BACKSCATTER ULTRAVIOLET MEASUREMENTS

OF THE

CLIMATIC IMPACT ASSESSMENT PROGRAM

FINAL REPORT

BY

MATTHEW P. THEKAEKARA

REGINALD S. MITCHELL

BERNARD M. BURDA AND

JOHN S. FEDOR

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
APPLICATIONS DIRECTORATE
ATMOSPHERIC AND HYDROSPHERIC APPLICATION DIVISION
UPPER ATMOSPHERE BRANCH
GREENBELT, MARYLAND

APRIL 1975

BACKSCATTER ULTRAVIOLET MEASUREMENTS OF THE CLIMATIC IMPACT ASSESSMENT PROGRAM

FINAL REPORT

BY

MATTHEW P. THEKAEKARA

REGINALD S. MITCHELL

BERNARD M. BURDA AND

JOHN S. FEDOR

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
APPLICATIONS DIRECTORATE
ATMOSPHERIC AND HYDROSPHERIC APPLICATION DIVISION
UPPER ATMOSPHERE BRANCH
GREENBELT, MARYLAND

APRIL 1975

ABSTRACT

The engineering model of the backscatter ultraviolet (BUV) experiment package developed for the Nimbus satellite was modified for use on the research aircraft RB 57 for altitudes up to 65,000 feet. Measurements of solar spectral irradiance and zenith sky radiance were made during 12 flights of the RB 57 aircraft between June 1973 and June 1974, as part of the Climatic Impact Assessment Program (CIAP) of the U. S. Department of Transportation. The instrumentation and its calibration are briefly described. Samples of the printouts from different stages of the computerized data analysis and of spectral curves generated from them are shown. Preliminary attempts at developing techniques for the derivation of the amount of ozone above the aircraft from these spectral scans are discussed. Tables of zenith sky spectral radiance and solar spectral irradiance are given at 10 A intervals in the range 2600 A to 4000 A for a total of 643 scans. The data from the inertial navigation system for latitude, longitude and altitude at one minute intervals and computed values of the solar zenith angle at 15 minute intervals are also presented.

CONTENTS

		Page
I.	The Experiment Objective	3
II.	Instrument Description	4
III.	The BUV Spectrometer Calibration	5
IV.	Preliminary Analysis of Solar and Zenith Sky Spectra	8
V.	Data Processing	13
VI.	Computations of Ozone Transmittance	17
VII.	Analysis of Signal Drift	21
VIII.	Qualitative Discussion of Data	24
IX.	Tables of Zenith Sky Radiance and Solar Irradiance	30
X.	Acknowledgments	162
References		163

ILLUSTRATIONS

Figure		Page
1	Semilog Plot of Solar Spectral Irradiance, January 17, 1974. Lat. 35-39N. Long. 105-108W. Near Albuquerque, New Mexico, Solar Zenith Angle 62°	9
2	Solar Spectral Irradiance, January 17, 1974. Near Albuquerque, New Mexico, Solar Zenith Angle 62°	10
3	Solar Spectral Irradiance, 3000-4000 A. Dashed Line Shows ASTM Standard Values (Reference Ap. Optics, 13, 518, 1974)	11
4	Spectral Radiance of the Zenith Sky, January 17, 1974, Near Albuquerque, New Mexico	12
5	Solar Spectral Irradiance - Ozone Transmittance	19
6	Solar Spectral Irradiance at 20 km. Computed from NASA/ ASTM Standard Curve 3.4 mm Ozone, U.S. Std. Atmosphere Averaged Over 100 A Bandwidths for Three Values of Solar Zenith Angles	21
7	Signal Versus Wavelength (Semilog Plot) Three Successive Scans of Zenith Sky - Panama Flight, April 19, 1974	23
8	Zenith Signal Versus Time - Panama Flight, April 19, 1974	23
9	Zenith Signal Versus Time - Computed Values for Same Altitude and Zenith Angle as Panama Flight, April 19, 1974 (NCAR, Dave and Furukawa)	25

ILLUSTRATIONS (Continued)

Figure		Page
10	Ratio of Signals at 3300 A (Upper Curve) and 3970 A (Lower Curve) to Signal at 3000 A, From Zenith Sky Scans, Between 14:37 and 17:06 (Local Time) Panama Flight of April 19, 1974; Semilog Plots	27
11	Solar and Zenith Sky Spectra, January 27, 1974	28
12	Solar and Zenith Sky Spectra, January 27, 1974, Semilog Plots	29
13	Solar and Zenith Sky Spectra, January 27, 1974	29
14	Solar and Zenith Sky Spectra, January 27, 1974, Semilog Plots	30
15	Reciprocal Sensitivity of BUV Spectrometer for Direct Solar Irradiance (Upper curve, thin line) and for Zenith Sky Radiance (Lower curve, thick line)	32

TABLES

		Page
I	Printout Sample of Signals for Each Encoder Count for One of the Scans of 9/23/73	14
II	Printout Sample of Signal Averages Over 10 A Intervals Flight of 1/27/74	15
III	Listing of Available Complete BUV Scans of Zenith Sky Radiance and Solar Irradiance	17
IV	Printout Sample of the Flight Log From the Inertial Navigation System (INS) Data for 4/19/74	18
V	Reciprocal Sensitivity for Direct Solar Irradiance and Zenith Sky Radiance	31
VI-1 through 13	INS Data for the RB 57 Flights	34-46
VII	Solar Zenith Angle for the RB 57 Flights	48
VIII-1 through 112	Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance	49-160

BACKSCATTER ULTRAVIOLET MEASUREMENTS OF THE CLIMATIC IMPACT ASSESSMENT PROGRAM FINAL REPORT

I. THE EXPERIMENT OBJECTIVE

The objective of the experiment is to measure the zenith sky radiance and solar irradiance as a function of wavelength in the ultraviolet range between 2500 and 4000 A. The experiment is entitled the BUV (Backscatter Ultraviolet) experiment, since the instrument used was the engineering model of the one developed for the BUV experiment flown on the Nimbus F spacecraft.

On the spacecraft the instrument measures the spectral distribution in the UV of solar energy scattered back to space by the atmosphere and especially by the ozone layer. On the aircraft the instrument operates in either of two modes, in the tracking mode or the zenith sky mode and measures either the zenith sky spectral radiance (energy scattered downwards by the intervening atmosphere and especially the ozone) and the solar spectral irradiance (energy transmitted to the aircraft after absorption and scattering by the atmosphere).

The data on zenith sky radiance and solar irradiance were obtained for a large variety of parameters, latitude, solar zenith angle, seasons of the year and altitude of the spacecraft. The wavelength resolution is 10 A throughout the spectral range which extends from 4014 A down to 2500 A. The spectral data thus generated can be used for the determination of the total amount of

ozone and of the vertical distribution of ozone above the aircraft. Developing the inversion programs and processing spectral data with the aid of a computer for derivation of ozone profiles were not part of this project. The inversion programs are being developed under a separate project. The publication of this report was delayed with the expectation that the inversion programs would be available in the near future. That complex analytical problem still awaits a satisfactory solution. Hence all the available spectral data are presented here in the form of tables. These tables along with the relevant data from the inertial navigational system of the aircraft have been also recorded on a master tape which is compatible with any large size computer. The preliminary studies which were made to establish the validity of the spectral data are also reported here.

II. INSTRUMENT DESCRIPTION

The instrument as stated earlier is the engineering model of the Backscatter Ultraviolet Spectrometer flown on the Nimbus F spacecraft. A detailed description of the instrument is given in Section 7 of "The Nimbus IV User's Guide," March 1970. Two major modifications were introduced for the RB 57 version of the instrument (1) the scanning was made continuous over the wavelength range of 2500 A to 4014 A and (2) the instrument was redesigned to operate in two modes, measuring either the zenith sky spectral radiance or the solar spectral irradiance. In the solar mode a tracking mirror directs the sunlight along the optic axis of the monochromator. The slit is fixed for a spectral

width of 10 A. Output signals of the photomultiplier detector are sampled at intervals of 1.914 A. Two major literature references for the operation and the results of the BUV experiment on the Nimbus spacecraft are:

Heath, D. F., Mateer, C. L. and Krueger, A. J., The Nimbus 4 Back-scatter Ultraviolet (BUV) Atmospheric Ozone Experiment - Two Years' Operation, Pure and Ap. Geophys., 106-108, 1238-1253 (1973).

Heath, D. F., Space Observations of the Variability of Solar Irradiance in the Near and Far Ultraviolet, J. Geophys. Res., 78, 2779-2792 (1973).

The BUV CIAP instrument has an approximate weight of 60 kg, and its dimensions are 60 cm × 60 cm × 30 cm. It is designed for mounting on the wing-pod of the RB 57 aircraft, but can be mounted on any type of aircraft provided the Sun-tracker can follow the Sun from zenith to horizon. The power requirements are 28 volts D. C., 84.5 watts for the Sun-tracker and 115 volts A. C., 400 Hz, 140 watts for the spectrometer.

In the CIAP flights of RB 57 the BUV shared the wing-pod with the Nitric Oxide experiment of the University of Utah and more than half of the flights were made without the BUV in operation.

III. THE BUV SPECRTOMETER CALIBRATION

Initial calibration of the instrument was made for wavelength, gain factors and spectral sensitivity and the calibration was repeated periodically between flights. The wavelength range which can be scanned by the instrument extends

from 4014 A to 2500 A, but below about 2750 A the absorption due to ozone is such that the signal to noise ratio is too low to give meaningful results.

The wavelength calibration of the instrument was determined by a series of scans made on the ground using mercury pen-ray lamp as source. It was found that the encoder count varies linearly with the wavelength. The wavelength can be computed from the encoder count by the equation

$$\lambda = 4014.5463 - 1.9141C \qquad (1)$$

where λ is wavelength in Ångströms and C is encoder count.

The radiance of the zenith sky and the irradiance of the Sun vary over several orders of magnitude as the spectrum is scanned from one limit to the other. The detector output is amplified to the more limited range of the millivolt readout by automatic selection of one of two photomultiplier tube voltages or one of three series resistors. The combination of PMT voltages and resistors provides six options for the signal range and a corresponding gain factor for the output signal. The nominal values of the resistors are (in units of megohms) 10, 200 and 3000, and the PMT voltages are such that gain factors of about 100 and 14,000 can be obtained. It was found convenient to reduce all signals to that corresponding to the lowest gain setting. The factors by which signals at different gain settings are to be multiplied were determined by measurements made in the laboratory. A tungsten lamp was used as source, the radiant flux to the detector was varied by changing either the distance of the source or the wavelength

setting or both; and at each flux level signals were recorded for two gain settings. These measurements showed that the ratio of the gains was not exactly the same as that of the resistors. With the lower PMT voltage, when the resistor is changed from the lowest to the next higher the signal increases by a factor of 171.8, and a further increase by a factor of 13.7 is obtained by switching to the highest resistor. Changing to the higher PMT voltage all signals are increased by a factor of 139.3, which is rather close to the ratio 140 which the initial setting of the PMT voltages was designed to give.

The wavelength calibration and the values of the gain factors were confirmed from the printout of the spectral scans made on board the RB 57. Two of the Fraunhofer lines which are clearly identifiable on all spectral scans are the Ca^+ H and K lines at 3968.5 A and 3933.7 A respectively. A large number of scans were examined for these lines, and the encoder counts were found to be as given by Equation 1 with an uncertainty of about 1 A. This uncertainty is to be expected since the encoder count changes in unit increments and the corresponding wavelength change is about 1.9 A.

A plot of signal output versus encoder count shows a sharp discontinuity at every change of resistor or PMT voltage. But if the signals are multiplied by the appropriate gain factors the discontinuity vanishes and a smooth curve is obtained. However, at all gain changes, one or two of the signals are erratic because the time lag in response of the signal output system is about the same as the time interval between successive data points, namely, 0.1 second.

Calibration for the sensitivity of the BUV was made both at Beckman Instruments, Inc., Anaheim, and at NASA/Goddard Space Flight Center. The irradiance source used for these calibrations was a group of standard quartz iodine lamps issued by the NBS and Eppley Laboratories. Two of these lamps were on the revised 1973 NBS scale of spectral irradiance and all data obtained with the older lamps were corrected to conform to this scale. There are two modes of operation for the BUV, for solar irradiance with a transmitting diffuser plate in front of the entrance slit, and for zenith sky radiance, without the diffuser. In both cases light is directed to the BUV by reflection from a plane mirror. The mirror is a highly polished metal plate of nickel with aluminum coating and a 250 A thick magnesium fluoride coating. For solar irradiance mode, the lamp was mounted at 50 cm distance from the diffuser; readings were taken with and without the mirror. The reflectance of the mirror was found to be about 83 percent and to vary slightly with wavelength. For the zenith sky radiance mode, a large plate with a heavy coating of barium sulfate was used as an artificial sky. The plate was illumined uniformly by a standard lamp and it was located at a suitable distance from the tracking mirror and the BUV, so that the plate more than filled the entire field of view of the BUV.

IV. PRELIMINARY ANALYSIS OF SOLAR AND ZENITH SKY SPECTRA

The results of a typical solar irradiance scan are shown in Figure 1. This was plotted from a computer printout of output signal and encoder counts. The encoder counts were converted to wavelength by applying Equation 1. The

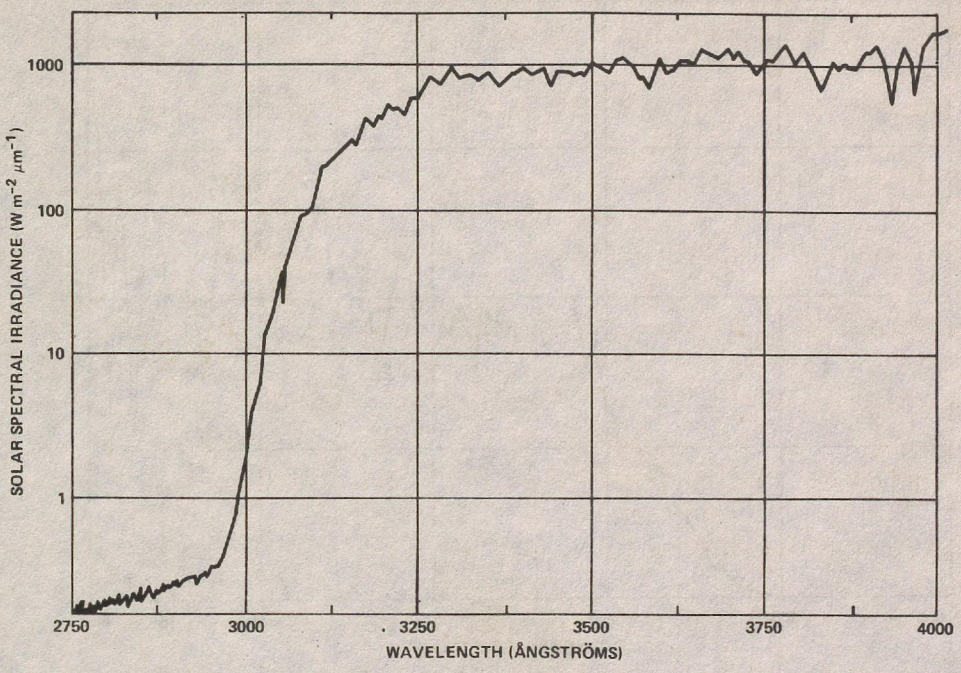

Figure 1. Semilog Plot of Solar Spectral Irradiance, January 17, 1974. Lat. 35-39N. Long. 105-108W. Near Albuquerque, New Mexico, Solar Zenith Angle 62°

output signals already corrected in the computer for gain setting were multiplied by the reciprocal sensitivity. There are over 650 signal values in this range; of these only those at the flexion points (or signals 5 counts apart if there are no flexion points in between) were plotted. The y-axis is on the log scale so as to show the variation of irradiance over four decades. The sharp dip at about 3050 A is spurious; it is where a gain change occurs.

In Figure 2 the same set of data is plotted with a linear scale for irradiance. Since only flexion points and points at 5 counts apart are shown, the line profiles of the Fraunhofer lines are not correctly represented. Two of the major dips,

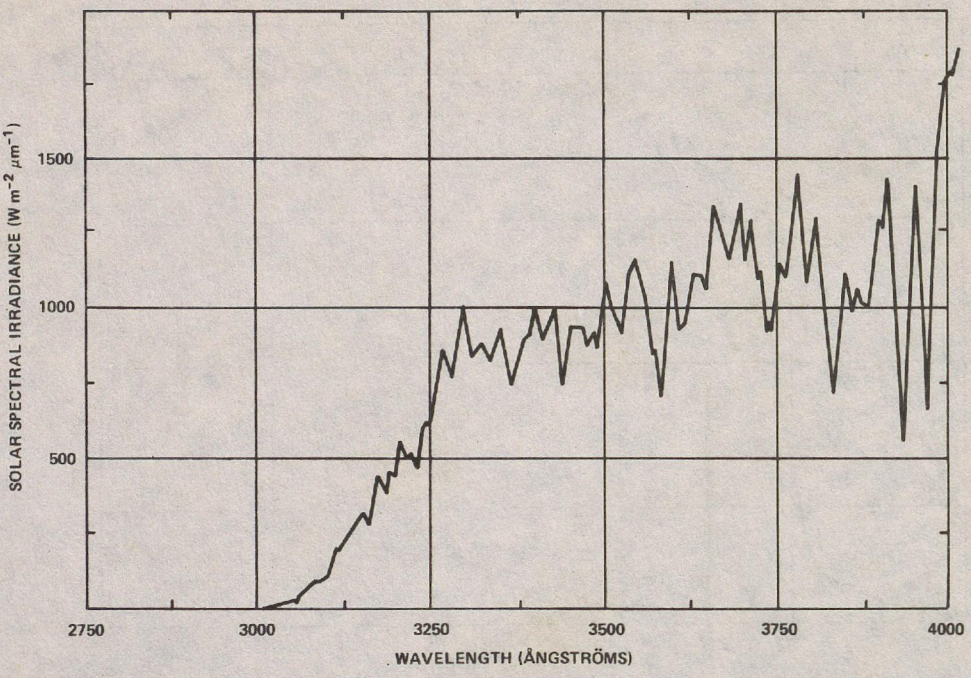

Figure 2. Solar Spectral Irradiance, January 17, 1974. Near Albuquerque, New Mexico, Solar Zenith Angle 62°

those at the extreme right, are the H and K lines. The rest are blends of large numbers of Fraunhofer lines.

Figure 2 should be compared with Figure 3 which is taken from the 1967 measurements of the solar spectrum made by a group of Goddard experimenters (References 1 and 2). The instrument was a Perkin-Elmer double prism monochromator and the solar spectral scans were made from a CV990 jet aircraft at 11.8 km. The extraterrestrial solar spectrum was determined by scans made at different solar zenith angles and extrapolation to zero air mass by the application of Bouguer's law. The wavelength resolution of the Perkin-Elmer varied from 2.7 A at 3000 A to 6.3 A at 4000 A. This is comparable to the wavelength

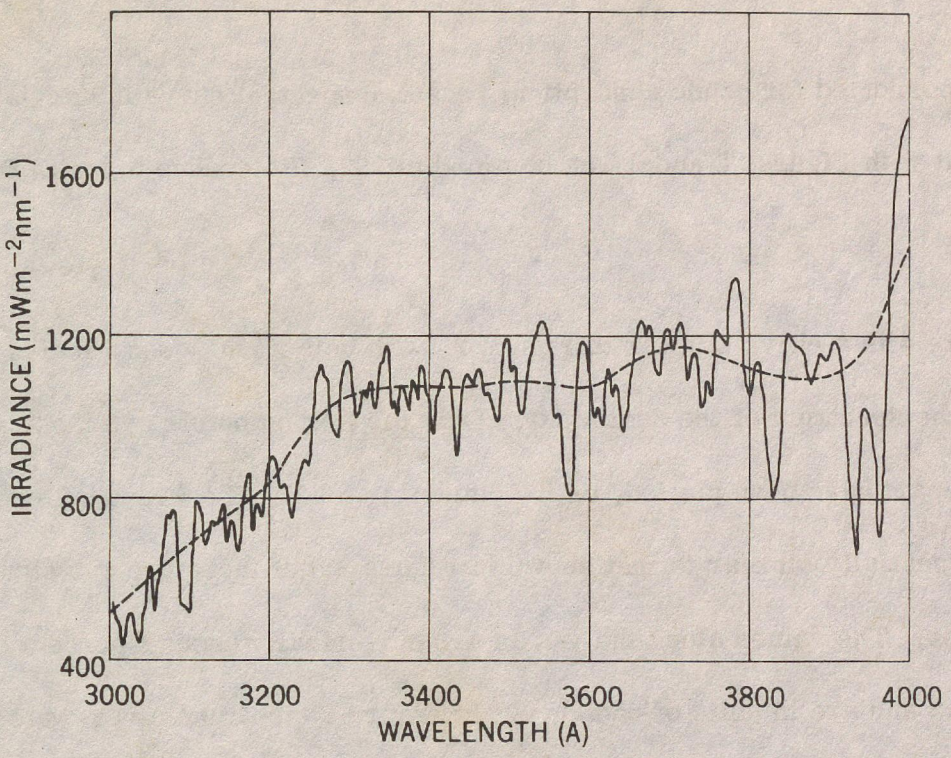

Figure 3. Solar Spectral Irradiance, 3000-4000 A. Dashed Line Shows ASTM Standard Values (Reference Ap. Optics, 13, 518, 1974)

resolution of the BUV which is 10 A throughout the range. The dashed line in Figure 3 is the NASA/ASTM standard curve based on all the instruments on board the CV990 and the filter radiometer measurements of Epply-JPL (References 3 and 4). Data points are 100 A averages. The data points of the continuous curve in Figure 3 were plotted at intervals of 1 A, (based on the Perkin-Elmer readings and normalized to the standard curve) so that the line profiles are more correctly shown. The close similarity between the two curves as regards the Fraunhofer structure, the minor flexions in the curve and the relative depths of the absorption lines is quite striking. The rapid drop to near zero between 3250 A and 3000 A which is seen in Figure 2 does not appear in Figure 3 since the

latter is corrected for ozone absorption. A solar spectral curve in very close agreement with Figures 2 and 3 was obtained in 1973 (Reference 5) by J. DeLuisi of NCAR.

Figure 4 is a curve similar to Figure 2, with both x and y coordinates linear; it shows the spectrum of the zenith sky. Only the flexion points and those at 5 counts apart have been plotted, as in Figures 1 and 2. The Fraunhofer structure is essentially similar to that shown in Figure 2; but there are two significant differences. The values along the y-axis are numerically about 2 percent of those in Figure 2 and are in units of radiance. In Figure 2, the running average over

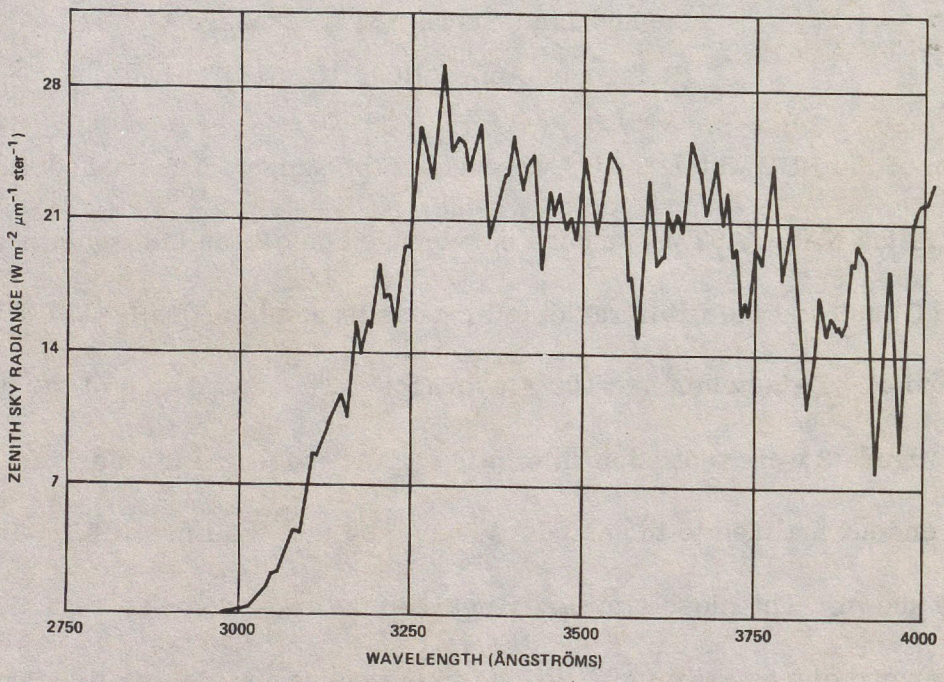

Figure 4. Spectral Radiance of the Zenith Sky, January 17, 1974, Near Albuquerque, New Mexico

relatively wide bands of 100 or 200 A decreases almost monotonically as the wavelength decreases, whereas in Figure 4, the running average increases at first as wavelength decreases to about 3000 A, and thereafter it drops very rapidly. The major cause of this is obviously the ozone scattering. The Rayleigh scattering due to about five percent of the residual atmosphere above the aircraft and scattering due to aerosols is also a contributing factor.

V. DATA PROCESSING

Tables I and II show printout samples of two of the several stages in the computerized data analysis. We shall not discuss the earlier stages which were essential for discovering, and if possible correcting for, the various illegal entries and erroneous data bits. At this stage of the printout we have a complete listing of the points, with identification as to the type of scan, whether solar or zenith sky, and giving the start time. Time is in minutes; thus 1061 min. means 17:41 GMT (Greenwich mean time). The entries in the first column are the serial numbers of the data points in the other columns. Columns titled lambda and intensity give respectively encoder counts and the detector signals. The signals have been corrected for the gain factors but conversions for wavelength and sensitivity have not been made. In about ten percent of the cases there are two signal values for each encoder count. This page represents about 20 seconds of data.

Table I

Printout Sample of Signals for Each Encoder Count for One of the Scans of 9/23/73

LISTING OF POINTS FOR SCAN 18 (TYPE =ZENITH , START TIME =1061 MIN, 52 SEC.)

POINT	LAMDBA	INTENSITY	LAMDBA	INTENSITY	LAMDBA	INTENSITY	LAMDBA	INTENSITY	LAMDBA	INTENSITY
1	0.0	0.30270E 01	1.0	0.30020E 01	2.0	0.29710E 01	3.0	0.29460E 01	4.0	0.29060E 01
6	5.0	0.28750E 01	6.0	0.28940E 01	7.0	0.29000E 01	8.0	0.29140E 01	9.0	0.29120E 01
11	10.0	0.29180E 01	10.0	0.28980E 01	11.0	0.28830E 01	12.0	0.28580E 01	13.0	0.28360E 01
16	14.0	0.28150E 01	15.0	0.27770E 01	16.0	0.27340E 01	17.0	0.26680E 01	18.0	0.25810E 01
21	18.0	0.24250E 01	19.0	0.22080E 01	20.0	0.19240E 01	21.0	0.16740E 01	22.0	0.14350E 01
26	23.0	0.12550E 01	24.0	0.11550E 01	25.0	0.12070E 01	26.0	0.13610E 01	27.0	0.15680E 01
31	28.0	0.18060E 01	28.0	0.20380E 01	29.0	0.22500E 01	30.0	0.23770E 01	31.0	0.24540E 01
36	32.0	0.24730E 01	37.0	0.24410E 01	37.0	0.17300E 01	37.0	0.17550E 01	38.0	0.17170E 01
41	38.0	0.16150E 01	39.0	0.14710E 01	40.0	0.13050E 01	41.0	0.11790E 01	41.0	0.10890E 01
46	42.0	0.10780E 01	43.0	0.11530E 01	44.0	0.13000E 01	45.0	0.14910E 01	45.0	0.16760E 01
51	46.0	0.18540E 01	47.0	0.19910E 01	47.0	0.21120E 01	48.0	0.22290E 01	49.0	0.23550E 01
56	50.0	0.24750E 01	51.0	0.25730E 01	51.0	0.26510E 01	52.0	0.26990E 01	53.0	0.27180E 01
61	54.0	0.26840E 01	55.0	0.26220E 01	56.0	0.25480E 01	57.0	0.24790E 01	58.0	0.24460E 01
66	59.0	0.24460E 01	60.0	0.24580E 01	60.0	0.24730E 01	61.0	0.24730E 01	62.0	0.24240E 01
71	63.0	0.23500E 01	64.0	0.22760E 01	65.0	0.21720E 01	66.0	0.20630E 01	67.0	0.19830E 01
76	68.0	0.19510E 01	69.0	0.19510E 01	69.0	0.19710E 01	70.0	0.20040E 01	71.0	0.20160E 01
81	72.0	0.20370E 01	73.0	0.20420E 01	74.0	0.20240E 01	75.0	0.20160E 01	75.0	0.20550E 01
86	76.0	0.20530E 01	77.0	0.20990E 01	78.0	0.20970E 01	79.0	0.20840E 01	80.0	0.20330E 01
91	81.0	0.19750E 01	82.0	0.19750E 01	83.0	0.20110E 01	84.0	0.20830E 01	85.0	0.21720E 01
96	86.0	0.22490E 01	87.0	0.22660E 01	87.0	0.22280E 01	88.0	0.21320E 01	89.0	0.20020E 01
101	90.0	0.19130E 01	91.0	0.17340E 01	92.0	0.15800E 01	93.0	0.15230E 01	94.0	0.14790E 01
106	95.0	0.14610E 01	96.0	0.15030E 01	97.0	0.15420E 01	98.0	0.15780E 01	98.0	0.16530E 01
111	99.0	0.17530E 01	101.0	0.18450E 01	102.0	0.19350E 01	102.0	0.20760E 01	103.0	0.22000E 01
116	104.0	0.23160E 01	105.0	0.24470E 01	106.0	0.26010E 01	107.0	0.27190E 01	108.0	0.27680E 01
121	109.0	0.27690E 01	109.0	0.27280E 01	110.0	0.26490E 01	111.0	0.25400E 01	112.0	0.24580E 01
126	112.0	0.23910E 01	113.0	0.23500E 01	114.0	0.23340E 01	115.0	0.23320E 01	116.0	0.24010E 01
131	117.0	0.24870E 01	118.0	0.25960E 01	119.0	0.27340E 01	120.0	0.28900E 01	120.0	0.30020E 01
136	121.0	0.30600E 01	122.0	0.30870E 01	123.0	0.30640E 01	124.0	0.30120E 01	125.0	0.29220E 01
141	126.0	0.28310E 01	127.0	0.27340E 01	127.0	0.26410E 01	128.0	0.25790E 01	129.0	0.25020E 01
146	130.0	0.24310E 01	131.0	0.23910E 01	132.0	0.24140E 01	133.0	0.24510E 01	133.0	0.24890E 01
151	134.0	0.25180E 01	135.0	0.25260E 01	136.0	0.24660E 01	137.0	0.23300E 01	138.0	0.21720E 01
156	139.0	0.20800E 01	140.0	0.20230E 01	141.0	0.20860E 01	142.0	0.21380E 01	143.0	0.21740E 01
161	144.0	0.21480E 01	145.0	0.20930E 01	146.0	0.20630E 01	146.0	0.20990E 01	147.0	0.22210E 01
166	148.0	0.23640E 01	149.0	0.24720E 01	150.0	0.25120E 01	151.0	0.25390E 01	152.0	0.25150E 01
171	153.0	0.24800E 01	154.0	0.25160E 01	154.0	0.26570E 01	155.0	0.28160E 01	156.0	0.29060E 01
176	157.0	0.29410E 01	158.0	0.28950E 01	159.0	0.27920E 01	160.0	0.26910E 01	161.0	0.26560E 01
181	162.0	0.26950E 01	163.0	0.27980E 01	163.0	0.29120E 01	164.0	0.30130E 01	165.0	0.30640E 01
186	166.0	0.30700E 01	167.0	0.30330E 01	168.0	0.29710E 01	169.0	0.29240E 01	169.0	0.28540E 01
191	170.0	0.27680E 01	171.0	0.27150E 01	172.0	0.26780E 01	173.0	0.26730E 01	174.0	0.26690E 01
196	175.0	0.27100E 01	176.0	0.27800E 01	177.0	0.28450E 01	177.0	0.29040E 01	178.0	0.29430E 01
201	179.0	0.29620E 01	180.0	0.29600E 01	181.0	0.29790E 01	182.0	0.30000E 01	183.0	0.30310E 01
206	184.0	0.30790E 01	185.0	0.31250E 01	186.0	0.31430E 01	187.0	0.31050E 01	187.0	0.30150E 01
211	188.0	0.29150E 01	189.0	0.27920E 01	190.0	0.26730E 01	191.0	0.25820E 01	192.0	0.25360E 01
216	193.0	0.25550E 01	194.0	0.25850E 01	194.0	0.26390E 01	195.0	0.26740E 01	196.0	0.26590E 01
221	197.0	0.26150E 01	198.0	0.25840E 01	199.0	0.25680E 01	200.0	0.25650E 01	200.0	0.25990E 01
226	201.0	0.26630E 01	202.0	0.27360E 01	203.0	0.27220E 01	204.0	0.26620E 01	205.0	0.26000E 01
231	206.0	0.25010E 01	207.0	0.24050E 01	208.0	0.23760E 01	208.0	0.23800E 01	209.0	0.23680E 01
236	210.0	0.23650E 01	211.0	0.23620E 01	212.0	0.23940E 01	213.0	0.24550E 01	214.0	0.25500E 01
241	215.0	0.26700E 01	216.0	0.27940E 01	216.0	0.29110E 01	217.0	0.29610E 01	218.0	0.29510E 01
246	219.0	0.28810E 01	220.0	0.27480E 01	221.0	0.26010E 01	222.0	0.24020E 01	223.0	0.21770E 01
251	223.0	0.19570E 01	224.0	0.19000E 01	225.0	0.18870E 01	226.0	0.19100E 01	227.0	0.20060E 01
256	229.0	0.21250E 01	229.0	0.22200E 01	230.0	0.22700E 01	230.0	0.22670E 01	231.0	0.22630E 01
261	232.0	0.22660E 01	233.0	0.23110E 01	234.0	0.23710E 01	235.0	0.24760E 01	236.0	0.26300E 01
266	236.0	0.27260E 01	237.0	0.27880E 01	238.0	0.28350E 01	239.0	0.29010E 01	240.0	0.29320E 01
271	241.0	0.29610E 01	242.0	0.30300E 01	243.0	0.30810E 01	243.0	0.31110E 01	244.0	0.31180E 01
276	245.0	0.31600E 01	246.0	0.31610E 01	247.0	0.31440E 01	248.0	0.31300E 01	249.0	0.31120E 01
281	251.0	0.30770E 01	250.0	0.30310E 01	251.0	0.29590E 01	252.0	0.28620E 01	253.0	0.27740E 01
286	254.0	0.26840E 01	255.0	0.25990E 01	256.0	0.25800E 01	257.0	0.26310E 01	258.0	0.26770E 01
291	258.0	0.27450E 01	259.0	0.28160E 01	260.0	0.28520E 01	261.0	0.28550E 01	262.0	0.28650E 01
296	263.0	0.29080E 01	264.0	0.29590E 01	265.0	0.30340E 01	266.0	0.31010E 01	266.0	0.31450E 01
301	267.0	0.31460E 01	268.0	0.30850E 01	269.0	0.29750E 01	270.0	0.28170E 01	271.0	0.27140E 01

Table II shows a further stage in the data analysis. The signals have been averaged over 10 A intervals but no correction has been made for sensitivity. The encoder counts have been converted to wavelengths in Ångströms; the first

Table II

Printout Sample of Signal Averages Over 10 A Intervals

Flight of 1/27/74

ENERGY CURVE 14 FOR ZENITH SCAN STARTING AT 908 MIN. 33 SEC.

WAVELENGTH	ENERGY 00	10	20	30	40	50	60	70	80	90
2600.0	2.112E-05	2.301E-05	2.151E-05	2.291E-05	2.248E-05	2.159E-05	2.248E-05	2.341E-05	2.341E-05	2.331E-05
2700.0	2.507E-05	2.460E-05	2.382E-05	2.434E-05	2.495E-05	2.566E-05	2.625E-05	2.607E-05	2.688E-05	2.718E-05
2800.0	2.828F-05	2.825E-05	2.915E-05	2.998E-05	2.982E-05	3.328E-05	3.279E-05	3.251E-05	3.470E-05	4.018E-05
2900.0	5.830E-05	9.801E-05	1.760E-04	3.498E-04	6.854E-04	1.372E-03	2.633E-03	4.186E-03	6.328E-03	9.111E-03
3000.0	1.162E-02	1.682E-02	2.128E-02	3.653E-02	4.427E-02	5.603E-02	5.955E-02	7.289E-02	8.407E-02	8.016E-02
3100.0	8.666E-02	1.255E-01	1.247E-01	1.343E-01	1.420E-01	1.418E-01	1.320E-01	1.713E-01	1.603E-01	1.643E-01
3200.0	1.841E-01	1.817E-01	1.729E-01	1.611E-01	1.864E-01	2.010E-01	2.411E-01	2.402E-01	2.229E-01	2.430E-01
3300.0	2.565E-01	2.301E-01	2.289E-01	2.210E-01	2.181E-01	2.333E-01	2.079E-01	1.985E-01	2.243E-01	2.341E-01
3400.0	2.452E-01	2.242E-01	2.272E-01	2.330E-01	1.953E-01	2.033E-01	2.144E-01	2.168E-01	2.091E-01	2.059E-01
3500.0	2.288E-01	2.327E-01	2.182E-01	2.217E-01	2.503E-01	2.447E-01	2.189E-01	1.830E-01	1.831E-01	1.922E-01
3600.0	2.374E-01	2.044E-01	2.142E-01	2.307E-01	2.314E-01	2.350E-01	2.767E-01	2.718E-01	2.505E-01	2.595E-01
3700.0	2.699E-01	2.546E-01	2.366E-01	2.161E-01	1.944E-01	2.059E-01	2.317E-01	2.452E-01	2.850E-01	2.414E-01
3800.0	2.270E-01	2.430E-01	1.821E-01	1.460E-01	1.657E-01	2.170E-01	2.058E-01	2.186E-01	2.117E-01	2.263E-01
3900.0	2.551E-01	2.673E-01	2.424E-01	1.404E-01	1.543E-01	2.367E-01	2.122E-01	1.390E-01	2.936E-01	3.086E-01
4000.0	3.340E-01									

```
   ZENITH  SCAN STARTED AT  910 MIN.  19 SEC. WITH PMT RANGE = 1. RESISTOR = 1
** PMT RANGE SWITCHED FROM 1 TO 0 AT CAM POSITION  22
** PMT RANGE SWITCHED FROM 0 TO 1 AT CAM POSITION  29
** PMT RANGE SWITCHED FROM 1 TO 0 AT CAM POSITION  44
** PMT RANGE SWITCHED FROM 0 TO 1 AT CAM POSITION  51
** PMT RANGE SWITCHED FROM 1 TO 0 AT CAM POSITION  71
** PMT RANGE SWITCHED FROM 0 TO 1 AT CAM POSITION  77
** PMT RANGE SWITCHED FROM 1 TO 0 AT CAM POSITION  94
** PMT RANGE SWITCHED FROM 0 TO 1 AT CAM POSITION 103
** PMT RANGE SWITCHED FROM 1 TO 0 AT CAM POSITION 120
** PMT RANGE SWITCHED FROM 0 TO 1 AT CAM POSITION 124
** PMT RANGE SWITCHED FROM 1 TO 0 AT CAM POSITION 141
   SWITCH FROM RESISTOR 1 TO 2 AT CAM POSITION 427
** SCAN TERMINATED AT CAM POSITION 519 DUE TO TRACKER SWITCH TO STANDBY POSITION.

   SOLAR  SCAN STARTED AT  913 MIN.  16 SEC. WITH PMT RANGE = 0. RESISTOR = 1
** ILLEGAL OVN RANGE VALUE AT CAM POSITION   0
** INVALID TRACKER STATUS ( 7 ) IN FRAME 149 OF RECORD 151
** SCAN TERMINATED AT CAM POSITION   0 DUE TO TRACKER SWITCH TO INVALID POSITION.
** INVALID TRACKER STATUS ( 7 ) IN FRAME 150 OF RECORD 151
** INVALID TRACKER STATUS ( 6 ) IN FRAME 151 OF RECORD 151

   SOLAR  SCAN STARTED AT  914 MIN.  45 SEC. WITH PMT RANGE = 0. RESISTOR = 1
   SWITCH FROM RESISTOR 1 TO 3 AT CAM POSITION 528
   SWITCH FROM RESISTOR 3 TO 2 AT CAM POSITION 582
   END OF SCAN 15, POINTS = 741
```

two digits of the wavelength are given in the first column and the third and fourth digits are given in the first line. The other entries are signals in millivolts; thus the final entry states that the average signal in the wavelength range 4005 A to 3995 A is 0.334 mV.

The information printed below the table of signal averages concerns three subsequent scans two of which were terminated due to tracker going off to standby

or invalid position and the third at 914 min., which is the next complete scan. Results of that scan follow on the next computer page (not shown here).

A listing of BUV scans processed in this manner for 10 A intervals is given in Table III. Spectral data are available for a total of 611 zenith sky scans and 32 solar scans. These were made under a wide variety of solar zenith angles and latitudes. There are a few hundred more scans which could not be processed because there were illegal entries in the record or the scans were terminated before the end. The solar scans are relatively few compared to the zenith sky scans. This is obviously a disadvantage. Special request was made for the flights made after April 19, 1974, to turn the BUV to Sun tracker mode more frequently, but only two flights were made since that date and most of the scan records were too full of illegal entries.

Table IV shows sample printout of the inertial navigation system flight log. The INS data of all the flights have been processed in this format. Data are printed at intervals of about 9 seconds. The page reproduced in Table IV shows the plane taking off on October 10, 1973. In about six minutes the altitude increases from 2420 ft to 21,800 ft and the temperature drops from 51°C to 11°C. The latitude and longitude are those of Mendoza.

Table III

Listing of Available Complete BUV Scans

of Zenith Sky Radiance and Solar Irradiance

Date	Location	Greenwich Mean Time For				Number of Scans	
		Start		Stop			
		h m s	min	h m s	min	Zenith Sky	Solar
6-5-73	Panama to Antiqua	12 42 29	762	13 14 21	795	14	
9-10-73	South of Mendoza	16 03 15	963	20 22 36	1223	84	9
9-12-73	Mendoza to Panama	18 26 19	1106	23 19 40	1400	125	
9-23-73	Panama to Albuq.	17 02 09	1022	21 07 29	1267	109	1
11-5-73	Alaska	12 18 00	1218	13 22 00	1282	54	
1-17-74	Albuq. to Denver	21 27 23	1288	21 43 34	1304		4
1-27-74	Mendoza	14 34 28	874	16 04 27	964	32	
1-30-74	Panama to Antiqua	12 41 50	762	19 11 02	1151	47	
1-31-74	Panama to Albuq.	16 15 31	975	21 20 51	1281	76	
4-19-74	Panama	20 02 21	1202	22 36 30	1357	56	5
4-25-74	Albuquerque	21 27 41	1288	22 09 48	1330	10	3
5-5-74	Albuquerque	20 34 54	1235	22 31 04	1351	4	7
					Total	611	32

VI. COMPUTATIONS OF OZONE TRANSMITTANCE

Attempts were made to correlate the observed data with what might be expected from parameters of extraterrestrial solar spectrum and ozone absorption. These parameters are not known with sufficient accuracy; however, computations based on these parameters can yield some useful results. At the altitude of RB 57 the Rayleigh and aerosol effects are small compared to ozone absorption. Figure 5 shows a continuous curve on top and three dashed line curves below it. The continuous curve is the NASA/ASTM standard extraterrestrial solar spectrum at the average Sun-Earth distance. The other curves show how this spectrum would be changed by ozone absorption. Rayleigh and aerosol effects were ignored

Table IV.

Printout Sample of the Flight Log

From the Inertial Navigation System (INS)

Data for 4/19/74

PRINT OF INERTIAL NAVIGATION SYSTEM FLIGHT LOG , RECORD NUMBER 8

GMT TIME MIN	SEC	LATITUDE DEG.	LONGITUDE DEG.	TRUE HDG. DEG.	PITCH DEG.	ROLL DEG.	ALTITUDE FEET	LAND SPEED KNOTS	TEMP. DEG.C
1246	8	4.866	-82.882	-107.89	0.09	-0.70	44000.	328.	-66.
1246	17	4.862	-82.896	-107.80	-0.79	-0.62	44020.	325.	-61.
1246	27	4.856	-82.911	-107.71	-1.41	-0.88	43900.	326.	-49.
1246	37	4.852	-82.925	-107.71	-1.41	-0.97	43800.	327.	-57.
1246	46	4.848	-82.939	-107.89	-1.41	-0.79	43620.	327.	-61.
1246	56	4.844	-82.952	-107.98	-1.50	-0.88	43540.	328.	-48.
1247	5	4.838	-82.966	-108.15	-1.23	-0.88	43240.	329.	-50.
1247	15	4.834	-82.980	-108.24	-0.97	-0.70	43000.	328.	-48.
1247	25	4.830	-82.993	-108.24	-0.88	-0.88	42760.	327.	-47.
1247	34	4.825	-83.007	-108.24	-0.26	-0.70	42500.	324.	-47.
1247	44	4.821	-83.021	-108.06	-0.26	-0.44	42520.	321.	-46.
1247	53	4.815	-83.035	-107.98	-0.53	-9.77	42300.	319.	-46.
1248	3	4.810	-83.048	-109.38	-0.97	2.64	42260.	318.	-47.
1248	13	4.804	-83.061	-110.35	-1.14	-0.35	42180.	318.	-46.
1248	22	4.799	-83.074	-110.44	-1.50	-0.26	42120.	318.	-46.
1248	32	4.794	-83.087	-110.62	-1.58	-0.18	41820.	319.	-46.
1248	41	4.789	-83.100	-110.62	-0.88	-0.18	41500.	319.	-45.
1248	51	4.783	-83.113	-110.53	-0.79	-0.26	41420.	318.	-45.
1249	1	4.778	-83.126	-110.53	0.53	-0.44	41280.	324.	-45.
1249	10	4.773	-83.140	-110.79	1.32	-0.62	41220.	327.	-44.
1249	20	4.767	-83.153	-110.97	1.67	-6.34	41240.	330.	-44.
1249	29	4.760	-83.166	-111.67	1.76	-14.78	41260.	333.	-44.
1249	39	4.752	-83.180	-120.82	2.20	-20.59	41300.	335.	-44.
1249	49	4.741	-83.192	-129.98	2.46	-20.50	41340.	339.	-44.
1249	58	4.727	-83.202	-140.98	2.64	-20.15	41300.	342.	-44.
1250	8	4.714	-83.210	-151.18	2.55	-19.71	41380.	346.	-44.
1250	17	4.698	-83.214	-161.39	2.55	-19.62	41500.	350.	-44.
1250	27	4.682	-83.217	-171.78	1.94	-5.02	41620.	352.	-45.
1250	37	4.667	-83.218	-175.47	1.76	-10.91	41820.	357.	-45.
1250	46	4.650	-83.217	-179.96	3.26	-8.71	42100.	356.	-46.
1250	56	4.635	-83.216	175.65	2.55	-11.26	42160.	357.	-46.
1251	5	4.620	-83.213	171.95	2.11	-19.54	42280.	364.	-46.
1251	15	4.605	-83.207	162.36	2.73	6.42	42320.	362.	-47.
1251	25	4.561	-83.201	162.10	2.46	-0.09	0.	355.	0.
1251	53	4.547	-83.183	161.22	2.46	0.09	43160.	354.	-48.
1252	3	4.532	-83.176	161.13	1.76	0.18	43360.	355.	-48.
1252	13	4.517	-83.170	161.04	1.32	0.0	43420.	352.	-49.
1252	22	4.504	-83.165	161.04	0.09	-0.09	43640.	349.	-49.
1252	32	4.488	-83.158	160.95	-0.09	-0.26	44060.	348.	-50.
1252	41	4.475	-83.153	160.95	-0.35	-0.35	44060.	347.	-54.
1252	51	0.0	-83.146	161.04	0.0	0.0	0.	0.	0.

INS RECORD 8 (TAPE RECORD 96) CONTAINS 41 FRAMES RUNNING FROM T=1246 8 TO 1252 51 (ERROR COUNT= 0)

for this figure which was prepared solely to study the effect of varying amounts of ozone above the aircraft. The Sun is assumed to be at zenith; ozone optical thickness coefficients are those derived by Elterman for U. S. model atmosphere and path length from 0 to 50 km (Reference 6). The ozone concentration profile assumed by Elterman is based on the Handbook of Geophysics and Space

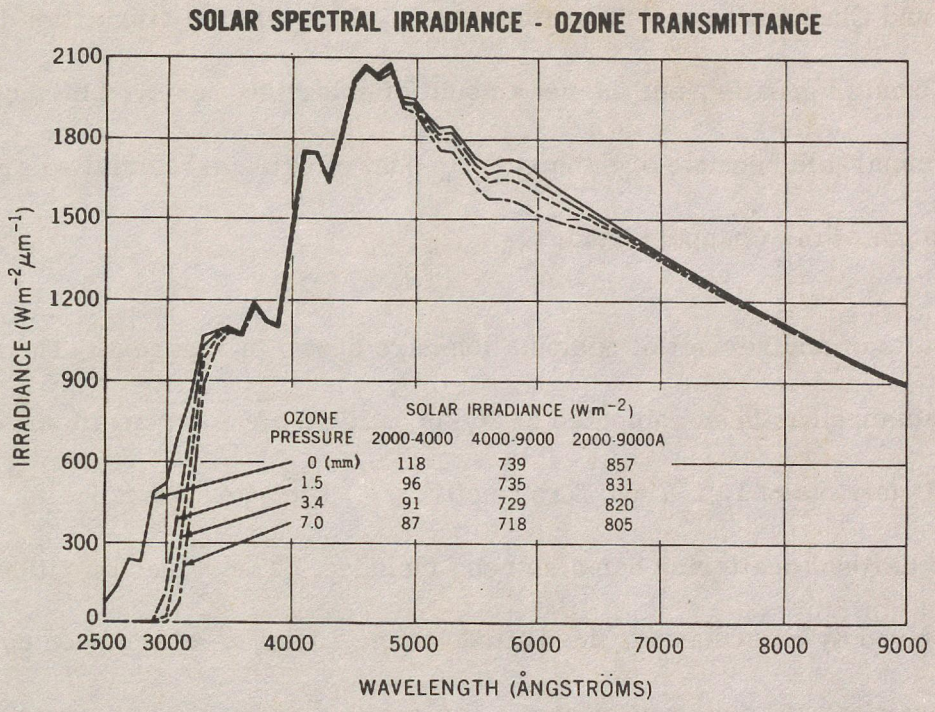

Figure 5. Solar Spectral Irradiance - Ozone Transmittance

Environment (1965) for 0 to 30 km, on London, Ooyama and Prabhakara (1962) for 40 to 50 km and on interpolation data for the intermediate range, 30 to 40 km. The total ozone pressure for Elterman's computation is 3.4 mm. For Figure 5 we have assumed also two extreme values, 1.5 mm and 7.0 mm which are somewhat beyond the minimum and maximum values quoted in literature. The data points for these curves are 50 A apart, but the irradiance values are averages over 100 A bandwidths and hence the Fraunhofer structure of Figures 2 and 3 is missing here. Below 3300 A all three dashed lines drop rapidly to zero as was observed in Figure 2; but the three curves are quite apart from each other, and the cut-off wavelength increases with ozone pressure. The inset table of Figure 5 gives the integral irradiance over finite wavelength intervals which contain

the Huggins and Chappuis ozone absorption bands. The relative attenuation in the Huggins band is greater, but the net amount of solar flux removed by the two bands are comparable because of the higher amount of extraterrestrial solar flux in the range of the Chappuis band.

The results of another set of computations are shown in Figure 6. The solar spectral irradiance has been computed at 20 km altitude for solar zenith angles 0, 54° and 71° (air mass 1, 1.7 and 3 respectively). The attenuation due to Rayleigh and aerosol scattering has also been included. The values of optical thickness derived by Elterman for the altitude range 20 km to ∞ have been used for the computation. The amount of ozone in a vertical path above 20 km is 0.21 cm according to the assumed distribution profile. Elterman's attenuation coefficients τ are listed at a few wavelengths (16 discrete wavelengths in the range 2700 to 9000 A) which are relatively far apart; and linear interpolation for intermediate wavelengths was found to be insufficient, especially where the coefficients change very rapidly. The intermediate values of τ for the data points of Figure 6, as also for those of Figure 5, were obtained by performing a parabolic interpolation routine on the listed values of τ or on values of log τ derived from them.

Curves of Figure 6 also show a rapid decrease in irradiance below 3300 A and a shift of the ozone cutoff to longer wavelengths as the zenith angle increases. The amount of ozone in the line of sight above 20 km for the three solar zenith angles are 0.21 cm, 0.36 cm and 0.65 cm.

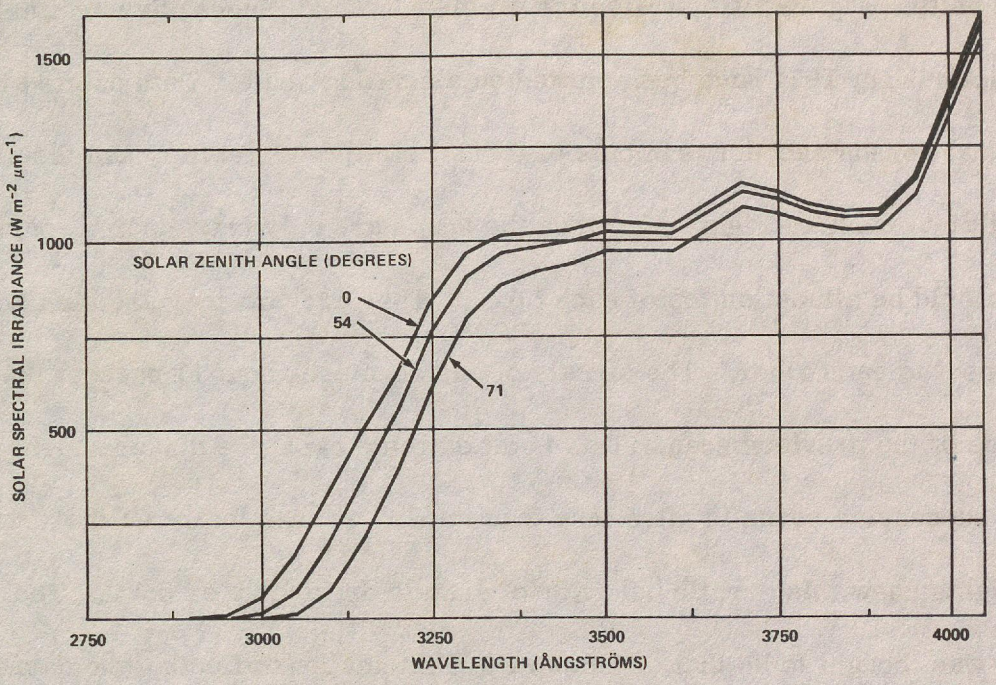

Figure 6. Solar Spectral Irradiance at 20 km. Computed from NASA/ASTM Standard Curve 3.4 mm Ozone, U. S. Std. Atmosphere Averaged Over 100 A Bandwidths for Three Values of Solar Zenith Angles

VII. ANALYSIS OF SIGNAL DRIFT

From Figures 5 and 6 it is sufficiently clear that the solar scans of the BUV from RB 57 altitudes should provide a method of determining the amount of ozone as a function of latitude and time of day. Scans can be obtained two minutes apart. A wide range of latitudes is available and also several values of altitude between 10 km and 20 km. But there are two major drawbacks in the spectral data. The solar scans are far too few. An even more serious drawback which affects also the zenith sky scans is that the intensity values cannot be considered to be in

absolute units. Figure 7 illustrates the problem. Three successive zenith sky scans of April 19, 1974 have been plotted on a semilog scale. Data points are from signal versus encoder printouts of format similar to Table I, and the plots are similar to those of Figure 1. Since the scans are only two minutes apart the curves should be almost on top of each other. They are not; they are displaced with respect to each other. The signals of one scan are about 11 percent less than those of the previous scan. This is an extreme case; the disagreement between successive scans is often less than this. But practically all the scans on all flights show this erratic behavior of signals drifting up or down. The problem was thought to be that of temperature fluctuations affecting the data collection system, but the drift persisted even after a heater system was installed in the BUV to ensure greater constancy of temperature.

Figure 8 gives a more complete picture of the drift in signals. The data points are signals from successive scans at three wavelengths, 3300 A, 3970 A and 3000 A. They are ten Ångström averages from printouts of the same format as Table II. There were 56 scans of the zenith sky between 20:02 and 22:30 GMT (lower x-axis scale) or between 14:20 and 17:00 local time (upper x-axis scale). During this time the solar zenith angle was increasing and the aircraft was gaining in altitude (from 50,000 ft to 62,000 ft); both factors would cause a lowering of zenith sky radiance. But the curves do not show a monotonic decrease; the signals drift above and below a smooth curve which might be drawn to fit all the

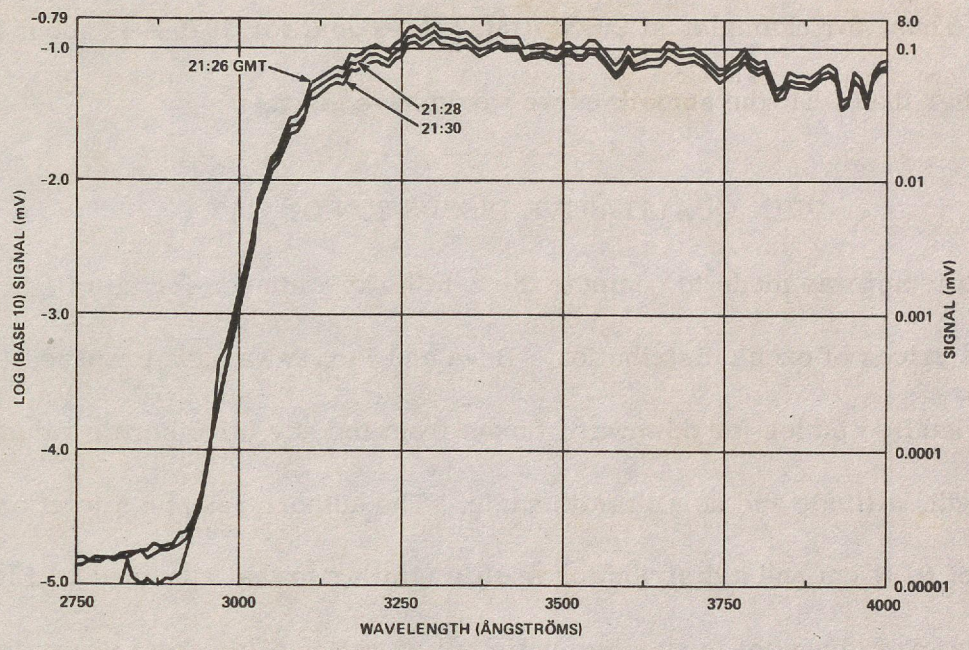

Figure 7. Signal Versus Wavelength (Semilog Plot) Three Successive Scans of Zenith Sky - Panama Flight, April 19, 1974

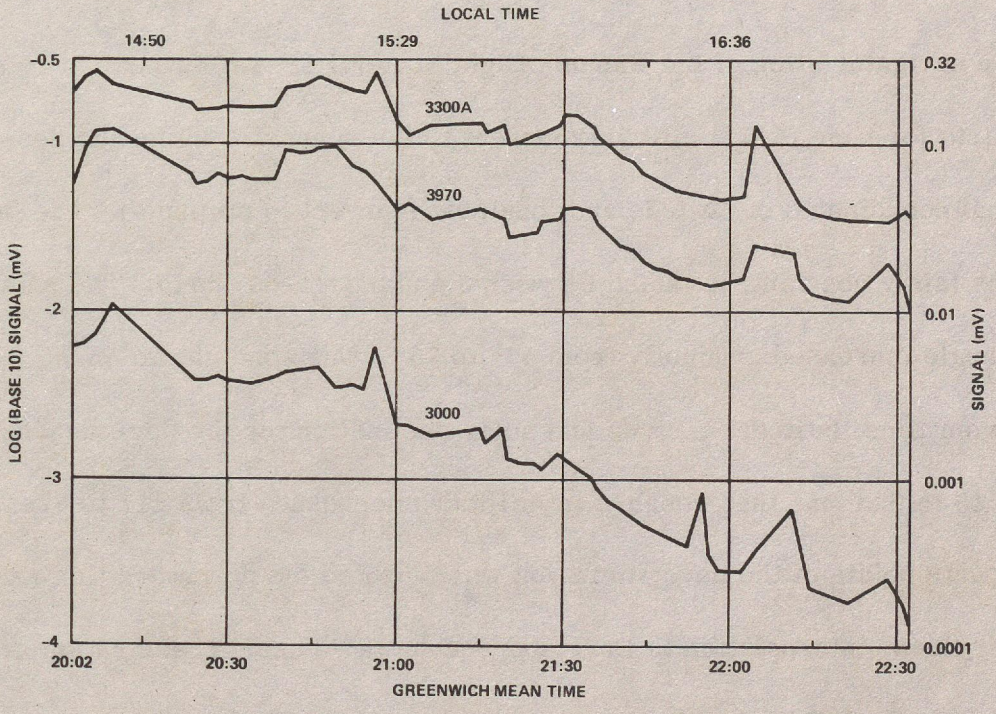

Figure 8. Zenith Signal Versus Time - Panama Flight, April 19, 1974

points. Thus, for example, at 20:45 (GMT) the signal for 3970 A is about 70 percent higher than what the smooth curve would have given.

VIII. QUALITATIVE DISCUSSION OF DATA

An attempt was made to compute the zenith sky radiance for this flight from assumed values of ozone distribution. Dave and Furukawa have prepared (Reference 9) detailed tables for downward fluxes from the sky for discrete values of wavelength, altitude and solar zenith angle. The authors assume a total ozone density of 0.34 cm and a distribution profile similar to that assumed by Elterman. The fluxes are given not in absolute units but as ratios of the total downward flux to the extraterrestrial solar irradiance. Multiple scattering was taken into account for preparing these tables.

The navigator's log of the Panama flight of April 19, 1974 gives ten sets of data points for time (GMT) altitude (correct to the nearest 1000 ft) and geographical coordinates of latitude and longitude (correct to a minute). The latitude was fairly constant; it varied between 3 and 6 degrees North. The solar zenith angle increased gradually from 42° to 76°. The absolute air mass (computed from time, latitude, altitude and solar declination for the day) increased from 0.16 to 0.29 and the pressure in millibars decreased from 117 to 67. For the ten data points of the navigator's log we computed the downward flux ratios applying linear interpolation to Dave and Furukawa values. These ratios are divided by a factor k_λ to give computed values of zenith sky signals.

$k_\lambda = (S_\lambda N/E_\lambda)$, where S_λ is the reciprocal sensitivity of the BUV for the given wavelength, E_λ is the extraterrestrial solar irradiance from the NASA/ASTM standard curve and N is a normalizing factor common to all three wavelengths. N is a factor which accounts for the Sun-Earth distance, the view angle of the BUV, etc., and it makes the sum of the log signals of the three wavelengths around flight midtime equal for the computed and observed signals. A semilog plot of these computed zenith sky signals is shown in Figure 9.

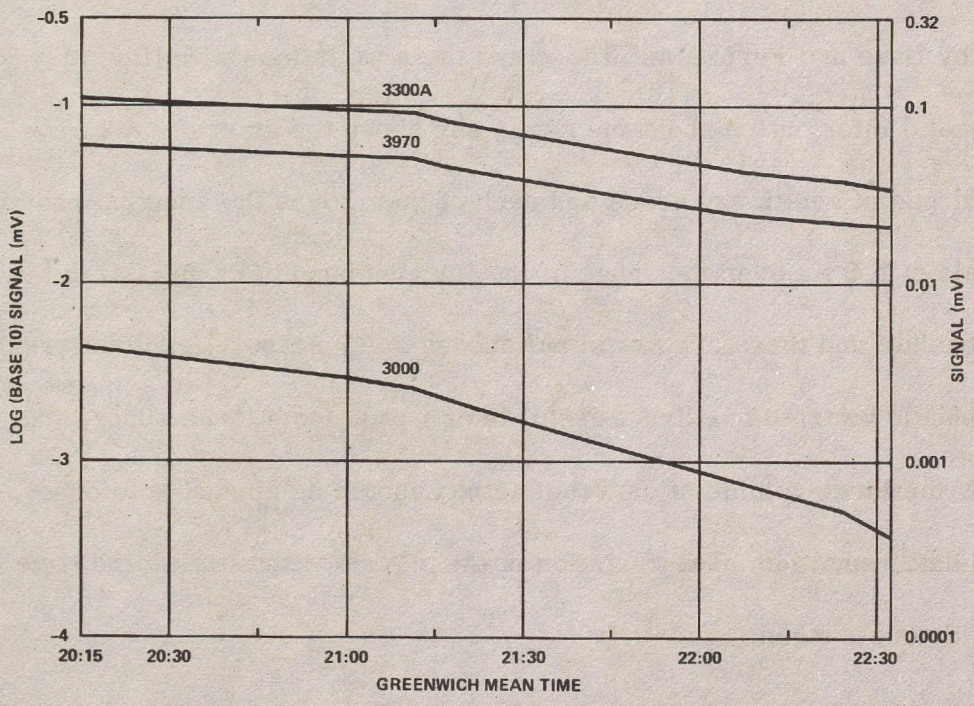

Figure 9. Zenith Signal Versus Time - Computed Values for Same Altitude and Zenith Angle as Panama Flight, April 19, 1974 (NCAR, Dave and Furukawa)

The three curves of Figure 9 show a downward slope. If the two Figures 8 and 9 are superposed on each other we observe many similarities and also a few dissimilarities. The signal at 3000 A decreases more rapidly than those at the two other wavelengths; the decrease is slightly greater for the observed signals than for those computed. The ratio of the signals at 3300 A and 3970 A at any given time is greater in the observed signals than in the computed signals. The differences between observed and computed signals can readily be explained as due to the ozone profile during the flight time being different from the model assumed by Dave and Furukawa. These and their variations with time may provide useful information about the zenith sky above the aircraft. We have many hundreds of zenith sky scans and each of them gives the spectral radiance at intervals of 1.9 A, over the range of the Huggins band of ozone; but the values are not absolute and there are few simultaneous solar scans. Hence different methods should be tried to extract useful information from these scans, and because of the large volume of data the method should be amenable to computerized data reduction. The variation of the signals with altitude and time may provide one method.

Another method which was tried was to find the ratio of signals at two wavelengths from the same scan. This has some similarity to the Dobson method. Two ratio plots based on the same data as those of Figure 8 are shown in Figure 10. The upper and lower curves give the ratios of the signals at 3300A and 3970 A respectively to the signal at 3000 A on each of the zenith sky scans. About

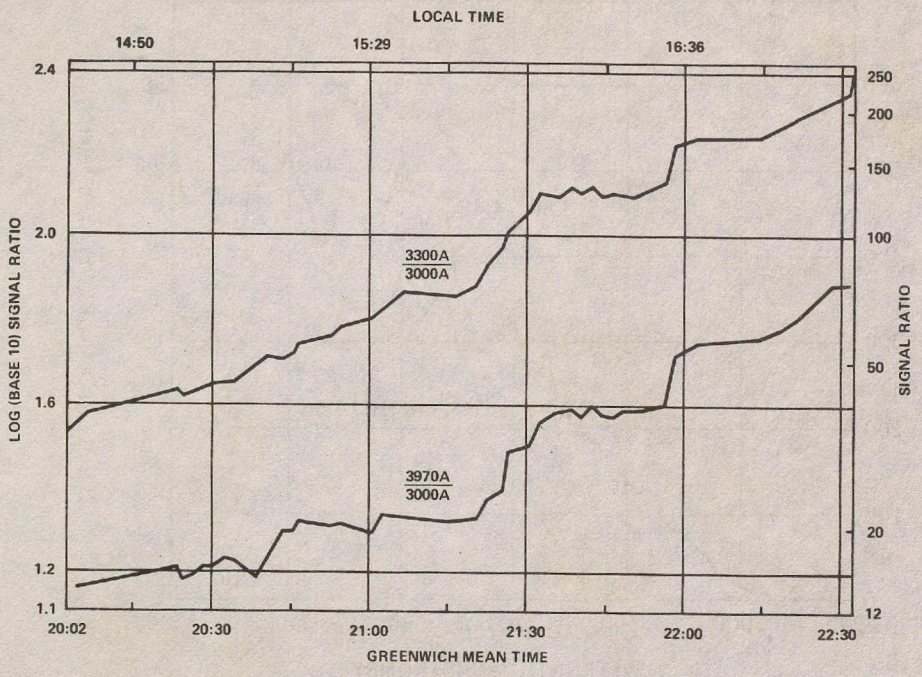

Figure 10. Ratio of Signals at 3300 A (Upper Curve) and 3970 A (Lower Curve) to Signal at 3000 A, From Zenith Sky Scans, Between 14:37 and 17:06 (Local Time) Panama Flight of April 19, 1974; Semilog Plots

ten of the ratios which seemed rather erratic were omitted from the graphs. We notice that during the two and a half hour flight the ratios with respect to the 3000 A signal changed from 30 to 250 for the signal at 3300 A and from 15 to 75 for the signal at 3970 A.

Valuable information can also be obtained from the solar scans which are relatively few and the zenith scans which were made shortly before or after the solar scans. Two such scans which were made on January 27, 1974 are shown in Figure 11. These are based on 10 A average printouts. The signals have been

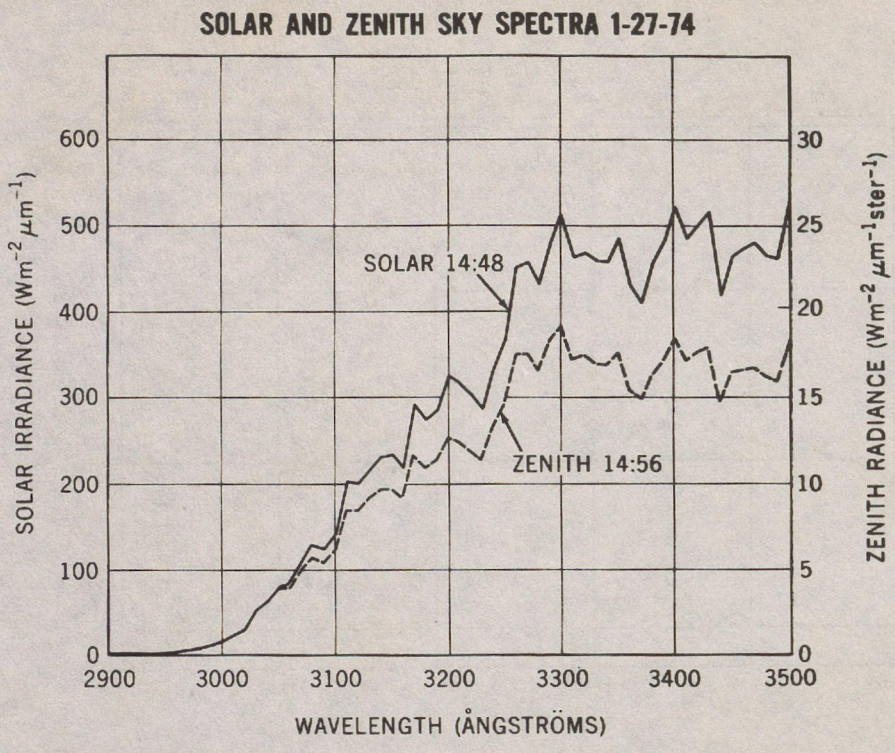

Figure 11. Solar and Zenith Sky Spectra, January 27, 1974

corrected for the spectral sensitivity of the BUV. The units for solar irradiance are $Wm^{-2}\ \mu m^{-1}$ and are given on the left; and the zenith sky irradiance, $Wm^{-2}\ \mu m^{-1}\ ster^{-1}$, are given on the right. Because of the drift problem the numerical values are not strictly correct and will have to be multiplied by a factor not yet determined. The same data on semilog scale are shown on Figure 12. These two figures should be compared with Figures 13 and 14 which show similar data of the same date taken about half hour later. The solar irradiance values are lower than might be expected and this may be due to instrument drift.

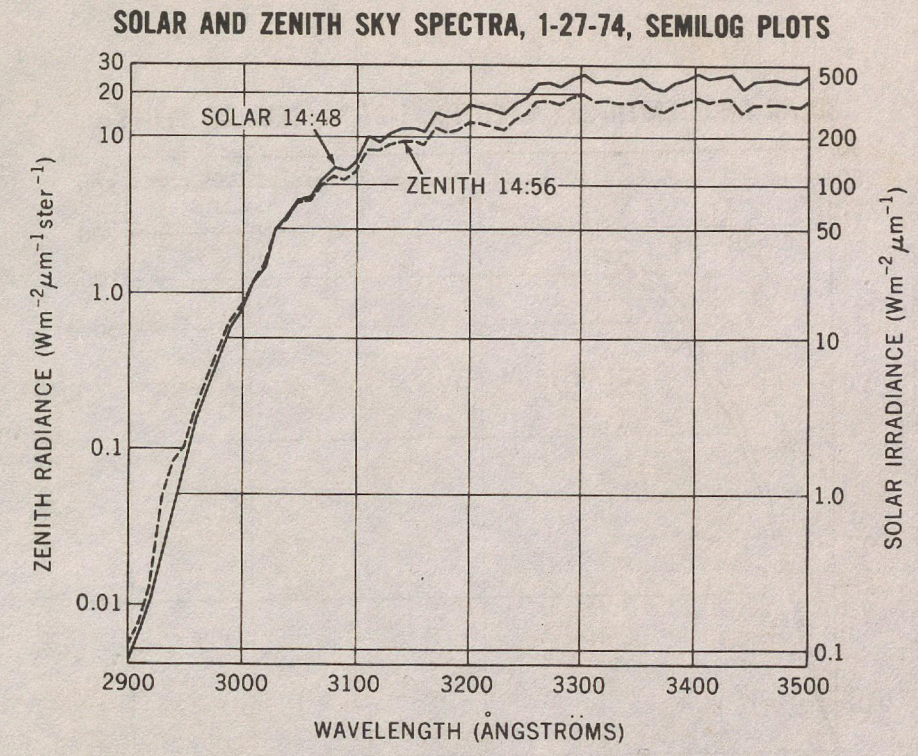

Figure 12. Solar and Zenith Sky Spectra, January 27, 1974, Semilog Plots

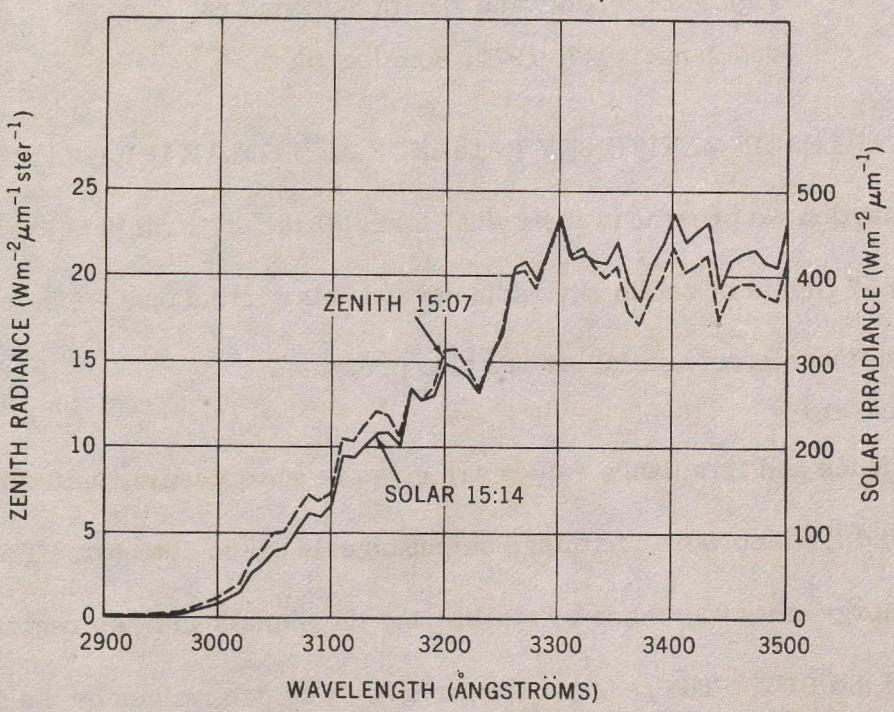

Figure 13. Solar and Zenith Sky Spectra, January 27, 1974

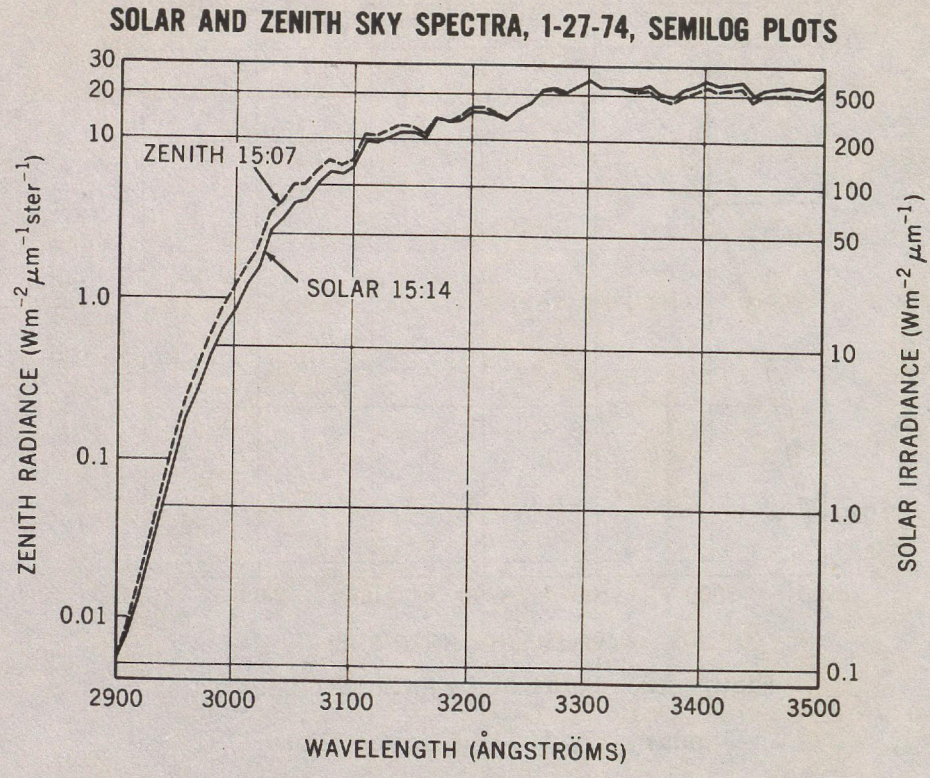

Figure 14. Solar and Zenith Sky Spectra, January 27, 1974, Semilog Plots

IX. TABLES OF ZENITH SKY RADIANCE AND SOLAR IRRADIANCE

In this section we present in their final form all the spectral data available from the RB 57 flights of zenith sky radiance and solar irradiance. Other relevant data for using these spectrum tables are also presented.

The radiance and irradiance values are given in energy units, unlike those in Tables I and II which were in voltage output signals of the detector. The conversion to energy units was made by multiplying the signals with the reciprocal sensitivity of the BUV. The reciprocal sensitivity was determined by the methods

discussed in Section III. Calibration scans made at different times did not yield identical results because of the drift problem. The values which were used are given in Table V and in Figure 15. These are based on the averages of many calibration scans. This method of averaging between several calibration curves which are all of the same shape but are displaced with respect to one another is justified in view of the normalization procedure discussed later (all spectral curves are normalized to unity at 3500 A).

Table V.

Reciprocal Sensitivity for Direct Solar Irradiance and Zenith Sky Radiance

λ_A wavelength in Ångströms

$R_D \times V$ is solar irradiance in $Wm^{-2}\ \mu m^{-1}$

$R_Z \times V$ is zenith sky radiance in $Wm^{-2}\ \mu m^{-1}\ ster^{-1}$

V is voltage signal averaged for 10 A bandwidths

λ_A	R_D	R_Z
2800	56.6	153.4
2900	53.0	148.8
3000	49.7	143.2
3100	47.8	138.6
3200	46.5	136.9
3300	47.1	140.3
3400	48.1	145.4
3500	49.4	150.3
3600	51.0	156.4
3700	52.7	165.2
3800	54.6	172.0
3900	57.2	179.6
4000	60.1	191.0

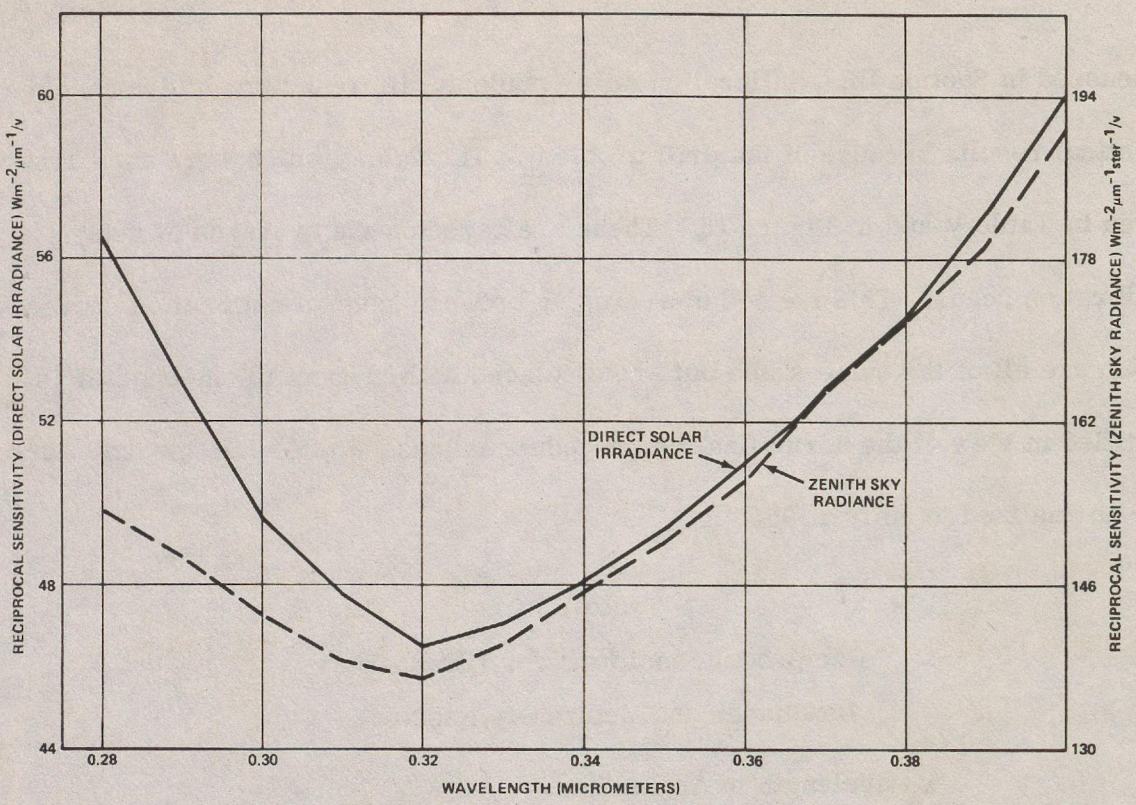

Figure 15. Reciprocal Sensitivity of BUV Spectrometer for Direct Solar Irradiance (Upper curve, thin line) and for Zenith Sky Radiance (Lower curve, thick line)

In Table V the values of reciprocal sensitivity are at 100 A (0.01 μm) whereas in the spectrum tables the radiance or irradiance is at intervals of 10 A. The values of reciprocal sensitivity at intermediate wavelengths were determined by linear interpolation.

A sample of the printout of the INS (inertial navigational system) of the aircraft was given in Table IV. INS data are available at 10 sec intervals. For purposes of this report data at one minute intervals were printed out for five variables, time, latitude, longitude, altitude and true heading. The other

columns of Table IV were not considered important for analysis of the spectral data. These condensed INS data are given in Table VI-1 through Table VI-13. There are a few erroneous values which can be readily detected. These were caused by illegal entries in the original tape record of the aircraft. The headings of the columns are self-explanatory. Time is hours, minutes and seconds, GMT. Latitude is in degrees, positive or negative according as the location is north or south of the equator. Longitude is also in degrees and is negative since all flights were west of Greenwich. The altitude is in feet. The final column is not highly significant for the purpose of this report.

A parameter which is highly significant is the zenith angle of the Sun. The zenith angle, Z, is dependent on three parameters, latitude Θ, solar declination δ and hour angle h.

$$\cos Z = \sin \theta \sin \delta + \cos \theta \cos \delta \cos h \qquad (2)$$

When h = 0, that is local noon, Equation 2 reduced to $Z = \theta - \delta$, the difference between the latitude of the place and the solar declination for the day. By local noon is meant the time the Sun crosses the meridian. Values of declination for each day of the year are available in the American Ephemeris and Nautical Almanac and also in more readily available almanacs and year books. The hour angle is the angle measured in the plane in which the Sun apparently moves; it is the angle between two lines from the observer, to the position of the Sun at the local noon and to the actual position of the Sun. Since the Sun's apparent rotation is 15° per hour, the hour angle in degrees is $h = 15\ (t - t_n)$, where t is the time

Table VI-1

INS Data for the RB 57 Flights

of 6/5/73 and 9/10/73

SUMMARY OF INS FLIGHT LOG FOR 6/ 5/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
12.15. 0	8.993	-79.170	25240.	71.19
12.15.58	9.033	-79.114	28080.	48.14
12.16.55	9.083	-79.061	30320.	43.56
12.17.53	9.143	-79.010	32280.	36.78
12.18.51	9.205	-78.958	34540.	37.75
12.19.48	9.266	-78.906	36760.	36.08
12.20.46	9.330	-78.851	38620.	36.70
12.21.43	9.398	-78.793	40220.	36.43
12.22.41	9.465	-78.737	42200.	35.02
12.24.27	9.571	-78.627	45900.	48.66
12.25.24	9.610	-78.552	47260.	63.36
12.26.22	9.640	-78.467	48240.	68.64
12.27.19	9.671	-78.376	48840.	68.38
12.28.17	9.706	-78.279	49320.	67.67
12.29.15	9.743	-78.177	49880.	66.70
12.30.12	9.780	-78.074	51060.	66.35
12.31.10	9.826	-77.975	52200.	58.34
12.32. 7	9.866	-77.889	52640.	57.90
12.33.24	9.958	-77.749	53280.	57.20
12.34.22	10.017	-77.657	53540.	56.67
12.35.19	10.077	-77.586	53320.	51.04
12.36.17	10.143	-77.481	53420.	49.28
12.37.15	10.212	-77.399	53460.	45.94
12.38.12	10.287	-77.318	53300.	43.21
12.39.10	10.364	-77.243	53640.	42.42
12.40. 7	10.438	-77.162	53520.	47.34
12.41.24	10.533	-77.046	53540.	47.08
12.42.41	10.635	-76.938	53560.	45.94
12.43.39	10.707	-76.854	53780.	49.02
12.44.36	10.772	-76.762	53800.	55.35
12.45.34	10.832	-76.666	53660.	55.97
12.46.31	10.895	-76.570	53340.	54.38
12.47.29	10.958	-76.478	53540.	53.24
12.48.27	11.022	-76.386	53360.	54.38
12.49.24	11.081	-76.293	53300.	54.65
12.50.22	11.109	-76.234	53300.	53.59
12.51.29	11.109	-76.234	53420.	54.03
12.52.27	11.109	-76.234	53320.	54.47
12.53.24	11.109	-76.234	53380.	53.77
12.54.22	11.388	-75.820	53260.	53.77
12.55.19	11.447	-75.725	53180.	54.12
12.56.17	11.505	-75.630	53060.	54.21
12.57.15	11.564	-75.534	53160.	53.68
12.58.12	11.624	-75.439	53180.	54.03
12.59.10	11.684	-75.342	53000.	52.18
13. 0.17	11.761	-75.232	53120.	50.16
13. 1.15	11.828	-75.140	53040.	49.37
13. 2.12	11.896	-75.047	53000.	48.49
13. 3.10	11.968	-74.958	52900.	43.38
13. 4. 8	12.047	-74.877	52960.	41.62
13. 5. 5	12.125	-74.800	53240.	42.59
13. 6. 3	12.199	-74.719	53240.	44.00
13. 7. 0	12.274	-74.638	53160.	43.47
13. 7.58	12.350	-74.557	53060.	42.86
13. 9.15	12.451	-74.454	53100.	43.21
13.10.12	12.519	-74.376	53180.	43.12
13.11.10	12.519	-74.372	53160.	42.94
13.12. 7	12.519	-74.372	52860.	43.30
13.13. 5	12.519	-74.372	53140.	42.86
13.14. 3	12.836	-74.067	52940.	43.21
13.15. 0	12.912	-73.988	53040.	43.03
13.15.58	12.989	-73.908	52880.	43.12
13.16.56	13.067	-73.828	52980.	42.50
13.18.22	13.184	-73.709	52960.	43.30
13.19.20	13.261	-73.625	53000.	43.03
13.20.17	13.341	-73.546	52980.	41.45
13.21.15	13.420	-73.470	53200.	41.62
13.22.12	13.498	-73.393	53300.	42.77
13.23.10	13.575	-73.313	52800.	43.56
13.24. 8	13.652	-73.233	53160.	42.06
13.25. 5	13.732	-73.156	0.	42.15
13.26. 3	13.811	-73.075	52900.	42.94
13.27.20	13.914	-72.969	52900.	40.48
13.28.17	13.981	-72.884	53100.	56.50
13.29.15	14.017	-72.780	53280.	71.54
13.30.12	14.050	-72.670	52940.	70.49
13.31.10	14.086	-72.561	52940.	69.34
13.32. 8	14.120	-72.454	53000.	70.22
13.33. 5	14.154	-72.342	52920.	70.40
13.34. 3	14.190	-72.234	53120.	68.99
13.35. 0	14.227	-72.127	53380.	69.17
13.36.27	14.282	-71.968	53180.	70.05
13.37.24	14.318	-71.861	53280.	69.17
13.38.22	14.355	-71.755	53400.	68.99
13.39.20	14.392	-71.648	0.	0.0
13.40.17	14.429	-71.540	0.	0.0
13.41.15	14.468	-71.434	0.	68.73
13.42.12	14.507	-71.326	53140.	69.17
13.43.10	14.547	-71.220	53320.	68.38
13.44. 8	14.588	-71.117	53740.	68.64
13.45.15	14.633	-70.996	0.	69.08
13.46.12	14.672	-70.891	53660.	68.99
13.47.10	14.711	-70.785	53320.	68.46
13.48. 8	14.753	-70.682	53760.	68.11
13.49. 5	14.792	-70.580	0.	68.73
13.50. 3	14.825	-70.478	53500.	69.34
13.51. 0	14.825	-70.478	53140.	68.64
13.51.58	14.825	-70.478	53000.	68.20
13.52.56	14.956	-70.154	53060.	68.02
13.53.53	14.989	-70.044	52940.	74.71

SUMMARY OF INS FLIGHT LOG FOR 9/10/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
14.47.41	-32.808	-68.746	0.	0.0
15.48.29	-32.813	-68.740	2400.	-0.35
15.49.26	-32.780	-68.736	2940.	40.74
15.50.24	-32.787	-68.684	7040.	116.07
15.51.22	-32.813	-68.624	10940.	112.99
15.52.19	-32.839	-68.556	15000.	116.95
15.53.17	-32.871	-68.486	18900.	118.71
15.54. 5	-32.896	-68.429	22360.	126.37
15.55. 2	-32.916	-68.349	25580.	108.42
15.56. 0	-32.938	-68.261	28780.	108.86
15.56.58	-32.967	-68.170	31520.	116.51
15.57.55	-33.003	-68.073	34120.	116.34
15.58.53	-33.037	-67.971	36420.	113.96
15.59.50	-33.069	-67.859	38480.	111.76
16. 0.38	-33.096	-67.762	39980.	110.62
16. 1.36	-33.130	-67.644	41660.	111.41
16. 2.53	-33.180	-67.486	44020.	111.41
16. 3.50	-33.215	-67.363	45240.	112.20
16. 4.48	-33.257	-67.239	46420.	114.49
16. 6. 5	-33.310	-67.058	45860.	110.70
16. 7. 2	-33.349	-66.924	48060.	110.53
16. 7.50	-33.382	-66.815	49800.	111.76
16. 8.48	-33.420	-66.688	51140.	111.67
16. 9.46	-33.462	-66.557	51940.	111.06
16.10.43	-33.502	-66.424	52040.	108.86
16.11.41	-33.539	-66.287	53420.	107.01
16.12.38	-33.575	-66.147	53340.	107.01
16.13.36	-33.597	-66.004	54920.	100.94
16.14.24	-33.616	-65.883	55560.	101.29
16.15.22	-33.638	-65.737	56100.	101.11
16.16.19	-33.664	-65.590	56440.	105.34
16.17.17	-33.704	-65.446	57000.	109.30
16.18.15	-33.744	-65.303	57600.	109.56
16.19.31	-33.793	-65.115	58120.	108.42
16.20.29	-33.822	-64.974	58600.	101.99
16.21. 7	-33.837	-64.882	59800.	102.08
16.22. 5	-33.865	-64.745	60120.	102.26
16.23. 2	-33.892	-64.609	60400.	101.99
16.24. 0	-33.919	-64.474	60580.	102.08
0. 0.33	0.0	0.0	0.	0.0
16.26. 5	-33.977	-64.181	60500.	101.38
16.27. 2	-34.003	-64.043	60620.	101.73
16.28. 0	-34.029	-63.907	60820.	101.55
16.28.58	-34.055	-63.772	60900.	101.73
16.29.55	-34.081	-63.636	60900.	101.46
16.30.53	-34.106	-63.497	60820.	101.20
16.31.51	-34.128	-63.359	60840.	100.85
16.32.48	-34.151	-63.219	60720.	100.85
16.33.46	-34.175	-63.077	60840.	100.67
16.34.34	-34.192	-62.959	60900.	100.32
16.35.31	-34.216	-62.818	61080.	100.58
16.36.29	-34.238	-62.677	61240.	100.50
16.37.27	-34.258	-62.537	61340.	100.23
16.38.24	-34.279	-62.395	61520.	100.14
16.39.22	-34.299	-62.255	61540.	100.06
16.40.19	-34.319	-62.114	61640.	99.97
16.40.58	-34.332	-62.021	61720.	100.06
16.41.55	-34.364	-61.881	61720.	102.08
16.43.12	-34.397	-61.697	61780.	106.92
16.44.10	-34.428	-61.561	61800.	106.66
16.45. 7	-34.461	-61.424	61840.	106.39
16.46. 5	-34.493	-61.287	61780.	106.22
16.47. 3	-34.523	-61.147	61540.	106.04
16.47.51	-34.552	-61.030	61580.	107.54
16.48.48	-34.645	-60.939	61460.	177.58
16.49.46	-34.733	-60.990	61300.	-131.03
16.51. 3	-34.832	-61.111	61600.	-131.03
16.52.19	-34.943	-61.218	61720.	-140.01
16.53.17	-35.031	-61.293	61600.	-139.83
16.54.15	-35.115	-61.369	62060.	-139.30
16.55. 2	-35.185	-61.432	62100.	-139.57
16.56. 0	-35.267	-61.506	62260.	-139.22
16.56.58	-35.351	-61.583	62200.	-139.13
16.57.55	-35.463	-61.658	0.	18.39
16.59.12	-35.547	-61.760	62260.	-138.86
17. 0.10	-35.632	-61.834	62380.	-139.22
17. 1. 7	-35.717	-61.911	62180.	-138.51
17. 1.55	-35.788	-61.975	62180.	-138.34
17. 2.53	-35.873	-62.054	62060.	-138.51
17. 3.51	-35.958	-62.132	62120.	-138.07
17. 4.48	-36.044	-62.211	62220.	-138.34
17. 5.46	-36.129	-62.291	62140.	-137.81
17. 6.43	-36.211	-62.369	62440.	-137.81
17. 7.41	-36.297	-62.449	62120.	-138.07
17. 8.29	-36.369	-62.516	62120.	-137.72
17. 9.27	-36.454	-62.598	62160.	-138.51
17.10.24	-36.542	-62.678	61980.	-140.10
17.11.22	-36.631	-62.756	61940.	-139.92
17.12.39	-36.750	-62.862	61880.	-139.48
17.13.36	-36.839	-62.941	62000.	-139.57
17.14.53	-36.957	-63.048	62020.	-139.48
17.15.31	-37.016	-63.099	62240.	-139.48
17.16.29	-37.107	-63.175	62260.	-139.39
17.17.27	-37.196	-63.250	62060.	-138.86
17.18.24	-37.285	-63.328	61800.	-138.86
17.19.22	-37.375	-63.408	62000.	-138.78
17.20.19	-37.464	-63.488	61780.	-138.95
17.21.17	-37.553	-63.566	62120.	-138.69
17.22. 5	-37.626	-63.633	62280.	-138.34
17.23. 3	-37.715	-63.714	61880.	-138.42

Table VI-2

INS Data for RB 57 Flight

of 9/10/73

SUMMARY OF INS FLIGHT LOG FOR 9/10/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
17.24. 0	-37.801	-63.798	61980.	-137.90
17.24.58	-37.888	-63.883	62240.	-137.98
17.25.55	-37.974	-63.969	62080.	-137.98
17.26.53	-38.061	-64.058	61820.	-137.37
17.27.51	-38.151	-64.148	61740.	-140.45
17.28.39	-38.228	-64.216	61880.	-140.62
17.29.36	-38.319	-64.296	61960.	-140.10
17.30.34	-38.408	-64.374	62520.	-139.74
17.31.31	-38.496	-64.454	62600.	-139.39
17.32.29	-38.585	-64.533	62340.	-139.74
17.33.46	-38.704	-64.637	62480.	-140.01
17.34.43	-38.793	-64.713	62420.	-139.57
17.35.31	-38.869	-64.776	62260.	-139.30
0. 0. 0	0.0	0.0	0.	0.0
17.37.36	-39.061	-64.938	62200.	-139.39
17.38.34	-39.149	-65.012	61960.	-136.14
17.39.51	-39.261	-65.125	61600.	-135.08
14.47.50	-32.808	-68.746	2100.	178.46
17.40.39	-39.331	-65.193	61820.	-135.26
17.41.36	-39.416	-65.276	61760.	-135.70
17.42.34	-39.499	-65.359	61640.	-134.55
17.43.31	-39.581	-65.444	61580.	-135.17
17.44.29	-39.662	-65.529	61780.	-134.99
17.45.27	-39.744	-65.614	61700.	-134.90
17.46.43	-39.853	-65.730	61400.	-134.99
17.47.41	-39.935	-65.815	61420.	-134.90
17.48.39	-40.017	-65.900	61560.	-134.46
17.49.36	-40.098	-65.985	61320.	-134.38
17.50.34	-40.181	-66.067	61340.	-134.29
17.51.51	-40.292	-66.177	61440.	-133.94
17.52.48	-40.374	-66.257	61500.	-134.38
17.53.36	-40.441	-66.324	61920.	-133.58
17.54.34	-40.522	-66.403	62440.	-133.58
17.55.31	-40.606	-66.482	61540.	-134.73
17.56.29	-40.687	-66.557	62620.	-133.76
17.57.27	-40.769	-66.631	62540.	-133.76
17.58.43	-40.881	-66.730	62240.	-133.67
17.59.41	-40.964	-66.807	61840.	-133.23
18. 0.39	-41.049	-66.884	61280.	-133.67
18. 1.36	-41.134	-66.962	61360.	-133.67
18. 2.34	-41.218	-67.046	61420.	-132.26
18. 3.31	-41.302	-67.129	61500.	-133.06
18. 4.48	-41.412	-67.241	61280.	-133.14
18. 5.46	-41.493	-67.324	61400.	-132.44
18. 6.43	-41.574	-67.409	61460.	-132.79
18. 7.31	-41.641	-67.481	61280.	-132.44
18. 8.29	-41.722	-67.564	61380.	-132.26
18. 9.27	-41.801	-67.647	62400.	-132.79
18.10.24	-41.884	-67.729	61940.	-132.00
18.11.22	-41.962	-67.813	62380.	-132.00
18.12.19	-42.040	-67.902	61600.	-131.03
18.13.17	-42.118	-67.995	61320.	-132.00
18.14. 5	-42.184	-68.067	61920.	-132.62
18.15. 3	-42.264	-68.148	62180.	-132.44
18.16. 0	-42.345	-68.229	61820.	-131.56
18.16.58	-42.452	-68.314	61520.	-131.65
18.18.15	-42.530	-68.427	61400.	-130.86
18.19.12	-42.610	-68.511	61540.	-131.56
18.20.10	-42.689	-68.598	61120.	-130.94
18.20.58	-42.755	-68.670	60880.	-130.77
18.21.56	-42.832	-68.757	61380.	-131.03
18.22.53	-42.909	-68.845	61480.	-130.86
18.23.51	-42.986	-68.932	61260.	-130.77
18.24.48	-43.064	-69.018	61500.	-130.68
18.25.46	-43.141	-69.109	61080.	-130.06
18.26.44	-43.217	-69.197	62000.	-130.86
18.27.22	-43.268	-69.254	62580.	-130.50
18.28.20	-43.349	-69.333	62740.	-133.85
18.29.17	-43.431	-69.407	62440.	-133.23
18.30.34	-43.537	-69.509	62180.	-131.82
18.31.32	-43.614	-69.584	62000.	-132.26
0. 4.20	-43.717	0.0	0.	0.0
18.33.46	-43.794	-69.775	61520.	-132.09
18.34.43	-43.871	-69.853	61200.	-131.91
18.35.41	-43.941	-69.933	61180.	-117.13
18.36.39	-43.938	-70.051	61300.	-69.78
18.37.36	-43.857	-70.124	61120.	-18.13
18.38.34	-43.755	-70.073	60780.	23.32
18.39.31	-43.659	-69.974	60540.	25.78
18.40.29	-43.563	-69.870	60860.	27.63
18.41.17	-43.484	-69.782	61080.	28.07
18.42.15	-43.388	-69.675	61080.	28.42
18.43.12	-43.293	-69.565	61380.	28.86
18.44.10	-43.195	-69.462	61300.	14.78
18.45. 8	-43.090	-69.413	61680.	3.43
18.46. 5	-42.984	-69.378	61860.	2.90
18.47. 3	-42.876	-69.345	61100.	2.73
18.47.41	-42.803	-69.324	61220.	2.64
18.48.39	-42.697	-69.291	61180.	2.55
18.49.36	-42.593	-69.259	61220.	2.82
18.50.34	-42.489	-69.229	61200.	2.38
18.51.32	-42.382	-69.196	61200.	2.29
18.52.29	-42.279	-69.162	62080.	2.02
18.53.27	-42.175	-69.130	61520.	1.94
18.54.15	-42.087	-69.108	61140.	1.58
18.55.12	-41.982	-69.079	61440.	1.23
18.56.10	-41.877	-69.049	60760.	1.32
18.57. 8	-41.771	-69.018	61460.	1.23
18.58. 5	-41.665	-68.986	61360.	1.50
18.59. 3	-41.560	-68.956	61140.	2.02

SUMMARY OF INS FLIGHT LOG FOR 9/10/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
19. 0. 0	-41.456	-68.932	61220.	1.23
19. 0.48	-41.369	-68.913	61140.	1.32
19. 1.46	-41.263	-68.890	61940.	0.88
19. 3. 3	-41.126	-68.858	62600.	0.88
19. 4. 0	-41.022	-68.836	62340.	0.62
19. 5.17	-40.882	-68.808	61640.	0.70
19. 6.15	-40.775	-68.787	61120.	3.96
19. 7.12	-40.669	-68.754	61080.	5.19
19. 8. 0	-40.581	-68.724	61840.	5.90
19. 8.58	-40.474	-68.688	60620.	5.98
19. 9.56	-40.369	-68.654	61380.	5.72
19.10.53	-40.263	-68.620	62380.	5.63
19.11.51	-40.157	-68.583	61880.	5.63
19.12.48	-40.050	-68.547	62180.	5.46
19.13.46	-39.946	-68.511	62700.	5.28
19.14.24	-39.876	-68.488	62720.	5.37
19.15.22	-39.770	-68.452	62560.	5.46
19.16.20	-39.665	-68.418	62680.	5.19
19.17.17	-39.561	-68.381	62620.	5.02
19.18.15	-39.456	-68.345	62680.	5.28
19.19.12	-39.352	-68.309	62620.	5.10
19.20.10	-39.246	-68.275	62740.	-7.92
19.20.58	-39.158	-68.267	62740.	3.34
19.21.56	-39.053	-68.238	62540.	3.78
19.22.53	-38.946	-68.204	61940.	4.75
19.23.51	-38.837	-68.172	62480.	4.40
19.24.48	-38.729	-68.138	62660.	4.49
19.25.46	-38.619	-68.104	62280.	4.22
19.26.44	-38.511	-68.086	62160.	-11.35
19.27.32	-38.423	-68.093	62600.	-13.11
19.28.29	-38.317	-68.102	62700.	-13.29
19.29.27	-38.209	-68.111	62480.	-12.85
19.30.24	-38.100	-68.121	62620.	-14.43
19.31.22	-37.996	-68.132	63060.	-13.02
19.32.20	-37.891	-68.141	62860.	-9.94
19.33.17	-37.785	-68.156	62820.	-12.85
19.34. 5	-37.697	-68.168	62600.	-13.64
19.35. 3	-37.558	-68.179	63060.	-12.41
19.36.20	-37.454	-68.193	63080.	-12.67
19.37.17	-37.353	-68.205	63440.	-12.58
19.38.34	-37.215	-68.226	63120.	-12.85
19.39.32	-37.111	-68.234	64000.	-10.38
19.40.29	-37.005	-68.238	63540.	-9.15
19.41.17	-36.918	-68.242	64000.	-9.42
19.42.15	-36.811	-68.250	63140.	-9.42
19.43.12	-36.702	-68.260	63200.	-9.33
19.44.10	-36.595	-68.272	63620.	-10.38
19.45. 8	-36.488	-68.281	63520.	-10.03
19.46. 5	-36.380	-68.289	63200.	-10.47
19.47. 3	-36.274	-68.293	63340.	-9.77
19.47.41	-36.203	-68.294	63540.	-9.86
19.48.39	-36.096	-68.300	63140.	-10.65
19.49.36	-35.989	-68.304	63220.	-9.77
19.50.34	-35.882	-68.311	63280.	-10.03
19.51.32	-35.772	-68.319	63300.	-9.24
19.52.29	-35.665	-68.333	63060.	-11.00
19.53.27	-35.558	-68.345	63140.	-10.56
19.54.15	-35.469	-68.353	63200.	-10.21
19.55.12	-35.359	-68.366	63080.	-10.12
19.56.10	-35.250	-68.379	63060.	-9.77
19.57. 8	-35.143	-68.396	62940.	-9.77
19.58. 5	-35.038	-68.414	63060.	-9.94
19.59. 3	-34.931	-68.432	63360.	-10.47
20. 0. 0	-34.822	-68.447	62980.	-10.03
20. 0.48	-34.732	-68.460	62840.	-10.47
20. 1.46	-34.625	-68.477	63560.	-10.65
20. 2.44	-34.518	-68.491	63880.	-10.30
20. 3.41	-34.409	-68.508	63140.	-12.85
20. 4.39	-34.302	-68.530	63660.	-13.38
20. 5.36	-34.197	-68.559	63300.	-28.34
20. 6.53	-34.070	-68.637	63000.	-31.42
20. 7.41	-33.992	-68.690	62680.	-32.12
20. 8.58	-33.869	-68.779	62880.	-32.47
20. 9.56	-33.773	-68.842	62780.	-23.32
20.10.53	-33.666	-68.852	62860.	8.98
20.12.10	-33.523	-68.814	62240.	6.07
20.13. 8	-33.421	-68.782	61800.	4.66
20.14. 5	-33.320	-68.758	59840.	-2.38
20.14.44	-33.255	-68.757	58140.	5.02
20.15.41	-33.156	-68.723	54520.	7.13
20.16.39	-33.059	-68.688	52640.	9.06
20.17.36	-32.962	-68.657	52200.	7.13
20.18.34	-32.864	-68.626	52480.	6.95
20.19.32	-32.765	-68.595	51800.	6.86
20.20.29	-32.665	-68.561	52200.	6.95
20.21.17	-32.582	-68.533	51900.	7.04
20.22.15	-32.481	-68.517	51520.	-2.64
20.23.13	-32.380	-68.507	51820.	-6.86
20.24.10	-32.280	-68.508	51880.	-8.36
20.25. 8	-32.179	-68.510	51900.	-8.80

Table VI-3

INS Data for RB 57 Flight

of 9/12/73

SUMMARY OF INS FLIGHT LOG FOR 9/12/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
22.35.51	-32.808	-68.746	2320.	179.43
22.36.49	-32.808	-68.746	2320.	179.52
22.37.46	-32.808	-68.746	2300.	179.52
22.38.44	-32.808	-68.746	2300.	179.52
22.39.42	-32.808	-68.746	2280.	179.52
22.40.39	-32.808	-68.746	2280.	179.61
22.41.37	-32.808	-68.746	2280.	179.52
22.42.25	-32.808	-68.746	2280.	179.70
22.43.22	-32.808	-68.746	2260.	179.70
22.44.20	-32.809	-68.746	2300.	179.70
22.45.18	-32.809	-68.746	2280.	179.70
23. 2.34	-32.812	-68.744	2300.	179.61
23. 3.32	-32.813	-68.744	2300.	179.70
23. 4.30	-32.813	-68.744	2260.	179.70
23. 5.18	-32.813	-68.744	2280.	179.78
23. 6.15	-32.813	-68.744	2280.	179.70
23. 7.13	-32.813	-68.744	2280.	179.78
23. 8.10	-32.815	-68.744	2300.	179.78
23. 9. 8	-32.815	-68.744	2300.	179.70
23.10. 6	-32.815	-68.744	2200.	179.70
23.11. 3	-32.815	-68.744	2280.	179.70
23.16.10	-32.818	-68.744	2300.	179.78
23.17. 8	-32.818	-68.744	2300.	179.70
23.18. 6	-32.818	-68.744	2300.	179.70
23.19. 3	-32.818	-68.744	2280.	179.70
23.20. 1	-32.819	-68.744	2320.	179.70
23.20.58	-32.819	-68.744	2320.	179.70
18.25.49	-27.849	-67.630	54240.	-0.26
18.26.37	-27.760	-67.617	53760.	-0.26
18.27.35	-27.653	-67.600	52980.	2.29
18.28.32	-27.546	-67.584	53020.	2.29
18.29.49	-27.401	-67.567	52920.	6.34
18.30.47	-27.294	-67.555	53240.	-1.06
18.31.44	-27.190	-67.544	53340.	0.26
18.32.42	-27.087	-67.527	53300.	0.26
18.33.49	-26.969	-67.505	52660.	0.26
18.34.47	-26.865	-67.482	51860.	1.67
18.35.44	-26.761	-67.460	51460.	1.58
18.36.42	-26.656	-67.438	51520.	3.17
18.37.39	-26.551	-67.416	51660.	2.20
18.38.37	-26.446	-67.393	51320.	1.76
18.39.35	-26.341	-67.367	51520.	2.46
18.40.22	-26.253	-67.343	51500.	1.67
18.41.20	-26.157	-67.319	51660.	1.58
18.42.18	-26.064	-67.295	51520.	1.14
18.43.15	-25.970	-67.275	51540.	1.23
18.44.13	-25.874	-67.257	51200.	1.32
18.45.11	-25.773	-67.241	51220.	1.14
18.46. 8	-25.667	-67.224	51240.	0.79
18.46.56	-25.579	-67.210	50720.	1.23
18.47.54	-25.472	-67.193	50940.	1.41
18.48.51	-25.368	-67.179	50660.	0.88
18.49.49	-25.264	-67.164	50920.	0.79
18.50.47	-25.157	-67.146	51880.	0.88
18.51.44	-25.049	-67.129	51960.	0.88
18.52.42	-24.940	-67.112	51660.	0.70
18.53.30	-24.849	-67.099	51280.	0.70
18.54.27	-24.741	-67.083	51220.	0.70
18.55.25	-24.631	-67.066	51340.	1.06
18.56.42	-24.483	-67.047	51280.	1.06
18.57.39	-24.372	-67.032	51140.	3.52
18.58.37	-24.262	-67.010	51860.	3.87
18.59.54	-24.122	-66.974	53220.	7.13
19. 0.32	-24.051	-66.958	53140.	4.84
19. 1.30	-23.946	-66.936	53100.	3.43
19. 2.27	-23.841	-66.922	51900.	-0.18
19. 3.25	-23.735	-66.914	50960.	-2.02
19. 4.23	-23.628	-66.904	51240.	-1.76
19. 5.20	-23.521	-66.895	51120.	-3.52
19. 6.18	-23.415	-66.895	51120.	-7.48
19. 7. 6	-23.329	-66.896	51180.	-6.78
19. 8. 3	-23.226	-66.900	51200.	-7.30
19. 9. 1	-23.122	-66.903	50940.	-8.36
19. 9.59	-23.020	-66.906	51100.	-7.66
19.10.56	-22.917	-66.910	52040.	-7.57
19.11.54	-22.813	-66.915	51880.	-7.83
19.12.51	-22.707	-66.918	52000.	-6.42
19.13.39	-22.621	-66.922	51860.	-7.48
19.14.37	-22.515	-66.926	51300.	-7.39
19.15.35	-22.411	-66.930	51660.	-7.83
19.16.32	-22.306	-66.936	51600.	-8.10
19.17.30	-22.201	-66.937	50980.	-6.95
19.18.27	-22.095	-66.941	50880.	-8.01
19.19.25	-21.988	-66.944	50920.	-8.01
19.20.13	-21.899	-66.947	51760.	-7.83
19.21.11	-21.792	-66.951	51880.	-7.22
19.22. 8	-21.684	-66.955	51680.	-8.01
19.23. 6	-21.575	-66.959	51620.	-7.74
19.24. 3	-21.468	-66.967	51560.	-18.39
19.25. 1	-21.373	-67.009	51580.	-32.38
19.25.59	-21.281	-67.058	51700.	-33.00
19.26.56	-21.192	-67.110	51620.	-33.18
19.27.54	-21.102	-67.164	51640.	-33.53
19.28.51	-20.980	-67.217	51760.	-33.00
19.30. 8	-20.889	-67.286	52560.	-33.44
19.31. 6	-20.797	-67.338	52440.	-32.65
19.32. 3	-20.706	-67.390	52980.	-32.65
19.33. 1	-20.616	-67.444	53000.	-33.26
19.33.49	-20.540	-67.488	52520.	-33.70
19.34.47	-20.450	-67.540	51380.	-33.70

SUMMARY OF INS FLIGHT LOG FOR 9/12/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
19.35.44	-20.363	-67.597	51940.	-38.28
19.36.42	-20.278	-67.658	51580.	-37.58
19.37.39	-20.193	-67.718	51240.	-38.28
19.38.37	-20.108	-67.777	51080.	-38.37
19.39.35	-20.022	-67.837	51320.	-38.10
19.40.13	-19.964	-67.877	51080.	-37.75
19.41.11	-19.878	-67.938	51620.	-37.93
19.42. 8	-19.791	-67.997	51020.	-38.10
19.43. 6	-19.708	-68.056	51520.	-38.10
19.44. 3	-19.621	-68.115	51440.	-37.93
19.45. 1	-19.535	-68.174	52100.	-37.93
19.45.59	-19.450	-68.234	51740.	-37.84
19.46.47	-19.378	-68.283	51860.	-37.75
19.47.44	-19.290	-68.342	51960.	-33.79
19.48.42	-19.200	-68.393	51760.	-32.65
19.49.39	-19.107	-68.444	51760.	-32.21
19.50.37	-19.015	-68.496	51540.	-32.56
19.51.35	-18.924	-68.548	51320.	-33.00
19.52.32	-18.836	-68.600	51920.	-32.82
19.53.20	-18.763	-68.643	51040.	-32.91
19.54.18	-18.676	-68.694	51140.	-32.82
19.55.15	-18.586	-68.743	51280.	-32.56
19.56.13	-18.497	-68.794	51560.	-32.38
19.57.11	-18.408	-68.845	51340.	-32.65
19.58. 8	-18.319	-68.894	51040.	-32.47
19.59.25	-18.199	-68.963	51540.	-32.47
20. 0.13	-18.125	-69.005	51400.	-32.38
20. 1.30	-18.005	-69.074	51200.	-32.47
20. 2.27	0.0	-69.126	51040.	-32.21
20. 3.25	-17.824	-69.178	51440.	-32.30
20. 4.23	-17.732	-69.230	51440.	-32.47
20. 5.20	-17.641	-69.282	51520.	-32.21
20. 6.18	-17.550	-69.336	51300.	-32.21
20. 7. 6	-17.474	-69.381	51400.	-32.47
20. 8. 3	-17.383	-69.435	51380.	-31.94
20. 9. 1	-17.292	-69.490	51320.	-32.56
20. 9.59	-17.201	-69.544	51500.	-31.94
20.10.56	-17.114	-69.605	51000.	-38.19
20.11.54	-17.029	-69.669	51260.	-37.84
20.12.51	-16.943	-69.731	50880.	-37.66
20.13.30	-16.885	-69.774	50540.	-37.31
20.14.27	-16.800	-69.837	50880.	-37.40
20.15.25	-16.713	-69.901	50600.	-37.31
20.16.23	-16.628	-69.966	50840.	-37.66
20.17.20	-16.540	-70.030	51940.	-37.31
20.18.18	-16.454	-70.097	52200.	-37.66
20.19.16	-16.368	-70.162	51760.	-36.70
20.20. 3	-16.295	-70.217	51720.	-37.40
20.21. 1	-16.208	-70.281	51480.	-37.22
20.21.59	-16.121	-70.347	51740.	-37.49
20.22.56	-16.034	-70.412	51020.	-37.31
20.23.54	-15.946	-70.476	51440.	-37.40
20.24.51	-15.860	-70.541	51400.	-37.31
20.25.49	-15.773	-70.604	50960.	-36.96
20.26.56	-15.672	-70.678	51260.	-37.14
20.27.54	-15.585	-70.741	51560.	-37.22
0. 0. 0	-15.470	0.0	0.	0.0
20.30. 8	-15.384	-70.889	51460.	-37.49
20.31. 6	-15.297	-70.952	51600.	-37.05
20.32. 4	-15.211	-71.017	51560.	-36.70
20.33.11	-15.112	-71.091	51740.	-37.22
20.34. 8	-15.028	-71.155	52100.	-37.31
20.35. 6	-14.943	-71.220	52380.	-36.96
20.36. 4	-14.857	-71.284	52960.	-37.40
20.37. 1	-14.768	-71.349	54560.	-36.78
20.37.59	-14.678	-71.416	55520.	-37.05
20.38.56	-14.589	-71.481	56640.	-34.23
20.39.44	-14.512	-71.531	57360.	-32.56
20.40.42	-14.420	-71.593	57840.	-32.12
20.41.40	-14.331	-71.655	58940.	-32.56
20.42.37	-14.242	-71.714	60120.	-37.05
20.43.35	-14.153	-71.772	60660.	-31.15
20.44.32	-14.064	-71.832	61120.	-33.70
20.45.30	-13.976	-71.894	61340.	-34.14
20.46.18	-13.905	-71.946	61640.	-34.14
20.47.16	-13.818	-72.008	61840.	-35.38
20.48.13	-13.733	-72.071	62480.	-32.21
20.49.11	-13.648	-72.131	62460.	-33.09
20.50. 8	-13.559	-72.186	62440.	-24.55
20.51. 6	-13.465	-72.233	62620.	-22.35
20.52. 4	-13.372	-72.278	63040.	-24.20
20.52.52	-13.295	-72.316	63000.	-23.67
20.53.49	-13.203	-72.362	63260.	-25.34
20.54.47	-13.113	-72.406	63260.	-22.88
20.55.44	-13.021	-72.451	63020.	-23.06
20.56.42	-12.929	-72.497	62980.	-23.32
20.57.40	-12.838	-72.543	63420.	-25.78
20.58.37	-12.746	-72.588	63280.	-28.78
20.59.25	-12.670	-72.626	63240.	-22.97
21. 0.23	-12.573	-72.672	63200.	-23.32
21. 1.20	-12.480	-72.718	63120.	-23.06
21. 2.18	-12.383	-72.761	63060.	-23.06
21. 3.16	-12.287	-72.805	63280.	-27.72
21. 4.13	-12.188	-72.850	63120.	-21.56
21. 5.11	-12.090	-72.893	62980.	-24.20
21. 5.49	-12.025	-72.923	63060.	-24.02
21. 6.47	-11.926	-72.969	62780.	-22.44
21. 7.44	-11.827	-73.013	62840.	-23.06
21. 8.42	-11.695	-73.056	0.	156.73
21. 9.59	-11.595	-73.112	62780.	-24.02

Table VI-4

INS Data for RB 57 Flights of 9/12/73 and 9/23/73

SUMMARY OF INS FLIGHT LOG FOR 9/12/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
21.10.56	-11.496	-73.155	62880.	-22.00
21.12.13	-11.363	-73.212	62740.	-24.73
21.13. 1	-11.279	-73.249	62900.	-22.18
21.13.59	-11.179	-73.293	62960.	-23.76
21.14.56	-11.079	-73.336	63360.	-22.79
21.15.54	-10.979	-73.377	63700.	-22.70
21.16.52	-10.877	-73.420	63500.	-24.29
21.17.49	-10.777	-73.461	63120.	-22.44
21.18.47	-10.676	-73.503	63300.	-23.41
21.19.35	-10.592	-73.538	63160.	-22.44
21.20.32	-10.490	-73.580	62600.	-23.32
21.21.30	-10.389	-73.621	63060.	-22.53
21.22.28	-10.286	-73.662	63140.	-21.74
21.23.25	-10.184	-73.705	62980.	-23.50
21.24.23	-10.082	-73.748	63080.	-23.76
21.25.20	-9.980	-73.790	62940.	-22.70
21.26. 8	-9.894	-73.824	62980.	-23.67
21.27. 6	-9.791	-73.867	63580.	-24.02
21.28. 4	-9.689	-73.908	63520.	-23.06
21.29. 1	-9.586	-73.951	63720.	-23.06
21.29.59	-9.485	-73.992	64020.	-22.18
21.30.56	-9.383	-74.034	63880.	-23.32
21.31.54	-9.282	-74.077	63700.	-22.70
21.32.42	-9.196	-74.113	63600.	-23.32
21.33.40	-9.095	-74.155	63520.	-23.14
21.34.37	-8.992	-74.198	63820.	-22.79
21.35.35	-8.890	-74.242	63440.	-24.64
21.36.32	-8.789	-74.285	63500.	-22.26
21.37.30	-8.686	-74.328	63320.	-22.70
21.38.28	-4.291	-74.372	63460.	-22.70
21.39.16	-8.498	-74.408	63360.	-23.14
21.40.13	-8.395	-74.450	63500.	-23.67
21.41.11	-8.292	-74.493	63680.	-22.00
21.42. 8	-8.191	-74.535	63580.	-23.58
21.43. 6	-8.086	-74.578	63220.	-22.53
21.44. 4	-7.983	-74.619	63560.	-23.14
21.45.20	-7.846	-74.675	63740.	-22.44
21.45.59	-7.778	-74.703	63980.	-22.09
21.46.56	-7.676	-74.745	64120.	-22.44
21.48.13	-7.539	-74.801	63940.	-23.94
21.49.11	-7.436	-74.843	63840.	-22.35
21.50. 8	-7.333	-74.885	63520.	-22.97
21.51. 6	-7.230	-74.928	63540.	-23.41
21.52. 4	-7.127	-74.969	63400.	-22.26
21.52.52	-7.042	-75.003	63300.	-23.32
21.53.49	-6.939	-75.046	63400.	-23.32
21.54.47	-6.845	-75.094	63320.	-36.61
21.55.44	-6.755	-75.158	63340.	-36.87
21.56.42	-6.668	-75.223	63600.	-36.34
21.57.40	-6.577	-75.286	63300.	-36.17
21.58.37	-6.486	-75.349	63320.	-35.55
21.59.25	-6.412	-75.401	63440.	-36.34
22. 0.23	-6.322	-75.464	63600.	-36.08
22. 1.20	-6.230	-75.527	63420.	-35.64
22. 2.18	-6.138	-75.590	63380.	-36.61
22. 3.16	-6.047	-75.653	63380.	-35.82
22. 4.32	-5.927	-75.737	63300.	-36.34
22. 5.30	-5.836	-75.800	63220.	-35.46
22. 6. 8	-5.774	-75.841	63180.	-36.17
22. 7.16	-5.667	-75.916	63280.	-36.08
22. 8.13	-5.577	-75.979	63260.	-35.64
22. 9.11	-5.485	-76.040	63180.	-35.82
22.10. 9	-5.394	-76.105	63220.	-35.64
22.11. 6	-5.302	-76.167	63160.	-35.20
22.12. 4	-5.210	-76.230	63000.	-36.17
22.13. 1	-5.120	-76.293	63020.	-35.82
22.13.59	-5.030	-76.356	63040.	-35.82
22.14.57	-4.940	-76.418	62960.	-36.08
22.15.54	-4.851	-76.481	63040.	-35.11
22.16.52	-4.762	-76.543	63180.	-36.43
22.17.49	-4.672	-76.604	63060.	-36.26
22.18.47	-4.583	-76.666	62820.	-35.20
22.19.25	-4.523	-76.707	62560.	-35.55
22.20.23	-4.432	-76.769	62900.	-36.08
22.21.21	-4.340	-76.829	62840.	-33.18
22.22.18	-4.244	-76.882	62900.	-28.69
22.23.16	-4.145	-76.931	62820.	-29.04
22.24.13	-4.048	-76.982	63000.	-29.39
22.25.11	-3.946	-77.026	62980.	-20.68
22.25.59	-3.859	-77.055	62720.	-20.50
22.26.57	-3.752	-77.090	62680.	-20.42
22.27.54	-3.646	-77.126	62860.	-20.42
22.28.52	-3.540	-77.160	62580.	-20.33
22.29.49	-3.435	-77.196	62780.	-20.50
22.30.47	-3.330	-77.230	63520.	-20.24
22.31.45	-3.226	-77.266	63560.	-20.59
22.32.33	-3.138	-77.293	63420.	-20.42
22.33.49	-3.000	-77.340	63540.	-20.42
22.34.47	-2.894	-77.374	63240.	-20.50
22.36. 4	-2.754	-77.421	63140.	-20.77
22.37. 1	-2.648	-77.455	62840.	-20.24
22.37.59	-2.544	-77.491	62980.	-20.59
22.38.57	-2.438	-77.525	62960.	-20.42
22.39.35	-2.368	-77.549	62980.	-20.77
22.40.33	-2.263	-77.584	62900.	-20.42
22.41.30	-2.157	-77.618	62880.	-20.77
22.42.28	-2.051	-77.654	62740.	-21.12
22.43.25	-1.944	-77.690	62740.	-20.77
22.44.23	-1.839	-77.727	62760.	-20.94
22.45.21	-1.733	-77.763	62880.	-20.33

SUMMARY OF INS FLIGHT LOG FOR 9/12/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
22.46. 9	-1.645	-77.791	62460.	-20.24
22.47. 6	-1.538	-77.827	62460.	-21.12
22.48. 4	-1.433	-77.864	62880.	-20.68
22.49. 1	-1.327	-77.900	62880.	-20.59
22.49.59	-1.220	-77.935	62460.	-20.50
22.50.57	-1.113	-77.973	62640.	-21.03
22.51.54	-1.006	-78.008	62800.	-20.24
22.52.42	-0.918	-78.041	62700.	-24.82
22.53.40	-0.812	-78.085	62500.	-24.11
22.54.37	-0.708	-78.128	62740.	-23.58
22.55.35	-0.604	-78.169	63500.	-23.50
22.56.33	-0.499	-78.209	63280.	-24.02
22.57.30	-0.395	-78.251	63260.	-23.94
22.58.28	-0.291	-78.294	63580.	-24.46
22.59.16	-0.204	-78.327	63880.	-23.76
23. 0.13	-0.102	-78.365	64000.	-23.23
23. 1.11	-0.007	-78.414	63680.	-44.35
23. 2. 9	0.085	-78.495	0.	0.26
23. 3.25	0.154	-78.609	63380.	-52.27
23. 4.23	0.224	-78.690	64040.	-51.92
23. 5.30	0.305	-78.786	63540.	-52.27
23. 6. 9	0.351	-78.841	63320.	-52.36
23. 7. 6	0.420	-78.928	63000.	-52.71
23. 8. 4	0.490	-79.014	63040.	-52.10
23. 9. 1	0.558	-79.098	63340.	-51.66
23. 9.59	0.627	-79.180	63400.	-52.18
23.10.57	0.697	-79.264	63100.	-50.16
23.11.54	0.773	-79.342	63020.	-45.23
23.12.42	0.837	-79.405	63320.	-45.58
23.13.40	0.915	-79.482	63000.	-46.20
23.14.37	1.013	-79.540	62920.	-11.70
23.15.35	1.122	-79.540	63020.	2.38
23.16.33	1.232	-79.533	63000.	2.99
23.17.30	1.342	-79.526	63360.	2.46
23.18.28	1.450	-79.519	63400.	2.55
23.19.16	1.542	-79.515	63300.	2.38
23.20.13	1.652	-79.508	63280.	2.46
23.21.11	1.762	-79.501	63360.	2.46

SUMMARY OF INS FLIGHT LOG FOR 9/23/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
3.55.40	9.151	-79.622	22240.	-39.16
3.56.38	9.201	-79.663	25520.	-40.48
16.32.22	9.254	-79.708	28200.	-40.30
16.33.20	9.308	-79.756	30780.	-40.48
16.34.18	9.367	-79.806	33160.	-40.13
16.35.15	9.431	-79.850	35440.	-29.83
16.36.22	9.509	-79.900	37920.	-30.71
16.37.10	9.567	-79.938	39660.	-30.18
16.38.17	9.651	-79.990	41460.	-30.45
16.39.15	9.736	-80.045	43880.	-30.36
16.40.32	9.822	-80.101	45760.	-30.27
16.41.30	9.899	-80.150	46120.	-30.18
16.42.27	9.981	-80.202	45740.	-30.36
16.43.25	10.064	-80.248	46880.	-21.65
22.30. 2	10.108	0.0	47520.	0.0
16.44.51	10.197	-80.297	48700.	-20.94
16.45.49	10.287	-80.330	49680.	-20.94
16.46.46	10.375	-80.363	51440.	-23.58
16.47.44	0.0	-80.403	51800.	-26.22
16.48.42	10.549	-80.444	53400.	-25.70
16.49.39	10.640	-80.484	54220.	-24.55
16.50.37	10.729	-80.523	55440.	-24.64
16.51.34	10.818	-80.567	56140.	-26.05
16.52.32	10.906	-80.611	56660.	-24.90
16.53.30	10.997	-80.659	56860.	-25.34
16.54.27	11.085	-80.707	57520.	-25.08
16.55.25	11.175	-80.754	58000.	-24.73
16.56.22	11.269	-80.803	58100.	-25.34
16.57.10	11.348	-80.846	57900.	-25.34
16.58. 8	11.447	-80.897	57600.	-24.55
16.59. 6	11.544	-80.947	58060.	-24.38
17. 0. 3	11.643	-80.998	58320.	-27.10
17. 1. 1	11.741	-81.053	57840.	-25.78
17. 2.18	11.864	-81.137	57680.	-34.50
17. 3.15	11.955	-81.207	57600.	-34.76
17. 3.54	12.014	-81.253	57380.	-34.67
17. 5.10	12.134	-81.345	57720.	-33.62
17. 6. 8	12.225	-81.413	57660.	-34.23
17. 7. 6	12.315	-81.480	57740.	-33.79
17. 8. 3	12.405	-81.548	58000.	-34.06
17. 9. 1	12.495	-81.617	57940.	-33.53
17. 9.58	12.587	-81.686	57980.	-33.18
17.10.46	12.664	-81.739	57880.	-26.58
17.11.44	12.764	-81.794	57200.	-24.38
17.12.42	12.863	-81.846	57580.	-18.66
17.13.39	12.966	-81.887	57880.	-16.98
17.14.37	13.067	-81.926	58000.	-17.60
17.15.34	13.168	-81.967	58080.	-18.30
17.16.32	13.268	-82.010	58140.	-17.51
17.17.20	13.353	-82.041	58160.	-17.07

Table VI-5

INS Data for RB 57 Flight of 9/23/73

SUMMARY OF INS FLIGHT LOG FOR 9/23/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
17.18.27	13.471	-82.088	58000.	-17.95
17.19.25	13.571	-82.129	58080.	-17.69
17.20.22	13.674	-82.167	57920.	-17.51
17.21.20	13.774	-82.207	58040.	-17.69
17.22.18	13.876	-82.246	58160.	-17.42
17.23.15	13.976	-82.284	58000.	-17.69
17.23.54	14.043	-82.311	57940.	-17.69
17.24.51	14.145	-82.351	57780.	-17.95
17.25.49	14.245	-82.391	57800.	-17.69
17.26.46	14.344	-82.434	58020.	-21.21
17.27.44	14.442	-82.482	57900.	-21.03
17.28.42	14.540	-82.527	57920.	-20.15
17.29.39	14.639	-82.571	58020.	-20.42
17.30.46	14.754	-82.623	58060.	-20.42
17.31.44	14.853	-82.668	57920.	-20.50
0. 0. 0	0.0	0.0	0.	0.0
17.33.49	15.067	-82.761	58040.	-20.59
17.34.46	15.164	-82.807	58020.	-20.59
17.35.44	15.262	-82.848	57680.	-19.89
17.36.42	15.359	-82.889	57700.	-20.50
17.37.39	15.456	-82.930	57720.	-20.50
17.38.37	15.554	-82.971	57920.	-20.06
17.39.34	15.654	-83.011	57840.	-20.50
17.40.32	15.754	-83.051	57360.	-20.50
17.41.30	15.854	-83.089	57680.	-20.06
17.42.27	15.956	-83.128	57580.	-20.77
17.43.25	16.057	-83.168	57560.	-20.42
17.44.13	16.141	-83.202	57680.	-23.76
17.45.10	16.239	-83.249	57560.	-24.55
17.46. 8	16.339	-83.297	57440.	-23.76
17.47. 6	16.439	-83.342	57400.	-23.14
17.48. 3	16.539	-83.387	57440.	-23.67
17.49. 1	16.639	-83.434	57480.	-24.02
17.49.58	16.741	-83.482	57480.	-23.58
17.50.37	16.808	-83.512	57600.	-23.23
17.51.34	16.908	-83.559	57640.	-23.50
17.52.32	17.008	-83.607	57680.	-23.58
17.53.30	17.109	-83.655	57720.	-23.41
17.54.27	17.209	-83.703	57960.	-23.67
17.55.25	17.310	-83.751	57800.	-23.50
17.56.22	17.409	-83.802	57980.	-30.10
17.57.10	17.486	-83.854	58100.	-33.09
17.58. 8	17.572	-83.926	58020.	-39.69
17.59. 6	17.657	-84.003	58000.	-38.81
18. 0. 3	17.745	-84.077	57980.	-37.84
18. 1.30	17.878	-84.187	57960.	-37.40
18. 2.27	17.968	-84.260	57860.	-37.49
18. 3.44	18.081	-84.357	58500.	-38.10
18. 4.32	18.151	-84.419	58400.	-37.49
18. 5.30	18.237	-84.493	58520.	-37.75
18. 6.27	18.322	-84.567	58560.	-37.22
18. 7.25	18.405	-84.640	58500.	-37.22
18. 8.22	18.490	-84.714	58360.	-37.31
18. 9.20	18.575	-84.788	58180.	-36.96
18.10.18	18.661	-84.862	57840.	-34.94
18.11. 6	18.735	-84.921	57800.	-32.82
18.12. 3	18.824	-84.987	57920.	-32.47
18.13. 1	18.914	-85.052	57380.	-33.35
18.13.59	19.004	-85.118	57940.	-33.35
18.14.56	19.093	-85.183	57960.	-33.00
18.15.54	19.182	-85.249	57960.	-33.26
18.16.51	19.273	-85.317	58060.	-33.26
18.17.39	19.347	-85.371	58000.	-32.82
18.18.37	19.436	-85.437	58060.	-33.00
18.19.34	19.525	-85.503	57780.	-33.18
18.20.32	19.614	-85.570	57820.	-32.82
18.21.30	19.703	-85.636	57500.	-32.91
18.22.27	19.794	-85.702	57980.	-32.74
18.23.25	19.885	-85.769	58080.	-33.00
18.24.13	19.960	-85.824	58060.	-32.65
18.25.10	20.052	-85.891	58120.	-32.82
18.26. 8	20.143	-85.957	58080.	-32.74
18.27. 6	20.237	-86.020	58020.	-25.61
18.28.22	20.369	-86.088	58120.	-23.76
18.29.20	20.466	-86.138	58000.	-24.90
18.30.18	20.564	-86.191	58180.	-24.82
18.31.15	20.661	-86.240	58100.	-24.38
18.32.13	20.759	-86.291	57740.	-24.82
18.33.11	20.855	-86.344	58060.	-25.52
18.34. 8	20.951	-86.398	58080.	-24.82
18.35. 6	21.047	-86.451	58080.	-25.26
18.36. 3	21.144	-86.506	58020.	-24.90
18.37. 1	21.242	-86.560	57820.	-24.82
18.37.49	21.324	-86.605	57960.	-25.08
18.38.46	21.421	-86.659	57940.	-24.38
18.39.44	21.520	-86.712	58020.	-24.46
18.40.42	21.619	-86.766	58140.	-24.82
18.41.39	21.718	-86.819	57820.	-24.46
18.42.37	21.817	-86.874	57800.	-24.64
18.43.35	21.917	-86.929	57780.	-24.29
18.44.23	22.000	-86.974	57940.	-24.64
18.45.20	22.099	-87.030	57640.	-24.55
18.46.18	22.201	-87.085	57840.	-23.76
18.47.15	22.301	-87.137	57800.	-24.20
18.48.13	22.403	-87.192	57680.	-25.08
18.49.11	22.504	-87.249	57580.	-24.29
18.50. 8	22.604	-87.302	57680.	-24.29
18.50.56	22.689	-87.349	57760.	-24.99
18.51.54	22.791	-87.405	57700.	-24.64
18.52.51	22.891	-87.459	57520.	-23.94

SUMMARY OF INS FLIGHT LOG FOR 9/23/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
18.53.49	22.991	-87.513	57660.	-24.46
18.54.47	23.080	-87.577	57760.	-47.87
18.55.44	23.149	-87.673	57900.	-52.89
18.56.42	23.212	-87.774	57120.	-51.30
18.57.30	23.270	-87.856	57320.	-49.46
18.58.27	23.340	-87.951	57460.	-48.84
18.59.25	23.411	-88.046	57560.	-49.10
19. 0.23	23.482	-88.142	56880.	-49.37
19. 1.59	23.599	-88.302	57060.	-49.37
19. 2.56	23.670	-88.398	57120.	-49.46
19. 4.13	23.765	-88.527	57220.	-49.54
19. 5.11	23.836	-88.624	57060.	-48.93
19. 6. 8	23.909	-88.720	56700.	-49.02
19. 7. 6	23.981	-88.816	56980.	-49.72
19. 8. 3	24.052	-88.913	56940.	-49.19
19. 8.51	24.112	-88.993	57120.	-48.75
19. 9.49	24.185	-89.089	57180.	-48.93
19.10.47	24.259	-89.185	56880.	-48.75
19.11.44	24.333	-89.279	56660.	-48.66
19.12.42	24.406	-89.374	56360.	-48.66
19.13.39	24.480	-89.470	56980.	-48.58
19.14.37	24.554	-89.565	56760.	-48.93
19.15.25	24.616	-89.644	56740.	-48.66
19.16.23	24.690	-89.739	56940.	-48.40
19.17.20	24.764	-89.835	56560.	-48.58
19.18.18	24.835	-89.931	57560.	-51.66
19.19.15	24.901	-90.031	57180.	-52.80
19.20.13	24.969	-90.133	57100.	-51.66
19.21.11	25.037	-90.232	57620.	-51.13
19.21.59	25.095	-90.314	57740.	-51.74
19.22.56	25.163	-90.413	57720.	-51.22
19.23.54	25.233	-90.512	57300.	-51.83
19.24.51	25.302	-90.612	57180.	-51.92
19.25.49	25.372	-90.712	56980.	-51.04
19.26.47	25.443	-90.809	56600.	-50.95
19.27.44	25.513	-90.907	56940.	-51.48
19.28.23	25.560	-90.971	56760.	-51.39
19.29.20	25.631	-91.067	57060.	-51.04
19.30.18	25.701	-91.165	56800.	-51.66
19.31.35	25.795	-91.295	56800.	-51.48
19.32.32	25.865	-91.393	56620.	-50.95
19.33.49	25.959	-91.522	56700.	-51.13
19.34.47	26.025	-91.620	56540.	-55.70
19.35.44	26.088	-91.723	56700.	-55.70
19.36.42	26.150	-91.826	56720.	-55.09
19.37.39	26.215	-91.926	57640.	-54.47
19.38.37	26.279	-92.027	57740.	-55.18
19.39.35	26.342	-92.127	57500.	-55.00
19.40.32	26.407	-92.227	57940.	-54.56
19.41.30	26.471	-92.327	57960.	-55.35
19.42.18	26.523	-92.411	57980.	-54.91
19.43.15	26.589	-92.511	57880.	-54.38
19.44.13	26.655	-92.610	57740.	-54.56
19.45.11	26.719	-92.707	58040.	-54.91
19.46. 8	26.783	-92.806	57920.	-54.65
19.47. 6	26.847	-92.903	58520.	-54.47
19.48. 3	26.907	-93.002	58500.	-59.31
19.48.42	26.943	-93.071	58240.	-61.07
19.49.39	26.998	-93.176	58080.	-60.19
19.50.37	27.056	-93.279	57540.	-59.31
19.51.35	27.113	-93.382	58100.	-59.58
19.52.32	27.170	-93.484	57860.	-59.49
19.53.30	27.226	-93.587	57720.	-59.14
19.54.27	27.283	-93.688	57540.	-59.22
19.55.15	27.330	-93.773	57480.	-59.40
19.56.13	27.386	-93.875	57540.	-59.31
19.57.11	27.444	-93.975	57720.	-59.22
19.58. 8	27.500	-94.078	57920.	-59.75
19.59. 6	27.557	-94.180	57920.	-59.14
20. 0. 4	27.613	-94.282	57880.	-59.14
20. 1. 1	27.669	-94.384	57860.	-59.22
20. 1.49	27.717	-94.469	57840.	-58.78
20. 2.47	27.775	-94.571	57700.	-59.22
20. 3.44	27.832	-94.672	57920.	-58.52
20. 5. 1	27.909	-94.807	57840.	-59.14
20. 5.59	27.967	-94.908	57560.	-59.22
20. 7.16	28.044	-95.045	57240.	-58.70
20. 8.13	28.103	-95.147	57300.	-58.17
20. 9. 1	28.152	-95.231	57600.	-58.52
20. 9.59	28.211	-95.332	57600.	-58.70
20.10.56	28.270	-95.434	56960.	-58.61
20.11.54	28.329	-95.538	56840.	-59.14
20.12.51	28.389	-95.642	56880.	-58.61
20.13.49	28.448	-95.748	57000.	-58.70
20.14.47	28.509	-95.852	56900.	-57.64
20.15.35	28.569	-95.932	56480.	-49.72
20.16.32	28.643	-96.025	56720.	-50.25
20.17.30	28.709	-96.123	56980.	-58.08
20.18.27	28.768	-96.227	57640.	-58.17
20.19.25	28.829	-96.328	57380.	-57.55
20.20.23	28.890	-96.429	57580.	-57.29
20.21.20	28.953	-96.529	57540.	-58.08
20.22. 8	29.004	-96.615	57340.	-58.08
20.23. 6	29.067	-96.717	57360.	-57.38
20.24. 4	29.132	-96.818	57900.	-57.29
20.25. 1	29.196	-96.921	56820.	-58.26
20.25.59	29.259	-97.026	56080.	-57.38
20.26.56	29.323	-97.130	56520.	-57.38
20.27.54	29.387	-97.233	56840.	-57.46
20.28.32	29.430	-97.301	57500.	-57.02

Table VI-6

INS Data for RB 57 Flights

of 9/23/73 and 11/5/73

SUMMARY OF INS FLIGHT LOG FOR 9/23/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
20.29.30	29.502	-97.404	57500.	-57.46
20.30.37	29.564	-97.526	57360.	-57.82
20.31.35	29.627	-97.631	57640.	-56.94
20.32.32	29.692	-97.735	57200.	-57.38
20.33.30	29.755	-97.839	57380.	-56.85
20.34.28	29.818	-97.942	57400.	-57.11
20.35.35	29.892	-98.060	57520.	-56.85
20.36.32	29.955	-98.162	57540.	-56.85
20.37.49	30.040	-98.298	57380.	-56.94
20.38.47	30.103	-98.399	57340.	-58.34
20.39.44	30.158	-98.507	57380.	-62.48
20.40.42	30.213	-98.616	57500.	-62.04
20.41.40	30.268	-98.724	57440.	-61.51
20.42.18	30.305	-98.796	57300.	-61.51
20.43.16	30.361	-98.904	57620.	-61.42
20.44.13	30.418	-99.012	57440.	-58.61
20.45.11	30.478	-99.117	57760.	-58.34
20.46. 8	30.545	-99.218	57520.	-53.15
20.47. 6	30.615	-99.317	57020.	-54.38
20.48. 4	30.682	-99.417	57140.	-55.09
20.48.52	30.744	-99.497	57860.	-49.90
20.49.49	30.818	-99.590	57660.	-50.60
20.50.47	30.891	-99.685	57220.	-50.69
20.51.44	30.965	-99.777	57200.	-50.25
20.52.42	31.038	-99.870	57500.	-50.78
20.53.40	31.111	-99.962	58400.	-49.46
20.54.37	31.183	-100.054	59820.	-50.16
20.55.25	31.242	-100.134	60160.	-51.83
20.56.23	31.304	-100.238	60440.	-57.73
20.57.20	31.366	-100.346	60700.	-57.64
20.58.18	31.427	-100.451	61500.	-55.70
20.59.16	31.492	-100.553	61740.	-56.76
21. 0.13	31.547	-100.660	62020.	-62.13
21. 1.11	31.620	-100.773	0.	0.0
21. 2.18	31.665	-100.903	62700.	-61.42
21. 3.16	31.720	-101.013	62720.	-60.98
21. 4.32	31.790	-101.161	62820.	-61.07
21. 5.30	31.842	-101.272	63280.	-61.25
21. 6.28	31.894	-101.384	63340.	-61.16
21. 7.25	31.946	-101.495	63240.	-61.34
21. 8.23	31.998	-101.606	63140.	-61.07
21. 9.11	32.044	-101.699	63440.	-61.42
21.10. 8	32.097	-101.812	63480.	-61.07
21.11. 6	32.151	-101.923	63140.	-61.34
21.12. 4	32.204	-102.034	63300.	-61.25
21.13. 1	32.258	-102.145	62980.	-61.34
21.13.59	32.311	-102.258	63300.	-61.16
21.14.56	32.366	-102.369	62940.	-60.81
21.15.44	32.410	-102.461	63060.	-61.34
21.16.42	32.464	-102.572	63160.	-61.51

SUMMARY OF INS FLIGHT LOG FOR 11/ 5/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
19. 1.39	63.713	-144.445	38900.	118.36
19. 2.36	63.658	-144.265	39000.	117.92
19. 3.34	63.604	-144.086	38460.	118.27
19. 4.32	63.549	-143.909	79960.	117.92
19. 5.29	63.496	-143.734	39120.	118.27
19. 6.27	63.441	-143.558	38540.	118.18
19. 7.24	63.387	-143.385	38780.	118.27
19. 8.12	63.341	-143.241	38600.	118.36
19. 9.10	63.286	-143.068	38980.	118.62
19.10. 8	63.231	-142.895	39080.	118.54
19.11. 5	63.175	-142.724	38600.	118.62
19.11. 7	63.117	-142.552	38920.	118.62
19.12. 5	63.061	-142.384	38780.	118.18
19.13. 2	63.003	-142.216	38580.	118.54
19.13.50	62.957	-142.076	38880.	118.54
19.14.48	62.881	-141.910	38780.	118.54
19.16. 5	62.825	-141.689	38240.	118.18
19.17. 2	62.773	-141.523	38240.	112.46
19.18. 0	62.723	-141.352	79040.	112.90
19.18.57	62.668	-141.184	38460.	119.68
19.19.55	62.607	-141.025	37840.	120.56
19.20.43	62.556	-140.892	37960.	119.94
19.21.41	62.498	-140.733	38160.	119.50
19.22.38	62.439	-140.574	38140.	119.50
19.23.45	62.369	-140.391	38180.	119.77
19.24.43	62.312	-140.211	38080.	119.42
19.25.41	62.305	-140.191	38160.	119.86
19.26.38	62.194	-139.922	38460.	119.68
19.27.36	62.135	-139.768	78980.	119.77
19.28.33	62.076	-139.614	38300.	120.03
19.29.31	62.017	-139.461	38660.	119.86
19.30.29	61.959	-139.306	38660.	119.86
19.31.26	61.900	-139.151	37960.	120.21
19.32.24	61.841	-138.997	37920.	119.59
19.33.21	61.786	-138.839	78920.	116.60
19.34. 9	61.739	-138.710	37860.	116.95
19.35. 7	61.695	-138.561	37920.	117.04
19.36. 5	61.695	-138.561	37820.	117.13
19.37. 2	61.695	-138.561	38280.	110.18
19.38. 0	61.539	-138.080	78520.	105.07
19.38.57	61.499	-137.912	37640.	105.95
19.39.55	61.459	-137.743	37860.	105.51
19.40.33	61.433	-137.629	37660.	105.95
19.41.31	61.394	-137.457	38120.	106.30
19.42.29	61.355	-137.289	37620.	105.25
19.43.26	61.317	-137.140	37880.	106.04
19.44.24	61.278	-136.947	37700.	106.22
19.45.21	61.239	-136.777	37840.	105.95
19.46.19	61.199	-68.303	38040.	106.39
19.47. 7	61.166	-136.467	37780.	105.34

SUMMARY OF INS FLIGHT LOG FOR 11/ 5/73

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
21.54. 3	61.127	-136.298	38220.	105.42
19.49. 2	61.088	-136.129	37780.	106.39
19.50. 0	61.049	-135.962	37880.	105.60
19.50.57	61.008	-135.794	37980.	109.30
19.51.55	60.953	-135.639	38220.	119.50
19.52.53	60.894	-135.491	37960.	119.42
19.53.41	60.846	-135.498	38060.	118.18
19.54.38	60.788	-135.218	37800.	118.27
19.55.36	60.729	-135.068	38100.	118.98
19.56.33	60.670	-134.919	38140.	118.36
19.57.31	60.613	-134.766	37920.	118.27
19.58.29	60.554	-134.616	38000.	118.54
19.59.26	60.498	-134.465	38020.	118.10
20. 0.14	60.450	-134.338	37940.	118.18
20. 1.12	60.392	-134.186	37440.	118.45
20. 2. 9	60.336	-134.035	37860.	117.83
20. 3. 7	60.278	-133.886	37620.	118.27
20. 4. 5	60.222	-133.736	37640.	117.92
20. 5. 2	60.165	-133.585	37740.	117.92
20. 6. 0	60.109	-133.435	37960.	117.92
20. 6.48	60.063	-133.312	37660.	118.18
20. 7.46	60.008	-133.169	37840.	118.10
20. 8.43	59.947	-133.017	37840.	122.23
20. 9.41	59.884	-132.874	37920.	122.23
20.10.38	59.802	-132.686	37660.	121.79
20.11.55	59.740	-132.545	37820.	121.97
20.12.53	59.680	-132.404	38000.	121.62
20.13.41	59.629	-132.287	37980.	121.97
0.44.36	0.0	0.0	0.	0.0
20.15.46	59.501	-131.982	37720.	121.70
20.16.43	59.442	-131.844	37880.	121.79
20.17.41	59.385	-131.704	37960.	121.60
20.18.38	59.327	-131.565	38000.	121.97
20.19.36	59.263	-131.433	37840.	127.07
20.20.33	59.199	-131.306	38060.	126.90
20.21.31	59.136	-131.177	38200.	127.16
20.22.29	59.073	-131.048	38040.	126.72
20.23.26	59.010	-130.919	37980.	127.07
20.24.24	58.948	-130.791	37800.	125.75
20.25.22	58.887	-130.664	38000.	126.28
20.26.19	58.826	-130.537	37980.	125.93
20.27. 7	58.778	-130.432	37900.	124.70
20.28. 5	58.721	-130.308	78820.	124.96
20.29. 2	58.663	-65.093	37900.	125.58
20.30. 0	58.604	-130.060	37780.	126.28
20.30.58	58.544	-129.932	37640.	127.16
20.31.55	58.483	-129.802	37960.	126.46
20.32.53	58.421	-129.670	38040.	126.98
20.33.41	58.369	-129.563	60160.	126.72
20.34.38	58.308	-129.431	38220.	126.90
20.35.36	58.246	-129.300	37900.	125.93
20.36.34	58.181	-129.169	75960.	-53.59
20.37.31	58.118	-129.040	37800.	128.04
20.38.29	58.051	-128.920	78880.	130.77
20.39.26	57.985	-128.800	37920.	130.50
20.40.14	57.932	-128.701	37640.	129.98
20.41.12	57.867	-128.583	37940.	130.42
20.42.10	57.804	-128.465	38020.	130.15
20.43. 7	57.741	-128.347	37800.	130.50
20.44. 5	57.678	-128.231	78880.	130.33
20.45. 2	57.613	-128.114	37940.	130.86
20.46. 0	57.549	-127.997	38080.	130.77
20.46.38	57.503	-127.919	38120.	131.38
20.47.36	57.440	-127.803	38040.	130.24
20.48.34	57.377	-127.685	38200.	131.30
20.49.31	57.313	-127.564	38040.	131.74
20.50.29	57.248	-127.443	37780.	130.77
20.51.26	57.185	-127.321	38000.	131.03
20.52.24	57.121	-127.199	38100.	130.59
20.53.12	57.068	-127.097	38280.	130.42
20.54.10	57.004	-126.975	37920.	130.33
20.55. 7	56.959	-126.867	78660.	129.89
20.56. 5	56.959	-126.867	37860.	129.80
20.57. 2	56.959	-126.867	37780.	129.89
20.58. 0	56.959	-126.867	37720.	135.87
20.58.58	56.676	-126.384	37880.	137.37
20.59.46	56.616	-126.296	37680.	137.54
21. 0.43	56.544	-126.189	37840.	137.46
21. 1.41	56.473	-126.082	37840.	137.54
21. 2.38	56.402	-125.973	37620.	137.54
21. 3.36	56.330	-125.866	78580.	137.28
21. 4.34	56.260	-125.759	37780.	137.54
21. 5.31	56.189	-125.652	78780.	137.72
21. 6.19	56.128	-125.563	37960.	137.72
21. 7.17	56.057	-125.455	37700.	137.54
21. 8.14	55.986	-125.346	37980.	137.28
21. 9.12	55.956	-125.280	38260.	136.84
21.10.10	55.956	-125.280	38260.	136.75
21.11. 7	67.011	-125.031	38120.	144.94
21.12.24	55.666	-124.911	38220.	145.38
21.13.12	55.602	-124.836	37940.	145.29
21.14.10	55.523	-124.745	37860.	145.20
21.15. 7	55.446	-124.655	37860.	145.55
21.16. 5	55.370	-124.564	37920.	145.20
21.17. 2	55.291	-124.474	37860.	145.38
21.18. 0	55.215	-124.382	37700.	145.38
21.18.58	55.139	-124.291	37960.	144.94
21.19.46	55.077	-124.214	38020.	145.20
21.20.43	55.002	-124.122	37900.	145.20
21.21.41	54.928	-124.030	38180.	145.11

Table VI-7

INS Data for RB 57 Flights of 1/17/74 and 1/27/74

SUMMARY OF INS FLIGHT LOG FOR 1/17/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
21.20. 7	39.942	-104.564	63740.	19.71
21.20.55	40.031	-104.529	63760.	9.42
21.21.52	40.141	-104.537	63700.	-17.42
21.22.50	40.226	-104.611	63480.	-52.27
21.23.47	40.237	-104.743	63360.	-106.66
21.24.45	40.148	-104.828	63240.	-173.36
21.25.43	40.060	-104.765	63080.	127.60
21.26.40	40.006	-104.638	63340.	119.50
21.27.28	39.964	-104.531	63420.	118.45
21.28.26	39.913	-104.400	63180.	118.18
21.29.23	39.865	-104.269	63640.	117.13
21.30.21	39.818	-104.138	63900.	116.86
21.31.19	39.766	-104.007	63860.	122.50
21.32.16	39.696	-103.892	63760.	132.35
21.33.14	39.621	-103.781	63640.	132.00
21.34. 2	39.558	-103.688	63760.	132.18
21.34.59	39.467	-103.596	64020.	151.71
21.35.57	39.366	-103.534	64180.	150.83
21.36.55	39.270	-103.458	64160.	149.25
21.37.52	39.175	-103.383	64320.	148.98
21.38.50	39.080	-103.307	64240.	149.81
21.39.47	38.984	-103.231	64260.	148.98
21.40.26	38.920	-103.180	64200.	148.72
21.41.23	38.821	-103.102	64080.	148.98
21.42.21	38.725	-103.023	64120.	148.72
21.43.19	38.630	-102.942	64080.	148.63
21.44.16	38.535	-102.864	64460.	148.02
21.45.14	38.441	-102.786	64460.	148.10
21.46.11	38.345	-102.706	64480.	147.84
21.46.59	38.254	-102.667	64000.	177.23
21.47.57	38.153	-102.701	64080.	-145.38
21.49.14	38.036	-102.815	64500.	-140.18
21.50.11	37.951	-102.900	64460.	-139.84
21.51. 9	37.864	-102.986	64820.	-139.39

SUMMARY OF INS FLIGHT LOG FOR 1/27/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
13.48. 3	-32.812	-34.378	1520.	0.0
13.49.10	-32.771	-68.747	2360.	3.52
13.50. 8	-32.754	-68.712	6260.	101.90
13.51. 5	-32.782	-68.658	9440.	118.45
13.52. 3	-32.813	-68.602	12540.	121.53
13.53. 0	-32.848	-68.540	15660.	129.10
13.53.58	-32.882	-68.476	18860.	113.52
13.54.46	-32.903	-68.410	22280.	110.35
13.55.44	-32.929	-68.326	24900.	110.79
13.56.41	-32.956	-68.241	26260.	111.50
13.57.39	-32.984	-68.156	26620.	110.70
13.58.36	-33.010	-68.067	27120.	110.70
13.59.34	-33.036	-67.976	27160.	110.88
14. 0.32	-33.062	-67.887	27860.	110.79
14. 1.20	-33.084	-67.811	28980.	110.62
14. 2.17	-33.111	-67.722	28960.	110.62
14. 3.15	-33.137	-67.632	26800.	110.35
14. 4.12	-33.163	-67.541	27180.	109.65
14. 5.10	-33.189	-67.445	29200.	110.09
14. 6. 8	-33.217	-67.350	31460.	110.18
14. 7. 5	-33.243	-67.253	33340.	110.09
14. 7.44	-33.261	-67.187	34640.	110.26
14. 9. 0	-33.296	-67.053	77940.	109.74
14. 9.58	-33.324	-66.947	38700.	111.23
14.10.56	-33.364	-66.845	40620.	119.24
14.11.53	-33.406	-66.742	42280.	118.89
14.12.51	-33.451	-66.640	42340.	119.24
14.13.48	-33.471	-66.526	42320.	88.26
14.14.36	-33.432	-66.435	42220.	46.64
14.15.53	-33.314	-66.384	42340.	1.06
14.16.51	-33.220	-66.371	42340.	2.02
14.17.48	-33.121	-66.355	42300.	2.64
14.18.46	-32.986	-66.339	1360.	2.82
14.20. 3	-32.897	-66.351	42340.	-41.62
14.21. 0	-32.900	-66.453	42240.	-117.83
14.21.48	-32.974	-66.500	42120.	-177.06
14.22.46	-33.049	-66.439	42280.	135.52
14.23.44	-33.106	-66.344	42380.	130.50
14.24.41	-33.162	-66.250	41120.	129.54
14.25.39	-33.188	-66.147	39780.	85.01
14.26.36	-33.095	-66.062	39100.	11.44
14.27.53	-33.008	-66.036	39080.	5.19
14.28.41	-32.937	-66.019	38760.	5.63
14.29.39	-32.852	-65.999	38540.	5.81
14.30.56	-32.739	-65.970	38720.	5.98
14.31.53	-32.657	-65.953	38380.	-14.08
14.32.51	-32.619	-66.012	39340.	-87.21
14.33.48	-32.671	-66.081	41440.	-157.43
14.34.46	-32.750	-66.058	42380.	152.33
14.35.34	-32.813	-66.008	42400.	152.77

SUMMARY OF INS FLIGHT LOG FOR 1/27/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
14.36.32	-32.900	-65.948	42220.	149.51
14.37.29	-32.986	-65.882	42120.	161.83
14.38.27	-33.082	-65.857	42020.	174.24
14.39.25	-33.181	-65.835	43260.	173.71
14.40.22	-33.284	-65.815	45220.	173.45
14.41.20	-33.387	-65.796	45920.	173.45
14.41.58	-33.457	-65.781	4820.	173.18
14.42.56	-33.560	-65.760	45540.	173.36
14.43.53	-33.664	-65.735	46440.	169.58
14.44.51	-33.764	-65.700	46260.	152.68
14.45.48	-33.816	-65.597	45420.	101.82
14.46.46	-33.775	-65.475	46200.	42.33
14.48. 3	-33.649	-65.465	45620.	-23.67
14.48.51	-33.572	-65.499	45680.	-23.14
14.49.49	-33.478	-65.540	46020.	-21.56
14.50.46	-33.382	-65.580	15440.	-20.59
14.52. 3	-33.253	-65.628	45800.	-20.15
14.53. 1	-33.155	-65.665	46480.	-20.06
14.53.58	-33.066	-65.711	45920.	-44.44
14.54.56	-33.058	-65.819	46020.	-106.48
14.55.44	-33.124	-65.890	49180.	-157.61
14.56.41	-33.226	-65.890	51460.	175.47
14.57.39	-33.325	-65.875	52920.	173.89
14.58.37	-33.425	-65.861	53700.	172.57
14.59.34	-33.526	-65.845	53960.	171.86
15. 0.32	-33.628	-65.829	54080.	171.95
15. 1.29	-33.731	-65.813	33400.	171.86
15. 2.17	-33.819	-65.779	53940.	171.86
15. 3.15	-33.925	-65.786	54120.	171.95
15. 4.13	-34.031	-65.771	54120.	171.95
15. 5.10	-34.136	-65.756	54200.	171.86
15. 6. 8	-34.242	-65.739	54240.	171.86
15. 7. 5	-34.348	-65.723	54220.	171.86
15. 8. 3	-34.453	-65.706	54040.	172.22
15. 8.41	-34.523	-65.694	54120.	171.86
15. 9.39	-34.627	-65.676	54160.	172.04
15.10.37	-34.732	-65.660	54040.	169.58
15.11.34	-34.793	-65.582	54140.	104.90
15.12.32	-34.745	-65.472	54160.	37.31
15.13.29	-34.626	-65.469	53840.	-35.20
15.14.46	-34.552	-65.588	54220.	-44.18
15.15.34	-34.489	-65.664	54140.	-43.03
15.16.32	-34.386	-65.753	0.	0.0
15.17.49	-34.308	-65.871	54320.	-41.89
15.18.46	-34.242	-65.964	54260.	-61.34
15.19.44	-34.253	-66.091	54100.	-114.31
15.20.41	-34.338	-66.176	54160.	-165.00
15.21.39	-34.442	-66.170	54060.	165.70
15.22.27	-34.527	-66.146	53940.	164.30
15.23.25	-34.629	-66.114	54900.	163.06
15.24.22	-34.732	-66.081	55500.	162.27
15.25.20	-34.835	-66.044	55760.	161.83
15.26.17	-34.933	-66.003	56780.	162.10
15.27.15	-35.032	-65.964	57180.	162.10
15.28.13	-35.131	-65.927	57460.	162.27
15.29. 1	-35.215	-65.896	57620.	162.10
15.29.58	-35.316	-65.859	57800.	162.01
15.30.56	-35.418	-65.822	78380.	162.18
15.31.53	-35.522	-65.783	57960.	162.18
15.32.51	-35.625	-65.745	57940.	162.10
15.33.49	-35.731	-65.709	57680.	168.87
15.34.46	-35.840	-65.702	57380.	-177.32
15.35.34	-35.932	-65.716	57620.	-172.83
15.36.32	-36.042	-65.737	58480.	-173.80
15.37.29	-36.152	-65.753	58740.	-173.89
15.38.27	-36.263	-65.770	58800.	-173.71
15.39.25	-36.207	-65.783	79460.	-173.80
15.40.22	-36.481	-65.798	59000.	-173.62
15.41.20	-36.592	-65.812	58880.	-173.62
15.42. 8	-36.684	-65.823	58940.	-173.62
15.43. 5	-36.796	-65.837	58920.	-173.45
15.44. 3	-36.908	-65.852	58940.	-173.36
15.45. 1	-37.019	-65.866	59000.	-173.45
15.45.58	-37.132	-65.879	58980.	-173.18
15.46.56	-37.242	-65.894	58740.	-173.10
15.48.13	-37.386	-65.915	59020.	-173.10
15.48.51	-37.458	-65.925	58780.	-173.18
15.49.49	-37.568	-65.942	58860.	-172.74
15.50.46	-37.681	-65.960	59000.	-173.10
15.52. 3	-37.829	-65.981	59060.	-172.83
15.53. 1	-37.940	-65.999	59080.	-173.01
15.53.58	-38.052	-66.032	59020.	-172.92
15.54.56	-38.164	-66.033	59060.	-172.74
15.55.44	-38.256	-66.048	58860.	-172.83
15.56.41	-38.367	-66.065	58980.	-172.74
15.57.39	-38.478	-66.080	59000.	-172.57
15.58.37	-38.589	-66.096	59060.	-172.74
15.59.34	-38.697	-66.110	39000.	-172.57
16. 0.32	-38.807	-66.125	79500.	-172.22
16. 1.29	-38.918	-66.141	58780.	-172.30
16. 2.17	-39.010	-66.154	38340.	-172.39
16. 3.15	-39.121	-66.170	59100.	-171.95
16. 4.13	-39.231	-66.189	59080.	-171.69
16. 5.10	-39.342	-66.210	59120.	-172.22
16. 6. 8	-39.452	-66.228	59020.	-172.30
16. 7. 5	-39.563	-66.247	58940.	-171.86
16. 8. 3	-39.674	-66.266	59020.	-171.95
16. 9.10	-39.805	-66.290	58800.	-171.78
16.10. 8	-39.916	-66.310	38460.	-172.04
16.11. 5	-40.027	-66.331	59060.	-171.78

Table VI-8

INS Data for RB 57 Flights of 1/27/74 and 1/30/74

SUMMARY OF INS FLIGHT LOG FOR 1/27/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
16.12.13	-40.157	-66.353	58980.	-171.86
16.13.10	-40.269	-66.372	58960.	-171.60
16.14. 8	-40.381	-66.390	58960.	-171.78

SUMMARY OF INS FLIGHT LOG FOR 1/30/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
12.37.51	10.216	-77.522	53860.	57.90
12.38.49	10.271	-77.448	54040.	57.90
12.39.46	10.324	-77.377	54140.	57.73
12.40.44	10.378	-77.306	54380.	57.82
12.41.42	10.431	-77.233	54220.	57.82
12.42.39	10.486	-77.162	54360.	57.73
12.43.37	10.541	-77.089	54440.	57.64
12.44.25	10.588	-77.030	54460.	57.55
12.45.23	10.644	-76.957	54340.	57.46
12.46.20	10.703	-76.886	54400.	56.58
12.47.18	10.761	-76.814	54340.	56.50
12.48.15	10.818	-76.743	54440.	56.50
12.49.13	10.877	-76.670	54480.	56.58
12.50.10	10.936	-76.598	54440.	56.50
12.50.58	10.984	-76.537	54040.	56.50
12.51.56	11.043	-76.463	53880.	56.50
12.52.54	11.102	-76.390	53880.	56.23
12.53.51	11.161	-76.319	53780.	56.23
12.54.49	11.219	-76.246	54360.	56.32
12.55.47	11.277	-76.174	54580.	56.23
12.56.44	11.336	-76.101	54400.	56.23
12.57.32	11.384	-76.040	54460.	56.14
12.58.30	11.443	-75.968	54500.	56.06
12.59.27	11.503	-75.894	54480.	55.97
13. 0.25	11.562	-75.821	54600.	55.88
13. 1.22	11.621	-75.748	54880.	55.79
13. 2.20	11.680	-75.675	54820.	55.79
13. 3.18	11.739	-75.603	54880.	55.79
13. 4. 6	11.789	-75.542	54820.	55.88
13. 5. 3	11.848	-75.470	54940.	55.88
13. 6. 1	11.907	-75.396	54920.	55.97
13. 6.58	11.964	-75.323	54980.	56.06
13. 7.56	12.023	-75.249	55080.	56.06
13. 8.54	12.081	-75.176	55100.	56.06
13. 9.51	12.140	-75.102	54980.	56.14
13.10.30	12.178	-75.052	55040.	56.14
13.11.27	12.237	-74.978	55080.	56.06
13.12.25	12.295	-74.904	55080.	56.06
13.13.23	12.353	-74.830	55080.	56.06
13.14.20	12.412	-74.755	55040.	56.14
13.15.37	12.512	-74.672	55180.	41.01
13.16.35	12.590	-74.616	75500.	41.01
13.17.42	12.680	-74.550	55000.	43.21
13.18.39	12.738	-74.476	54980.	57.73
13.19.37	12.794	-74.398	54960.	57.73
13.20.34	12.851	-74.321	54980.	57.82
13.21.32	12.907	-74.243	55120.	57.73
13.22.30	12.965	-74.166	55120.	55.35
13.23.27	13.026	-74.089	54760.	55.35
13.24.15	13.076	-74.025	54880.	55.44
13.25.13	13.137	-73.946	54960.	55.44
13.26.11	13.198	-73.868	54880.	55.53
13.27. 8	13.258	-73.791	54580.	55.44
13.28. 6	13.319	-73.713	54840.	55.53
13.29. 3	13.378	-73.636	55100.	55.53
13.30. 1	13.437	-73.558	55060.	57.20
13.30.49	13.467	-73.484	75440.	71.90
13.31.47	13.500	-73.392	55200.	71.98
13.32.44	13.533	-73.300	54840.	71.98
13.33.42	13.567	-73.207	54880.	72.07
13.34.39	13.601	-73.115	54940.	72.07
13.35.37	13.636	-73.023	55260.	72.07
13.36.35	13.670	-72.931	55460.	72.16
13.47.27	14.054	-71.891	54800.	72.34
13.48.35	14.088	-71.784	55000.	72.51
13.49.32	14.121	-71.692	55020.	72.51
13.50.49	14.165	-71.568	55160.	72.60
13.51.47	14.198	-71.477	55100.	72.60
13.52.44	14.231	-71.385	55260.	72.60
13.53.42	14.264	-71.291	55660.	72.69
13.54.40	14.290	-71.216	55220.	72.69
13.55.27	14.323	-71.124	55420.	72.69
13.56.25	14.356	-71.032	55240.	72.69
13.57.23	14.389	-70.939	55320.	72.69
13.58.20	14.423	-70.847	55180.	72.60
21.34.14	15.082	-34.396	68580.	74.18
14.20.25	15.111	-68.694	35460.	74.18
14.21. 3	15.130	-68.631	56180.	74.27
14.22.11	15.163	-68.519	56220.	74.18
14.23.27	15.201	-68.393	56400.	74.36
14.24.35	0.0	-68.282	56280.	-143.00
14.25.32	15.262	-68.186	56360.	74.54
14.26.30	15.290	-68.090	56300.	74.45
14.27.27	15.319	-67.994	55740.	74.45
14.28.25	15.347	-67.898	56120.	74.62
14.29.23	15.377	-67.800	55960.	74.45
14.30.20	15.406	-67.704	56300.	74.54
14.31.18	15.435	-67.608	56500.	74.54
14.32.15	15.465	-67.512	56440.	74.54
17.14.11	16.088	-65.540	58640.	-101.29
17.15. 9	16.057	-65.650	58540.	-105.78
17.16. 6	16.026	-65.760	58540.	-105.69
17.17. 4	15.996	-65.870	58420.	-106.13
17.18. 1	15.966	-65.979	58520.	-105.51
17.19. 9	15.930	-66.106	58560.	-105.42
17.20. 6	-172.034	-66.213	58580.	-105.60
17.20.54	15.876	-66.303	58580.	-105.51
17.21.52	15.842	-66.412	58600.	-105.42
17.22.59	15.813	-66.538	58600.	-105.51
17.23.57	15.783	-66.646	58460.	-105.42
17.24.54	15.754	-66.756	58380.	-105.16
17.25.52	15.724	-66.866	58340.	-105.25
17.26.49	15.695	-66.976	58260.	-105.07
17.27.37	15.671	-67.068	58320.	-105.07
17.29. 4	15.627	-67.234	58320.	-104.63
17.30. 1	15.598	-67.345	58440.	-104.63
17.30.59	15.569	-67.455	58440.	-104.54
17.32.16	15.531	-67.601	58460.	-104.46
0. 0. 2	15.498	0.0	0.	0.0
17.34.21	15.469	-67.843	58340.	-104.28
17.35.18	15.439	-67.955	58420.	-104.28
17.36.16	15.410	-68.067	58460.	-103.93
17.37.13	15.380	-68.179	58380.	-106.83
17.38.11	15.340	-68.288	58460.	-110.44
17.39. 9	15.299	-68.396	37960.	-110.44
17.40. 6	15.257	-68.504	58440.	-110.44
17.41. 4	15.215	-68.613	58440.	-110.26
17.41.52	-172.403	-68.702	58560.	-110.44
17.42.49	15.141	-68.810	58560.	-110.35
17.43.47	15.093	-68.916	58600.	-115.98
17.44.45	15.045	-69.019	58580.	-116.34
17.45.42	14.997	-69.119	59040.	-115.98
17.46.40	14.949	-69.218	59120.	-116.25
17.47.37	14.901	-69.318	59080.	-116.16
17.48.25	14.861	-69.400	58980.	-116.07
17.49.23	14.814	-69.501	58800.	-116.25
17.50.21	14.765	-69.601	58420.	-116.07
17.51.18	14.717	-69.701	58600.	-115.98
17.52.16	14.669	-69.802	58700.	-115.81
17.53.13	14.621	-69.904	58820.	-115.81
17.54.11	14.573	-70.006	58780.	-115.72
17.54.49	14.541	-70.074	58760.	-115.72
17.55.47	14.495	-70.176	58680.	-115.37
17.56.54	14.440	-70.294	58740.	-115.54
17.57.52	14.394	-33.862	58680.	-115.46
17.58.49	14.348	-70.497	58560.	-115.37
18. 0. 6	14.287	-70.631	58500.	-115.10
18. 1. 4	14.243	-70.733	38080.	-115.28
18. 2.21	14.187	-70.870	58420.	-110.97
18. 3.18	14.156	-70.976	58500.	-108.50
18. 4.16	14.125	-71.083	58400.	-108.24
18. 5.13	14.095	-71.188	58380.	-108.06
18. 6.11	14.064	-71.295	58380.	-107.89
18. 7. 9	14.033	-71.402	58320.	-107.98
18. 8. 6	14.005	-71.509	58320.	-107.80
18. 8.45	13.985	-71.581	58380.	-107.62
18. 9.42	13.955	-71.688	58360.	-107.89
18.10.40	13.925	-71.795	58340.	-107.71
18.11.37	13.895	-71.901	58340.	-107.54
18.12.35	13.866	-72.008	58300.	-107.54

Table VI-9

INS Data for RB 57 Flights

of 1/30/74 and 1/31/74

SUMMARY OF INS FLIGHT LOG FOR 1/30/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
18.13.33	13.836	-72.115	58260.	-107.45
18.14.30	13.807	-72.222	58220.	-107.45
18.15.18	13.784	-72.311	58200.	-107.27
18.16.16	13.754	-72.418	58040.	-107.27
18.17.13	13.726	-72.526	57980.	-107.10
18.18.11	13.699	-72.635	58020.	-107.01
18.19.18	13.667	-72.761	57960.	-107.01
18.20.16	13.638	-72.871	57880.	-106.74
18.21.23	13.605	-72.998	57820.	-106.92
18.22.11	13.582	-73.089	57680.	-106.57
18.23. 9	13.553	-73.197	58020.	-106.57
18.24. 6	13.524	-73.306	58120.	-106.48
18.25. 4	13.496	-73.415	58000.	-106.48
18.26. 1	13.452	-73.520	58060.	-124.34
18.26.59	13.384	-73.608	58180.	-131.12
18.28.16	13.293	-73.721	58200.	-131.47
18.29. 4	13.235	-73.793	58280.	-131.38
18.30. 2	13.142	-73.876	80.	-131.65
18.31.18	13.072	-73.990	58400.	-131.47
18.32.16	12.991	-74.075	58380.	-131.38
18.33.23	12.921	-74.174	58280.	-131.30
18.34.21	12.852	-74.261	58300.	-131.12
18.35.18	12.782	-74.347	58300.	-131.03
18.36. 6	12.723	-74.419	58340.	-131.03
18.37. 4	12.653	-74.506	58380.	-130.94
18.38. 2	12.583	-74.593	58360.	-131.03
18.38.59	12.512	-74.678	58340.	-130.86
18.39.57	12.443	-74.766	58360.	-129.01
18.40.54	12.374	-74.854	58380.	-128.74
18.41.52	12.306	-74.943	37840.	-128.83
18.42.30	12.261	-75.002	58260.	-128.66
18.43.28	12.192	-75.091	58220.	-128.57
18.44.26	12.125	-75.180	58200.	-128.30
18.45.23	12.056	-75.269	58220.	-128.39
18.46.21	11.988	-75.358	58120.	-128.30
18.47.18	11.919	-37.725	58020.	-128.22
18.48.16	11.850	-75.538	57820.	-128.13
18.49.14	11.783	-75.629	58020.	-128.04
18.50.11	11.714	-75.719	58040.	-128.04
18.51. 9	11.647	-37.906	58040.	-127.86
18.52. 6	11.580	-75.902	58000.	-127.78
21.26.21	-168.343	-75.992	57920.	-127.78
18.54. 2	11.446	-76.083	57820.	-127.78
18.55. 9	11.369	-76.190	57680.	-127.78
18.55.57	11.314	-76.267	57540.	-127.78
18.56.54	11.248	-76.359	57480.	-127.51
18.57.52	11.183	-76.451	57180.	-127.42
18.58.50	11.119	-76.541	57320.	-127.34
18.59.47	11.054	-76.633	57400.	-127.34
19. 1.14	10.958	-76.772	57400.	-126.98
19. 2.11	10.895	-76.864	57340.	-126.98
19. 2.50	10.853	-76.924	57220.	-126.98
19. 4.16	10.753	-77.052	57340.	-135.70
19. 5.14	10.680	-77.130	57340.	-136.22
19. 6.11	10.607	-77.207	57220.	-136.40
19. 7. 9	10.533	-77.284	57080.	-136.58
19. 8.16	10.448	-77.374	56840.	-136.40
19. 9.14	10.377	-77.452	56760.	-136.22
19. 9.52	10.329	-77.505	56780.	-136.49
19.10.50	10.256	-77.583	56700.	-136.31
19.11.47	10.183	-77.662	56480.	-136.22
19.12.45	10.110	-77.742	56380.	-136.14
19.13.42	10.038	-77.822	56340.	-135.96
19.14.40	9.969	-77.901	40600.	-135.96
19.15.38	9.902	-77.981	55860.	-135.96
19.16.26	9.847	-78.047	76020.	-135.70
19.17.23	9.784	-78.125	55500.	-135.43
19.18.21	9.722	-78.202	55100.	-135.70
19.19.18	9.656	-78.281	54280.	-134.73
19.20.16	9.585	-78.366	52980.	-134.64
19.21.14	9.507	-78.456	50080.	-137.46
19.22.11	9.430	-78.532	48980.	-138.16
19.22.59	9.365	-78.597	44220.	-136.49
19.23.57	9.293	-78.668	42240.	-137.10
19.24.54	9.225	-78.734	41220.	-131.03
19.25.52	9.168	-78.796	37880.	-128.92
19.26.50	9.120	-78.862	35580.	-123.02
19.27.47	9.078	-78.922	33520.	-120.30
19.28.45	9.046	-78.985	31400.	-115.72
19.29.23	9.025	-79.028	29840.	-117.30
19.30.21	8.985	-79.083	28080.	-127.16
19.31.18	8.937	-79.128	26480.	-146.26
19.32.16	8.880	-79.159	25560.	-151.36
19.33.14	8.823	-79.197	24500.	-145.38
19.34.11	8.770	-79.232	22140.	-150.30
19.35. 9	8.735	-79.242	19140.	87.65
19.35.57	8.759	-79.250	16880.	-97.33
19.36.54	8.719	-79.288	14600.	-137.63
19.37.52	8.689	-79.327	12900.	-124.96
19.38.50	8.675	-79.368	10880.	-67.76
19.39.47	8.709	-79.404	9440.	-35.20
19.40.45	8.748	-79.430	7620.	-29.13
19.41.42	8.781	-79.452	5420.	-45.67
19.42.30	8.808	-79.468	3680.	-30.54
19.43.47	0.0	0.0	900.	-177.67
19.45.42	0.0	0.0	81340.	4.22
19.46.39	0.0	0.0	80620.	-0.35

SUMMARY OF INS FLIGHT LOG FOR 1/31/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
16. 3. 7	10.825	-80.545	46460.	-23.94
16. 4. 5	10.919	-80.596	46560.	-24.11
16. 5. 2	11.012	-80.647	46080.	-24.11
16. 6. 0	11.104	-80.698	46520.	-23.94
16. 6.58	11.199	-80.746	45880.	-22.53
16. 7.55	11.293	-80.794	15360.	-22.53
16. 8.53	11.389	-80.839	45600.	-21.21
16. 9.41	11.465	-80.884	46660.	-31.59
16.10.38	11.553	-80.949	45980.	-31.86
16.11.36	11.640	-81.012	45820.	-31.24
16.12.34	11.731	-81.075	45780.	-31.50
16.13.31	11.819	-81.138	45920.	-31.59
16.14.29	11.908	-81.201	45940.	-31.33
16.15.26	11.997	-81.264	46260.	-31.24
16.16.14	12.070	-81.317	45700.	-32.30
16.17.12	12.156	-81.384	45600.	-34.58
16.18.10	12.243	-81.452	46520.	-34.06
16.19. 7	12.331	-81.520	45480.	-33.79
16.20. 5	12.417	-81.587	45860.	-34.14
16.21. 2	12.503	-81.656	10200.	-33.79
16.22. 0	12.595	-81.720	45560.	-27.63
16.22.48	12.676	-81.763	45720.	-20.68
16.23.46	12.775	-81.811	45220.	-22.35
16.24.43	12.874	-81.859	45180.	-18.04
16.25.41	12.974	-81.900	15440.	-17.07
16.26.58	13.111	-81.953	45120.	-17.16
16.27.55	13.212	-81.993	46300.	-16.98
16.28.53	13.314	-82.033	45920.	-16.72
16.29.41	13.400	-82.063	44860.	-16.46
16.30.38	13.502	-82.100	45920.	-17.16
16.31.36	13.604	-82.139	45880.	-16.90
16.32.34	13.707	-82.176	46100.	-17.07
16.33.31	13.807	-82.214	9880.	-17.34
16.34.29	13.910	-82.251	45880.	-15.22
16.35.26	14.013	-82.287	15380.	-15.49
10.30. 1	0.0	0.0	0.	0.0
16.36.53	14.168	-82.342	45860.	-15.22
16.37.51	14.272	-82.377	45720.	-15.05
16.38.48	14.378	-82.413	45680.	-14.96
16.39.46	14.485	-82.450	45500.	-15.66
16.40.43	14.591	-82.488	46320.	-20.24
16.41.41	14.695	-82.536	4600.	-22.09
16.42.39	14.801	-82.584	46000.	-21.21
16.43.36	14.906	-82.633	45500.	-22.09
16.44.34	15.010	-82.685	46100.	-23.58
16.45.31	15.113	-82.737	46740.	-23.32
16.46.29	15.216	-82.786	45560.	-23.06
16.47.26	15.321	-82.836	45580.	-19.71
16.48.24	15.426	-82.877	45840.	-19.01
16.49.12	15.514	-82.911	4600.	-19.01
16.50.10	15.620	-82.954	45900.	-18.74
16.51. 7	15.724	-82.995	45260.	-19.01
16.52. 5	15.828	-83.036	45960.	-20.68
16.53. 3	15.930	-83.085	44880.	-25.61
16.54. 0	16.030	-83.137	45840.	-24.64
16.54.58	16.132	-83.187	45360.	-24.38
16.55.46	16.217	-83.228	45580.	-24.99
16.56.43	16.317	-83.279	45760.	-24.38
23.54.25	0.0	0.0	0.	0.0
0. 0. 0	0.0	0.0	0.	0.0
0. 0. 0	0.0	0.0	0.	0.0
0. 0. 0	0.0	0.0	81880.	0.0
17.18.39	18.482	-84.714	47140.	-35.20
17.18.58	18.512	-84.736	46420.	-35.02
17.19.55	18.603	-84.799	9540.	-35.02
17.20.53	18.695	-84.862	44700.	-35.20
17.21.51	18.785	-84.925	9360.	-34.94
17.22.48	18.877	-84.989	45020.	-35.20
17.23.46	18.969	-85.053	45240.	-35.29
17.24.43	19.063	-85.118	46520.	-35.11
17.25.31	19.139	-85.172	4400.	-35.46
17.26.29	19.234	-85.238	46380.	-35.20
17.27.27	19.330	-85.304	46040.	-35.20
17.28.24	19.425	-85.371	45940.	-35.29
17.29.22	19.521	-85.437	46460.	-35.29
17.30.19	19.616	-85.505	46500.	-35.02
17.31.17	19.712	-85.572	46480.	-35.20
17.31.55	19.775	-85.618	46340.	-35.11
17.32.53	19.872	-85.686	46560.	-34.67
17.33.51	19.968	-85.753	45080.	-35.02
17.34.48	20.064	-85.819	46300.	-34.50
17.35.46	-169.786	-85.875	44740.	-25.61
17.36.43	20.273	-85.927	46180.	-27.02
17.37.41	20.376	-85.981	9700.	-27.02
17.38.29	20.462	-86.025	44800.	-27.28
17.39.27	20.565	-86.077	46180.	-27.10
17.40.24	20.667	-86.129	44980.	-27.63
17.41.22	20.768	-86.181	45680.	-27.10
17.42.19	20.870	-86.232	44760.	-27.02
17.43.17	20.971	-86.283	45020.	-27.19
17.44.15	21.072	-86.333	45700.	-27.02
17.45. 3	21.155	-86.374	44980.	-27.19
17.46. 0	21.254	-86.425	45580.	-26.84
17.46.58	21.354	-86.473	9060.	-27.10
17.47.55	21.454	-86.523	45240.	-26.75
17.48.53	21.555	-86.571	45240.	-27.02
17.49.51	21.653	-86.619	45440.	-26.75
17.50.48	21.755	-86.665	45440.	-26.66
17.51.36	21.839	-86.707	45600.	-27.10
17.52.34	21.939	-86.753	46300.	-26.58

Table VI-10

INS Data for RB 57 Flight

of 1/31/74

SUMMARY OF INS FLIGHT LOG FOR 1/31/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
17.53.31	22.039	-86.800	45300.	-27.10
17.54.29	22.139	-86.848	46320.	-26.49
17.55.27	22.241	-86.893	45660.	-27.02
17.56.24	22.339	-86.940	46280.	-27.02
17.57.22	22.440	-86.985	45900.	-26.84
17.58.10	22.523	-87.024	45580.	-26.93
17.59. 7	22.612	-87.069	46040.	-26.75
18. 0. 5	22.721	-87.113	46540.	-26.75
18. 1. 3	22.820	-87.158	45960.	-26.75
18. 2. 0	22.918	-87.203	46400.	-26.93
18. 2.58	23.017	-87.249	45880.	-26.40
18. 3.55	23.111	-87.299	45660.	-39.95
18. 4.43	23.170	-87.365	46300.	-55.53
18. 5.41	23.231	-87.454	46080.	-56.76
18. 6.39	23.293	-87.544	45980.	-56.32
18. 7.36	23.358	-87.633	45720.	-56.14
18. 8.44	23.430	-87.736	46160.	-56.32
18. 9.41	23.493	-87.826	10220.	-56.50
18.10.39	23.558	-87.917	46340.	-56.14
18.11.17	23.600	-87.977	46200.	-56.50
18.12.15	23.664	-88.069	46620.	-56.23
18.13.12	23.729	-88.160	10760.	-56.32
18.14.10	23.794	-88.252	46680.	-56.32
18.15. 7	23.858	-88.344	46960.	-57.64
18.16. 5	23.917	-88.436	49640.	-59.66
18.17. 3	23.975	-88.522	52620.	-58.26
18.17.51	24.022	-88.595	53580.	-59.40
18.18.48	24.077	-88.684	54080.	-59.66
18.19.46	24.136	-88.773	54400.	-57.11
18.20.44	24.196	-88.866	54400.	-56.50
18.21.41	24.258	-88.958	54440.	-55.79
18.22.39	24.321	-89.052	34040.	-55.97
18.23.36	24.384	-89.144	54540.	-55.97
18.17.51	24.022	-88.595	53580.	-59.40
18.24.34	24.447	-89.237	54480.	-55.97
18.25.32	24.509	-89.329	54500.	-55.70
18.26.29	24.573	-89.422	33940.	-55.79
18.27.27	24.636	-89.514	39180.	-55.62
18.28.24	24.700	-89.607	54400.	-56.14
18.29.22	24.761	-89.699	54480.	-55.53
18.30.19	24.826	-89.791	54380.	-55.79
18.31. 8	24.878	-89.868	54480.	-55.70
18.32. 5	24.940	-89.959	54460.	-55.62
18.33. 3	25.001	-90.049	54480.	-55.35
18.34. 0	25.063	-90.140	54440.	-55.44
18.34.58	25.125	-90.230	54380.	-55.09
18.35.56	25.188	-90.320	54300.	-55.35
18.36.53	25.248	-90.407	54320.	-55.09
18.37.41	25.301	-90.480	54380.	-55.18
18.38.39	25.361	-90.569	38900.	-55.44
18.39.36	25.421	-90.656	54440.	-55.26
18.40.34	25.483	-90.742	54120.	-55.26
18.41.32	25.543	-90.829	54340.	-56.58
18.42.29	25.597	-90.921	53980.	-61.60
18.43.27	25.649	-91.013	54300.	-60.98
18.44.15	25.692	-91.088	38760.	-61.16
18.45.12	25.742	-91.180	54080.	-60.72
18.46.10	25.795	-91.272	54020.	-60.81
18.47. 8	25.845	-91.364	54000.	-60.90
18.48. 5	25.898	-91.456	54280.	-60.81
18.49. 3	25.950	-91.548	54000.	-60.81
18.50. 0	26.002	-91.640	38680.	-60.63
18.50.48	26.046	-91.718	53940.	-60.98
18.51.46	26.098	-91.810	54340.	-60.37
18.52.44	26.151	-91.903	54040.	-60.63
18.53.41	26.205	-91.995	54300.	-60.37
18.54.39	26.257	-92.087	54100.	-60.54
18.55.36	26.311	-92.179	54300.	-60.28
18.56.34	26.364	-92.271	53940.	-60.63
18.57.12	26.400	-92.331	53820.	-60.02
18.58.10	26.456	-92.420	53940.	-60.37
18.59. 8	26.510	-92.511	54040.	-60.19
19. 0. 5	26.563	-92.600	53840.	-60.19
19. 1. 3	26.618	-92.689	53620.	-60.19
19. 2. 0	26.673	-92.779	38820.	-60.19
19. 2.58	26.728	-92.868	53760.	-59.93
19. 3.46	26.774	-92.940	53680.	-59.84
19. 4.44	26.832	-93.028	54000.	-60.10
19. 5.41	26.890	-93.116	53840.	-59.93
19. 6.39	26.946	-93.204	53760.	-60.28
19. 7.36	27.004	-93.293	53840.	-59.93
19. 8.34	27.063	-93.380	53800.	-60.02
19. 9.32	27.122	-93.469	53780.	-59.84
19.10.20	27.170	-93.540	54540.	-59.49
19.11.17	27.226	-93.627	54540.	-59.93
19.12.15	27.282	-93.713	54140.	-59.75
19.13.12	27.340	-93.799	54200.	-59.84
19.14.10	27.397	-93.886	54080.	-59.66
19.15. 8	27.447	-93.976	54020.	-69.17
19.16. 5	27.482	-94.074	54180.	-72.95
19.16.53	27.514	-94.155	53680.	-72.69
19.17.51	27.551	-94.252	53800.	-72.34
19.18.48	27.589	-94.350	53920.	-72.69
19.19.46	27.628	-94.447	53800.	-72.25
19.20.44	27.666	-94.546	54100.	-72.60
19.21.41	27.706	-94.645	53980.	-72.16
19.22.39	27.747	-94.742	53980.	-72.51
19.23.27	27.783	-94.823	54360.	-66.79
19.24.24	27.841	-94.914	54260.	-63.45
19.25.22	27.901	-95.002	54020.	-59.84

SUMMARY OF INS FLIGHT LOG FOR 1/31/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
19.26.20	27.963	-95.088	53740.	-60.10
19.27.17	28.029	-95.173	33980.	-56.76
19.28.15	28.094	-95.257	54280.	-57.29
19.29.12	28.159	-95.340	54360.	-57.20
19.29.51	28.203	-95.397	54080.	-56.76
19.30.48	28.270	-95.480	54420.	-57.29
19.31.46	28.336	-95.564	54380.	-57.20
19.32.44	28.400	-95.648	54420.	-57.73
19.33.41	28.464	-95.734	54540.	-60.19
19.34.39	28.523	-95.822	54260.	-60.28
19.35.36	28.583	-95.909	54220.	-59.93
19.36.34	28.643	-95.996	33540.	-59.66
19.37.32	28.704	-96.083	54400.	-59.84
19.38.29	28.754	-96.173	54120.	-71.37
19.39.27	28.794	-96.271	54000.	-70.93
19.40.24	28.837	-96.367	38580.	-71.10
19.41.22	28.878	-96.463	53940.	-70.49
19.42.20	28.922	-96.558	53800.	-70.93
19.43.17	28.984	-96.644	53900.	-58.08
19.44.15	29.045	-96.729	54240.	-57.99
19.45.12	29.106	-96.814	54260.	-58.34
19.46.10	29.167	-96.901	54300.	-58.34
19.47. 8	29.228	-96.987	53820.	-60.54
19.48. 5	29.284	-97.078	53780.	-62.13
19.49. 3	29.339	-97.170	53580.	-61.60
19.49.41	29.376	-97.230	53520.	-62.04
19.50.39	29.431	-97.323	53560.	-61.78
19.51.36	29.486	-97.415	53740.	-62.22
19.52.34	29.541	-97.510	53600.	-61.69
19.53.32	29.590	-97.603	53660.	-72.69
19.54.48	29.641	-97.740	53720.	-69.17
19.55.46	29.693	-97.836	53640.	-60.90
19.56.34	29.737	-97.915	53680.	-62.39
19.57.32	29.790	-98.009	53560.	-62.48
19.58.29	29.844	-98.104	53480.	-62.22
19.59.27	29.896	-98.199	53460.	-62.39
20. 0.24	29.950	-98.293	53540.	-61.78
20. 1.22	30.005	-98.387	38440.	-61.95
20. 2.20	30.058	-98.481	53720.	-61.95
20. 3. 8	30.102	-98.561	53660.	-61.69
20. 4. 5	30.155	-98.654	53440.	-61.69
20. 5. 3	30.210	-98.749	53780.	-61.86
20. 6. 0	30.264	-98.844	53720.	-61.16
20. 6.58	30.317	-98.938	53780.	-61.86
20. 7.56	30.371	-99.033	53620.	-61.42
20. 8.53	30.424	-99.128	53560.	-61.60
20. 9.32	30.460	-99.192	53880.	-61.78
20.10.29	30.514	-99.287	53660.	-61.42
20.11.27	30.568	-99.382	53760.	-61.51
20.12.25	30.625	-99.475	53760.	-61.25
20.13.22	30.680	-99.571	53680.	-61.60
20.14.20	30.736	-99.666	53600.	-61.60
20.15.17	30.791	-99.762	53780.	-61.42
20.16. 5	30.836	-99.841	53560.	-61.60
20.17. 3	30.890	-99.939	53660.	-61.51
20.18. 0	30.944	-100.036	53360.	-61.34
20.18.58	30.999	-100.134	53760.	-61.69
20.19.56	31.053	-100.232	53740.	-61.07
20.20.53	31.105	-100.331	53580.	-61.51
20.21.51	31.157	-100.430	53500.	-61.16
20.22.39	31.202	-100.514	53640.	-61.51
20.23.36	31.253	-100.614	53560.	-61.07
20.24.34	31.307	-100.714	53540.	-61.34
20.25.32	31.359	-100.814	53600.	-60.90
20.26.29	31.412	-100.913	53580.	-60.72
20.27.27	31.466	-101.012	53640.	-60.98
20.28.24	31.521	-101.111	53640.	-60.63
20.29.13	31.566	-101.194	53740.	-60.98
20.30.10	31.618	-101.294	32980.	-60.46
20.31. 8	31.672	-101.395	53840.	-60.28
20.32. 5	31.727	-101.493	53680.	-60.02
20.33. 3	31.779	-101.592	53740.	-60.02
20.34. 1	31.834	-101.690	53660.	-60.37
20.34.58	31.887	-101.788	53840.	-60.28
20.35.46	31.931	-101.871	54660.	-60.37
20.36.44	31.985	-101.970	54000.	-60.19
20.37.41	32.039	-102.067	54020.	-60.46
20.38.39	32.093	-102.167	54000.	-60.46
20.39.37	32.145	-102.267	53760.	-60.63
20.40.34	32.199	-102.369	53880.	-60.46
20.41.51	32.273	-102.502	53740.	-60.81
20.42.29	32.308	-102.571	53860.	-60.54
20.43.27	32.365	-102.672	53500.	-60.72
20.44.25	32.421	-102.775	53580.	-60.54
20.45.22	32.477	-102.878	53660.	-60.54
20.46.20	32.533	-102.981	53620.	-59.93
20.47.17	32.588	-103.084	25160.	-60.10
20.48.15	32.645	-103.187	53560.	-59.84
20.49. 3	32.691	-103.272	53520.	-59.22
20.50. 1	32.748	-103.373	53760.	-59.75
20.50.58	32.802	-103.475	53640.	-59.58
20.51.56	32.859	-103.575	33000.	-59.22
20.52.53	32.914	-103.677	53420.	-59.75
20.53.51	32.967	-103.777	53600.	-59.31
20.54.49	33.022	-103.877	53460.	-59.40
20.55.37	33.066	-103.961	53460.	-59.14
20.56.34	33.122	-104.059	53460.	-59.66
20.57.32	33.176	-104.158	53500.	-59.14
20.58.29	33.233	-104.256	53620.	-58.96
20.59.27	33.288	-104.352	54260.	-59.31

Table VI-11

INS Data for RB 57 Flights

of 1/31/74 and 4/19/74

SUMMARY OF INS FLIGHT LOG FOR 1/31/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
21. 0.25	33.347	-104.449	53620.	-53.86
21. 1.22	33.421	-104.534	53420.	-46.02
21. 2.10	33.482	-104.603	53460.	-49.02
21. 3. 8	33.554	-104.689	53680.	-48.40
21. 4. 5	33.628	-104.774	53600.	-47.61
21. 5. 3	33.704	-104.858	53480.	-48.40
21. 6. 1	33.779	-104.944	53360.	-47.96
21. 6.58	33.855	-105.031	53580.	-48.40
21. 7.56	33.930	-105.117	53520.	-47.43
21. 8.44	33.993	-105.189	53620.	-48.14
21. 9.41	34.068	-105.275	53560.	-47.17
21.10.39	34.143	-105.358	53340.	-47.87
21.11.37	34.212	-105.445	53300.	-51.13
21.12.34	34.280	-105.532	53260.	-49.90
21.13.51	34.372	-105.646	53400.	-50.07
21.14.49	34.441	-105.731	53700.	-50.42
21.15.27	34.486	-105.788	53780.	-50.51
21.16.25	34.555	-105.872	25160.	-49.98
21.17.22	34.623	-105.959	53580.	-50.95
21.18.20	34.691	-106.046	53340.	-50.34
21.19.17	34.759	-106.134	53540.	-51.22
21.20.15	34.811	-106.234	53380.	-62.57
21.21.13	34.862	-106.337	53260.	-61.60
21.22. 1	34.905	-106.425	53540.	-62.13

SUMMARY OF INS FLIGHT LOG FOR 4/19/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
20. 0. 3	7.330	-79.990	49820.	-62.74
20. 1. 0	7.382	-80.084	49920.	-62.74
20. 1.58	7.435	-80.179	49880.	-62.74
20. 2.56	7.483	-80.275	49200.	-66.00
20. 3.53	7.528	-80.370	48940.	-66.35
20. 4.51	7.573	-80.467	49740.	-66.00
20. 5.49	7.621	-80.565	49520.	-66.00
20. 6.36	7.661	-80.646	49740.	-65.82
20. 7.34	7.706	-80.742	49660.	-66.00
20. 8.32	7.753	-80.838	49720.	-65.91
20. 9.29	7.815	-80.934	49680.	-66.00
20.10.46	7.859	-81.061	49500.	-69.87
20.11.44	7.853	-81.164	49240.	-107.36
20.12.41	7.775	-81.241	49520.	-155.06
20.13.29	7.690	-81.263	49420.	-167.46
20.14.27	7.587	-81.282	49580.	-168.17
20.15.24	7.484	-81.300	49640.	-168.43
20.16.22	7.382	-81.319	49280.	-168.52
20.17.20	7.280	-81.337	48860.	-168.43
20.18.17	7.178	-81.355	48940.	-168.43
20.19.15	7.076	-81.374	49160.	-168.43
20.20. 3	6.991	-81.391	49060.	-168.26
20.21. 1	6.890	-81.410	49360.	-168.17
20.21.58	6.788	-81.430	49700.	-168.17
20.22.56	6.688	-81.457	49520.	-156.11
20.23.53	6.592	-81.498	49640.	-156.29
20.24.51	6.496	-81.539	49540.	-156.29
20.25.49	6.400	-81.580	48960.	-156.20
20.26.27	6.335	-81.607	49340.	-156.38
20.27.25	6.241	-81.649	50400.	-156.20
20.28.22	6.146	-81.691	50660.	-156.29
20.29.20	6.056	-81.742	49840.	-151.80
20.30.17	5.965	-81.791	49600.	-151.80
20.31.15	5.874	-81.839	49760.	-151.80
20.32.13	5.784	-81.889	48300.	-151.71
20.33. 1	5.708	-81.929	48920.	-151.62
20.33.58	5.615	-81.977	48840.	-151.62
20.34.56	5.524	-82.026	49000.	-151.54
20.35.53	5.433	-82.075	49480.	-151.54
20.36.51	5.341	-82.125	49680.	-151.54
20.37.49	5.251	-82.174	49640.	-145.11
20.38.46	5.165	-82.232	49520.	-146.61
20.39.34	5.094	-82.280	49340.	-146.70
20.40.32	5.022	-82.346	49740.	-122.58
20.41.29	4.989	-82.439	49200.	-108.15
20.42.27	4.963	-82.534	48140.	-107.89
20.43.25	4.939	-82.628	47000.	-108.24
20.44.22	4.912	-82.720	45860.	-108.06
20.45.20	4.886	-82.811	45120.	-108.15
20.46. 8	4.866	-82.882	44000.	-107.89

SUMMARY OF INS FLIGHT LOG FOR 4/19/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
20.47. 5	4.838	-82.966	43240.	-108.15
20.48. 3	4.810	-83.048	42260.	-109.38
20.49. 1	4.778	-83.126	41280.	-110.53
20.49.58	4.727	-83.202	41300.	-140.98
20.50.56	4.635	-83.216	42160.	175.65
20.52.13	4.517	-83.170	43420.	161.04
20.53. 1	4.446	-83.140	43580.	161.30
20.53.58	4.358	-83.102	43580.	161.22
20.54.56	4.273	-83.058	43460.	154.62
20.55.53	4.189	-83.007	43540.	154.35
20.56.51	4.107	-82.951	43480.	139.13
20.57.49	4.021	-82.899	45340.	165.35
20.58.46	3.923	-82.888	46880.	178.46
0. 0. 0	3.822	0.0	0.	0.0
21. 0.51	3.797	-82.766	49900.	103.66
21. 1.49	3.776	-82.670	49540.	104.02
21. 2.46	3.769	-82.572	50820.	80.70
21. 3.44	3.855	-82.513	50820.	13.20
21. 4.41	3.955	-82.491	50960.	13.99
21. 5.39	4.056	-82.468	50980.	13.64
21. 6.27	4.123	-82.495	50920.	-57.55
21. 7.25	4.150	-82.591	50760.	-77.26
21. 8.22	4.174	-82.689	50140.	-76.91
21. 9.20	4.200	-82.788	50600.	-76.65
21.10.17	4.220	-82.884	50760.	-91.43
21.11.15	4.158	-82.962	50660.	-154.35
21.12.13	4.064	-82.987	50480.	-166.58
21.13. 1	3.986	-83.003	50280.	-166.94
21.13.58	3.892	-83.022	49980.	-167.20
21.14.56	3.796	-83.041	49040.	-176.53
21.15.53	3.736	-82.984	49480.	104.90
21.16.51	3.716	-82.886	50760.	103.58
21.17.49	3.690	-82.793	52260.	104.02
21.18.46	3.668	-82.700	52340.	101.64
21.19.25	3.695	-82.638	51980.	52.94
21.20.22	3.790	-82.612	51680.	-19.80
21.21.20	3.874	-82.667	52560.	-33.35
21.22.17	3.955	-82.724	53120.	-32.65
21.23.15	4.036	-82.781	52980.	-32.65
21.24.13	4.119	-82.837	51280.	-38.63
21.25.10	4.200	-82.897	50100.	-40.83
21.25.58	4.270	-82.951	48780.	-42.24
21.26.56	4.351	-83.017	47580.	-42.15
21.27.53	4.447	-83.063	45760.	-8.80
21.28.51	4.545	-83.043	44060.	22.88
21.29.49	4.627	-82.991	43120.	33.44
21.30.46	4.704	-82.930	41700.	38.63
21.31.44	4.774	-82.864	40280.	40.30
21.32.32	4.832	-82.812	38620.	38.28
21.33.29	4.895	-82.751	37820.	42.06
21.34.27	4.954	-82.692	38440.	38.72
21.35.25	5.014	-82.638	39980.	36.87
21.36.22	5.080	-82.586	41280.	33.62
21.37.20	5.148	-82.534	43220.	37.58
21.38.17	5.221	-82.480	43900.	33.62
21.39. 5	5.288	-82.442	45280.	29.83
21.40. 3	5.368	-82.402	47020.	27.98
21.41. 1	5.445	-82.358	48680.	29.13
21.41.58	5.530	-82.310	48920.	29.22
21.42.56	5.622	-82.258	49300.	28.42
21.43.53	5.714	-82.208	50760.	28.42
21.44.51	5.803	-82.162	52540.	28.34
21.45.39	5.876	-82.123	53600.	28.25
21.46.37	5.964	-82.079	54480.	28.51
21.47.34	6.056	-82.036	54820.	28.51
21.48.32	6.152	-81.989	55220.	28.51
21.49.29	6.244	-81.941	56000.	29.13
21.50.27	6.331	-81.890	57000.	28.42
21.51.25	6.415	-81.835	57480.	38.28
21.52. 3	6.470	-81.794	57660.	38.72
21.53. 1	6.552	-81.731	57800.	38.37
21.53.58	6.636	-81.668	57940.	37.93
21.54.56	6.722	-81.605	58100.	38.19
21.55.53	6.809	-81.540	58320.	38.28
21.56.51	6.894	-81.477	58620.	37.93
21.57.49	6.980	-81.413	58740.	38.28
21.58.37	7.052	-81.358	58880.	38.37
21.59.34	7.138	-81.290	58980.	37.66
22. 0.32	7.225	-81.225	59040.	38.28
22. 1.29	7.311	-81.156	59060.	37.84
22. 2.27	7.396	-81.087	59340.	40.22
22. 3.25	7.448	-80.995	59440.	75.42
22. 4.22	7.433	-80.888	59560.	115.63
22. 5.10	7.371	-80.820	59600.	151.10
22. 6. 8	7.274	-80.798	59640.	-167.20
22. 7. 6	7.175	-80.816	59620.	-167.82
22. 8. 3	7.076	-80.832	59520.	-168.61
22. 9. 1	6.978	-80.847	59480.	-169.05
22. 9.58	6.877	-80.862	59080.	-169.14
22.10.56	6.780	-80.847	59380.	154.26
22.11.44	6.725	-80.787	59800.	122.85
22.12.42	6.713	-80.684	59680.	86.06
22.13.39	6.766	-80.585	59620.	48.22
22.14.37	6.862	-80.528	59800.	18.48
22.15.34	6.968	-80.522	59700.	-17.16
22.16.32	7.050	-80.578	59520.	-54.38
22.17.30	7.075	-80.673	59400.	-90.46
22.18.18	7.075	-80.758	59720.	-90.29
22.19.15	7.079	-80.860	60220.	-88.62
22.20.13	7.086	-80.960	60400.	-86.94

Table VI-12

INS Data for RB 57 Flights

of 4/19/74, 4/25/74 and 5/5/74

SUMMARY OF INS FLIGHT LOG FOR 4/19/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
22.21.10	7.094	-81.060	60360.	-86.77
22.22. 8	7.090	-81.161	60320.	-103.22
22.22.56	7.046	-81.237	60180.	-130.77
22.23.54	6.958	-81.292	60160.	-162.36
22.24.51	6.860	-81.314	60400.	-167.11
22.25.49	6.761	-81.334	60460.	-168.26
22.26.46	6.662	-81.354	60480.	-168.52
22.27.44	6.563	-81.371	60520.	-168.70
22.28.42	6.463	-81.391	60500.	-168.52
22.29.30	6.385	-81.380	60320.	145.38
22.30.27	6.374	-81.284	60240.	72.60
22.31.25	6.467	-81.222	60060.	-0.62
22.32.22	6.565	-81.256	60060.	-26.93
22.33.20	6.659	-81.301	60100.	-33.70
22.34.18	6.672	-81.391	59740.	-111.06
22.35.15	6.584	-81.447	59780.	-168.52
22.36. 3	6.503	-81.463	60000.	-168.26
22.37. 1	6.403	-81.481	60100.	-168.70
22.37.58	6.303	-81.499	60180.	-168.87
22.38.56	6.204	-81.516	60240.	-169.05
22.39.54	6.104	-81.522	60300.	160.16
22.41.10	6.088	-81.404	60020.	60.28
22.42. 8	6.179	-81.339	60160.	29.48
22.42.56	6.259	-81.293	59980.	29.48
22.43.54	6.356	-81.237	59520.	30.10
22.44.51	6.452	-81.179	59720.	29.57
22.45.49	6.550	-81.124	59540.	29.39
22.46.46	6.646	-81.070	59720.	29.92
22.47.44	6.742	-81.012	59660.	29.48
22.48.42	6.839	-80.956	59640.	29.48
22.49.30	6.920	-80.908	59660.	29.66
22.50.27	7.016	-80.851	59720.	29.30
22.51.25	7.112	-80.795	59700.	29.48
22.52.22	7.208	-80.736	59660.	30.80
22.53.20	7.303	-80.677	59380.	30.18
22.54.18	7.399	-80.621	59200.	30.27
22.55.15	7.496	-80.565	58980.	30.36
13.30. 1	7.559	0.0	58920.	30.27
22.56.51	7.657	-80.473	58720.	30.36
22.58. 8	7.784	-80.399	58480.	30.27
22.59. 6	7.876	-80.344	57800.	35.55
23. 0. 3	7.963	-80.285	55080.	37.75
23. 1. 1	8.033	-80.219	52240.	48.84
23. 1.58	8.101	-80.138	47020.	51.92
23. 2.46	8.152	-80.073	43840.	54.38
23. 3.44	8.214	-79.998	40260.	51.48
23. 4.42	8.274	-79.927	36280.	49.19
23. 5.39	8.333	-79.863	32960.	45.32
23. 6.37	8.390	-79.807	29700.	46.46
23. 7.34	8.439	-79.755	26720.	47.78

SUMMARY OF INS FLIGHT LOG FOR 4/25/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
21.45. 1	34.213	-108.367	60660.	171.42
21.40.21	34.117	-108.369	60600.	-157.78
21.41.19	34.057	-108.456	60260.	-111.58
21.42.16	34.069	-108.579	60100.	-69.70
21.43.14	34.143	-108.677	60080.	-34.06
21.44.11	34.231	-108.754	59960.	-35.90
21.44.50	34.287	-108.806	59980.	-35.90
21.45.47	34.374	-108.883	60060.	-35.55
21.46.45	34.460	-108.960	60160.	-35.38
21.47.43	34.552	-109.030	60480.	-18.66
22. 5.33	34.652	-109.021	60460.	30.10
22. 6.30	34.730	-108.939	60360.	44.79
22. 7.28	34.807	-108.850	60300.	45.94
21.51.24	34.850	-108.763	60460.	71.46
21.52.21	34.888	-108.644	60420.	71.90
21.53.19	34.924	-108.525	60420.	72.16
22. 5.31	34.962	-108.405	60460.	72.07
22. 6.29	35.001	-108.286	60500.	71.81
22. 7.27	35.039	-108.165	60520.	71.98
21.57. 9	35.076	-108.046	60600.	72.42
21.57.57	35.061	-107.943	60560.	117.48
21.58.55	34.979	-107.866	60560.	164.74
22. 5.49	34.851	-107.818	60560.	164.30
22. 6.47	34.756	-107.782	60620.	163.42
22. 2. 7	34.662	-107.744	60680.	162.89
22. 3. 4	34.567	-107.707	60700.	162.71
22. 4. 2	34.472	-107.668	60780.	162.54
22. 4.50	34.394	-107.637	60880.	162.27
22. 5.47	34.299	-107.600	60880.	162.27
22. 6.45	34.224	-107.535	60780.	123.82
22. 7.43	34.227	-107.420	60600.	71.28
22. 8.40	34.304	-107.333	60560.	31.50
22. 9.38	34.394	-107.272	60500.	30.98
22.27.28	34.486	-107.213	60560.	30.71
22.28.16	34.563	-107.162	60560.	-165.00
22.29.14	34.654	-107.097	60580.	32.91
22.13.19	34.743	-107.032	60120.	32.74
22.14.16	34.836	-106.957	56740.	34.23
22.15.14	34.928	-106.881	53220.	37.05
22.27.27	35.009	-106.796	50540.	42.59
22.28.24	35.090	-106.706	46960.	44.26
22.29.12	35.161	-106.636	43860.	25.43
22.18.55	35.261	-106.603	40220.	8.36
22.19.52	35.356	-106.577	37500.	9.42
22.20.50	35.427	-106.603	34680.	-60.81
22.27.25	35.407	-106.673	31740.	-146.43
22.28.23	35.348	-106.690	28820.	-162.80
22.29.20	35.294	-106.701	26660.	-162.80
22.29.59	35.257	-106.709	24780.	-162.36
22.25.19	35.205	-106.721	22060.	-163.94

SUMMARY OF INS FLIGHT LOG FOR 4/25/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
20.57.49	35.039	-106.479	6800.	-0.79
20.58.47	35.071	-106.507	10500.	-48.84
20.59.44	35.117	-106.544	14280.	-43.56
20.55. 4	35.167	-106.583	18720.	-43.21
20.56. 2	35.219	-106.621	22340.	-43.47
20.56.59	35.275	-106.662	24780.	-43.47
20.57.57	35.336	-106.708	27680.	-43.47
20.58.45	35.386	-106.746	29580.	-43.56
20.59.43	35.451	-106.793	32200.	-41.36
21. 0.40	35.532	-106.820	34400.	-23.06
21. 1.38	35.617	-106.849	36720.	-27.46
21. 2.35	35.703	-106.882	38960.	-27.54
21.20.26	35.791	-106.914	41320.	-27.02
21.21.23	35.880	-106.953	43200.	-28.34
21.22.11	35.956	-106.990	44400.	-37.14
21. 6.16	36.039	-107.051	45840.	-38.98
21. 7.14	36.123	-107.118	47240.	-39.16
21. 8.11	36.205	-107.192	48340.	-40.04
21.20.24	36.291	-107.268	49380.	-39.07
21.21.22	36.376	-107.340	50840.	-37.93
21.22.19	36.461	-107.414	51820.	-38.81
21.11.52	36.527	-107.479	52520.	-50.95
21.12.50	36.554	-107.590	53260.	-93.10
21.13.47	36.527	-107.707	54020.	-107.27
21.20.23	36.495	-107.823	54300.	-107.36
21.21.20	36.465	-107.941	54960.	-106.74
21.22.18	36.435	-108.062	55560.	-106.57
21.17.38	36.395	-108.180	56060.	-120.82
21.18.26	36.336	-108.260	56560.	-142.56
21.19.23	36.248	-108.316	57520.	-157.17
21.20.21	36.157	-108.360	58100.	-157.17
21.21.19	36.067	-108.402	58340.	-157.17
21.22.16	35.972	-108.444	58440.	-157.34
21.23.14	35.878	-108.487	58700.	-157.08
21.24.11	35.783	-108.530	58840.	-157.43
21.25.19	35.670	-108.579	59120.	-157.61
21.43. 9	35.572	-108.618	59360.	-170.46
21.44. 6	35.469	-108.622	59700.	-177.58
21.28.11	35.367	-108.612	59920.	173.89
21.29. 9	35.266	-108.592	60020.	172.92
21.30. 7	35.164	-108.571	60160.	172.57
21.42.19	35.064	-108.551	60320.	172.04
21.43. 7	34.981	-108.533	60760.	172.22
21.44. 5	34.884	-108.512	60880.	172.13
21.33.47	34.787	-108.490	60720.	172.04
21.34.45	34.688	-108.470	60680.	171.86
21.35.43	34.590	-108.448	60720.	171.69
21.42.18	34.492	-108.427	60620.	171.78
21.43.15	34.393	-108.405	60580.	171.51
21.44. 3	34.312	-108.387	60620.	171.69

SUMMARY OF INS FLIGHT LOG FOR 5/ 5/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
20.17. 4	33.921	-107.181	0.	20.86
20.18.21	33.822	-107.145	48240.	144.32
20.19.57	33.826	-106.941	48160.	40.66
20.20.55	33.928	-106.871	47980.	24.38
20.22.11	34.065	-106.789	47720.	23.76
20.23. 9	34.168	-106.726	47600.	24.20
20.24. 6	34.247	-106.639	47540.	61.25
20.24.55	34.231	-106.523	47480.	122.67
20.25.52	34.132	-106.453	47380.	166.14
20.26.50	34.035	-106.387	47400.	154.09
20.27.47	33.929	-106.354	47420.	-177.58
20.28.45	33.823	-106.366	47440.	-165.79
20.29.43	33.718	-106.385	47740.	-165.97
20.30.40	33.613	-106.404	48000.	-166.23
20.31.28	33.527	-106.420	48000.	-166.32
20.32.26	33.423	-106.437	47940.	-166.50
20.33.23	33.317	-106.457	47800.	-166.50
20.34.21	33.213	-106.477	47840.	-166.58
20.35.19	33.108	-106.465	47420.	149.07
20.36.16	33.012	-106.394	47260.	150.30
20.37.14	32.918	-106.321	47600.	149.69
20.38. 2	32.839	-106.260	47700.	149.95
20.38.59	32.745	-106.186	47580.	150.13
20.39.57	32.650	-106.112	47580.	149.51
20.40.55	32.555	-106.038	47520.	149.86
20.41.52	32.461	-105.963	47520.	149.34
20.42.50	32.366	-105.890	47500.	149.34
20.43.47	32.269	-105.814	47240.	149.60
20.44.35	32.188	-105.753	47300.	149.51
20.45.33	32.109	-105.661	47700.	124.52
20.46.31	32.097	-105.529	49340.	81.66
20.47.47	32.196	-105.386	50980.	20.94
20.48.45	32.329	-105.385	52140.	-27.28
20.50. 2	32.420	-105.470	52700.	-33.79
20.51.28	32.538	-105.587	52740.	-53.77
20.52. 7	32.579	-105.653	52760.	-53.15
20.53. 4	32.643	-105.751	52780.	-52.18
20.54. 2	32.709	-105.847	52760.	-50.95
20.54.59	32.780	-105.941	52820.	-43.38
20.55.57	32.874	-106.005	52920.	-21.65
20.56.55	32.975	-106.046	52680.	-20.59
20.57.52	33.076	-106.089	52640.	-21.30
20.58.40	33.159	-106.126	52580.	-22.09
20.59.38	33.259	-106.173	52380.	-26.05
21. 0.35	33.303	-106.270	52500.	-85.54
21. 1.33	33.237	-106.376	52640.	-152.50
21. 2.31	33.132	-106.362	53040.	158.58
21. 3.28	33.029	-106.307	53040.	158.84
21. 4.26	32.927	-106.251	52920.	158.40
21. 5.14	32.842	-106.200	52160.	157.96

Table VI-13

INS Data for RB 57 Flight of 5/5/74

SUMMARY OF INS FLIGHT LOG FOR 5/ 5/74

GMT TIME HH.MM.SS	LATITUDE DEG.	LONGITUDE DEG.	ALTITUDE FEET	TRUE HDG. DEG.
21. 6.11	32.741	-106.140	52080.	157.96
21. 7. 9	32.639	-106.078	52000.	157.61
21. 8. 7	32.540	-106.015	52300.	157.34
21. 9. 4	32.439	-105.953	52420.	157.08
21.10. 2	32.336	-105.893	52460.	157.34
21.10.59	32.233	-105.831	52560.	157.08
21.11.47	32.148	-105.782	52660.	157.34
21.12.45	32.055	-105.713	52660.	136.49
21.13.43	32.033	-105.588	53020.	86.24
21.14.40	32.100	-105.473	53560.	33.97
21.15.38	32.207	-105.449	54200.	-16.54
21.16.55	32.330	-105.536	54720.	-36.26
21.18.11	32.446	-105.639	55340.	-36.78
21.18.59	32.517	-105.701	55760.	-35.90
21.20.16	32.634	-105.799	56240.	-35.90
21.21.14	32.719	-105.879	56460.	-37.49
21.22.11	32.801	-105.960	56640.	-37.14
21.23. 9	32.885	-106.041	56880.	-36.17
21.24. 7	32.971	-106.120	56940.	-34.41
21.25. 4	33.067	-106.184	57020.	-25.17
21.25.43	33.133	-106.218	57040.	-19.98
21.26.40	33.233	-106.267	57040.	-26.05
21.27.38	33.276	-106.369	56880.	-86.33
21.28.35	33.185	-106.446	56560.	172.04
21.29.33	33.074	-106.410	56760.	165.53
21.30.31	32.964	-106.370	56480.	165.09
21.31.28	32.855	-106.326	56280.	164.47
21.32.16	32.764	-106.289	56280.	164.12
21.33.14	32.657	-106.245	56220.	164.12
21.34.11	32.549	-106.201	56060.	163.77
21.35. 9	32.443	-106.158	56080.	163.94
21.36. 7	32.337	-106.112	56020.	163.86
21.37. 4	32.232	-106.070	55980.	163.68
21.38. 2	32.126	-106.026	56080.	163.77
21.38.50	32.039	-105.987	56060.	156.99
21.39.47	31.964	-105.900	56080.	119.64
21.40.45	31.974	-105.771	56280.	64.68
21.42. 2	32.103	-105.702	56760.	-15.05
21.43.38	32.276	-105.775	57100.	-19.89
21.44.55	32.413	-105.842	57300.	-20.50
21.45.52	32.517	-105.890	57620.	-19.18
21.46.40	32.605	-105.928	57820.	-18.57
21.47.38	32.710	-105.971	58120.	-18.22
21.48.35	32.816	-106.015	58420.	-19.54
21.49.33	32.919	-106.063	58600.	-20.24
21.50.31	33.021	-106.109	58840.	-19.10
21.51.28	33.125	-106.152	58980.	-18.13
21.52.26	33.228	-106.195	59000.	-23.94
21.53. 4	33.274	-106.249	58880.	-61.07
21.54. 2	33.236	-106.372	58680.	-135.17
21.54.59	33.126	-106.400	58620.	171.51
21.55.57	33.015	-106.378	58740.	171.25
21.56.55	32.904	-106.350	58780.	169.93
21.57.52	32.793	-106.319	58820.	169.49
21.58.50	32.683	-106.289	59000.	169.31
21.59.38	32.591	-106.263	59080.	169.40
22. 0.36	32.480	-106.233	59160.	169.22
22. 1.33	32.370	-106.201	59180.	169.05
22. 2.31	32.259	-106.170	59160.	169.31
22. 3.28	32.149	-106.137	59200.	169.22
22. 4.26	32.039	-106.103	59240.	169.22
22. 5.23	31.931	-106.064	59160.	156.82
22. 6.12	31.868	-105.989	59140.	123.90
22. 7. 9	31.883	-105.860	59100.	57.90
22. 8. 7	31.985	-105.805	59120.	-9.59
22. 9. 4	32.092	-105.824	59280.	-10.91
22.10. 2	32.199	-105.850	59320.	-12.58
22.11.19	32.341	-105.887	59360.	-11.62
22.12.55	32.518	-105.928	59700.	-9.86
22.13.43	32.608	-105.948	59860.	-10.82
22.15. 0	32.750	-105.982	59920.	-11.44
22.15.57	32.857	-106.008	59980.	-10.65
22.16.55	32.963	-106.034	60100.	-10.65
22.17.52	33.070	-106.060	60100.	-10.65
22.18.50	33.177	-106.088	60120.	-11.53
22.19.48	33.284	-106.119	60100.	-17.34
22.20.35	33.355	-106.175	60000.	-49.19
22.21.33	33.362	-106.300	59960.	-102.61
22.22.31	33.280	-106.402	59920.	-153.74
22.23.28	33.169	-106.406	60040.	168.70
22.24.26	33.060	-106.377	60300.	168.96
22.25.24	32.968	-106.347	60160.	168.87
22.26.21	32.837	-106.314	60140.	168.43
22.27. 9	32.743	-106.286	60220.	168.08
22.28. 7	32.634	-106.255	60360.	167.99
22.29. 4	32.521	-106.222	60440.	167.90
22.30. 2	32.410	-106.189	60400.	167.82
22.31. 0	32.299	-106.158	60440.	167.99
22.31.57	32.186	-106.125	60460.	167.90
22.32.55	32.075	-106.093	60460.	167.82
22.33.43	31.987	-106.055	60420.	145.38
22.34.40	31.946	-105.943	60320.	91.87
22.35.38	32.009	-105.832	60160.	30.54
22.36.36	32.115	-105.825	59920.	-18.30
22.37.33	32.249	-105.867	59900.	-19.18
22.38.50	32.351	-105.924	59780.	-19.36
22.40.26	32.521	-105.993	59700.	-18.74
22.41. 4	0.0	0.0	0.	0.0
22.42.12	32.708	-106.072	59600.	-19.89
20.17. 4	33.921	-107.181	0.	20.86

of observation and t_n is the time of local noon, both in hours. It is convenient to express t and t_n in GMT. The value of t_n at Greenwich for each day of the year is given in the American Ephemeris and Nautical Almanac. For any other location local noon (or ephemeris transit) is four minutes of time later for each degree of longitude west (one hour for 15 degrees of longitude).

Table VII gives the values of solar zenith angle. Since the zenith angle changes slowly with time, computations were made at intervals of 15 minutes. The values of latitude and longitude were taken from Table VI. Table VII gives in addition to the solar zenith angle the values of solar declination, ephemeris transit and hour angle which were used for the computation. The final column gives the relative air mass which is the secant of the solar zenith angle. The relative air mass is the ratio of the actual path length of solar rays in the atmosphere to what it would be if the Sun were directly above the aircraft.

The complete set of spectral scans of zenith sky radiance and solar irradiance is given in Table VIII. The format is the same as that of Table II, with two major differences. The signals averaged over 10 A intervals have been converted to energy units by multiplying them with the reciprocal sensitivity (Table V, Figure 15). Since the drift in signals makes it difficult to compare one scan with another, all energy values were divided by a normalizing factor. The normalizing factor chosen was the energy at 3500 A since most zenith sky scans have the maximum value around 3500 A. The values of the energy are thus not absolute, but relative.

Table VII

Solar Zenith Angle for the RB 57 Flights

Date	Time GMT h	m	s	Solar declination arc min	Ephemeris transit minutes	Hour angle degrees	Solar zenith angle degrees	Relative air mass
6-5-73	12	42	41	1350	718	-65.683	63.6	2.2496
	12	57	15	1350		-60.783	58.8	1.9285
	13	15	07	1350		-55.117	53.2	1.6702
9-10-73	16	00	36	301	717	-6.767	38.7	1.2805
	16	15	22	301		-1.233	41.7	1.3386
	16	30	53	301		5.000	39.4	1.2941
	16	45	07	300		10.583	40.7	1.3192
	17	0	10	300		13.917	42.7	1.3603
	17	15	31	300		16.650	44.8	1.4092
	17	30	34	300		19.133	46.9	1.4636
	17	45	27	299		21.383	48.9	1.5205
	18	00	39	299		24.117	51.0	1.5907
	18	15	03	299		26.350	53.0	1.6606
	18	30	34	299		28.983	55.1	1.7484
	18	45	08	298		32.583	56.4	1.8052
	19	00	00	298		36.817	57.3	1.8502
	19	15	22	298		41.050	58.5	1.9153
	19	30	24	298		45.133	60.0	2.0014
	19	45	08	298		48.717	61.5	2.0964
	20	00	00	297		52.300	63.2	2.2177
	20	15	41	297		56.033	65.2	2.3875
9-12-73	18	29	49	253	716	30.933	43.5	1.3781
	18	45	11	252		35.017	45.3	1.4210
	19	00	32	252		39.300	47.6	1.4817
	19	15	35	252		43.067	49.8	1.5489
	19	30	08	252		46.217	51.8	1.6165
	19	45	01	252		49.083	53.8	1.6917
	20	00	13	251		52.000	55.9	1.7831
	20	15	25	251		54.850	58.1	1.8906
	20	30	08	251		57.617	60.3	2.0175
	20	45	30	251		60.600	62.8	2.1860
	21	00	23	250		63.333	65.1	2.3748
	21	14	56	250		66.417	67.8	2.6482
	21	29	59	250		69.500	70.6	3.0072
	21	45	20	250		72.567	73.4	3.4956
	22	00	23	249		75.533	76.1	4.1720
	22	14	57	249		78.333	78.8	5.1355
	22	29	49	249		81.300	81.6	6.8372
	22	45	21	249		84.483	84.6	10.6774
	23	00	13	248		87.633	87.6	24.3505
9-23-73	17	00	03	-1	712	-4.000	12.3	1.0236
	17	15	34	-1		-0.967	13.2	1.0272
	17	29	39	-1		1.933	14.8	1.0342
	17	45	10	-2		5.000	17.0	1.0457
	18	00	03	-2		7.917	19.4	1.0603
	18	14	56	-2		10.567	21.8	1.0767
	18	29	20	-2		13.117	24.2	1.0962
	18	45	20	-3		16.217	27.2	1.1244
	19	00	23	-3		18.850	29.8	1.1526
	19	14	37	-3		21.183	32.0	1.1796
	19	29	20	-3		23.183	34.1	1.2071
	19	45	11	-4		25.550	36.4	1.2417
	20	00	04	-4		27.717	38.4	1.2757
	20	14	47	-4		29.900	40.4	1.3138
	20	29	30	-4		32.100	42.5	1.3574
11-5-73	19	01	39	-939	704	-34.950	83.8	9.2916
	19	14	48	-940		-29.167	81.8	6.9996
	19	30	29	-940		-22.800	79.7	5.5926
	19	45	21	-940		-16.533	78.0	4.8194
	20	00	14	-940		-10.333	76.6	4.3058
	20	15	46	-940		-3.983	75.2	3.9242
	20	30	00	-941		1.433	74.3	3.6938
	20	45	02	-941		7.133	73.5	3.5290
	21	00	43	-940		13.067	73.0	3.4285
	21	15	07	-941		18.100	72.8	3.3744

Date	Time GMT h	m	s	Solar declination arc min	Ephemeris transit minutes	Hour angle degrees	Solar zenith angle degrees	Relative air mass
1-17-74	21	27	28	-1247	730	34.717	68.8	2.7696
	21	43	19	-1247		40.300	70.4	2.9810
1-27-74	14	29	39	-1115	733	-31.750	31.8	1.1765
	14	44	51	-1115		-27.700	29.0	1.1431
	15	00	32	-1115		-23.833	26.1	1.1131
	15	14	46	-1115		-20.083	23.9	1.0942
	15	29	58	-1115		-16.617	22.3	1.0807
	15	45	01	-1115		-12.867	21.6	1.0756
	16	00	32	-1114		-9.133	21.7	1.0765
1-30-74	12	37	51	-1069	733	-71.267	75.7	4.0545
	12	45	23	-1069		-68.950	73.7	3.5776
	13	00	25	-1068		-64.067	69.7	2.8849
	13	15	37	-1068		-58.917	65.6	2.4176
	13	30	01	-1068		-54.300	62.0	2.1304
	13	47	27	-1068	733	-48.400	57.4	1.8552
	13	58	20	-1068		-44.600	54.5	1.7227
	14	20	25	-1068		-36.950	49.1	1.5271
	14	29	23	-1067		-33.800	47.0	1.4665
	17	15	09	-1066		9.850	35.2	1.2235
	17	30	01	-1065		11.900	35.4	1.2261
	17	44	45	-1065		13.983	35.6	1.2295
	18	00	06	-1065		16.117	35.8	1.2323
	18	15	18	-1065		18.183	36.3	1.2405
	18	30	02	-1065		20.367	36.9	1.2499
	18	45	23	-1065		22.733	37.3	1.2572
	19	01	14	-1064		25.233	38.0	1.2692
	19	15	38	-1064		27.767	38.9	1.2855
	19	29	23	-1064		29.967	39.9	1.3036
1-31-74	16	15	26	-1050	734	-21.017	36.1	1.2372
	16	29	41	-1050		-18.067	35.7	1.2310
	16	45	31	-1050		-14.733	35.7	1.2315
	16	56	43	-1050		-12.533	36.0	1.2361
	17	18	38	-1049		- 8.467	36.9	1.2508
	17	30	19	-1049		-6.500	37.6	1.2629
	17	45	03	-1049		-3.717	38.9	1.2850
	18	00	05	-1049		-0.617	40.2	1.3093
	18	15	07	-1049		1.900	41.4	1.3326
	18	30	19	-1049		4.200	42.5	1.3567
	18	45	12	-1048		6.567	43.7	1.3829
	19	00	05	-1048		8.900	44.9	1.4111
	19	29	51	-1048		13.600	47.5	1.4809
	20	00	24	-1047		18.200	50.5	1.5735
	20	30	10	-1047		22.700	53.7	1.6885
	21	00	25	-1047		27.050	57.0	1.8353
4-19-74	20	00	03	665	719	40.267	39.9	1.3034
	20	30	17	665		45.950	45.7	1.4314
	21	00	51	666		52.733	52.7	1.6511
	21	30	46	666		60.067	59.7	1.9850
	22	00	32	667		69.267	68.4	2.7110
	22	30	27	667		76.467	75.5	4.0068
	23	00	03	668		84.967	83.6	8.9278
4-25-74	21	30	07	788	718	34.433	38.0	1.2699
	22	02	07	788		43.233	44.5	1.4029
	22	29	59	788		51.283	51.1	1.5909
5-5-74	20	30	40	971	718	21.850	26.3	1.1153
	21	00	35	971		29.483	31.6	1.1740
	21	30	31	971		36.883	37.2	1.2561
	22	00	36	972		44.517	43.3	1.3747
	22	00	02	972		51.817	49.4	1.5368

Table VIII-1

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 6/ 5/73

ZENITH SCAN STARTING AT 12.42.29 ON 6/ 5/73, NORMALIZING FACTOR = 1.1848E 01

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
2600.0	0.00005	0.00007	0.00005	0.00006	0.00007	0.00005	0.00006	0.00005	0.00007	0.00007
2700.0	0.00006	0.00007	0.00011	0.00012	0.00007	0.00007	0.00008	0.00007	0.00010	0.00008
2800.0	0.00008	0.00010	0.00008	0.00008	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009
2900.0	0.00012	0.00012	0.00015	0.00019	0.00031	0.00053	0.00110	0.00180	0.00341	0.00544
3000.0	0.00596	0.01386	0.02230	0.04041	0.06518	0.08702	0.11422	0.13826	0.19229	0.21766
3100.0	0.22595	0.33094	0.40389	0.43622	0.48971	0.53004	0.52289	0.59362	0.69268	0.69148
3200.0	0.74336	0.83362	0.77914	0.72656	0.83433	0.90726	1.07927	1.18533	1.07087	1.10051
3300.0	1.26475	1.10983	1.11201	1.08840	1.05002	1.11309	0.99764	0.91047	0.98712	1.04947
3400.0	1.11302	1.05560	1.05593	1.08264	0.91378	0.93567	0.97409	0.97631	0.93089	0.91952
3500.0	1.00000	1.03174	0.95557	0.95132	1.07579	1.06904	0.97632	0.81696	0.72862	0.79386
3600.0	0.97332	0.83814	0.84726	0.91628	0.91106	0.93110	1.06923	1.03998	0.96261	0.96364
3700.0	1.01856	0.93626	0.90104	0.80699	0.71778	0.75018	0.84083	0.88166	1.02368	0.89771
3800.0	0.82291	0.88981	0.67697	0.52809	0.55108	0.72308	0.67189	0.69111	0.67202	0.71312
3900.0	0.81731	0.86307	0.80169	0.50571	0.48112	0.77487	0.72508	0.45969	0.79632	0.96154
4000.0	0.99669									

ZENITH SCAN STARTING AT 12.44.15 ON 6/ 5/73, NORMALIZING FACTOR = 1.3889E 01

2600.0	0.00004	0.00003	0.00002	0.00003	0.00003	0.00016	0.00003	0.00003	0.00003	0.00004
2700.0	0.00003	0.00002	0.00003	0.00003	0.00004	0.00004	0.00003	0.00004	0.00004	0.00005
2800.0	0.00004	0.00003	0.00005	0.00006	0.00007	0.00004	0.00003	0.00004	0.00006	0.00005
2900.0	0.00006	0.00007	0.00011	0.00015	0.00029	0.00061	0.00124	0.00261	0.01022	0.00670
3000.0	0.00994	0.01727	0.02795	0.05137	0.06696	0.09565	0.11228	0.15511	0.20240	0.20946
3100.0	0.25180	0.38030	0.40286	0.45296	0.50027	0.52665	0.50323	0.67239	0.65708	0.69422
3200.0	0.76762	0.79585	0.75147	0.70994	0.84241	0.89986	1.10900	1.13554	1.04766	1.15516
3300.0	1.23586	1.09522	1.10399	1.07670	1.04377	1.11061	0.98092	0.90528	0.99247	1.04482
3400.0	1.10802	1.03771	1.05180	1.07941	0.88329	0.94041	0.97155	0.97394	0.93003	0.91617
3500.0	1.00000	1.01434	0.93806	0.95341	1.07114	1.05676	0.94994	0.79603	0.71221	0.78237
3600.0	0.95896	0.82161	0.84208	0.89948	0.90210	0.92211	1.05266	1.02348	0.94655	0.96394
3700.0	1.00215	0.92854	0.87227	0.78246	0.69559	0.73661	0.82023	0.86971	1.00566	0.86559
3800.0	0.80170	0.86087	0.65753	0.50814	0.55740	0.71104	0.66164	0.67577	0.65480	0.70203
3900.0	0.80153	0.85187	0.76820	0.48409	0.49939	0.77056	0.69897	0.47456	0.79303	0.96733
4000.0	0.99568									

ZENITH SCAN STARTING AT 12.46.37 ON 6/ 5/73, NORMALIZING FACTOR = 1.2102E 01

2600.0	0.00005	0.00004	0.00003	0.00005	0.00005	0.00005	0.00005	0.00004	0.00006	0.00003
2700.0	0.00003	0.00004	0.00003	0.00006	0.00005	0.00003	0.00005	0.00009	0.00007	0.00004
2800.0	0.00005	0.00006	0.00011	0.00004	0.00004	0.00006	0.00004	0.00004	0.00005	0.00005
2900.0	0.00008	0.00006	0.00009	0.00016	0.00030	0.00054	0.00125	0.00203	0.00785	0.00749
3000.0	0.01024	0.01605	0.02630	0.04592	0.07078	0.09463	0.11905	0.14586	0.20162	0.22437
3100.0	0.23286	0.34789	0.41171	0.44819	0.49763	0.53457	0.51756	0.60714	0.69092	0.68106
3200.0	0.73089	0.83061	0.77561	0.72587	0.79681	0.88223	1.02021	1.16458	1.08394	1.07697
3300.0	1.26777	1.14182	1.08988	1.07997	1.03426	1.08578	1.05558	0.90539	0.94137	1.02687
3400.0	1.09344	1.05202	1.02991	1.07468	0.91874	0.89297	0.96579	0.96645	0.91940	0.90442
3500.0	1.00000	1.01199	0.93466	0.93497	1.05887	1.03995	0.94670	0.78795	0.70355	0.78272
3600.0	0.96046	0.81686	0.83105	0.88910	0.89017	0.90115	1.04108	1.00752	0.93617	0.94233
3700.0	0.98274	0.91397	0.85775	0.76931	0.68531	0.72387	0.80610	0.85079	0.98173	0.85237
3800.0	0.79391	0.85304	0.65658	0.50843	0.55553	0.70602	0.65709	0.66732	0.65431	0.70311
3900.0	0.80150	0.85397	0.77183	0.48189	0.49488	0.77575	0.68997	0.46434	0.81658	0.96888
4000.0	0.99954									

ZENITH SCAN STARTING AT 12.48.23 ON 6/ 5/73, NORMALIZING FACTOR = 1.1526E 01

2600.0	0.00006	0.00009	0.00006	0.00006	0.00006	0.00007	0.00007	0.00009	0.00007	0.00007
2700.0	0.00009	0.00008	0.00007	0.00009	0.00009	0.00007	0.00008	0.00012	0.00009	0.00009
2800.0	0.00008	0.00008	0.00011	0.00010	0.00010	0.00009	0.00009	0.00010	0.00010	0.00018
2900.0	0.00012	0.00011	0.00019	0.00029	0.00028	0.00048	0.00098	0.00177	0.00329	0.00536
3000.0	0.00958	0.01405	0.02413	0.03828	0.07056	0.09270	0.12706	0.14263	0.19574	0.24315
3100.0	0.24542	0.31290	0.43953	0.45815	0.52034	0.56629	0.59196	0.58017	0.74840	0.70931
3200.0	0.76678	0.86222	0.85904	0.81147	0.78914	0.93574	1.01046	1.22511	1.22240	1.13540
3300.0	1.29276	1.33509	1.19822	1.21344	1.16491	1.16228	1.21580	1.04871	1.00836	1.10747
3400.0	1.15998	1.22525	1.13758	1.17678	1.16644	0.96062	1.06676	1.06444	1.05570	1.02446
3500.0	1.00000	1.13225	1.11007	1.06879	1.08389	1.19661	1.15609	1.00433	0.85710	0.75227
3600.0	1.01527	1.01029	0.90648	0.97287	0.97671	0.97679	1.11397	1.13772	1.05409	1.02801
3700.0	1.10493	1.03131	0.96492	0.87165	0.76939	0.79280	0.89965	0.95381	1.10090	0.96352
3800.0	0.88478	0.95330	0.74242	0.56979	0.60496	0.77462	0.72912	0.74471	0.72669	0.76444
3900.0	0.88260	0.93595	0.87553	0.54919	0.54346	0.82966	0.79131	0.51550	0.85225	1.05495
4000.0	1.09655									

ZENITH SCAN STARTING AT 12.50.45 ON 6/ 5/73, NORMALIZING FACTOR = 1.2427E 01

2600.0	0.00006	0.00008	0.00009	0.00008	0.00009	0.00008	0.00011	0.00007	0.00008	0.00007
2700.0	0.00007	0.00007	0.00008	0.00010	0.00009	0.00009	0.00008	0.00009	0.00008	0.00010
2800.0	0.00010	0.00010	0.00017	0.00011	0.00010	0.00011	0.00011	0.00012	0.00012	0.00012
2900.0	0.00012	0.00013	0.00017	0.00025	0.00040	0.00074	0.00143	0.00231	0.00461	0.00718
3000.0	0.01182	0.01918	0.02861	0.05716	0.07896	0.10950	0.13098	0.16367	0.22486	0.23915
3100.0	0.25125	0.39300	0.43441	0.47412	0.52719	0.55795	0.53202	0.66499	0.70050	0.70764
3200.0	0.76760	0.83783	0.78291	0.72596	0.82879	0.90350	1.08601	1.17597	1.08905	1.12815
3300.0	1.28682	1.14317	1.13634	1.11024	1.07278	1.15029	1.03257	0.91197	0.99139	1.05435
3400.0	1.12107	1.05255	1.05793	1.09032	0.89957	0.93558	0.97454	0.98259	0.93486	0.92187
3500.0	1.00000	1.02941	0.95160	0.94455	1.07231	1.06632	0.96981	0.80751	0.72730	0.77763
3600.0	0.97827	0.82987	0.84705	0.91159	0.90412	0.92731	1.06159	1.03414	0.96199	0.96405
3700.0	1.00501	0.93483	0.89421	0.79989	0.71041	0.73467	0.83477	0.87394	1.02044	0.88758
3800.0	0.81995	0.88935	0.68362	0.52417	0.56973	0.73441	0.68667	0.69979	0.68061	0.71281
3900.0	0.82547	0.86670	0.80684	0.50142	0.49610	0.76981	0.72872	0.46626	0.78408	0.97424
4000.0	1.00778									

ZENITH SCAN STARTING AT 12.52.31 ON 6/ 5/73, NORMALIZING FACTOR = 1.2208E 01

2600.0	0.00008	0.00010	0.00008	0.00009	0.00008	0.00008	0.00012	0.00008	0.00011	0.00009
2700.0	0.00009	0.00010	0.00009	0.00010	0.00012	0.00009	0.00009	0.00010	0.00010	0.00018
2800.0	0.00012	0.00011	0.00011	0.00011	0.00012	0.00015	0.00012	0.00012	0.00012	0.00012
2900.0	0.00013	0.00014	0.00018	0.00027	0.00038	0.00066	0.00140	0.00231	0.00446	0.00723
3000.0	0.01211	0.01883	0.03180	0.05899	0.08799	0.11543	0.14063	0.17952	0.23891	0.25745
3100.0	0.27356	0.41105	0.44826	0.49372	0.54733	0.58353	0.54926	0.67262	0.72266	0.72835
3200.0	0.78661	0.87106	0.80854	0.75504	0.85222	0.92698	1.09784	1.20641	1.11413	1.14421
3300.0	1.32184	1.17343	1.14640	1.13900	1.08690	1.14655	1.07513	0.94772	1.00450	1.08175
3400.0	1.14446	1.11697	1.08323	1.12953	0.98714	0.93448	1.01395	1.01642	0.96428	0.95997
3500.0	1.00000	1.08368	1.00113	0.96351	1.09538	1.11769	1.02684	0.86002	0.77472	0.75501
3600.0	1.01561	0.89385	0.86492	0.95254	0.93825	0.94481	1.09115	1.04991	0.98465	0.95875
3700.0	1.02968	0.93603	0.92719	0.82797	0.71992	0.72343	0.84282	0.86008	1.01693	0.94886
3800.0	0.81420	0.90877	0.73404	0.54717	0.54152	0.72534	0.69126	0.70298	0.68746	0.69337
3900.0	0.81863	0.85859	0.85591	0.57901	0.43738	0.75089	0.75015	0.49283	0.82545	0.99675
4000.0	1.03483									

Table VIII-2

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 6/ 5/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 12.56.40 ON 6/ 5/73. NORMALIZING FACTOR = 1.2947E 01										
2600.0	0.00008	0.00017	0.00017	0.00010	0.00010	0.00012	0.00008	0.00020	0.00010	0.00012
2700.0	0.00011	0.00012	0.00031	0.00011	0.00011	0.00011	0.00012	0.00012	0.00015	0.00013
2800.0	0.00014	0.00013	0.00013	0.00013	0.00020	0.00014	0.00014	0.00013	0.00014	0.00014
2900.0	0.00016	0.00017	0.00020	0.00025	0.00040	0.00064	0.00132	0.00227	0.00428	0.00702
3000.0	0.01204	0.01787	0.02932	0.04792	0.08683	0.11445	0.14357	0.17104	0.23488	0.26269
3100.0	0.26496	0.38771	0.46896	0.51139	0.56232	0.59767	0.55991	0.66976	0.72954	0.73182
3200.0	0.79153	0.86921	0.80348	0.74793	0.84210	0.91942	1.09527	1.20205	1.10489	1.13959
3300.0	1.31285	1.16100	1.14139	1.13261	1.07482	1.14053	1.07484	0.93738	0.99975	1.07602
3400.0	1.13756	1.10531	1.07229	1.12364	0.97377	0.92184	1.00604	1.00998	0.95953	0.95290
3500.0	1.00000	1.07726	0.99348	0.95187	1.09159	1.09511	0.99236	0.82676	0.73894	0.80886
3600.0	1.00516	0.85316	0.86152	0.93342	0.92915	0.94046	1.09593	1.06462	0.98598	0.99466
3700.0	1.04368	0.94540	0.91424	0.81550	0.71868	0.75030	0.84711	0.89010	1.02583	0.90556
3800.0	0.82239	0.89583	0.69482	0.53264	0.56296	0.73174	0.68306	0.69887	0.67977	0.71744
3900.0	0.82716	0.87483	0.81862	0.50842	0.50591	0.78562	0.73846	0.47052	0.80133	0.98633
4000.0	1.02557									
ZENITH SCAN STARTING AT 12.58.26 ON 6/ 5/73. NORMALIZING FACTOR = 1.3328E 01										
2600.0	0.00009	0.00010	0.00009	0.00010	0.00010	0.00010	0.00010	0.00010	0.00011	0.00011
2700.0	0.00011	0.00010	0.00012	0.00012	0.00011	0.00013	0.00011	0.00013	0.00011	0.00013
2800.0	0.00014	0.00014	0.00014	0.00014	0.00014	0.00015	0.00014	0.00015	0.00015	0.00015
2900.0	0.00016	0.00017	0.00024	0.00027	0.00038	0.00064	0.00133	0.00229	0.00448	0.00722
3000.0	0.01230	0.01815	0.02992	0.04787	0.08205	0.10478	0.14170	0.16078	0.22455	0.26053
3100.0	0.25847	0.35093	0.45987	0.47888	0.53785	0.57361	0.57996	0.59979	0.74661	0.71696
3200.0	0.77078	0.87352	0.81549	0.76110	0.82407	0.92266	1.05656	1.20736	1.12458	1.14314
3300.0	1.32463	1.17931	1.15378	1.14623	1.09486	1.15242	1.08443	0.95478	1.01480	1.09325
3400.0	1.15729	1.13297	1.09886	1.15147	1.01199	0.96087	1.03816	1.01861	0.96852	0.96260
3500.0	1.00000	1.08623	1.00470	0.96800	1.10091	1.12157	1.02987	0.86404	0.76477	0.75505
3600.0	1.01217	0.89058	0.85793	0.94263	0.93160	0.93757	1.08252	1.07566	1.01048	0.97922
3700.0	1.06033	0.96810	0.96078	0.85850	0.74631	0.73949	0.85799	0.88593	1.04530	0.96920
3800.0	0.83883	0.92730	0.73701	0.54551	0.58454	0.75019	0.70468	0.71985	0.70055	0.74124
3900.0	0.85803	0.90450	0.84869	0.51401	0.52567	0.81094	0.77144	0.48964	0.83589	1.03359
4000.0	1.06979									
ZENITH SCAN STARTING AT 13. 0.47 ON 6/ 5/73. NORMALIZING FACTOR = 1.3279E 01										
2600.0	0.00011	0.00011	0.00012	0.00011	0.00011	0.00010	0.00013	0.00018	0.00011	0.00012
2700.0	0.00013	0.00012	0.00013	0.00013	0.00014	0.00013	0.00014	0.00016	0.00016	0.00014
2800.0	0.00016	0.00016	0.00015	0.00016	0.00017	0.00017	0.00017	0.00017	0.00017	0.00018
2900.0	0.00018	0.00020	0.00022	0.00026	0.00039	0.00057	0.00108	0.00207	0.00354	0.00650
3000.0	0.01084	0.01623	0.02724	0.04038	0.07902	0.10175	0.13882	0.15660	0.20696	0.26524
3100.0	0.26994	0.30762	0.46770	0.48558	0.53662	0.58598	0.61035	0.57742	0.76309	0.74191
3200.0	0.78312	0.88867	0.84665	0.80493	0.77389	0.91655	0.98884	1.20779	1.19027	1.10638
3300.0	1.26213	1.28671	1.15504	1.17180	1.12613	1.12813	1.15811	0.98300	0.99124	1.08569
3400.0	1.13405	1.17722	1.09433	1.15124	1.09916	0.91475	1.05673	1.03985	1.01762	0.99421
3500.0	1.00000	1.11679	1.04358	0.97321	1.10294	1.15702	1.07698	0.91381	0.81309	0.74104
3600.0	1.01527	0.93978	0.87566	0.97152	0.95716	0.95586	1.08953	1.12207	1.05808	1.00083
3700.0	1.09544	1.00545	1.01048	0.90440	0.78995	0.77167	0.87189	0.89283	1.03718	1.02762
3800.0	0.85858	0.93693	0.78339	0.56110	0.56154	0.75233	0.72563	0.74145	0.72177	0.73553
3900.0	0.87005	0.91405	0.91059	0.59637	0.48741	0.78944	0.78876	0.49327	0.86285	1.05500
4000.0	1.09323									
ZENITH SCAN STARTING AT 13. 2.33 ON 6/ 5/73. NORMALIZING FACTOR = 1.4853E 01										
2600.0	0.00010	0.00011	0.00011	0.00011	0.00009	0.00012	0.00012	0.00011	0.00012	0.00011
2700.0	0.00012	0.00018	0.00014	0.00012	0.00014	0.00012	0.00013	0.00014	0.00013	0.00013
2800.0	0.00015	0.00014	0.00014	0.00014	0.00015	0.00016	0.00017	0.00016	0.00015	0.00018
2900.0	0.00022	0.00018	0.00022	0.00027	0.00038	0.00065	0.00129	0.00234	0.00462	0.00728
3000.0	0.01257	0.01848	0.03035	0.04825	0.08352	0.10458	0.14053	0.15910	0.22116	0.25660
3100.0	0.25448	0.34315	0.44968	0.46765	0.52408	0.56312	0.54605	0.61401	0.71790	0.70425
3200.0	0.75718	0.83465	0.77524	0.72442	0.81733	0.88975	1.05233	1.15589	1.07063	1.09178
3300.0	1.26716	1.12844	1.10484	1.09552	1.04958	1.10700	1.03823	0.91149	0.97366	1.04732
3400.0	1.10627	1.07951	1.04772	1.04896	0.96063	0.90856	0.99181	0.99821	0.95089	0.94849
3500.0	1.00000	1.03457	0.97833	0.93291	1.07091	1.08506	0.99722	0.84101	0.75155	0.74732
3600.0	0.98435	0.86089	0.83648	0.92345	0.90825	0.91070	1.05996	1.05718	0.97947	0.95863
3700.0	1.04156	0.94374	0.93068	0.83911	0.73122	0.73596	0.85546	0.88957	1.04410	0.96726
3800.0	0.84027	0.91566	0.71809	0.54828	0.58047	0.75277	0.70533	0.72244	0.70047	0.74345
3900.0	0.85292	0.90469	0.83643	0.52184	0.51239	0.80774	0.76631	0.48175	0.83703	1.01858
4000.0	1.05626									
ZENITH SCAN STARTING AT 13. 4.19 ON 6/ 5/73. NORMALIZING FACTOR = 1.4807E 01										
2600.0	0.00012	0.00014	0.00012	0.00012	0.00012	0.00012	0.00012	0.00014	0.00013	0.00013
2700.0	0.00014	0.00016	0.00018	0.00014	0.00014	0.00014	0.00016	0.00015	0.00016	0.00017
2800.0	0.00015	0.00016	0.00017	0.00017	0.00019	0.00018	0.00018	0.00019	0.00019	0.00021
2900.0	0.00021	0.00022	0.00025	0.00032	0.00042	0.00066	0.00127	0.00236	0.00428	0.00714
3000.0	0.01262	0.01814	0.03063	0.04739	0.08404	0.10637	0.14331	0.15887	0.22317	0.26629
3100.0	0.26370	0.33493	0.46564	0.47760	0.53531	0.57497	0.59505	0.58390	0.75218	0.70239
3200.0	0.75513	0.85173	0.83454	0.79444	0.76672	0.91449	0.98719	1.16273	1.15552	1.07527
3300.0	1.26024	1.22564	1.12375	1.13586	1.08578	1.10701	1.11747	0.96258	0.96156	1.05411
3400.0	1.09909	1.14940	1.06485	1.11699	1.07244	0.89699	1.01282	1.01910	0.97534	0.96051
3500.0	1.00000	1.09093	1.00669	0.97116	1.10352	1.12830	1.03362	0.86842	0.76975	0.76820
3600.0	1.02765	0.88789	0.86924	0.95952	0.94381	0.95593	1.10782	1.09283	1.02846	1.00487
3700.0	1.08335	0.99109	0.98165	0.88004	0.77058	0.76962	0.89279	0.92838	1.10468	1.01594
3800.0	0.88923	0.94311	0.73426	0.56002	0.59436	0.78238	0.73447	0.74934	0.72669	0.76645
3900.0	0.88256	0.94075	0.87977	0.54554	0.52835	0.85938	0.77750	0.50077	0.88259	1.07079
4000.0	1.11190									
ZENITH SCAN STARTING AT 13.10.14 ON 6/ 5/73. NORMALIZING FACTOR = 1.5610E 01										
2600.0	0.00013	0.00013	0.00013	0.00014	0.00015	0.00014	0.00013	0.00014	0.00015	0.00016
2700.0	0.00015	0.00014	0.00016	0.00016	0.00015	0.00016	0.00017	0.00016	0.00015	0.00018
2800.0	0.00019	0.00017	0.00018	0.00019	0.00019	0.00019	0.00019	0.00021	0.00020	0.00020
2900.0	0.00021	0.00018	0.00025	0.00023	0.00051	0.00090	0.00187	0.00262	0.00611	0.00974
3000.0	0.01670	0.02448	0.03326	0.06854	0.10248	0.13165	0.15887	0.18786	0.26088	0.28413
3100.0	0.28196	0.41920	0.49438	0.13106	0.34860	0.26061	0.23662	0.54909	0.77180	0.73892
3200.0	0.79894	0.89425	0.83147	0.77600	0.83308	0.93805	1.08186	1.22871	1.15640	1.13639
3300.0	1.32316	1.22445	1.16902	1.16644	1.10843	1.16102	1.13006	0.97148	1.01548	1.09926
3400.0	1.14755	1.15648	1.09673	1.15595	1.04991	0.92672	1.05480	1.04327	0.99875	0.99167
3500.0	1.00000	1.12181	1.04399	0.98086	1.11990	1.16707	1.08776	0.93413	0.82668	0.64400
3600.0	1.01632	0.92226	0.86630	0.96389	0.94461	0.94255	1.08136	1.11030	1.04568	0.98849
3700.0	1.07817	0.99207	0.94497	0.79540	0.25662	0.50337	0.88422	0.92725	1.08227	0.94758
3800.0	0.86835	0.94212	0.59765	0.55018	0.39066	0.63834	0.51701	0.29850	0.25917	0.35920
3900.0	0.84079	0.91996	0.78092	0.40834	0.51194	0.83566	0.70321	0.49691	0.61501	1.04664
4000.0	1.08866									

Table VIII-3

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 6/ 5/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 13.12.35 ON 6/ 5/73, NORMALIZING FACTOR = 1.7081E 01										
2600.0	0.00013	0.00012	0.00013	0.00013	0.00013	0.00015	0.00013	0.00013	0.00014	0.00014
2700.0	0.00014	0.00014	0.00015	0.00015	0.00015	0.00016	0.00015	0.00017	0.00017	0.00017
2800.0	0.00018	0.00016	0.00019	0.00017	0.00014	0.00018	0.00013	0.00009	0.00013	0.00014
2900.0	0.00002	0.00007	0.00025	0.00026	0.00049	0.00079	0.00165	0.00212	0.00532	0.00866
3000.0	0.01472	0.01925	0.02590	0.03952	0.09183	0.11378	0.15144	0.17038	0.23363	0.26967
3100.0	0.26476	0.32074	0.24082	0.10757	0.08564	0.33040	0.22704	0.62642	0.70711	0.70786
3200.0	0.76408	0.83932	0.77877	0.72723	0.82328	0.90696	1.09618	1.14879	1.05735	1.14761
3300.0	1.26659	1.11260	1.12141	1.10531	1.07079	1.12105	0.97957	0.90690	0.99184	1.04411
3400.0	1.10802	1.04470	1.05371	1.07800	0.89300	0.93714	0.97683	0.98214	0.93220	0.91839
3500.0	1.00000	1.02028	0.94744	0.94398	1.07260	1.06037	0.95952	0.80258	0.60433	0.67779
3600.0	0.97498	0.82549	0.84724	0.90674	0.90009	0.90836	1.05877	1.02633	0.95114	0.96280
3700.0	1.00316	0.93386	0.89592	0.80611	0.56266	0.53880	0.83985	0.88062	1.02201	0.89442
3800.0	0.82269	0.89318	0.24219	0.47201	0.34733	0.42347	0.12009	0.40643	0.13477	0.57569
3900.0	0.81526	0.85965	0.60756	0.34030	0.34855	0.56424	0.36091	0.46955	0.57215	0.97920
4000.0	1.01733									
ZENITH SCAN STARTING AT 13.14.21 ON 6/ 5/73, NORMALIZING FACTOR = 1.6002E 01										
2600.0	0.00014	0.00015	0.00017	0.00015	0.00015	0.00013	0.00014	0.00016	0.00016	0.00016
2700.0	0.00017	0.00017	0.00017	0.00018	0.00018	0.00018	0.00018	0.00018	0.00019	0.00019
2800.0	0.00020	0.00020	0.00021	0.00019	0.00021	0.00020	0.00021	0.00011	0.00016	0.00003
2900.0	0.00006	0.00002	0.00002	0.00017	0.00032	0.00038	0.00066	0.00121	0.00212	0.00270
3000.0	0.00780	0.01276	0.01917	0.02020	0.03835	0.08219	0.11275	0.15090	0.17591	0.23855
3100.0	0.29491	0.29458	0.39016	0.05109	0.03353	0.16623	0.58906	0.25550	0.71934	0.76916
3200.0	0.77988	0.85077	0.91403	0.84434	0.79131	0.93845	1.00132	1.22194	1.25318	1.15669
3300.0	1.26453	1.36433	1.21483	1.21905	1.16932	1.16736	1.21824	1.04634	1.01433	1.11544
3400.0	1.16281	1.22725	1.13397	1.17777	1.16688	0.95171	1.07336	1.06942	1.05940	1.02869
3500.0	1.00000	1.13632	1.10463	1.02253	1.08679	1.19349	1.15351	1.02533	0.87306	0.76718
3600.0	0.94363	1.05625	0.90729	0.96960	1.00495	1.00898	1.08436	1.15383	1.08336	1.02356
3700.0	1.11838	1.03382	1.03054	0.91583	0.80642	0.79020	0.91518	0.93485	1.11212	1.02265
3800.0	0.88834	0.98174	0.50510	0.41505	0.47414	0.49084	0.14318	0.12673	0.10076	0.32826
3900.0	0.90134	0.95077	0.79965	0.36772	0.40414	0.61842	0.54667	0.49765	0.63103	1.07823
4000.0	1.11856									

Table VIII-4

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

20

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 16. 3.15 ON 9/10/73. NORMALIZING FACTOR = 1.9915E 01										
2600.0	0.00005	0.00006	0.00005	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00010
2700.0	0.00006	0.00007	0.00007	0.00008	0.00011	0.00008	0.00008	0.00008	0.00009	0.00008
2800.0	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00010	0.00011	0.00010	0.00011
2900.0	0.00011	0.00013	0.00018	0.00026	0.00047	0.00103	0.00224	0.00416	0.00784	0.01365
3000.0	0.02010	0.03477	0.04983	0.09398	0.11842	0.15972	0.17725	0.23697	0.29221	0.28935
3100.0	0.34455	0.49838	0.50962	0.59211	0.60547	0.62533	0.59291	0.78297	0.74915	0.79044
3200.0	0.87949	0.88342	0.83408	0.79044	0.92392	0.99261	1.21777	1.24322	1.14678	1.26336
3300.0	1.31098	1.16358	1.17304	1.13184	1.10569	1.16470	1.02799	0.94581	1.03300	1.07993
3400.0	1.14322	1.05327	1.07460	1.07990	0.87709	0.94976	0.96580	0.96320	0.92436	0.90893
3500.0	1.00000	1.00099	0.93230	0.95159	1.06727	1.04498	0.93553	0.78681	0.69441	0.82510
3600.0	0.95829	0.82181	0.86561	0.90689	0.91111	0.94417	1.07316	1.03689	0.96311	0.98993
3700.0	1.02148	0.96705	0.90737	0.80443	0.71820	0.74841	0.83591	0.89778	1.02139	0.87153
3800.0	0.82367	0.87362	0.66274	0.51508	0.57282	0.66918	0.65481	0.66521	0.64350	0.68909
3900.0	0.78360	0.83501	0.74380	0.44887	0.50964	0.75313	0.63993	0.46088	0.80251	0.92724
4000.0	0.95839									
ZENITH SCAN STARTING AT 16. 5. 0 ON 9/10/73. NORMALIZING FACTOR = 1.9636E 01										
2600.0	0.00005	0.00006	0.00006	0.00007	0.00007	0.00007	0.00007	0.00009	0.00007	0.00007
2700.0	0.00007	0.00008	0.00007	0.00008	0.00007	0.00008	0.00008	0.00008	0.00008	0.00008
2800.0	0.00008	0.00008	0.00010	0.00010	0.00009	0.00009	0.00011	0.00009	0.00010	0.00010
2900.0	0.00011	0.00012	0.00015	0.00026	0.00047	0.00108	0.00225	0.00440	0.00779	0.01352
3000.0	0.02004	0.03298	0.04987	0.08924	0.11206	0.15471	0.17048	0.23065	0.28207	0.28198
3100.0	0.33229	0.47503	0.49104	0.54496	0.58668	0.61008	0.58450	0.75060	0.71333	0.75643
3200.0	0.83768	0.84606	0.79862	0.75920	0.89855	0.96411	1.17179	1.18108	1.09008	1.20255
3300.0	1.27212	1.13130	1.13632	1.09783	1.07749	1.13518	0.99575	0.93043	1.01185	1.05820
3400.0	1.11983	1.04565	1.06239	1.07242	0.87854	0.94222	0.95847	0.95380	0.92006	0.90412
3500.0	1.00000	0.99682	0.93564	0.95107	1.06376	1.04518	0.95355	0.79550	0.70717	0.78782
3600.0	0.93358	0.80374	0.84482	0.88323	0.88350	0.90485	1.04165	1.00116	0.92978	0.95701
3700.0	0.97541	0.91982	0.86199	0.78293	0.68257	0.72007	0.79592	0.85992	0.96961	0.82030
3800.0	0.77711	0.82165	0.61448	0.48598	0.53833	0.66276	0.62857	0.63384	0.61517	0.65482
3900.0	0.74791	0.79619	0.70987	0.43325	0.50380	0.72303	0.62966	0.42614	0.73670	0.88159
4000.0	0.90987									
ZENITH SCAN STARTING AT 16. 7. 2 ON 9/10/73. NORMALIZING FACTOR = 1.6693E 01										
2600.0	0.00006	0.00006	0.00007	0.00008	0.00007	0.00007	0.00009	0.00007	0.00008	0.00007
2700.0	0.00008	0.00007	0.00008	0.00008	0.00009	0.00008	0.00009	0.00008	0.00010	0.00013
2800.0	0.00010	0.00010	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	0.00012
2900.0	0.00013	0.00014	0.00019	0.00032	0.00051	0.00109	0.00239	0.00438	0.00803	0.01412
3000.0	0.02051	0.03486	0.04982	0.09261	0.11710	0.15654	0.17292	0.23395	0.28360	0.28178
3100.0	0.33759	0.48021	0.49292	0.54685	0.58728	0.60831	0.58280	0.76588	0.72608	0.76853
3200.0	0.85582	0.85950	0.81255	0.76573	0.90208	0.96768	1.19295	1.20238	1.11101	1.24350
3300.0	1.29879	1.15986	1.17533	1.13503	1.07739	1.14370	0.99837	0.93361	1.01455	1.06176
3400.0	1.11993	1.04592	1.06589	1.07565	0.89047	0.94829	0.95936	0.95868	0.92370	0.90900
3500.0	1.00000	1.00223	0.93099	0.95182	1.06308	1.04142	0.94217	0.77919	0.70086	0.80996
3600.0	0.94500	0.81365	0.84633	0.89531	0.89396	0.92104	1.05030	1.01407	0.93601	0.96135
3700.0	0.98896	0.93675	0.87663	0.77460	0.69687	0.73180	0.81357	0.87621	0.99232	0.84555
3800.0	0.79798	0.84540	0.64502	0.49862	0.56617	0.70088	0.65480	0.66513	0.64431	0.68724
3900.0	0.76359	0.81979	0.73930	0.45181	0.48619	0.74044	0.64118	0.43792	0.76485	0.91206
4000.0	0.94345									
ZENITH SCAN STARTING AT 16. 9.23 ON 9/10/73. NORMALIZING FACTOR = 1.5755E 01										
2600.0	0.00004	0.00004	0.00004	0.00003	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004
2700.0	0.00005	0.00004	0.00005	0.00005	0.00006	0.00005	0.00004	0.00005	0.00005	0.00005
2800.0	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006	0.00008	0.00005	0.00006	0.00006
2900.0	0.00009	0.00013	0.00013	0.00026	0.00054	0.00133	0.00432	0.00662	0.00914	0.01547
3000.0	0.02261	0.03643	0.05154	0.09442	0.11718	0.15734	0.17307	0.23029	0.28054	0.27686
3100.0	0.33217	0.47979	0.48887	0.54492	0.58211	0.60412	0.58032	0.74930	0.71548	0.76579
3200.0	0.85340	0.84809	0.79998	0.77178	0.90363	0.97458	1.17555	1.18273	1.08714	1.22208
3300.0	1.27166	1.12899	1.13708	1.09546	1.07910	1.12268	0.98442	0.92655	1.01109	1.05524
3400.0	1.11598	1.03274	1.05434	1.05987	0.85766	0.93841	0.94810	0.94600	0.91461	0.89711
3500.0	1.00000	0.98348	0.91434	0.94966	1.05192	1.02246	0.91057	0.76636	0.67496	0.81317
3600.0	0.93054	0.79504	0.84762	0.88473	0.86022	0.90731	1.03063	0.98192	0.90252	0.94376
3700.0	0.95788	0.91193	0.84564	0.74669	0.67616	0.71118	0.78429	0.85031	0.95404	0.80692
3800.0	0.77664	0.80313	0.60305	0.47253	0.54270	0.66690	0.62693	0.63527	0.61631	0.66999
3900.0	0.74961	0.79945	0.70348	0.42378	0.51763	0.72984	0.60143	0.46048	0.78654	0.90054
4000.0	0.92793									
ZENITH SCAN STARTING AT 16.11. 9 ON 9/10/73. NORMALIZING FACTOR = 1.4535E 01										
2600.0	0.00006	0.00007	0.00007	0.00020	0.00006	0.00007	0.00007	0.00007	0.00007	0.00007
2700.0	0.00007	0.00007	0.00009	0.00008	0.00009	0.00008	0.00009	0.00008	0.00008	0.00008
2800.0	0.00009	0.00009	0.00010	0.00015	0.00012	0.00011	0.00011	0.00011	0.00011	0.00012
2900.0	0.00012	0.00014	0.00018	0.00027	0.00056	0.00123	0.00252	0.00489	0.00851	0.01477
3000.0	0.02140	0.03497	0.05145	0.09388	0.11846	0.15984	0.17414	0.23510	0.28468	0.28365
3100.0	0.33412	0.47707	0.49123	0.54481	0.58634	0.61076	0.58466	0.75440	0.71654	0.76049
3200.0	0.84332	0.85182	0.80262	0.75970	0.90111	0.96801	1.17768	1.18753	1.09709	1.21447
3300.0	1.28425	1.14278	1.15039	1.11396	1.09225	1.14850	1.00982	0.94891	1.02540	1.04333
3400.0	1.11429	1.04103	1.05828	1.06770	0.88179	0.94443	0.95344	0.95293	0.92009	0.90055
3500.0	1.00000	1.00234	0.93258	0.95263	1.05907	1.03992	0.93824	0.77980	0.69347	0.79402
3600.0	0.94516	0.81049	0.83751	0.88073	0.88202	0.90428	1.04125	0.99601	0.92225	0.95777
3700.0	0.96823	0.91397	0.85911	0.76593	0.68727	0.73083	0.80057	0.85128	0.97464	0.83235
3800.0	0.78932	0.83237	0.62070	0.48664	0.54620	0.68767	0.64084	0.65391	0.63320	0.67806
3900.0	0.76874	0.81210	0.72789	0.50777	0.59685	0.72966	0.63344	0.44763	0.77466	0.90574
4000.0	0.93962									
ZENITH SCAN STARTING AT 16.12.54 ON 9/10/73. NORMALIZING FACTOR = 1.3529E 01										
2600.0	0.00008	0.00008	0.00007	0.00009	0.00008	0.00009	0.00008	0.00008	0.00008	0.00008
2700.0	0.00009	0.00008	0.00008	0.00008	0.00012	0.00009	0.00010	0.00014	0.00010	0.00011
2800.0	0.00010	0.00010	0.00015	0.00011	0.00012	0.00010	0.00011	0.00014	0.00013	0.00012
2900.0	0.00012	0.00014	0.00019	0.00029	0.00057	0.00126	0.00266	0.00476	0.00877	0.01502
3000.0	0.02160	0.03629	0.05278	0.09704	0.12237	0.16324	0.17914	0.23753	0.29264	0.28966
3100.0	0.34239	0.49637	0.50842	0.55060	0.58505	0.61060	0.58360	0.76635	0.72882	0.77009
3200.0	0.85739	0.85900	0.81003	0.76497	0.89995	0.96008	1.18120	1.19241	1.09666	1.22933
3300.0	1.28391	1.13663	1.14724	1.10767	1.08052	1.14103	1.00046	0.93300	1.01953	1.06210
3400.0	1.12502	1.04219	1.06582	1.07075	0.88326	0.95850	0.96441	0.96434	0.92583	0.90207
3500.0	1.00000	1.00347	0.92773	0.94754	1.06405	1.04168	0.93511	0.78585	0.69718	0.81954
3600.0	0.94153	0.81283	0.85091	0.89726	0.89461	0.92186	1.04970	1.01287	0.92824	0.94793
3700.0	0.96029	0.90527	0.85175	0.75691	0.68180	0.72707	0.79362	0.84971	0.95943	0.81650
3800.0	0.78105	0.82206	0.61656	0.48909	0.53974	0.67200	0.63379	0.64448	0.62345	0.67466
3900.0	0.75860	0.79929	0.72985	0.44501	0.48177	0.73180	0.65087	0.43707	0.75273	0.90193
4000.0	0.93242									

Table VIII-5

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 16.15.15 ON 9/10/73, NORMALIZING FACTOR = 1.3025E 01									
2600.0	0.00008	0.00008	0.00009	0.00007	0.00007	0.00008	0.00008	0.00008	0.00008	0.00009
2700.0	0.00009	0.00012	0.00009	0.00008	0.00008	0.00009	0.00010	0.00009	0.00010	0.00009
2800.0	0.00010	0.00010	0.00010	0.00011	0.00011	0.00010	0.00011	0.00012	0.00018	0.00012
2900.0	0.00014	0.00015	0.00019	0.00032	0.00057	0.00127	0.00256	0.00471	0.00851	0.01441
3000.0	0.02097	0.03449	0.04928	0.09526	0.11932	0.16143	0.17780	0.23498	0.29192	0.29002
3100.0	0.33601	0.49717	0.50871	0.56399	0.60729	0.63201	0.59721	0.78388	0.75674	0.80515
3200.0	0.89249	0.90401	0.84836	0.80925	0.94616	1.01425	1.23240	1.25935	1.15107	1.28347
3300.0	1.36274	1.19538	1.20637	1.17084	1.14065	1.19596	1.06210	0.98548	1.07618	1.12638
3400.0	1.19843	1.11768	1.13622	1.10230	0.87736	0.93956	0.95997	0.96061	0.92383	0.90495
3500.0	1.00000	0.99715	0.93053	0.94894	1.05872	1.03398	0.93891	0.78123	0.68623	0.79370
3600.0	0.94431	0.80425	0.83773	0.87955	0.87702	0.90868	1.03717	0.99166	0.92079	0.95272
3700.0	0.96486	0.91127	0.85664	0.75977	0.68307	0.71721	0.79804	0.85957	0.96554	0.82927
3800.0	0.78448	0.83260	0.62520	0.49243	0.54665	0.68062	0.64159	0.64985	0.62910	0.67339
3900.0	0.76552	0.81051	0.73943	0.44153	0.48013	0.74251	0.66378	0.44793	0.73327	0.85548
4000.0	0.93028									
	ZENITH SCAN STARTING AT 16.17. 1 ON 9/10/73, NORMALIZING FACTOR = 1.2185E 01									
2600.0	0.00008	0.00009	0.00014	0.00013	0.00010	0.00009	0.00008	0.00010	0.00010	0.00008
2700.0	0.00008	0.00009	0.00009	0.00011	0.00011	0.00009	0.00010	0.00010	0.00011	0.00010
2800.0	0.00010	0.00012	0.00011	0.00012	0.00012	0.00011	0.00011	0.00015	0.00014	0.00015
2900.0	0.00015	0.00022	0.00023	0.00034	0.00060	0.00126	0.00271	0.00506	0.00880	0.01532
3000.0	0.02203	0.03620	0.05297	0.09728	0.12180	0.16080	0.17632	0.23727	0.28672	0.28506
3100.0	0.33906	0.48366	0.49642	0.55044	0.59271	0.61635	0.59296	0.76968	0.70713	0.75516
3200.0	0.83816	0.84724	0.79524	0.75378	0.89759	0.95602	1.17089	1.17758	1.08632	1.20936
3300.0	1.26611	1.12399	1.13517	1.09618	1.07133	1.13036	0.99330	0.92787	1.01252	1.05286
3400.0	1.11288	1.03782	1.06025	1.06562	0.88015	0.95086	0.95599	0.95595	0.92118	0.89682
3500.0	1.00000	1.00155	0.92601	0.95299	1.05481	1.03688	0.93170	0.78061	0.68467	0.81246
3600.0	0.93626	0.80767	0.83919	0.88856	0.88244	0.90952	1.03646	1.00104	0.92082	0.95168
3700.0	0.97906	0.92888	0.87453	0.75947	0.69571	0.71999	0.79867	0.86611	0.96728	0.83098
3800.0	0.78629	0.83200	0.62435	0.49426	0.54221	0.68122	0.64284	0.65398	0.63273	0.67947
3900.0	0.76683	0.81372	0.72915	0.44996	0.48901	0.74315	0.64158	0.46625	0.79576	0.91550
4000.0	0.95173									
	ZENITH SCAN STARTING AT 16.18.47 ON 9/10/73, NORMALIZING FACTOR = 1.1644E 01									
2600.0	0.00007	0.00007	0.00010	0.00009	0.00008	0.00011	0.00008	0.00008	0.00008	0.00009
2700.0	0.00009	0.00008	0.00010	0.00008	0.00010	0.00009	0.00009	0.00010	0.00011	0.00011
2800.0	0.00010	0.00012	0.00010	0.00019	0.00011	0.00013	0.00012	0.00010	0.00011	0.00011
2900.0	0.00013	0.00014	0.00022	0.00036	0.00061	0.00128	0.00272	0.00479	0.00873	0.01464
3000.0	0.02106	0.03533	0.05257	0.09594	0.11906	0.15663	0.17102	0.22555	0.27736	0.27441
3100.0	0.32196	0.46799	0.47981	0.52717	0.56883	0.58733	0.55924	0.74161	0.70504	0.74759
3200.0	0.82995	0.83305	0.78520	0.74280	0.87076	0.92893	1.13636	1.15580	1.06168	1.19581
3300.0	1.26643	1.11253	1.12489	1.09058	1.06541	1.12115	0.99459	0.92203	1.01161	1.05939
3400.0	1.12684	1.04555	1.06673	1.06660	0.88045	0.95354	0.97564	0.98033	0.91648	0.90568
3500.0	1.00000	1.00481	0.93435	0.95458	1.06875	1.04499	0.93977	0.78832	0.69488	0.82638
3600.0	0.95507	0.82069	0.86398	0.90116	0.89435	0.92156	1.04007	0.99784	0.91848	0.94788
3700.0	0.96175	0.91513	0.85645	0.76060	0.68424	0.71958	0.79647	0.85922	0.96358	0.82285
3800.0	0.78475	0.83075	0.62641	0.48982	0.54656	0.67585	0.64504	0.65223	0.63427	0.67258
3900.0	0.76764	0.81604	0.74222	0.44095	0.49464	0.74271	0.65053	0.44095	0.77316	0.91905
4000.0	0.95705									
	ZENITH SCAN STARTING AT 16.20.51 ON 9/10/73, NORMALIZING FACTOR = 1.1056E 01									
2600.0	0.00007	0.00008	0.00008	0.00008	0.00009	0.00008	0.00009	0.00024	0.00013	0.00009
2700.0	0.00011	0.00009	0.00010	0.00009	0.00009	0.00011	0.00012	0.00010	0.00012	0.00011
2800.0	0.00011	0.00011	0.00012	0.00011	0.00012	0.00011	0.00012	0.00016	0.00014	0.00014
2900.0	0.00014	0.00016	0.00020	0.00033	0.00064	0.00138	0.00271	0.00514	0.00885	0.01515
3000.0	0.02190	0.03525	0.05228	0.09386	0.11920	0.15943	0.17256	0.23173	0.28099	0.27983
3100.0	0.32799	0.46839	0.48453	0.53876	0.57837	0.60352	0.57698	0.74226	0.71179	0.75910
3200.0	0.83938	0.85579	0.80099	0.74486	0.88530	0.95090	1.15258	1.16728	1.07555	1.19038
3300.0	1.25841	1.11612	1.12365	1.08706	1.06453	1.12064	0.98112	0.92204	1.00499	1.04793
3400.0	1.10756	1.03625	1.05643	1.05408	0.87849	0.94207	0.95304	0.95416	0.91712	0.89429
3500.0	1.00000	0.99854	0.92673	0.95403	1.05173	1.03132	0.92812	0.77829	0.69025	0.79020
3600.0	0.93360	0.80599	0.83716	0.87754	0.87357	0.89930	1.03085	0.98828	0.91264	0.95081
3700.0	0.95476	0.90663	0.85094	0.77146	0.69305	0.71898	0.80082	0.84976	0.91298	0.81024
3800.0	0.77890	0.81391	0.62136	0.48064	0.54013	0.67509	0.63334	0.64328	0.62462	0.66517
3900.0	0.75376	0.79669	0.72325	0.42665	0.48177	0.73158	0.65367	0.44160	0.75153	0.89910
4000.0	0.93220									
	ZENITH SCAN STARTING AT 16.23.12 ON 9/10/73, NORMALIZING FACTOR = 1.1017E 01									
2600.0	0.00007	0.00008	0.00008	0.00007	0.00007	0.00008	0.00009	0.00009	0.00008	0.00009
2700.0	0.00009	0.00009	0.00009	0.00008	0.00012	0.00011	0.00010	0.00010	0.00009	0.00009
2800.0	0.00010	0.00010	0.00012	0.00011	0.00010	0.00011	0.00012	0.00020	0.00013	0.00012
2900.0	0.00012	0.00014	0.00019	0.00032	0.00060	0.00130	0.00272	0.00476	0.00852	0.01517
3000.0	0.02157	0.03522	0.05101	0.09331	0.11809	0.15555	0.17034	0.22832	0.27649	0.27431
3100.0	0.32575	0.46314	0.47588	0.52677	0.56570	0.58821	0.56535	0.73091	0.69422	0.73898
3200.0	0.82077	0.82767	0.77720	0.73878	0.88023	0.93096	1.14882	1.15601	1.06232	1.19089
3300.0	1.24754	1.10282	1.11736	1.08377	1.05432	1.11090	0.98168	0.91268	1.00173	1.04309
3400.0	1.10560	1.02446	1.05054	1.05966	0.86164	0.94831	0.95650	0.96020	0.92350	0.90317
3500.0	1.00000	1.00113	0.92825	0.93494	1.03943	1.01618	0.91792	0.76298	0.66912	0.77921
3600.0	0.92392	0.78843	0.83052	0.87003	0.86462	0.88349	1.01270	0.97374	0.90269	0.92850
3700.0	0.94243	0.89632	0.84247	0.74269	0.67271	0.71469	0.78259	0.84352	0.94766	0.81442
3800.0	0.77144	0.80722	0.61858	0.47982	0.54082	0.67193	0.63277	0.64057	0.61789	0.66326
3900.0	0.75318	0.79562	0.71657	0.42906	0.49462	0.71982	0.62736	0.44509	0.76473	0.89510
4000.0	0.93254									
	ZENITH SCAN STARTING AT 16.26.59 ON 9/10/73, NORMALIZING FACTOR = 1.0933E 01									
2600.0	0.00010	0.00009	0.00009	0.00007	0.00009	0.00010	0.00008	0.00010	0.00008	0.00009
2700.0	0.00011	0.00009	0.00009	0.00010	0.00011	0.00010	0.00010	0.00009	0.00012	0.00010
2800.0	0.00010	0.00012	0.00012	0.00024	0.00011	0.00011	0.00012	0.00011	0.00014	0.00012
2900.0	0.00012	0.00015	0.00019	0.00033	0.00063	0.00130	0.00271	0.00502	0.00862	0.01500
3000.0	0.02154	0.03515	0.04884	0.09056	0.11635	0.15582	0.16993	0.22735	0.27472	0.27427
3100.0	0.32145	0.45919	0.47469	0.52875	0.56706	0.59133	0.56513	0.72814	0.69823	0.74193
3200.0	0.82069	0.83554	0.78324	0.74995	0.88385	0.94917	1.15174	1.16335	1.07420	1.19225
3300.0	1.25486	1.11434	1.12508	1.09145	1.06827	1.12369	0.98976	0.92512	1.01291	1.05301
3400.0	1.11076	1.03936	1.06086	1.06810	0.88080	0.95185	0.96046	0.96228	0.92782	0.90524
3500.0	1.00000	1.00245	0.93073	0.95439	1.06583	1.04268	0.93910	0.76001	0.67099	0.79920
3600.0	0.92601	0.79838	0.83542	0.87946	0.87128	0.90140	1.02053	0.98175	0.91077	0.93470
3700.0	0.95179	0.90055	0.85183	0.75516	0.68403	0.71420	0.78998	0.84394	0.95836	0.82393
3800.0	0.78033	0.81840	0.62307	0.48787	0.55227	0.68220	0.64309	0.65165	0.62749	0.67472
3900.0	0.76234	0.80980	0.73656	0.43786	0.50367	0.72801	0.64310	0.46427	0.76684	0.91032
4000.0	0.94387									

Table VIII-6

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 16.29.20 ON 9/10/73, NORMALIZING FACTOR = 1.0817E 01										
2600.0	0.00014	0.00011	0.00009	0.00009	0.00009	0.00009	0.00010	0.00008	0.00009	0.00009
2700.0	0.00010	0.00012	0.00010	0.00010	0.00010	0.00017	0.00014	0.00019	0.00011	0.00012
2800.0	0.00012	0.00012	0.00012	0.00013	0.00012	0.00012	0.00013	0.00013	0.00013	0.00014
2900.0	0.00015	0.00017	0.00023	0.00036	0.00064	0.00133	0.00278	0.00505	0.00885	0.01501
3000.0	0.02152	0.03586	0.05239	0.09432	0.11900	0.15707	0.17156	0.22853	0.27890	0.27690
3100.0	0.32863	0.47024	0.48283	0.53301	0.57323	0.59379	0.56880	0.74733	0.71130	0.75229
3200.0	0.83698	0.84052	0.79234	0.75350	0.88643	0.94635	1.16678	1.17973	1.08786	1.22710
3300.0	1.29149	1.13685	1.12873	1.08767	1.06534	1.11876	0.99376	0.92127	1.01126	1.05523
3400.0	1.11978	1.03928	1.05721	1.07169	0.86298	0.94776	0.95651	0.96309	0.92672	0.90409
3500.0	1.00000	0.99585	0.92622	0.94462	1.05517	1.03192	0.92658	0.77471	0.67466	0.79320
3600.0	0.93604	0.79903	0.84338	0.88455	0.87863	0.90537	1.03117	0.99173	0.91785	0.94257
3700.0	0.95863	0.98961	0.85653	0.75725	0.69065	0.72678	0.80426	0.85909	0.97295	0.83053
3800.0	0.79232	0.83295	0.63413	0.49641	0.55526	0.68546	0.65709	0.65725	0.63050	0.67498
3900.0	0.76033	0.80204	0.73458	0.43643	0.48803	0.73294	0.66056	0.44708	0.75551	0.90734
4000.0	0.94306									
ZENITH SCAN STARTING AT 16.31. 6 ON 9/10/73, NORMALIZING FACTOR = 1.0934E 01										
2600.0	0.00008	0.00007	0.00008	0.00008	0.00008	0.00008	0.00014	0.00010	0.00011	0.00008
2700.0	0.00009	0.00008	0.00011	0.00010	0.00011	0.00010	0.00012	0.00010	0.00011	0.00011
2800.0	0.00010	0.00011	0.00013	0.00011	0.00012	0.00013	0.00012	0.00013	0.00012	0.00014
2900.0	0.00015	0.00016	0.00020	0.00033	0.00058	0.00133	0.00264	0.00494	0.00875	0.01463
3000.0	0.02130	0.03445	0.05086	0.09237	0.11714	0.15853	0.17058	0.22194	0.27359	0.27363
3100.0	0.31501	0.46065	0.47259	0.52579	0.56446	0.58890	0.55723	0.72148	0.69890	0.74190
3200.0	0.81759	0.83471	0.78129	0.75029	0.87618	0.93996	1.14130	1.15978	1.06549	1.18344
3300.0	1.25398	1.11009	1.11933	1.08598	1.06322	1.11515	0.97829	0.91953	1.00321	1.04673
3400.0	1.10858	1.03348	1.05013	1.06212	0.87426	0.93658	0.94864	0.95295	0.91758	0.89231
3500.0	1.00000	0.99502	0.92186	0.94668	1.04848	1.02890	0.92580	0.77997	0.68789	0.80597
3600.0	0.93218	0.80632	0.81430	0.85076	0.86303	0.88266	1.01315	0.97062	0.89477	0.93017
3700.0	0.94216	0.88628	0.83573	0.73409	0.68130	0.70470	0.78263	0.84041	0.95351	0.80305
3800.0	0.77815	0.80106	0.61101	0.48215	0.53918	0.67589	0.63429	0.64466	0.62707	0.66776
3900.0	0.75216	0.79489	0.72254	0.41979	0.48338	0.73247	0.65550	0.44452	0.74976	0.90307
4000.0	0.93918									
ZENITH SCAN STARTING AT 16.32.51 ON 9/10/73, NORMALIZING FACTOR = 1.0769E 01										
2600.0	0.00011	0.00008	0.00008	0.00009	0.00009	0.00010	0.00010	0.00008	0.00009	0.00009
2700.0	0.00010	0.00010	0.00011	0.00009	0.00010	0.00011	0.00010	0.00011	0.00012	0.00010
2800.0	0.00012	0.00021	0.00017	0.00013	0.00015	0.00017	0.00016	0.00015	0.00014	0.00015
2900.0	0.00014	0.00020	0.00025	0.00034	0.00063	0.00130	0.00266	0.00490	0.00850	0.01472
3000.0	0.02115	0.03470	0.05036	0.09164	0.11628	0.15465	0.16886	0.22708	0.27385	0.27379
3100.0	0.32369	0.46022	0.47493	0.52835	0.56856	0.59151	0.56873	0.73311	0.69901	0.73997
3200.0	0.82205	0.83538	0.78263	0.74492	0.88587	0.94315	1.15896	1.16475	1.07760	1.20549
3300.0	1.26245	1.12035	1.13623	1.10446	1.08155	1.14092	1.00095	0.91876	1.01112	1.05103
3400.0	1.10849	1.03136	1.05459	1.05922	0.86772	0.95283	0.95863	0.96162	0.92348	0.90311
3500.0	1.00000	0.99149	0.92267	0.94293	1.05260	1.02628	0.92730	0.77521	0.67922	0.78569
3600.0	0.92162	0.79882	0.83498	0.88353	0.87728	0.89184	1.02600	0.98780	0.91642	0.93827
3700.0	0.95540	0.90423	0.85663	0.76152	0.68866	0.72286	0.79721	0.85066	0.96124	0.83244
3800.0	0.79068	0.82255	0.62418	0.49453	0.54846	0.67815	0.64980	0.66069	0.63603	0.68644
3900.0	0.77168	0.81869	0.67363	0.43205	0.48314	0.73686	0.63329	0.44171	0.75757	0.91172
4000.0	0.94895									
ZENITH SCAN STARTING AT 16.35.15 ON 9/10/73, NORMALIZING FACTOR = 1.0671E 01										
2600.0	0.00004	0.00004	0.00005	0.00006	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006
2700.0	0.00005	0.00006	0.00010	0.00006	0.00005	0.00007	0.00005	0.00006	0.00006	0.00007
2800.0	0.00007	0.00005	0.00007	0.00007	0.00009	0.00007	0.00006	0.00008	0.00008	0.00007
2900.0	0.00007	0.00010	0.00015	0.00031	0.00058	0.00133	0.00539	0.00673	0.00967	0.01556
3000.0	0.02241	0.03638	0.04922	0.09523	0.11549	0.15435	0.16822	0.22265	0.27195	0.26914
3100.0	0.31848	0.45975	0.46968	0.52339	0.56273	0.57739	0.55779	0.73538	0.69884	0.73774
3200.0	0.82821	0.82129	0.77438	0.74884	0.87677	0.93996	1.14559	1.15052	1.05686	1.19909
3300.0	1.26638	1.09836	1.11368	1.08055	1.05905	1.10530	0.96900	0.91248	1.00553	1.04802
3400.0	1.10530	1.02419	1.04667	1.05049	0.84368	0.93413	0.94380	0.94788	0.91502	0.89088
3500.0	1.00000	0.97736	0.91172	0.93327	1.04021	1.01145	0.90951	0.76193	0.67246	0.79303
3600.0	0.91193	0.78360	0.82618	0.80375	0.85780	0.88594	1.00596	0.95161	0.88410	0.92198
3700.0	0.92660	0.87946	0.81187	0.73838	0.66994	0.71006	0.77399	0.84090	0.93901	0.79260
3800.0	0.76966	0.79032	0.59034	0.47594	0.54028	0.65904	0.63069	0.63945	0.61482	0.67258
3900.0	0.74641	0.79334	0.70292	0.41334	0.50942	0.72252	0.61864	0.46764	0.76762	0.89774
4000.0	0.92835									
ZENITH SCAN STARTING AT 16.37. 1 ON 9/10/73, NORMALIZING FACTOR = 1.0363E 01										
2600.0	0.00008	0.00008	0.00008	0.00008	0.00009	0.00009	0.00010	0.00010	0.00008	0.00009
2700.0	0.00014	0.00009	0.00010	0.00009	0.00010	0.00009	0.00010	0.00009	0.00012	0.00010
2800.0	0.00011	0.00010	0.00012	0.00012	0.00011	0.00014	0.00018	0.00016	0.00013	0.00013
2900.0	0.00014	0.00015	0.00022	0.00034	0.00062	0.00136	0.00276	0.00513	0.00887	0.01517
3000.0	0.02170	0.03503	0.05083	0.09211	0.11824	0.15615	0.16984	0.22851	0.27573	0.27533
3100.0	0.32419	0.46177	0.47751	0.52932	0.56982	0.59316	0.56993	0.73086	0.69880	0.74183
3200.0	0.82071	0.83359	0.78193	0.74684	0.88626	0.94710	1.14954	1.16451	1.07376	1.19129
3300.0	1.26301	1.11788	1.12810	1.09726	1.07533	1.12653	0.99023	0.93194	1.02151	1.06785
3400.0	1.13037	1.04805	1.05431	1.06545	0.85841	0.93982	0.95030	0.95623	0.91700	0.89142
3500.0	1.00000	0.99288	0.91785	0.94725	1.04763	1.02584	0.92072	0.77599	0.68280	0.79827
3600.0	0.92479	0.79901	0.83043	0.87463	0.87278	0.89294	1.02425	0.98235	0.90652	0.94159
3700.0	0.94898	0.89060	0.84050	0.75376	0.69016	0.73306	0.79599	0.85350	0.96623	0.81094
3800.0	0.79081	0.81844	0.62320	0.48317	0.55056	0.68424	0.64396	0.65896	0.63596	0.68111
3900.0	0.76531	0.81324	0.74097	0.43475	0.50174	0.74139	0.68214	0.65732	0.68870	0.91316
4000.0	0.95003									
ZENITH SCAN STARTING AT 16.39.22 ON 9/10/73, NORMALIZING FACTOR = 1.0240E 01										
2600.0	0.00010	0.00017	0.00009	0.00010	0.00010	0.00014	0.00010	0.00009	0.00010	0.00011
2700.0	0.00010	0.00011	0.00010	0.00012	0.00010	0.00011	0.00011	0.00012	0.00013	0.00012
2800.0	0.00013	0.00012	0.00012	0.00014	0.00013	0.00015	0.00013	0.00014	0.00014	0.00015
2900.0	0.00020	0.00017	0.00023	0.00035	0.00066	0.00135	0.00284	0.00505	0.00892	0.01546
3000.0	0.02168	0.03609	0.05249	0.09625	0.12097	0.15962	0.17388	0.22978	0.28132	0.27914
3100.0	0.32871	0.47653	0.48945	0.53890	0.58289	0.60874	0.56354	0.73072	0.70940	0.74408
3200.0	0.82751	0.83970	0.78773	0.75130	0.87868	0.93700	1.14813	1.16477	1.06812	1.20720
3300.0	1.27137	1.11111	1.12618	1.09544	1.06728	1.12246	0.99050	0.92427	1.01697	1.05814
3400.0	1.11493	1.03632	1.05931	1.06710	0.87621	0.95818	0.96156	0.96603	0.92840	0.90382
3500.0	1.00000	0.99661	0.92550	0.94898	1.05715	1.03247	0.93077	0.78031	0.68657	0.78945
3600.0	0.93003	0.80026	0.84483	0.89002	0.88246	0.89889	1.03412	0.99486	0.92288	0.94640
3700.0	0.95725	0.88452	0.82166	0.76094	0.69083	0.71551	0.78977	0.84377	0.96534	0.81273
90.0	0.78417	0.81969	0.61820	0.49023	0.54530	0.67398	0.64233	0.65481	0.63318	0.68283
.0	0.76007	0.80320	0.73135	0.44146	0.49833	0.72928	0.65572	0.46278	0.75754	0.91095
^	0.94403									

Table VIII-7

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED 8UV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 16.43.12 ON 9/10/73. NORMALIZING FACTOR = 1.0351E 01										
2600.0	0.00005	0.00004	0.00008	0.00005	0.00006	0.00011	0.00012	0.00006	0.00006	0.00005
2700.0	0.00007	0.00005	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00006
2800.0	0.00007	0.00007	0.00006	0.00010	0.00007	0.00008	0.00007	0.00008	0.00008	0.00008
2900.0	0.00010	0.00010	0.00020	0.00031	0.00067	0.00142	0.00540	0.00939	0.00981	0.01657
3000.0	0.02310	0.03784	0.04056	0.08774	0.11698	0.15393	0.16858	0.22812	0.27310	0.27052
3100.0	0.33109	0.46245	0.47501	0.52683	0.56596	0.58440	0.56971	0.73518	0.69560	0.73822
3200.0	0.82460	0.77492	0.72046	0.62786	0.88568	0.94378	1.15621	1.15124	1.06672	1.20681
3300.0	1.23782	1.10624	1.12059	1.08210	1.06788	1.11431	0.96798	0.92258	1.01334	1.05435
3400.0	1.10531	1.02575	1.04956	0.85984	0.95385	0.95291	0.94941	0.91718	0.89025	
3500.0	1.00000	0.98281	0.90882	0.95229	1.04421	1.01543	0.90690	0.76659	0.66824	0.67608
3600.0	0.90650	0.78740	0.83416	0.81391	0.85723	0.90015	1.01019	0.97204	0.89610	0.92808
3700.0	0.93374	0.88651	0.82745	0.74152	0.67712	0.73058	0.79831	0.84253	0.94336	0.79655
3800.0	0.77529	0.79270	0.59246	0.47601	0.54534	0.66172	0.63207	0.64205	0.61809	0.68026
3900.0	0.74768	0.79412	0.70738	0.40099	0.51557	0.72605	0.61694	0.47408	0.77010	0.90232
4000.0	0.93163									
ZENITH SCAN STARTING AT 16.44.58 ON 9/10/73. NORMALIZING FACTOR = 1.0260E 01										
2600.0	0.00008	0.00008	0.00008	0.00009	0.00009	0.00010	0.00008	0.00013	0.00009	0.00009
2700.0	0.00010	0.00009	0.00010	0.00009	0.00010	0.00011	0.00010	0.00010	0.00011	0.00012
2800.0	0.00011	0.00013	0.00013	0.00012	0.00011	0.00014	0.00012	0.00012	0.00012	0.00013
2900.0	0.00014	0.00016	0.00017	0.00030	0.00041	0.00136	0.00269	0.00406	0.00882	0.01474
3000.0	0.02160	0.03494	0.04128	0.09603	0.12015	0.15988	0.17494	0.22773	0.28071	0.28005
3100.0	0.32149	0.47413	0.48753	0.53712	0.57846	0.59826	0.56606	0.59150	0.71705	0.75107
3200.0	0.69090	0.75697	0.66977	0.70667	0.64642	0.79943	1.15462	1.17722	1.07941	1.21187
3300.0	1.28253	1.12181	1.13858	1.10787	1.07890	1.13398	1.00247	0.93215	0.95039	1.07456
3400.0	1.13821	1.05037	1.07340	1.06695	0.42185	0.95677	0.51274	0.97548	0.65240	0.45391
3500.0	1.00000	0.72448	0.88091	0.76766	0.83005	0.46320	0.67362	0.77913	0.67892	0.78584
3600.0	0.84921	0.79689	0.83851	0.88801	0.88196	0.90107	0.43814	0.79625	0.91802	0.76047
3700.0	0.95068	0.90071	0.84588	0.76155	0.69173	0.73382	0.80212	0.85086	0.96789	0.83249
3800.0	0.79408	0.81777	0.62795	0.49359	0.55769	0.68405	0.65346	0.66252	0.63791	0.68641
3900.0	0.77269	0.81636	0.75035	0.43464	0.48785	0.75321	0.66245	0.45561	0.77920	0.93243
4000.0	0.97159									
ZENITH SCAN STARTING AT 16.47.20 ON 9/10/73. NORMALIZING FACTOR = 1.6946E 01										
2600.0	0.00008	0.00007	0.00007	0.00007	0.00010	0.00008	0.00016	0.00009	0.00008	0.00009
2700.0	0.00013	0.00010	0.00010	0.00009	0.00010	0.00010	0.00048	0.00010	0.00011	0.00012
2800.0	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	0.00012	0.00012	0.00017	0.00014
2900.0	0.00014	0.00015	0.00017	0.00020	0.00028	0.00063	0.00121	0.00157	0.00400	0.00769
3000.0	0.01187	0.02040	0.01619	0.04152	0.07819	0.11057	0.12322	0.17022	0.21302	0.21774
3100.0	0.26223	0.38120	0.40209	0.43322	0.18830	0.25925	0.07742	0.63110	0.65097	0.70330
3200.0	0.78342	0.81790	0.76470	0.74395	0.89116	0.94401	1.12646	1.15024	1.05669	1.19131
3300.0	1.26305	1.11102	1.13286	1.10574	1.07818	1.13311	0.99911	0.93837	1.04127	1.09662
3400.0	1.15868	1.07959	1.09686	1.11287	0.89121	0.97200	0.98692	0.98462	0.93802	0.90005
3500.0	1.00000	0.96898	0.88150	0.89194	0.96865	0.93410	0.82030	0.48789	0.42579	0.53593
3600.0	0.68098	0.45552	0.41251	0.47041	0.22187	0.15654	0.69292	0.32293	0.46002	0.34499
3700.0	0.22132	0.48734	0.43376	0.47140	0.43223	0.45758	0.49138	0.47777	0.36501	0.50617
3800.0	0.48906	0.48561	0.38100	0.29825	0.33203	0.41420	0.39460	0.40055	0.38596	0.42128
3900.0	0.46560	0.49306	0.44513	0.26377	0.30370	0.44796	0.39571	0.28689	0.46744	0.55884
4000.0	0.57919									
ZENITH SCAN STARTING AT 16.59.20 ON 9/10/73. NORMALIZING FACTOR = 1.3749E 01										
2600.0	0.00020	0.00018	0.00014	0.00024	0.00017	0.00013	0.00007	0.00010	0.00020	0.00006
2700.0	0.00006	0.00003	0.00002	0.00002	0.00003	0.00003	0.00003	0.00016	0.00010	0.00003
2800.0	0.00004	0.00003	0.00009	0.00012	0.00014	0.00036	0.00037	0.00034	0.00035	0.00035
2900.0	0.00036	0.00039	0.00040	0.00064	0.00103	0.00204	0.00122	0.00660	0.01098	0.01802
3000.0	0.02513	0.01969	0.04404	0.09282	0.12244	0.16161	0.17445	0.23058	0.27747	0.27478
3100.0	0.31799	0.45342	0.46242	0.51230	0.54988	0.34886	0.46687	0.41870	0.12526	0.17478
3200.0	0.76895	0.78893	0.71642	0.29172	0.83168	0.89877	1.09140	1.10367	1.02438	1.13330
3300.0	1.20587	1.07116	1.08170	1.05175	1.03439	1.08759	0.95379	0.90154	0.99266	1.04239
3400.0	1.07051	1.00628	1.02742	1.04187	0.85993	0.92673	0.94332	0.94038	0.90924	0.88913
3500.0	1.00000	0.99653	0.92101	0.95237	1.05885	1.03692	0.93381	0.31222	0.16262	0.52663
3600.0	0.95065	0.34637	0.57444	0.91167	0.90968	0.93720	1.07244	1.03125	0.95273	0.99308
3700.0	1.01953	0.95341	0.45927	0.11450	0.03097	0.07126	0.15659	0.68080	1.07224	0.59979
3800.0	0.36540	0.75258	0.45204	0.55009	0.59550	0.12444	0.51252	0.30656	0.72733	0.21493
3900.0	0.14514	0.70835	0.42546	0.51920	0.56961	0.32745	0.40594	0.50152	0.55590	1.08932
4000.0	1.12696									
SOLAR SCAN STARTING AT 17. 2.54 ON 9/10/73. NORMALIZING FACTOR = 1.2328E 03										
2600.0	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
2700.0	0.00009	0.00009	0.00009	0.00010	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011
2800.0	0.00012	0.00012	0.00013	0.00013	0.00013	0.00014	0.00014	0.00013	0.00001	0.00004
2900.0	0.00021	0.00023	0.00025	0.00032	0.00047	0.00090	0.00129	0.00296	0.00570	0.00981
3000.0	0.01340	0.01772	0.02698	0.06345	0.08010	0.11017	0.12095	0.16059	0.19861	0.19704
3100.0	0.22684	0.06835	0.03408	0.19211	0.41190	0.42650	0.34435	0.52662	0.50099	0.53047
3200.0	0.59726	0.59563	0.57094	0.54675	0.64044	0.70222	0.85133	0.86540	0.80620	0.89141
3300.0	0.95556	0.85724	0.87573	0.83973	0.85256	0.89989	0.79773	0.76149	0.85689	0.90977
3400.0	0.98160	0.91148	0.94667	0.98310	0.79183	0.85689	0.90784	0.91509	0.88943	0.87722
3500.0	1.00000	0.99124	0.91695	0.95562	1.08193	1.06808	0.96213	0.81082	0.72131	0.86371
3600.0	1.02711	0.87985	0.92163	0.97185	0.98084	1.03213	1.20657	1.15570	1.06234	1.11878
3700.0	1.15469	1.09639	1.03278	0.93532	0.85336	0.92936	1.04510	1.15866	1.33012	1.11828
3800.0	1.08253	1.14011	0.87559	0.68798	0.81924	1.02087	0.95729	0.99233	0.98271	1.08284
3900.0	1.23768	1.32168	1.20221	0.67268	0.81795	1.29298	1.13163	0.76860	1.39008	1.66741
4000.0	1.69919									
ZENITH SCAN STARTING AT 17. 7. 1 ON 9/10/73. NORMALIZING FACTOR = 1.6969E 01										
2600.0	0.00065	0.00065	0.00066	0.00065	0.00067	0.00070	0.00066	0.00067	0.00068	0.00068
2700.0	0.00068	0.00068	0.00068	0.00070	0.00070	0.00071	0.00071	0.00070	0.00071	0.00075
2800.0	0.00072	0.00072	0.00074	0.00073	0.00073	0.00075	0.00075	0.00074	0.00076	0.00074
2900.0	0.00076	0.00079	0.00084	0.00098	0.00140	0.00398	0.00507	0.00693	0.01103	0.01643
3000.0	0.02242	0.02962	0.03379	0.07995	0.09795	0.12845	0.13972	0.18434	0.22242	0.21770
3100.0	0.26228	0.15510	0.25076	0.03792	0.06957	0.08021	0.10920	0.57855	0.54875	0.57968
3200.0	0.65235	0.64855	0.61455	0.59030	0.69117	0.74415	0.90922	0.91461	0.84553	0.96331
3300.0	1.06534	1.03229	1.04749	1.01344	1.00148	1.05084	0.92155	0.86755	0.95809	1.00498
3400.0	1.06645	0.98331	1.01383	1.01872	0.82674	0.92053	0.93081	0.92655	0.89412	0.88084
3500.0	1.00000	0.97100	0.89808	0.94156	1.04620	1.02185	0.91088	0.77468	0.67887	0.82634
3600.0	0.92875	0.80203	0.85089	0.89379	0.89681	0.93499	1.05029	1.01317	0.94121	0.97637
3700.0	0.98941	0.94534	0.87915	0.78272	0.71652	0.77050	0.84553	0.91609	1.03884	0.87077
3800.0	0.85390	0.87345	0.66375	0.52009	0.60962	0.74084	0.70212	0.71711	0.69523	0.76979
3900.0	0.85438	0.91195	0.81252	0.27409	0.51472	0.84175	0.68348	0.37651	0.91140	1.05795
4000.0	1.08838									

Table VIII-8

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 17. 8.47 ON 9/10/73, NORMALIZING FACTOR = 1.3653E 01										
2600.0	0.00039	0.00041	0.00040	0.00042	0.00039	0.00040	0.00040	0.00048	0.00042	0.00048
2700.0	0.00042	0.00043	0.00042	0.00044	0.00042	0.00042	0.00042	0.00042	0.00043	0.00043
2800.0	0.00044	0.00044	0.00044	0.00044	0.00045	0.00043	0.00047	0.00044	0.00044	0.00045
2900.0	0.00047	0.00046	0.00053	0.00071	0.00105	0.00264	0.00861	0.00751	0.01179	0.01885
3000.0	0.02589	0.02001	0.04048	0.09432	0.11615	0.15567	0.16750	0.22287	0.26731	0.26408
3100.0	0.31328	0.44306	0.38338	0.03216	0.06949	0.08715	0.12670	0.69154	0.65410	0.69553
3200.0	0.77486	0.77288	0.72985	0.69895	0.81829	0.88670	1.08463	1.08982	1.00510	1.14454
3300.0	1.19246	1.05530	1.06951	1.03583	1.01791	1.07096	0.93754	0.88127	0.97164	1.01931
3400.0	1.08101	0.99483	1.02323	1.03156	0.83096	0.92716	0.93881	0.93667	0.90716	0.88685
3500.0	1.00000	0.98045	0.91263	0.94556	1.04926	1.02522	0.92192	0.77628	0.45420	0.79260
3600.0	0.93488	0.80113	0.84038	0.88362	0.88448	0.91940	1.04587	1.00042	0.92469	0.97204
3700.0	0.97903	0.93387	0.86297	0.67949	0.47392	0.61608	0.83654	0.90744	1.02356	0.88104
3800.0	0.85537	0.87140	0.30635	0.51528	0.27243	0.36993	0.09736	0.10340	0.07921	0.44035
3900.0	0.84277	0.89688	0.53619	0.40634	0.29851	0.70980	0.42309	0.41309	0.72553	1.01121
4000.0	1.04796									
ZENITH SCAN STARTING AT 17.16.59 ON 9/10/73, NORMALIZING FACTOR = 1.4674E 01										
2600.0	0.00088	0.00087	0.00086	0.00087	0.00088	0.00088	0.00089	0.00089	0.00091	0.00091
2700.0	0.00089	0.00091	0.00091	0.00095	0.00093	0.00100	0.00094	0.00097	0.00096	0.00099
2800.0	0.00103	0.00099	0.00100	0.00099	0.00100	0.00100	0.00102	0.00104	0.00102	0.00103
2900.0	0.00104	0.00105	0.00111	0.00127	0.00334	0.00844	0.00586	0.00779	0.01208	0.01786
3000.0	0.02393	0.03754	0.04642	0.08658	0.10577	0.13905	0.15225	0.20111	0.24474	0.24205
3100.0	0.28319	0.41396	0.42199	0.48663	0.50466	0.51956	0.49675	0.65167	0.62868	0.66503
3200.0	0.74627	0.75111	0.70997	0.68278	0.79902	0.85922	1.04865	1.06757	0.98250	1.11063
3300.0	1.17044	1.03261	1.04826	1.01292	0.98841	1.05510	0.92848	0.87156	0.96278	1.01009
3400.0	1.07447	0.99402	1.01792	1.03120	0.83144	0.91882	0.93631	0.93632	0.90435	0.88486
3500.0	1.00000	0.98435	0.91785	0.94935	1.05598	1.03330	0.93454	0.78290	0.69922	0.81506
3600.0	0.95380	0.82212	0.86025	0.90549	0.90781	0.94024	1.07692	1.03295	0.95427	1.00110
3700.0	1.01622	0.95876	0.89423	0.80329	0.73334	0.78867	0.85746	0.94075	1.06135	0.88510
3800.0	0.86744	0.89713	0.67992	0.53680	0.61568	0.75471	0.71716	0.72903	0.73227	0.79275
3900.0	0.87172	0.93479	0.83182	0.49034	0.58878	0.86851	0.72950	0.55501	0.93436	1.08888
4000.0	1.12036									
ZENITH SCAN STARTING AT 17.18.45 ON 9/10/73, NORMALIZING FACTOR = 1.1918E 01										
2600.0	0.00055	0.00055	0.00056	0.00057	0.00057	0.00058	0.00057	0.00058	0.00059	0.00059
2700.0	0.00058	0.00058	0.00056	0.00057	0.00056	0.00056	0.00057	0.00056	0.00057	0.00059
2800.0	0.00059	0.00059	0.00059	0.00057	0.00058	0.00061	0.00059	0.00060	0.00060	0.00060
2900.0	0.00061	0.00063	0.00069	0.00083	0.00115	0.00199	0.00352	0.00598	0.00995	0.01598
3000.0	0.02263	0.03572	0.05070	0.09153	0.11621	0.15558	0.16839	0.22010	0.26314	0.26083
3100.0	0.29723	0.43287	0.44653	0.49471	0.53346	0.55590	0.52150	0.67588	0.65415	0.69024
3200.0	0.76148	0.78288	0.73595	0.70254	0.82336	0.88665	1.08068	1.10962	1.02537	1.12219
3300.0	1.20956	1.06965	1.07620	1.04473	1.02062	1.08352	0.95109	0.88830	0.97840	1.03164
3400.0	1.09197	1.02163	1.03990	1.05718	0.87547	0.93592	0.95599	0.95461	0.91711	0.90096
3500.0	1.00000	1.00880	0.93525	0.95513	1.08286	1.06414	0.96121	0.81081	0.71641	0.83563
3600.0	0.99143	0.84132	0.88738	0.93245	0.91051	0.93994	1.08037	1.03875	0.97056	0.98924
3700.0	1.02294	0.96656	0.91227	0.81612	0.73724	0.78485	0.87388	0.93157	1.06765	0.92322
3800.0	0.86684	0.91864	0.70615	0.54731	0.61955	0.76994	0.72515	0.73698	0.71226	0.77038
3900.0	0.87240	0.92822	0.84093	0.50931	0.55730	0.84990	0.76084	0.53056	0.89381	1.08743
4000.0	1.11932									
SOLAR SCAN STARTING AT 17.22.52 ON 9/10/73, NORMALIZING FACTOR = 1.2862E 03										
2600.0	0.00008	0.00008	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009	0.00009
2700.0	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011	0.00012	0.00012	0.00012	0.00013
2800.0	0.00013	0.00014	0.00014	0.00015	0.00015	0.00016	0.00016	0.00017	0.00018	0.00019
2900.0	0.00019	0.00021	0.00022	0.00027	0.00037	0.00066	0.00129	0.00233	0.00441	0.00765
3000.0	0.01164	0.01986	0.02955	0.05702	0.07238	0.09865	0.11041	0.14771	0.18591	0.18659
3100.0	0.21374	0.32501	0.33129	0.36044	0.39119	0.40436	0.38105	0.50557	0.49220	0.51377
3200.0	0.58223	0.58796	0.56119	0.53325	0.62274	0.68390	0.83908	0.86806	0.80782	0.88873
3300.0	0.97136	0.86342	0.87350	0.85768	0.84628	0.89960	0.80417	0.75202	0.83762	0.88726
3400.0	0.96043	0.90201	0.92301	0.96018	0.78003	0.85975	0.89447	0.90922	0.88293	0.87533
3500.0	1.00000	1.00659	0.93918	0.97374	1.10400	1.09789	0.99929	0.84578	0.76009	0.88003
3600.0	1.06297	0.91426	0.96109	1.03661	1.04354	1.08686	1.26797	1.24010	1.16238	1.17775
3700.0	1.21524	1.14532	1.09513	0.98479	0.89223	0.95663	1.08336	1.16255	1.36143	1.17787
3800.0	1.11660	1.20336	0.91515	0.71416	0.8.297	1.05181	0.99622	1.02369	0.99734	1.08410
3900.0	1.26372	1.36088	1.24645	0.71855	0.80961	1.31220	1.18937	0.83961	1.47433	1.77872
4000.0	1.84832									
SOLAR SCAN STARTING AT 17.25.13 ON 9/10/73, NORMALIZING FACTOR = 1.2259E 03										
2600.0	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009
2700.0	0.00010	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012
2800.0	0.00013	0.00013	0.00013	0.00014	0.00014	0.00015	0.00015	0.00016	0.00020	0.00021
2900.0	0.00022	0.00023	0.00023	0.00029	0.00039	0.00068	0.00128	0.00236	0.00436	0.00752
3000.0	0.01150	0.01943	0.02851	0.05462	0.07072	0.09847	0.11031	0.14647	0.18391	0.18681
3100.0	0.21325	0.31780	0.32729	0.36493	0.39617	0.41356	0.39044	0.51194	0.49654	0.52318
3200.0	0.58676	0.59898	0.57052	0.54032	0.63916	0.70360	0.86021	0.88268	0.82819	0.91131
3300.0	0.99339	0.88887	0.89797	0.88133	0.87286	0.92785	0.81983	0.77733	0.86143	0.91569
3400.0	0.99303	0.94041	0.96632	0.97077	0.81641	0.88329	0.91511	0.92425	0.89797	0.89057
3500.0	1.00000	1.02162	0.96097	0.98528	1.13181	1.11971	1.01795	0.85809	0.76421	0.89822
3600.0	1.10566	0.92955	0.98147	1.05728	1.06881	1.09580	1.28884	1.24811	1.16925	1.20715
3700.0	1.25481	1.18203	1.12977	1.01923	0.92123	0.99312	1.11812	1.20340	1.39716	1.20939
3800.0	1.14629	1.24265	0.92742	0.73863	0.85791	1.08166	1.02115	1.05094	1.02573	1.11259
3900.0	1.30195	1.40560	1.29118	0.74938	0.85033	1.33649	1.19572	0.83979	1.40790	1.67268
4000.0	1.81718									
ZENITH SCAN STARTING AT 17.28.47 ON 9/10/73, NORMALIZING FACTOR = 1.1954E 01										
2600.0	0.00069	0.00068	0.00071	0.00071	0.00071	0.00072	0.00071	0.00071	0.00070	0.00071
2700.0	0.00071	0.00074	0.00073	0.00074	0.00074	0.00074	0.00075	0.00074	0.00075	0.00076
2800.0	0.00074	0.00075	0.00076	0.00076	0.00077	0.00078	0.00077	0.00077	0.00077	0.00078
2900.0	0.00080	0.00080	0.00087	0.00103	0.00131	0.00202	0.00346	0.00542	0.00923	0.01457
3000.0	0.02079	0.03302	0.04742	0.08713	0.10862	0.14323	0.15738	0.20196	0.25228	0.25177
3100.0	0.28331	0.42513	0.43687	0.48081	0.52329	0.54111	0.50749	0.67107	0.65670	0.68957
3200.0	0.76760	0.78558	0.74156	0.69974	0.81854	0.88274	1.08591	1.12539	1.02656	1.14095
3300.0	1.24311	1.09040	1.09838	1.07194	1.03882	1.09421	0.97207	0.89971	0.98724	1.04037
3400.0	1.10979	1.04234	1.05402	1.08522	0.90391	0.94831	0.97941	0.97285	0.92199	0.90477
3500.0	1.00000	1.02201	0.94499	0.96577	1.08543	1.06251	0.95788	0.80824	0.71900	0.82691
3600.0	0.99129	0.85137	0.87889	0.94575	0.94654	0.96172	1.10891	1.07330	0.99920	1.01655
3700.0	1.05463	0.98115	0.92721	0.82820	0.74735	0.78409	0.88952	0.94676	1.09919	0.94813
3800.0	0.88777	0.95017	0.72277	0.56604	0.62953	0.79090	0.74057	0.75975	0.73292	0.77986
3900.0	0.89176	0.94999	0.86831	0.53689	0.56239	0.87898	0.80568	0.54549	0.91765	1.12475
4000.0	1.16603									

Table VIII-9

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
				ZENITH SCAN STARTING AT 17.31. 8 ON 9/10/73. NORMALIZING FACTOR = 1.2259E 01						
2600.0	0.00043	0.00043	0.00044	0.00044	0.00045	0.00046	0.00045	0.00052	0.00046	0.00047
2700.0	0.00047	0.00047	0.00047	0.00046	0.00051	0.00047	0.00048	0.00047	0.00049	0.00049
2800.0	0.00050	0.00051	0.00049	0.00050	0.00052	0.00050	0.00050	0.00051	0.00052	0.00052
2900.0	0.00053	0.00053	0.00057	0.00069	0.00096	0.00159	0.00297	0.00506	0.00848	0.01400
3000.0	0.01970	0.03148	0.04586	0.06213	0.10567	0.13949	0.15387	0.20300	0.24788	0.25053
3100.0	0.28634	0.41675	0.43256	0.48108	0.52397	0.55000	0.52498	0.67774	0.65966	0.69549
3200.0	0.77104	0.80501	0.74849	0.69749	0.82729	0.88574	1.08304	1.11021	1.02702	1.12739
3300.0	1.21463	1.07458	1.08509	1.05883	1.02839	1.09307	0.97178	0.89205	0.98082	1.02998
3400.0	1.09462	1.02179	1.03838	1.05798	0.87637	0.93513	0.95931	0.96230	0.92086	0.90592
3500.0	1.00000	1.00936	0.93666	0.95094	1.07808	1.06744	0.97621	0.81367	0.72534	0.80353
3600.0	0.99353	0.85104	0.87310	0.94199	0.94020	0.95552	1.11204	1.08018	1.00292	1.02510
3700.0	1.05976	0.98945	0.94110	0.84560	0.76726	0.80960	0.90742	0.95148	1.05440	0.93045
3800.0	0.87347	0.93504	0.70894	0.55905	0.61165	0.77159	0.72713	0.74345	0.72368	0.77113
3900.0	0.87615	0.93215	0.85995	0.53071	0.53735	0.86284	0.77686	0.51135	0.88343	1.08510
4000.0	1.12333									
				SOLAR SCAN STARTING AT 17.36.54 ON 9/10/73. NORMALIZING FACTOR = 1.0468E 03						
2600.0	0.00007	0.00007	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00009	0.00009
2700.0	0.00009	0.00009	0.00009	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011	0.00011
2800.0	0.00012	0.00012	0.00012	0.00013	0.00013	0.00013	0.00014	0.00014	0.00015	0.00015
2900.0	0.00016	0.00016	0.00018	0.00021	0.00029	0.00050	0.00102	0.00193	0.00363	0.00667
3000.0	0.01002	0.01794	0.02615	0.05007	0.06519	0.08802	0.10016	0.13933	0.17681	0.18111
3100.0	0.21218	0.31192	0.32239	0.35982	0.39271	0.41038	0.39264	0.51827	0.49920	0.52387
3200.0	0.59229	0.60398	0.57602	0.54452	0.64754	0.70402	0.87594	0.89426	0.83839	0.92940
3300.0	0.99787	0.89488	0.90739	0.88810	0.87249	0.93224	0.82849	0.77480	0.86151	0.90704
3400.0	0.97473	0.91033	0.93702	0.96348	0.79807	0.87558	0.90418	0.91935	0.89120	0.88769
3500.0	1.00000	1.02380	0.96202	0.99187	1.13950	1.14283	1.04393	0.86912	0.77297	0.88756
3600.0	1.08952	0.93707	0.97588	1.05411	1.06547	1.09705	1.28141	1.25210	1.15945	1.20358
3700.0	1.26691	1.18731	1.12523	1.02642	0.92629	0.97106	1.10855	1.19432	1.39925	1.19071
3800.0	1.13915	1.22389	0.94340	0.73049	0.81901	1.06439	1.00883	1.04695	1.02490	1.10261
3900.0	1.28830	1.37748	1.28405	0.76020	0.80527	1.33057	1.16929	0.77238	1.43538	1.74207
4000.0	1.82590									
				ZENITH SCAN STARTING AT 17.40.46 ON 9/10/73. NORMALIZING FACTOR = 1.2202E 01						
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005
2700.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
2800.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
2900.0	0.00006	0.00038	0.00044	0.00044	0.00045	0.00046	0.00449	0.00590	0.00468	0.00483
3000.0	0.00486	0.00543	0.02580	0.08291	0.10491	0.14024	0.15300	0.20374	0.24929	0.24988
3100.0	0.28933	0.42179	0.43224	0.48306	0.52303	0.54588	0.51796	0.67343	0.65370	0.69544
3200.0	0.77256	0.78743	0.74377	0.71206	0.83671	0.90122	1.09658	1.11541	1.03057	1.14876
3300.0	1.22382	1.08318	1.09410	1.06332	1.04120	1.08980	0.94985	0.89604	0.98255	1.02956
3400.0	1.09020	1.01758	1.03703	1.05049	0.86782	0.93173	0.94796	0.94884	0.91793	0.89516
3500.0	1.00000	1.00545	0.93437	0.96776	1.08155	1.06156	0.95928	0.81018	0.71739	0.83153
3600.0	0.99391	0.84797	0.89524	0.94232	0.94399	0.95279	1.11685	1.07408	0.99994	1.03503
3700.0	1.05079	0.98539	0.93058	0.83404	0.76404	0.81594	0.89311	0.95943	1.08237	0.92611
3800.0	0.89451	0.92331	0.70901	0.55119	0.63153	0.78383	0.73979	0.75183	0.72678	0.78976
3900.0	0.89080	0.95154	0.85894	0.50754	0.59494	0.87873	0.76517	0.56211	0.92619	1.10699
4000.0	1.13951									
				ZENITH SCAN STARTING AT 17.43. 7 ON 9/10/73. NORMALIZING FACTOR = 1.0003E 00						
2600.0	0.00009	0.00019	0.00009	0.00011	0.00012	0.00008	0.00010	0.00010	0.00010	0.00010
2700.0	0.00009	0.00009	0.00017	0.00022	0.00010	0.00011	0.00010	0.00010	0.00019	0.00017
2800.0	0.00023	0.00036	0.00020	0.00021	0.00020	0.00017	0.00016	0.00022	0.00022	0.00020
2900.0	0.00032	0.00046	0.00047	0.00024	0.00010	0.00017	0.00078	0.00145	0.00114	0.00173
3000.0	0.00252	0.00594	0.01359	0.01070	0.01311	0.01737	0.01907	0.02511	0.03073	0.03052
3100.0	0.03622	0.05772	0.06217	0.09255	0.13440	0.16323	0.15427	0.85467	0.85837	0.91011
3200.0	0.90964	0.91156	0.91363	0.91684	0.91835	0.92050	0.92324	0.92572	0.92752	0.92945
3300.0	0.93261	0.93528	0.93827	0.94214	0.94449	0.94627	0.94675	0.95029	0.96189	0.96488
3400.0	0.96880	0.97157	0.97440	0.97776	0.98097	0.98380	0.98665	0.99054	0.99317	0.99622
3500.0	1.00000	1.00373	1.00740	1.01154	1.01524	1.01876	1.02168	1.02138	0.71195	0.94804
3600.0	1.03939	1.04514	1.05022	1.05636	1.06206	1.06715	1.07294	1.07865	1.08431	1.08943
3700.0	1.09518	1.09921	1.10169	1.07677	0.98371	1.00116	1.12058	1.12423	1.12825	1.13033
3800.0	1.13208	1.11388	0.51247	0.23996	0.34063	0.64231	0.52316	0.55560	0.50613	0.73214
3900.0	1.19000	1.18476	0.76629	0.36038	0.37982	1.12902	0.75908	0.34300	1.01801	1.26537
4000.0	1.27219									
				ZENITH SCAN STARTING AT 17.53. 2 ON 9/10/73. NORMALIZING FACTOR = 4.7822E-01						
2600.0	0.00046	0.00043	0.00030	0.00034	0.00046	0.00064	0.00064	0.00050	0.00052	0.00043
2700.0	0.00044	0.00052	0.00045	0.00070	0.00056	0.00066	0.00075	0.00084	0.00081	0.00087
2800.0	0.00081	0.00079	0.00089	0.00082	0.00090	0.00089	0.00087	0.00089	0.00088	0.00088
2900.0	0.00087	0.00088	0.00081	0.00023	0.00018	0.00030	0.00053	0.00190	0.01133	0.01165
3000.0	0.01163	0.01157	0.01150	0.01166	0.02156	0.03075	0.03394	0.04488	0.05511	0.05551
3100.0	0.06500	0.09413	0.09748	0.10809	0.11817	0.12394	0.11843	0.21687	0.18385	0.23083
3200.0	0.39185	0.37654	0.28691	0.22362	0.52235	0.75531	1.82054	1.88854	1.86916	1.89584
3300.0	1.90389	1.90100	1.91058	1.88406	1.74697	1.91969	1.14494	0.66632	1.18962	1.49610
3400.0	1.89462	1.39065	1.48315	1.55133	0.52243	0.79228	0.80814	0.79651	0.63346	0.55671
3500.0	1.00000	0.97941	0.65860	0.72668	1.33887	1.22497	0.73279	0.29308	0.20112	0.33914
3600.0	0.78870	0.33481	0.41506	0.55115	0.51321	0.59324	1.20286	0.97392	0.67964	0.75151
3700.0	0.82886	0.59652	0.45658	0.28256	0.19816	0.22906	0.32517	0.46101	0.82047	0.39371
3800.0	0.31478	0.38105	0.17300	0.12590	0.14220	0.19069	0.17263	0.17521	0.16655	0.18716
3900.0	0.25084	0.31193	0.24967	0.11365	0.12733	0.23574	0.19575	0.11860	0.30313	0.56163
4000.0	0.66076									
				ZENITH SCAN STARTING AT 17.54.48 ON 9/10/73. NORMALIZING FACTOR = 9.6023E-01						
2600.0	0.00021	0.00022	0.00021	0.00020	0.00021	0.00022	0.00021	0.00021	0.00021	0.00031
2700.0	0.00026	0.00020	0.00021	0.00020	0.00021	0.00020	0.00022	0.00020	0.00029	0.00021
2800.0	0.00022	0.00022	0.00022	0.00022	0.00022	0.00021	0.00022	0.00021	0.00021	0.00023
2900.0	0.00022	0.00025	0.00031	0.00050	0.00139	0.00162	0.00185	0.00264	0.00693	0.00693
3000.0	0.00689	0.00486	0.00681	0.01223	0.19155	0.22155	0.21324	0.20986	0.21299	0.22399
3100.0	0.21169	0.21065	0.20646	0.24328	0.21849	0.21267	0.20118	0.31574	0.28410	0.32418
3200.0	0.44262	0.49464	0.39854	0.34335	0.54395	0.80784	1.15228	1.15361	1.15489	1.15739
3300.0	1.15890	1.16186	1.16431	1.16763	1.16966	1.16908	1.03510	0.69215	1.18000	1.18742
3400.0	1.18970	1.19226	1.19210	1.17329	0.56315	0.84539	0.95426	0.96436	0.58624	0.53410
3500.0	1.00000	0.82496	0.54991	0.81310	1.23226	1.20524	0.60145	0.26799	0.15111	0.30409
3600.0	0.59760	0.29145	0.33522	0.44608	0.41549	0.47333	1.25154	1.00994	0.46905	0.56762
3700.0	0.75943	0.43138	0.32841	0.21460	0.11554	0.16767	0.24765	0.32639	0.60676	0.28759
3800.0	0.22779	0.28881	0.09905	0.06520	0.07444	0.11504	0.09698	0.09765	0.09096	0.12019
3900.0	0.18708	0.23867	0.16447	0.06139	0.06558	0.15147	0.11852	0.06113	0.18880	0.36956
4000.0	0.42033									

Table VIII-10

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
SOLAR SCAN STARTING AT 18. 1. 9 ON 9/10/73, NORMALIZING FACTOR = 1.0010E 03										
2600.0	0.00006	0.00005	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007
2700.0	0.00007	0.00007	0.00007	0.00007	0.00008	0.00011	0.00009	0.00009	0.00010	0.00010
2800.0	0.00010	0.00010	0.00011	0.00011	0.00011	0.00012	0.00012	0.00013	0.00013	0.00014
2900.0	0.00014	0.00015	0.00016	0.00017	0.00020	0.00030	0.00053	0.00098	0.00192	0.00366
3000.0	0.00610	0.01142	0.01799	0.03893	0.05162	0.07484	0.08539	0.11785	0.15135	0.15527
3100.0	0.18442	0.27897	0.29086	0.34036	0.36197	0.38358	0.36491	0.48456	0.47267	0.50701
3200.0	0.57087	0.58515	0.55988	0.53999	0.64046	0.70234	0.86512	0.89294	0.83576	0.93139
3300.0	1.00655	0.89178	0.90512	0.88512	0.87617	0.93167	0.81932	0.77815	0.86248	0.91121
3400.0	0.97771	0.91712	0.94393	0.97329	0.80640	0.87414	0.89972	0.91233	0.88615	0.87727
3500.0	1.00000	1.01403	0.94465	0.98219	1.11810	1.11293	1.00905	0.85727	0.76804	0.90080
3600.0	1.08455	0.93370	0.98572	1.05718	1.06659	1.10778	1.29665	1.25578	1.16397	1.22186
3700.0	1.27209	1.20104	1.13223	1.04054	0.94361	1.02569	1.13445	1.23192	1.43262	1.21095
3800.0	1.18199	1.26496	0.94665	0.74366	0.84626	1.05536	1.03398	1.05287	1.02741	1.13220
3900.0	1.29207	1.38692	1.26284	0.73606	0.84219	1.32901	1.15418	0.80574	1.45077	1.73349
4000.0	1.80662									
ZENITH SCAN STARTING AT 18. 4.58 ON 9/10/73, NORMALIZING FACTOR = 1.3432E 01										
2600.0	0.00054	0.00055	0.00055	0.00057	0.00057	0.00056	0.00056	0.00056	0.00058	0.00058
2700.0	0.00058	0.00058	0.00057	0.00059	0.00057	0.00058	0.00059	0.00059	0.00060	0.00062
2800.0	0.00065	0.00062	0.00062	0.00062	0.00068	0.00066	0.00063	0.00063	0.00063	0.00064
2900.0	0.00064	0.00065	0.00067	0.00073	0.00085	0.00119	0.00270	0.00822	0.00674	0.01061
3000.0	0.01447	0.02331	0.03286	0.06463	0.08162	0.11335	0.12769	0.17410	0.21724	0.21843
3100.0	0.26414	0.38988	0.40348	0.45129	0.49029	0.51302	0.49322	0.65086	0.62763	0.67140
3200.0	0.75023	0.76458	0.72037	0.70006	0.82329	0.88293	1.07974	1.09415	1.00195	1.13097
3300.0	1.19196	1.04787	1.06368	1.03207	1.01057	1.04658	0.94635	0.88816	0.98104	1.02613
3400.0	1.08602	1.00368	1.02357	1.03126	0.82948	0.91384	0.93475	0.93883	0.90805	0.88560
3500.0	1.00000	0.98445	0.91765	0.94848	1.05997	1.03582	0.93818	0.78767	0.69209	0.82448
3600.0	0.97392	0.83338	0.89024	0.93579	0.93595	0.96751	1.10659	1.06431	0.99113	1.02753
3700.0	1.04241	0.99348	0.92762	0.82869	0.76107	0.81696	0.89084	0.95870	1.08422	0.91811
3800.0	0.88677	0.92061	0.67740	0.54785	0.62898	0.77595	0.73311	0.74028	0.71899	0.77566
3900.0	0.87204	0.92478	0.82162	0.49302	0.57953	0.85730	0.73686	0.55078	0.93092	1.09254
4000.0	1.13336									
ZENITH SCAN STARTING AT 18. 6.43 ON 9/10/73, NORMALIZING FACTOR = 1.0479E 01										
2600.0	0.00037	0.00038	0.00037	0.00040	0.00038	0.00040	0.00040	0.00039	0.00038	0.00039
2700.0	0.00039	0.00040	0.00038	0.00040	0.00040	0.00040	0.00042	0.00041	0.00040	0.00042
2800.0	0.00041	0.00040	0.00041	0.00043	0.00043	0.00043	0.00042	0.00042	0.00044	0.00042
2900.0	0.00044	0.00044	0.00046	0.00049	0.00067	0.00108	0.00187	0.00331	0.00564	0.00977
3000.0	0.01445	0.02412	0.03607	0.06881	0.08816	0.12451	0.13824	0.18788	0.23201	0.23354
3100.0	0.27070	0.40037	0.41836	0.46883	0.50925	0.53656	0.51619	0.66971	0.64557	0.68887
3200.0	0.76597	0.79094	0.74368	0.71230	0.85200	0.90770	1.11240	1.13264	1.04366	1.15872
3300.0	1.23305	1.09183	1.10495	1.07504	1.05112	1.11019	0.97080	0.90909	0.99712	1.04274
3400.0	1.09945	1.02820	1.04875	1.06314	0.87793	0.94421	0.96001	0.96588	0.92540	0.90142
3500.0	1.00000	1.00989	0.93459	0.95584	1.07902	1.06302	0.96264	0.81487	0.71849	0.83156
3600.0	0.99693	0.85990	0.90656	0.96838	0.96374	0.97873	1.12288	1.08185	1.00326	1.04049
3700.0	1.06279	1.00613	0.95513	0.85901	0.78291	0.82723	0.92311	0.98366	1.13139	0.95540
3800.0	0.92129	0.96431	0.72206	0.56645	0.62821	0.79434	0.74848	0.75975	0.73726	0.79449
3900.0	0.89562	0.95302	0.86891	0.52515	0.56286	0.86451	0.77972	0.51598	0.88586	1.07521
4000.0	1.11952									
ZENITH SCAN STARTING AT 18. 9. 4 ON 9/10/73, NORMALIZING FACTOR = 1.0652E 01										
2600.0	0.00025	0.00026	0.00025	0.00027	0.00026	0.00028	0.00026	0.00025	0.00030	0.00027
2700.0	0.00028	0.00026	0.00027	0.00027	0.00028	0.00026	0.00029	0.00030	0.00027	0.00029
2800.0	0.00029	0.00028	0.00028	0.00029	0.00034	0.00032	0.00030	0.00029	0.00030	0.00031
2900.0	0.00033	0.00032	0.00035	0.00040	0.00055	0.00094	0.00177	0.00311	0.00543	0.00960
3000.0	0.01393	0.02393	0.03578	0.06705	0.08904	0.12113	0.13444	0.17945	0.22386	0.22547
3100.0	0.26667	0.39254	0.40755	0.45322	0.49499	0.51645	0.49238	0.65922	0.63838	0.67530
3200.0	0.75411	0.77450	0.73363	0.69791	0.82871	0.88188	1.09787	1.12112	1.02671	1.15832
3300.0	1.22703	1.08071	1.10173	1.07781	1.04737	1.11279	0.98596	0.91455	1.01091	1.05065
3400.0	1.07741	1.02023	1.03528	1.04971	0.85416	0.92029	0.94994	0.95163	0.91578	0.89921
3500.0	1.00000	0.99779	0.93327	0.95057	1.06580	1.04636	0.95386	0.79254	0.70090	0.81103
3600.0	0.97166	0.82731	0.85501	0.91965	0.91896	0.94155	1.08194	1.04667	0.97405	0.99397
3700.0	1.02509	0.96598	0.91531	0.82493	0.74365	0.78231	0.86797	0.92453	1.05292	0.90847
3800.0	0.85851	0.90379	0.67689	0.53719	0.60011	0.75569	0.71531	0.72475	0.70062	0.75024
3900.0	0.85529	0.90347	0.83597	0.49594	0.51485	0.76124	0.71941	0.51787	0.85453	1.03466
4000.0	1.07461									
SOLAR SCAN STARTING AT 18.10.50 ON 9/10/73, NORMALIZING FACTOR = 1.0431E 03										
2600.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006	0.00006
2700.0	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008
2800.0	0.00008	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010	0.00010	0.00011	0.00011
2900.0	0.00012	0.00012	0.00013	0.00014	0.00016	0.00024	0.00042	0.00080	0.00161	0.00309
3000.0	0.00525	0.01001	0.01593	0.03490	0.04583	0.06868	0.07871	0.10944	0.14139	0.14599
3100.0	0.17534	0.26287	0.27801	0.31720	0.34429	0.36088	0.34728	0.46195	0.44976	0.48297
3200.0	0.54454	0.55903	0.53441	0.51324	0.61324	0.67152	0.82549	0.84991	0.79383	0.88579
3300.0	0.96114	0.85911	0.87380	0.85776	0.85015	0.90294	0.80217	0.76042	0.84601	0.89647
3400.0	0.96985	0.90860	0.93212	0.96653	0.78800	0.86725	0.90192	0.91516	0.88899	0.87934
3500.0	1.00000	1.00461	0.94608	0.98368	1.11523	1.10969	1.00898	0.85547	0.76686	0.89823
3600.0	1.08286	0.93320	0.98657	1.05999	1.07105	1.11282	1.30235	1.26363	1.17481	1.21650
3700.0	1.24114	1.20601	1.13346	1.01607	0.92829	1.00267	1.12054	1.21475	1.40309	1.19566
3800.0	1.14927	1.23612	0.92096	0.72412	0.85553	1.07312	1.01022	1.03183	1.01408	1.10054
3900.0	1.26600	1.36226	1.25423	0.71038	0.82012	1.29875	1.16077	0.78038	1.38978	1.69927
4000.0	1.76746									
SOLAR SCAN STARTING AT 18.13.11 ON 9/10/73, NORMALIZING FACTOR = 9.9752E 02										
2600.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006	0.00006	0.00006
2700.0	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008
2800.0	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010	0.00013
2900.0	0.00013	0.00014	0.00014	0.00015	0.00018	0.00026	0.00043	0.00083	0.00156	0.00317
3000.0	0.00518	0.00990	0.01629	0.03358	0.04650	0.06797	0.07831	0.11161	0.14222	0.14702
3100.0	0.18101	0.26794	0.28216	0.32152	0.35378	0.37662	0.36525	0.48192	0.46412	0.50018
3200.0	0.56640	0.57740	0.55271	0.52987	0.64042	0.69519	0.86829	0.88280	0.82739	0.93115
3300.0	0.99507	0.89371	0.91113	0.89153	0.88324	0.94467	0.83140	0.78804	0.87695	0.92623
3400.0	0.99341	0.93401	0.96929	0.99182	0.81800	0.88746	0.91454	0.92411	0.89755	0.88724
3500.0	1.00000	1.01864	0.95173	0.99353	1.12944	1.12242	1.01814	0.86420	0.77099	0.92899
3600.0	1.10281	0.94872	1.00245	1.07676	1.08783	1.12991	1.31022	1.27705	1.18549	1.23341
3700.0	1.28467	1.20947	1.14249	1.03565	0.94524	1.00469	1.13936	1.23073	1.43737	1.19788
3800.0	1.17413	1.25463	0.94351	0.73974	0.86539	1.08471	1.02494	1.05670	1.03402	1.13688
3900.0	1.30392	1.40768	1.26894	0.75187	0.86558	1.35148	1.17094	0.84197	1.47976	1.75479
4000.0	1.80515									

Table VIII-11

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
SOLAR SCAN STARTING AT 18.15. 0 ON 9/10/73, NORMALIZING FACTOR = 1.0215E 03										
2600.0	0.00005	0.00005	0.00005	0.00006	0.00009	0.00006	0.00006	0.00006	0.00007	0.00007
2700.0	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00008	0.00009	0.00009
2800.0	0.00009	0.00009	0.00010	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011	0.00012
2900.0	0.00012	0.00013	0.00014	0.00015	0.00017	0.00023	0.00040	0.00073	0.00142	0.00297
3000.0	0.00485	0.00960	0.01586	0.03271	0.04553	0.06591	0.07674	0.10777	0.13980	0.14486
3100.0	0.17840	0.27000	0.28493	0.34388	0.35773	0.37705	0.36141	0.49380	0.47778	0.50180
3200.0	0.57028	0.58235	0.55634	0.53435	0.63246	0.69088	0.85543	0.88569	0.82416	0.93121
3300.0	1.00592	0.89282	0.91368	0.89912	0.88754	0.94401	0.83929	0.78549	0.87286	0.92431
3400.0	0.99521	0.92670	0.95203	0.98528	0.80398	0.88183	0.90907	0.92012	0.89338	0.88166
3500.0	1.00000	1.00660	0.94468	0.97671	1.10743	1.09627	1.00005	0.83657	0.75581	0.87699
3600.0	1.08348	0.91397	0.97336	1.04500	1.05762	1.09238	1.28389	1.24355	1.16017	1.20991
3700.0	1.25159	1.18515	1.12771	1.03361	0.91512	0.98455	1.11261	1.20407	1.39205	1.18456
3800.0	1.14556	1.21228	0.92097	0.72128	0.83921	1.05824	0.99308	1.02237	0.99924	1.08484
3900.0	1.24971	1.33828	1.23301	0.70700	0.82060	1.28860	1.13903	0.79094	1.38615	1.69469
4000.0	1.75851									
ZENITH SCAN STARTING AT 18.16.45 ON 9/10/73, NORMALIZING FACTOR = 1.2740E 01										
2600.0	0.00057	0.00054	0.00054	0.00055	0.00054	0.00054	0.00057	0.00052	0.00053	0.00053
2700.0	0.00054	0.00055	0.00056	0.00054	0.00054	0.00055	0.00056	0.00056	0.00055	0.00056
2800.0	0.00056	0.00057	0.00058	0.00056	0.00057	0.00057	0.00059	0.00060	0.00057	0.00057
2900.0	0.00057	0.00057	0.00058	0.00058	0.00057	0.00059	0.00059	0.00061	0.00058	0.00060
3000.0	0.00061	0.00059	0.00059	0.00061	0.00062	0.00070	0.00085	0.00127	0.00370	0.00965
3100.0	0.00652	0.01021	0.01488	0.02328	0.03744	0.06122	0.07927	0.10382	0.11926	0.16527
3200.0	0.19025	0.19309	0.26986	0.34706	0.36863	0.41959	0.45519	0.46040	0.50045	0.61692
3300.0	0.59601	0.65186	0.74968	0.71899	0.67614	0.71683	0.82663	0.93409	1.10033	1.05461
3400.0	1.01617	1.19850	1.13631	1.06100	1.07765	1.02464	1.05482	1.05382	0.89887	0.91697
3500.0	1.00000	1.03959	1.06930	0.99874	1.04646	0.99198	0.83589	0.95267	0.93821	0.91478
3600.0	0.90854	0.90563	1.02497	0.96372	0.90698	1.00655	1.07905	1.02130	0.89964	0.78289
3700.0	0.70157	0.93169	0.92354	0.83374	0.91584	0.91560	0.91886	1.01775	1.08939	1.02739
3800.0	0.96529	1.05497	0.98253	0.98725	0.88711	0.79432	0.76140	0.85136	0.88483	1.02048
3900.0	1.05678	0.86778	0.92947	0.84207	0.63468	0.54239	0.69724	0.75706	0.75582	0.74778
4000.0	0.73280									
SOLAR SCAN STARTING AT 18.22.54 ON 9/10/73, NORMALIZING FACTOR = 1.2027E 03										
2600.0	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
2700.0	0.00005	0.00005	0.00006	0.00008	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008
2800.0	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010	0.00010	0.00011
2900.0	0.00012	0.00013	0.00014	0.00015	0.00020	0.00033	0.00062	0.00119	0.00238	
3000.0	0.00403	0.00773	0.01300	0.02730	0.03778	0.05773	0.06639	0.09562	0.12261	0.12674
3100.0	0.15511	0.23192	0.24740	0.28120	0.31082	0.33439	0.32619	0.43838	0.42526	0.45757
3200.0	0.51762	0.53218	0.51075	0.49157	0.59947	0.65731	0.81715	0.83834	0.78255	0.86256
3300.0	0.92327	0.83113	0.85118	0.83730	0.83641	0.90140	0.79423	0.75647	0.84328	0.89546
3400.0	0.96157	0.90555	0.94186	0.96797	0.80334	0.88436	0.90882	0.92128	0.89492	0.88290
3500.0	1.00000	1.01562	0.95051	0.98924	1.12860	1.12160	1.00517	0.84434	0.74721	0.87591
3600.0	1.04982	0.89364	0.95155	1.01623	1.02338	1.06608	1.23086	1.19184	1.10323	1.15284
3700.0	1.19711	1.13168	1.07609	0.96375	0.87423	0.93483	1.04512	1.11443	1.30711	1.11953
3800.0	1.06917	1.14714	0.85027	0.71627	0.80519	0.99314	0.93990	0.96896	0.94[illegible]	1.03796
3900.0	1.19480	1.28885	1.17645	0.70076	0.80378	1.22759	1.06693	0.75813	1.[illegible]	1.59352
4000.0	1.65260									
SOLAR SCAN STARTING AT 18.24.39 ON 9/10/73, NORMALIZING FACTOR = 1.1492E 03										
2600.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006
2700.0	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007	0.00007	0.00007
2800.0	0.00008	0.00008	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009	0.00010
2900.0	0.00010	0.00010	0.00011	0.00011	0.00013	0.00017	0.00028	0.00053	0.00106	0.00216
3000.0	0.00370	0.00750	0.01234	0.02681	0.03742	0.05564	0.06574	0.09450	0.12319	0.12860
3100.0	0.16076	0.24284	0.25718	0.29312	0.32706	0.34704	0.33286	0.45667	0.44403	0.47715
3200.0	0.54225	0.55485	0.53300	0.51241	0.61013	0.66479	0.82791	0.85118	0.79025	0.89651
3300.0	0.96879	0.85614	0.87593	0.86185	0.85189	0.90381	0.80813	0.75900	0.84824	0.89771
3400.0	0.96946	0.90497	0.93239	0.96176	0.78120	0.87400	0.89872	0.91342	0.89094	0.88427
3500.0	1.00000	1.00540	0.93918	0.97156	1.10131	1.09042	0.99823	0.83813	0.76785	0.88897
3600.0	1.06333	0.89933	0.94748	1.01846	1.02701	1.07331	1.24460	1.20372	1.12524	1.17304
3700.0	1.20815	1.15284	1.09051	0.98422	0.90092	0.98043	1.10163	1.19865	1.37897	1.18093
3800.0	1.13846	1.21079	0.91275	0.71759	0.83307	1.05456	1.00116	1.02669	1.00316	1.08716
3900.0	1.26409	1.36177	1.25657	0.72550	0.81553	1.33803	1.16604	0.77784	1.43744	1.74787
4000.0	1.81384									
ZENITH SCAN STARTING AT 0. 4.39 ON 9/10/73, NORMALIZING FACTOR = 9.4696E 00										
2600.0	0.00040	0.00041	0.00040	0.00040	0.00041	0.00041	0.00040	0.00048	0.00046	0.00042
2700.0	0.00042	0.00042	0.00042	0.00044	0.00043	0.00042	0.00047	0.00046	0.00043	0.00045
2800.0	0.00047	0.00049	0.00045	0.00045	0.00045	0.00044	0.00044	0.00045	0.00045	0.00051
2900.0	0.00051	0.00054	0.00048	0.00053	0.00063	0.00092	0.00151	0.00259	0.00442	0.00759
3000.0	0.01138	0.01928	0.02922	0.05652	0.07436	0.11064	0.12092	0.16540	0.20636	0.21081
3100.0	0.25259	0.36578	0.38462	0.42259	0.47117	0.49896	0.48514	0.63219	0.60940	0.65416
3200.0	0.72805	0.75643	0.70987	0.68374	0.82433	0.87732	1.08137	1.10288	1.01746	1.13918
3300.0	1.20757	1.06868	1.08906	1.05942	1.03374	1.09544	0.95989	0.89703	0.98459	1.03487
3400.0	1.08940	1.01745	1.03603	1.05509	0.87032	0.93119	0.94649	0.95141	0.91522	0.89231
3500.0	1.00000	0.99990	0.92597	0.96008	1.06275	1.04482	0.93981	0.79425	0.70009	0.81349
3600.0	0.95373	0.82534	0.86270	0.91944	0.91091	0.92767	1.07900	1.03504	0.93553	0.96787
3700.0	0.98038	0.92219	0.86440	0.77459	0.71142	0.75760	0.82865	0.88587	1.00482	0.85975
3800.0	0.81308	0.85408	0.64526	0.51086	0.57357	0.71109	0.67099	0.67879	0.65621	0.70367
3900.0	0.79930	0.84707	0.78030	0.46763	0.51055	0.78434	0.70695	0.47529	0.80790	0.98898
4000.0	1.02266									
ZENITH SCAN STARTING AT 18.35. 9 ON 9/10/73, NORMALIZING FACTOR = 1.4541E 01										
2600.0	0.00020	0.00020	0.00020	0.00019	0.00019	0.00019	0.00019	0.00020	0.00019	0.00020
2700.0	0.00020	0.00020	0.00020	0.00020	0.00021	0.00020	0.00021	0.00021	0.00021	0.00022
2800.0	0.00029	0.00029	0.00023	0.00022	0.00022	0.00022	0.00022	0.00026	0.00028	0.00024
2900.0	0.00024	0.00025	0.00026	0.00028	0.00035	0.00054	0.00094	0.00170	0.00303	0.00570
3000.0	0.00850	0.01550	0.02422	0.04773	0.06487	0.09124	0.10495	0.14488	0.18570	0.19060
3100.0	0.23172	0.34759	0.36658	0.41250	0.45628	0.48196	0.46769	0.62745	0.60523	0.64914
3200.0	0.72312	0.74578	0.70109	0.66498	0.79142	0.84279	1.05583	1.07547	0.97898	1.10806
3300.0	1.17734	1.02934	1.05658	1.03925	1.01786	1.08715	0.96942	0.89922	0.99976	1.05324
3400.0	1.12635	1.04880	1.07761	1.05145	0.86914	0.93597	0.94807	0.94634	0.91429	0.89502
3500.0	1.00000	1.00355	0.92766	0.95288	1.07007	1.05390	0.94843	0.80327	0.70931	0.83565
3600.0	0.97685	0.84085	0.88391	0.94193	0.94832	0.97877	1.12875	1.09217	1.00668	1.04683
3700.0	1.08011	1.01506	0.95451	0.84350	0.75349	0.78431	0.87118	0.92002	1.04943	0.88138
3800.0	0.82225	0.84163	0.62648	0.46859	0.52345	0.63479	0.58584	0.59084	0.55796	0.58319
3900.0	0.63825	0.65477	0.58437	0.33974	0.36763	0.54774	0.46463	0.31284	0.53875	0.58820
4000.0	0.66375									

Table VIII-12

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 18.36.58 ON 9/10/73, NORMALIZING FACTOR = 9.7566E 00										
2600.0	0.00018	0.00019	0.00025	0.00018	0.00018	0.00020	0.00021	0.00019	0.00019	0.00020
2700.0	0.00018	0.00018	0.00020	0.00019	0.00019	0.00019	0.00019	0.00019	0.00026	0.00020
2800.0	0.00021	0.00021	0.00020	0.00022	0.00021	0.00023	0.00020	0.00026	0.00021	0.00027
2900.0	0.00020	0.00021	0.00022	0.00027	0.00036	0.00060	0.00107	0.00189	0.00605	0.00920
3000.0	0.01064	0.01719	0.02573	0.05084	0.06621	0.09394	0.10491	0.14438	0.18055	0.18516
3100.0	0.22755	0.33200	0.34929	0.39925	0.43732	0.46425	0.45369	0.59104	0.57794	0.63056
3200.0	0.70462	0.72653	0.68328	0.67083	0.79654	0.85192	1.05033	1.07041	0.98072	1.12630
3300.0	1.17887	1.04291	1.06599	1.03505	1.01661	1.06789	0.93632	0.88227	0.96901	1.01787
3400.0	1.07640	1.00224	1.02476	1.03322	0.84591	0.92138	0.93601	0.93399	0.90519	0.88545
3500.0	1.00000	0.98197	0.91448	0.95703	1.05208	1.02887	0.92514	0.77855	0.69498	0.81119
3600.0	0.94706	0.81191	0.85567	0.89482	0.89869	0.93721	1.05992	1.01433	0.94158	0.97849
3700.0	0.98528	0.93516	0.86044	0.76755	0.70865	0.76274	0.83138	0.90343	1.00944	0.85427
3800.0	0.82355	0.85262	0.63823	0.50906	0.59942	0.71626	0.66697	0.67805	0.65882	0.71169
3900.0	0.80716	0.86489	0.76468	0.45811	0.54283	0.79200	0.67305	0.50548	0.84946	1.00126
4000.0	1.02567									
ZENITH SCAN STARTING AT 18.38.44 ON 9/10/73, NORMALIZING FACTOR = 9.6297E 00										
2600.0	0.00017	0.00017	0.00017	0.00017	0.00018	0.00019	0.00016	0.00018	0.00017	0.00021
2700.0	0.00021	0.00018	0.00021	0.00021	0.00018	0.00020	0.00019	0.00020	0.00022	0.00019
2800.0	0.00020	0.00018	0.00023	0.00020	0.00019	0.00023	0.00020	0.00020	0.00021	0.00027
2900.0	0.00022	0.00024	0.00032	0.00032	0.00042	0.00075	0.00136	0.00246	0.00433	0.00781
3000.0	0.01136	0.01998	0.03023	0.05817	0.07600	0.10727	0.12230	0.16582	0.20768	0.21179
3100.0	0.25475	0.37239	0.39240	0.44135	0.48323	0.51106	0.49346	0.65532	0.63057	0.67996
3200.0	0.75640	0.78214	0.73373	0.70315	0.84540	0.89062	1.11561	1.13422	1.04185	1.17707
3300.0	1.23940	1.09401	1.11585	1.08393	1.05467	1.12121	0.97848	0.91624	1.00633	1.05696
3400.0	1.11321	1.03831	1.06269	1.07408	0.88661	0.96064	0.97861	0.97417	0.92940	0.89739
3500.0	1.00000	1.00361	0.92744	0.95156	1.06013	1.04195	0.93459	0.78792	0.69357	0.80654
3600.0	0.93940	0.81252	0.84444	0.89758	0.89816	0.91346	1.05641	1.01518	0.93424	0.96486
3700.0	0.98948	0.92758	0.87082	0.79059	0.71430	0.74246	0.82643	0.88268	1.01224	0.84990
3800.0	0.81605	0.85805	0.64827	0.50822	0.56107	0.70930	0.66824	0.67940	0.65726	0.71358
3900.0	0.79634	0.84587	0.77578	0.46906	0.51545	0.76816	0.68473	0.49045	0.80243	0.96754
4000.0	1.00003									
ZENITH SCAN STARTING AT 18.41. 5 ON 9/10/73, NORMALIZING FACTOR = 9.5910E 00										
2600.0	0.00015	0.00014	0.00015	0.00017	0.00018	0.00017	0.00019	0.00032	0.00016	0.00026
2700.0	0.00017	0.00017	0.00017	0.00018	0.00018	0.00020	0.00018	0.00018	0.00018	0.00018
2800.0	0.00022	0.00018	0.00019	0.00019	0.00019	0.00018	0.00020	0.00022	0.00019	0.00020
2900.0	0.00021	0.00020	0.00023	0.00029	0.00041	0.00069	0.00126	0.00224	0.00413	0.00707
3000.0	0.01095	0.01903	0.02829	0.05772	0.07436	0.10562	0.12047	0.16143	0.20529	0.20949
3100.0	0.24926	0.37363	0.39176	0.44012	0.48526	0.51230	0.49065	0.65900	0.64488	0.69091
3200.0	0.77148	0.80058	0.73979	0.71160	0.84645	0.89817	1.10990	1.14225	1.03824	1.18019
3300.0	1.25714	1.09225	1.11428	1.08870	1.05377	1.11298	0.98507	0.90729	0.99657	1.04736
3400.0	1.10849	1.02803	1.04561	1.06319	0.85662	0.93171	0.95934	0.95903	0.92211	0.90134
3500.0	1.00000	0.99940	0.92918	0.94933	1.06647	1.04508	0.94329	0.79356	0.70480	0.80582
3600.0	0.95933	0.82439	0.86658	0.91424	0.91284	0.93648	1.06717	1.03219	0.96020	0.98140
3700.0	1.00836	0.94617	0.88791	0.80900	0.72955	0.76070	0.84778	0.92210	1.02138	0.85216
3800.0	0.81492	0.85628	0.63459	0.50440	0.56546	0.71165	0.66874	0.67787	0.65723	0.71073
3900.0	0.79321	0.84686	0.76116	0.45675	0.51779	0.76214	0.67949	0.48884	0.79724	0.95715
4000.0	0.98942									
ZENITH SCAN STARTING AT 18.42.50 ON 9/10/73, NORMALIZING FACTOR = 1.0401E 01										
2600.0	0.00013	0.00015	0.00013	0.00013	0.00014	0.00020	0.00014	0.00015	0.00014	0.00014
2700.0	0.00015	0.00015	0.00014	0.00015	0.00015	0.00025	0.00024	0.00018	0.00015	0.00018
2800.0	0.00019	0.00016	0.00016	0.00016	0.00017	0.00016	0.00017	0.00016	0.00018	0.00017
2900.0	0.00018	0.00018	0.00019	0.00025	0.00034	0.00061	0.00121	0.00212	0.00401	0.00718
3000.0	0.01111	0.01934	0.02988	0.05980	0.07871	0.11395	0.12704	0.17439	0.21910	0.22456
3100.0	0.25762	0.39888	0.41813	0.47538	0.51773	0.54869	0.52399	0.68965	0.67380	0.72484
3200.0	0.80397	0.83448	0.78219	0.75215	0.89570	0.95639	1.17430	1.20581	1.10148	1.23221
3300.0	1.31614	1.15768	1.17563	1.13977	1.10326	1.15903	1.01997	0.94906	1.03852	1.09420
3400.0	1.15468	1.07569	1.09113	1.10902	0.90375	0.96831	0.97988	0.97665	0.93206	0.89984
3500.0	1.00000	0.98486	0.87453	0.87544	0.96402	0.94374	0.85937	0.71334	0.63897	0.71943
3600.0	0.86699	0.73661	0.76506	0.81408	0.80855	0.82541	0.95379	0.91580	0.84892	0.87398
3700.0	0.88903	0.83650	0.78826	0.70092	0.64245	0.68188	0.74613	0.79642	0.91526	0.77295
3800.0	0.73948	0.77683	0.59831	0.46253	0.53543	0.65200	0.61199	0.62231	0.60519	0.65509
3900.0	0.73405	0.77797	0.71156	0.43281	0.47541	0.71625	0.64732	0.45128	0.74539	0.90518
4000.0	0.93857									
ZENITH SCAN STARTING AT 18.44.36 ON 9/10/73, NORMALIZING FACTOR = 9.4893E 00										
2600.0	0.00013	0.00013	0.00013	0.00015	0.00014	0.00015	0.00015	0.00016	0.00014	0.00015
2700.0	0.00016	0.00020	0.00021	0.00015	0.00016	0.00019	0.00015	0.00018	0.00016	0.00022
2800.0	0.00031	0.00016	0.00018	0.00018	0.00018	0.00017	0.00018	0.00017	0.00025	0.00018
2900.0	0.00019	0.00018	0.00021	0.00027	0.00043	0.00072	0.00145	0.00258	0.00456	0.00808
3000.0	0.01188	0.02100	0.03211	0.06090	0.07953	0.11146	0.12602	0.17176	0.21407	0.21709
3100.0	0.26019	0.38383	0.40236	0.45024	0.49539	0.52115	0.50010	0.67375	0.65118	0.70060
3200.0	0.78146	0.80346	0.76115	0.72783	0.87168	0.92786	1.16151	1.14633	1.04641	1.18963
3300.0	1.25013	1.09869	1.12251	1.08929	1.05613	1.12565	0.98552	0.91506	1.00781	1.05584
3400.0	1.11392	1.03391	1.05969	1.07018	0.87983	0.95457	0.96506	0.96396	0.92556	0.90375
3500.0	1.00000	1.00487	0.92841	0.95121	1.07087	1.05008	0.94044	0.79219	0.70065	0.81892
3600.0	0.95379	0.82143	0.85610	0.90549	0.90481	0.92482	1.06455	1.02352	0.94176	0.97571
3700.0	1.00386	0.93967	0.87924	0.79756	0.71608	0.74250	0.82887	0.88805	1.01999	0.85497
3800.0	0.83049	0.87726	0.64392	0.50758	0.57836	0.71199	0.66923	0.67406	0.65299	0.69830
3900.0	0.79409	0.84196	0.76255	0.45525	0.49552	0.77126	0.68607	0.46837	0.79667	0.96100
4000.0	0.99290									
ZENITH SCAN STARTING AT 18.46.57 ON 9/10/73, NORMALIZING FACTOR = 1.0012E 01										
2600.0	0.00012	0.00012	0.00012	0.00014	0.00017	0.00014	0.00021	0.00020	0.00012	0.00014
2700.0	0.00014	0.00014	0.00015	0.00015	0.00013	0.00013	0.00014	0.00014	0.00014	0.00017
2800.0	0.00016	0.00017	0.00015	0.00014	0.00015	0.00018	0.00016	0.00016	0.00015	0.00016
2900.0	0.00015	0.00016	0.00018	0.00024	0.00035	0.00072	0.00133	0.00241	0.00427	0.00749
3000.0	0.01129	0.01902	0.02768	0.05752	0.07485	0.10667	0.11933	0.16077	0.20196	0.20554
3100.0	0.24394	0.35884	0.37799	0.42909	0.47059	0.50043	0.47902	0.62961	0.61339	0.66350
3200.0	0.73269	0.76463	0.71791	0.69346	0.82366	0.87683	1.07856	1.11000	1.01379	1.14320
3300.0	1.21890	1.06484	1.08444	1.05901	1.02957	1.08712	0.96304	0.89201	0.98050	1.02887
3400.0	1.09228	1.01716	1.03265	1.05231	0.85310	0.91937	0.94462	0.94580	0.91156	0.89365
3500.0	1.00000	0.99413	0.92394	0.95006	1.05957	1.04351	0.94383	0.79450	0.69397	0.78949
3600.0	0.94580	0.80791	0.83640	0.88753	0.89032	0.91352	1.04980	1.00932	0.93422	0.96528
3700.0	0.98207	0.92040	0.86516	0.76886	0.70118	0.74162	0.81962	0.88302	0.99145	0.84784
3800.0	0.80945	0.84527	0.63484	0.50443	0.56933	0.70559	0.66258	0.67137	0.65011	0.69581
3900.0	0.78951	0.83712	0.76376	0.44805	0.49680	0.76826	0.67614	0.46087	0.79632	0.95626
4000.0	0.98686									

Table VIII-13

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 18.48.43 ON 9/10/73, NORMALIZING FACTOR = 9.8518E 00										
2600.0	0.00011	0.00013	0.00013	0.00012	0.00011	0.00012	0.00012	0.00012	0.00011	0.00012
2700.0	0.00012	0.00014	0.00014	0.00014	0.00014	0.00015	0.00033	0.00019	0.00021	0.00016
2800.0	0.00015	0.00015	0.00014	0.00016	0.00016	0.00016	0.00016	0.00018	0.00017	0.00019
2900.0	0.00017	0.00018	0.00022	0.00029	0.00037	0.00076	0.00138	0.00255	0.00453	0.00799
3000.0	0.01186	0.02014	0.03046	0.05865	0.07633	0.10675	0.12061	0.16484	0.20513	0.20917
3100.0	0.25247	0.36701	0.38644	0.43780	0.47815	0.50748	0.49222	0.64618	0.62258	0.67201
3200.0	0.74811	0.77756	0.73196	0.70093	0.84944	0.90569	1.11796	1.14194	1.05500	1.18880
3300.0	1.26234	1.11192	1.09847	1.07822	1.04770	1.11442	0.97321	0.90853	0.99586	1.04711
3400.0	1.10448	1.02912	1.05208	1.06432	0.88059	0.94067	0.95370	0.95446	0.91729	0.89364
3500.0	1.00000	0.99999	0.92313	0.94849	1.05678	1.03964	0.93538	0.78673	0.70005	0.80243
3600.0	0.95039	0.81563	0.84775	0.89925	0.89709	0.92115	1.06070	1.01866	0.93851	0.97369
3700.0	1.00321	0.93667	0.87147	0.79162	0.71536	0.74535	0.83358	0.89108	1.02361	0.85993
3800.0	0.82978	0.87104	0.66527	0.51289	0.58371	0.72334	0.66420	0.66203	0.65740	0.69925
3900.0	0.79349	0.83907	0.76163	0.44790	0.49303	0.76872	0.68326	0.46847	0.79659	0.95869
4000.0	0.98681									
ZENITH SCAN STARTING AT 18.51. 7 ON 9/10/73, NORMALIZING FACTOR = 9.8444E 00										
2600.0	0.00012	0.00011	0.00012	0.00011	0.00014	0.00014	0.00012	0.00013	0.00013	0.00011
2700.0	0.00012	0.00012	0.00013	0.00014	0.00013	0.00012	0.00013	0.00013	0.00014	0.00027
2800.0	0.00013	0.00015	0.00015	0.00014	0.00014	0.00016	0.00015	0.00015	0.00016	0.00015
2900.0	0.00017	0.00017	0.00020	0.00028	0.00038	0.00070	0.00144	0.00254	0.00461	0.00799
3000.0	0.01186	0.02055	0.03129	0.06026	0.07824	0.10868	0.12079	0.16186	0.20517	0.20731
3100.0	0.24172	0.36501	0.38063	0.42832	0.47018	0.49529	0.47301	0.63204	0.61506	0.65833
3200.0	0.73277	0.75641	0.71321	0.68486	0.81259	0.86264	1.07267	1.10433	1.00354	1.13563
3300.0	1.21801	1.06056	1.08326	1.05455	1.02519	1.09078	0.96603	0.88850	0.98073	1.03291
3400.0	1.09387	1.01570	1.04030	1.03396	0.85710	0.93522	0.95824	0.95715	0.91819	0.90250
3500.0	1.00000	0.99833	0.92557	0.94623	1.06745	1.04440	0.94586	0.79205	0.70342	0.80619
3600.0	0.96821	0.82036	0.85912	0.90103	0.89913	0.92293	1.05136	1.01477	0.94344	0.96780
3700.0	0.98797	0.93039	0.87679	0.77947	0.70529	0.74848	0.82892	0.89201	1.00875	0.87009
3800.0	0.82236	0.86923	0.65737	0.51638	0.58347	0.71870	0.67247	0.68482	0.66343	0.70702
3900.0	0.80509	0.85445	0.77609	0.45225	0.51382	0.79302	0.68251	0.47164	0.82033	0.98253
4000.0	1.01450									
ZENITH SCAN STARTING AT 18.52.52 ON 9/10/73, NORMALIZING FACTOR = 1.0244E 01										
2600.0	0.00011	0.00010	0.00011	0.00011	0.00012	0.00013	0.00010	0.00013	0.00011	0.00011
2700.0	0.00012	0.00013	0.00012	0.00012	0.00012	0.00015	0.00015	0.00015	0.00016	0.00012
2800.0	0.00014	0.00020	0.00013	0.00014	0.00014	0.00016	0.00017	0.00015	0.00016	0.00015
2900.0	0.00015	0.00018	0.00019	0.00026	0.00037	0.00073	0.00133	0.00243	0.00439	0.00755
3000.0	0.01141	0.01924	0.02909	0.05689	0.07451	0.10726	0.11876	0.16163	0.20150	0.20553
3100.0	0.24596	0.35773	0.37839	0.42947	0.46976	0.50050	0.48120	0.63029	0.61268	0.66278
3200.0	0.73354	0.76420	0.71628	0.68854	0.82406	0.87867	1.07954	1.10798	1.01380	1.13804
3300.0	1.22096	1.07280	1.09221	1.06932	1.04300	1.10098	0.96233	0.88999	0.97481	1.02608
3400.0	1.08756	1.01895	1.03666	1.05574	0.85367	0.92402	0.95271	0.95142	0.91675	0.89466
3500.0	1.00000	0.99076	0.92038	0.94308	1.04838	1.02955	0.93199	0.78134	0.68923	0.78636
3600.0	0.93874	0.79586	0.82231	0.87568	0.87547	0.89386	1.02506	0.98747	0.91611	0.93815
3700.0	0.95591	0.90226	0.85223	0.75767	0.68040	0.71743	0.80086	0.85856	0.96975	0.82930
3800.0	0.79327	0.82946	0.63654	0.49124	0.57084	0.69698	0.65356	0.66582	0.64785	0.69882
3900.0	0.79013	0.78386	0.72755	0.44748	0.51692	0.76594	0.65976	0.45404	0.80122	0.95005
4000.0	0.98210									
ZENITH SCAN STARTING AT 18.54.38 ON 9/10/73, NORMALIZING FACTOR = 1.0048E 01										
2600.0	0.00011	0.00013	0.00012	0.00014	0.00011	0.00010	0.00013	0.00012	0.00014	0.00013
2700.0	0.00011	0.00012	0.00013	0.00013	0.00014	0.00013	0.00012	0.00013	0.00013	0.00013
2800.0	0.00015	0.00014	0.00014	0.00015	0.00016	0.00015	0.00016	0.00015	0.00017	0.00016
2900.0	0.00023	0.00016	0.00018	0.00025	0.00035	0.00067	0.00132	0.00238	0.00419	0.00763
3000.0	0.01095	0.01941	0.02936	0.05618	0.07423	0.10434	0.11850	0.16174	0.20253	0.20677
3100.0	0.25047	0.35680	0.37708	0.42516	0.46805	0.49466	0.47330	0.63829	0.61646	0.66250
3200.0	0.73730	0.76221	0.71904	0.68568	0.82146	0.87173	1.09303	1.11175	1.01703	1.15401
3300.0	1.21193	1.07171	1.09451	1.06149	1.03429	1.10143	0.96654	0.89878	0.98696	1.03753
3400.0	1.09618	1.02094	1.04555	1.05899	0.87280	0.94150	0.95526	0.95564	0.91829	0.89581
3500.0	1.00000	1.00196	0.92778	0.94763	1.06947	1.04908	0.94359	0.79413	0.69968	0.81225
3600.0	0.95471	0.82215	0.86477	0.91534	0.91355	0.94149	1.04709	1.01200	0.93169	0.95941
3700.0	0.99132	0.92639	0.86420	0.78287	0.70347	0.72962	0.81245	0.86628	0.99700	0.84208
3800.0	0.80107	0.84169	0.62548	0.49419	0.56147	0.69420	0.65396	0.66344	0.64429	0.69401
3900.0	0.78115	0.82797	0.74283	0.45945	0.51060	0.75245	0.65517	0.47824	0.79611	0.94224
4000.0	0.97319									
ZENITH SCAN STARTING AT 18.56.59 ON 9/10/73, NORMALIZING FACTOR = 8.1979E 00										
2600.0	0.00013	0.00013	0.00013	0.00013	0.00013	0.00016	0.00016	0.00014	0.00014	0.00015
2700.0	0.00018	0.00015	0.00014	0.00015	0.00016	0.00016	0.00018	0.00018	0.00017	0.00015
2800.0	0.00015	0.00016	0.00016	0.00015	0.00021	0.00020	0.00028	0.00022	0.00018	0.00018
2900.0	0.00020	0.00020	0.00023	0.00030	0.00046	0.00080	0.00163	0.00289	0.00523	0.00905
3000.0	0.01377	0.02349	0.03500	0.07046	0.09028	0.12796	0.14610	0.19527	0.24718	0.25210
3100.0	0.29669	0.44290	0.46487	0.52577	0.57600	0.61045	0.58368	0.77468	0.75505	0.81367
3200.0	0.90244	0.93705	0.88176	0.85058	1.00806	0.77597	1.25028	1.36676	1.24516	1.41619
3300.0	1.51307	1.31752	1.34424	1.31130	1.27142	1.34683	1.19316	1.09875	1.21433	1.27712
3400.0	1.35171	1.24041	1.24435	1.29694	0.93843	1.10990	1.14274	1.14465	0.90276	1.08149
3500.0	1.00000	1.19614	1.12101	1.14846	1.28232	1.05252	1.14199	0.95056	0.85225	0.96782
3600.0	1.15605	0.99159	1.02160	1.09092	1.09311	1.12646	1.28607	1.23880	1.15191	1.18816
3700.0	1.21135	1.13923	1.07196	0.95871	0.87381	0.92796	1.02386	1.09871	1.12569	1.06280
3800.0	1.01261	1.06191	0.80536	0.62893	0.71739	0.88357	0.82799	0.83998	0.81364	0.87139
3900.0	0.98965	1.05228	0.95560	0.57218	0.62400	0.97516	0.78906	0.66610	1.00999	1.18768
4000.0	1.22587									
ZENITH SCAN STARTING AT 18.58.45 ON 9/10/73, NORMALIZING FACTOR = 5.6244E 00										
2600.0	0.00026	0.00029	0.00022	0.00019	0.00018	0.00022	0.00038	0.00021	0.00024	0.00019
2700.0	0.00020	0.00020	0.00020	0.00022	0.00021	0.00023	0.00025	0.00022	0.00025	0.00024
2800.0	0.00022	0.00026	0.00039	0.00025	0.00025	0.00028	0.00028	0.00024	0.00026	0.00029
2900.0	0.00026	0.00027	0.00031	0.00042	0.00060	0.00124	0.00241	0.00441	0.00777	0.01375
3000.0	0.02050	0.03466	0.05254	0.10077	0.13161	0.19205	0.21086	0.28967	0.35869	0.36619
3100.0	0.44156	0.63746	0.66992	0.75740	0.82875	0.87466	0.82205	1.08511	1.04251	1.11951
3200.0	1.24151	1.28568	1.20765	1.15258	1.38929	1.30882	1.71261	1.76379	0.99186	1.89329
3300.0	2.02534	1.78979	1.81977	1.77271	1.56011	1.71581	1.51196	1.16584	1.48298	1.17183
3400.0	1.68100	1.18439	1.54599	1.76683	1.30225	1.55220	1.29131	1.58071	1.37772	1.48968
3500.0	1.00000	1.15766	0.94714	1.58284	1.25378	1.18501	1.55657	1.30941	1.16109	1.22377
3600.0	1.38842	1.35677	1.40334	1.48859	1.49933	1.53911	1.76598	1.53831	1.57131	1.62077
3700.0	1.66218	1.52671	1.45539	1.29838	1.17542	1.23660	1.37599	1.47046	1.68144	1.43859
3800.0	1.35834	1.43883	1.08357	0.85320	0.96622	1.19629	1.12828	1.14060	1.10482	1.18093
3900.0	1.34054	1.41658	1.29299	0.76184	0.84202	1.31471	1.16000	0.78635	1.36850	1.63259
4000.0	1.68435									

Table VIII-14

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 19. 4.37 ON 9/10/73. NORMALIZING FACTOR = 8.0993E-01									
2600.0	0.00126	0.00121	0.00120	0.00162	0.00168	0.00173	0.00142	0.00134	0.00126	0.00145
2700.0	0.00151	0.00131	0.00135	0.00130	0.00129	0.00136	0.00269	0.00130	0.00152	0.00156
2800.0	0.00148	0.00159	0.00148	0.00157	0.00150	0.00153	0.00154	0.00174	0.00156	0.00163
2900.0	0.00174	0.00212	0.00210	0.00298	0.00238	0.00856	0.01647	0.02944	0.04874	0.09042
3000.0	0.13359	0.23253	0.35169	0.44313	0.82996	0.78776	1.38759	1.88823	2.35011	2.38169
3100.0	2.89643	4.21477	4.42788	4.97599	5.46197	5.78283	5.60576	7.50039	7.22832	7.81432
3200.0	8.74026	9.06654	8.59455	8.20895	4.31107	5.63212	13.01366	13.21163	5.78736	12.48698
3300.0	14.41640	12.72524	12.96887	8.77260	10.33388	12.63417	3.43451	1.66151	2.57235	4.01025
3400.0	10.14785	5.97136	4.21224	4.10511	5.79063	5.13303	3.49225	2.86904	2.07168	8.51915
3500.0	1.00000	2.98478	3.70874	5.07739	3.73888	1.35522	3.49774	9.26911	8.12735	9.52081
3600.0	6.89420	9.51260	9.96317	10.56624	10.54817	10.70900	4.72433	5.18373	10.88491	10.01445
3700.0	6.10866	10.82760	10.04114	9.14871	8.25332	8.60611	9.56556	10.21502	11.78340	9.97084
3800.0	9.50539	9.90707	7.61673	5.99536	6.67189	8.31045	7.86023	8.02888	7.75936	8.43001
3900.0	9.45378	10.03660	9.07385	5.46063	6.09895	9.09838	7.95713	5.76552	9.59212	11.36170
4000.0	11.71970									
	ZENITH SCAN STARTING AT 19. 6.58 ON 9/10/73. NORMALIZING FACTOR = 3.8531E 00									
2600.0	0.00028	0.00027	0.00032	0.00026	0.00024	0.00038	0.00031	0.00033	0.00028	0.00031
2700.0	0.00062	0.00030	0.00032	0.00035	0.00032	0.00031	0.00034	0.00038	0.00042	0.00035
2800.0	0.00034	0.00032	0.00034	0.00038	0.00037	0.00038	0.00038	0.00038	0.00039	0.00040
2900.0	0.00039	0.00043	0.00057	0.00071	0.00046	0.00153	0.00361	0.00629	0.01001	0.01651
3000.0	0.02943	0.05179	0.07722	0.10289	0.18495	0.22028	0.30683	0.40786	0.51891	0.52742
3100.0	0.61843	0.93171	0.97125	1.09497	1.20308	1.27012	1.21082	1.61997	1.56942	1.67840
3200.0	1.86938	1.93147	1.81621	1.74375	0.70078	0.08571	1.90748	2.60027	0.47245	2.15112
3300.0	2.99201	0.98798	2.26820	1.17958	0.40698	1.94333	0.22312	0.43096	0.44426	0.35835
3400.0	0.82087	0.39297	0.33508	0.82831	1.70203	0.89987	0.09265	0.77497	1.42567	1.67330
3500.0	1.00000	0.78690	1.15471	0.99666	0.70305	0.20138	1.11561	1.86971	1.67497	1.80698
3600.0	1.22878	1.92592	1.98417	2.10518	2.10119	2.11593	0.34736	2.23977	2.21472	2.27525
3700.0	2.32381	2.20341	2.07549	1.88181	1.68425	1.78971	1.98119	2.12067	2.41469	2.07528
3800.0	1.91857	2.00328	1.54376	1.20818	1.37959	1.69769	1.59341	1.61903	1.56677	1.67807
3900.0	1.90396	2.01850	1.82870	1.10603	1.25283	1.84192	1.60084	1.16588	1.93571	2.28963
4000.0	2.36001									
	ZENITH SCAN STARTING AT 19. 8.44 ON 9/10/73. NORMALIZING FACTOR = 2.9138E 00									
2600.0	0.00039	0.00034	0.00033	0.00031	0.00036	0.00037	0.00035	0.00036	0.00038	0.00035
2700.0	0.00033	0.00036	0.00035	0.00036	0.00038	0.00048	0.00036	0.00037	0.00038	0.00037
2800.0	0.00044	0.00050	0.00054	0.00047	0.00049	0.00054	0.00041	0.00045	0.00045	0.00046
2900.0	0.00047	0.00052	0.00059	0.00089	0.00064	0.00170	0.00482	0.00873	0.01430	0.02620
3000.0	0.03796	0.06584	0.09890	0.16120	0.24616	0.29673	0.38782	0.53077	0.65241	0.66326
3100.0	0.79804	1.16030	1.21627	1.37395	1.50272	1.59146	1.54203	2.00747	1.93378	2.07658
3200.0	2.30370	2.38957	2.24619	2.15395	2.58728	1.60491	2.17122	2.75634	0.51143	2.67017
3300.0	3.68626	0.72832	0.59311	0.50145	0.41135	0.56827	0.78348	2.55850	0.24867	0.37029
3400.0	0.55101	0.32407	0.37568	0.42320	2.03090	1.16112	0.05985	0.95643	2.87831	2.81542
3500.0	1.00000	0.16929	2.05566	1.30054	0.32718	0.73858	2.57127	2.43241	2.13978	2.47917
3600.0	2.89084	2.47919	2.56251	2.72367	2.70582	2.77012	1.92971	3.03009	2.79098	2.88926
3700.0	2.95861	2.77333	2.61001	2.35220	2.11972	2.21710	2.47282	2.67471	3.04205	2.57746
3800.0	2.49976	2.60090	2.00346	1.55013	1.73319	2.18867	2.06164	2.08949	2.02608	2.17809
3900.0	2.45774	2.61371	2.36964	1.42417	1.60115	2.37862	2.10931	1.50592	2.49589	2.99134
4000.0	3.07797									
	ZENITH SCAN STARTING AT 19.11. 5 ON 9/10/73. NORMALIZING FACTOR = 3.4831E 00									
2600.0	0.00026	0.00034	0.00027	0.00026	0.00028	0.00034	0.00028	0.00034	0.00047	0.00028
2700.0	0.00037	0.00030	0.00031	0.00037	0.00043	0.00053	0.00038	0.00038	0.00040	0.00137
2800.0	0.00043	0.00038	0.00040	0.00042	0.00046	0.00040	0.00043	0.00047	0.00038	0.00041
2900.0	0.00044	0.00051	0.00058	0.00077	0.00058	0.00187	0.00406	0.00714	0.01125	0.01823
3000.0	0.03255	0.05671	0.08362	0.11052	0.21001	0.29104	0.32840	0.43990	0.55024	0.55630
3100.0	0.66656	0.97963	1.02275	1.14428	1.25519	1.31699	1.26303	1.69798	1.63630	1.75123
3200.0	1.95226	2.00965	1.89909	1.81110	2.15971	1.55315	1.85032	2.43245	0.39136	2.32332
3300.0	2.85491	0.60456	0.49965	0.40707	0.31682	0.47785	1.10662	2.10368	0.19070	0.27982
3400.0	0.42687	0.20919	0.25975	0.33508	2.02644	0.93841	0.94543	1.23170	2.35429	2.30831
3500.0	1.00000	0.78117	2.36217	1.95459	0.13380	0.12482	2.09593	2.00401	1.77528	2.05207
3600.0	2.42401	2.05297	2.15826	2.27859	2.2.627	2.34016	1.62929	2.56278	2.37502	2.41857
3700.0	2.48101	2.34412	2.19886	1.97278	1.77335	1.85399	2.05767	2.20690	2.53377	2.14874
3800.0	2.04953	2.15869	1.62771	1.27754	1.44316	1.68673	1.65813	1.67996	1.62642	1.73406
3900.0	1.95987	2.07856	1.89633	1.10349	1.25179	1.90015	1.68764	1.19311	1.97589	2.37514
4000.0	2.44492									
	ZENITH SCAN STARTING AT 19.12.50 ON 9/10/73. NORMALIZING FACTOR = 3.1463E 00									
2600.0	0.00030	0.00033	0.00029	0.00027	0.00029	0.00035	0.00047	0.00032	0.00035	0.00033
2700.0	0.00032	0.00037	0.00039	0.00034	0.00036	0.00032	0.00035	0.00035	0.00033	0.00034
2800.0	0.00039	0.00045	0.00038	0.00041	0.00040	0.00039	0.00044	0.00047	0.00052	0.00040
2900.0	0.00045	0.00057	0.00054	0.00077	0.00045	0.00214	0.00473	0.00809	0.01023	0.02374
3000.0	0.03742	0.06299	0.09370	0.12757	0.23261	0.24245	0.36021	0.48444	0.60185	0.61251
3100.0	0.72073	1.05372	1.10640	1.24719	1.35749	1.43570	1.36966	1.79017	1.73804	1.86830
3200.0	2.06646	2.13900	2.00751	1.92659	2.29123	2.10707	0.45486	0.53214	0.26228	1.84428
3300.0	2.97464	0.37855	0.41691	0.33560	0.24243	0.38741	1.10889	2.45231	0.87603	0.19034
3400.0	0.35084	0.13256	0.16574	0.26012	2.13189	2.52031	2.58008	2.57703	2.48048	2.42195
3500.0	1.00000	1.80511	2.50820	2.45940	0.23750	0.78555	2.54875	2.15692	1.91887	2.23137
3600.0	2.49039	2.20250	2.27285	2.40677	2.40746	2.46163	2.83892	2.71389	2.50841	2.58900
3700.0	2.64328	2.46998	2.30285	2.10364	1.89599	1.99350	2.20343	2.37608	2.67539	2.27560
3800.0	2.19757	2.27959	1.74433	1.35685	1.53228	1.92308	1.81317	1.82321	1.76620	1.88697
3900.0	2.12783	2.25327	2.04787	1.18278	1.33189	2.07546	1.83341	1.26583	2.11999	2.55450
4000.0	2.62393									
	ZENITH SCAN STARTING AT 19.14.36 ON 9/10/73. NORMALIZING FACTOR = 3.1665E 00									
2600.0	0.00027	0.00030	0.00031	0.00030	0.00029	0.00029	0.00035	0.00030	0.00037	0.00039
2700.0	0.00031	0.00036	0.00031	0.00029	0.00032	0.00032	0.00039	0.00033	0.00040	0.00051
2800.0	0.00050	0.00037	0.00042	0.00039	0.00038	0.00042	0.00044	0.00046	0.00043	0.00043
2900.0	0.00044	0.00050	0.00056	0.00073	0.00008	0.00160	0.00450	0.00819	0.01218	0.02340
3000.0	0.03581	0.06070	0.09096	0.11434	0.21237	0.22527	0.35047	0.47731	0.58728	0.59730
3100.0	0.71985	1.03830	1.08591	1.24137	1.33567	1.40789	1.36048	1.77835	1.70558	1.82647
3200.0	2.02319	2.09269	1.96752	1.87887	2.26290	1.82957	0.46103	0.50294	0.26638	1.85496
3300.0	2.94269	0.40034	0.44681	0.36569	0.26813	0.34367	1.56988	2.43563	0.36934	0.18900
3400.0	0.33978	0.13169	0.18184	0.26048	2.17848	2.12745	2.50596	2.57932	2.48593	2.42336
3500.0	1.00000	1.80900	2.49265	2.05068	0.08567	1.30675	2.52253	2.12428	1.86923	2.16522
3600.0	2.54808	2.18472	2.26819	2.40393	2.40211	2.44762	2.81478	2.69225	2.49569	2.57180
3700.0	2.60955	2.45030	2.29051	2.08835	1.88628	1.99238	2.17752	2.32933	2.66884	2.26874
3800.0	2.17713	2.26946	1.74141	1.35283	1.55271	1.90444	1.79484	1.81570	1.76389	1.87018
3900.0	2.06591	2.23469	2.04485	1.21488	1.32406	2.04564	1.82141	1.23637	2.13922	2.55076
4000.0	2.63096									

Table VIII-15

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 19.17. 0 ON 9/10/73. NORMALIZING FACTOR = 4.6632E 00										
2600.0	0.00018	0.00018	0.00019	0.00023	0.00019	0.00026	0.00024	0.00020	0.00027	0.00021
2700.0	0.00021	0.00022	0.00027	0.00023	0.00021	0.00029	0.00027	0.00022	0.00023	0.00024
2800.0	0.00029	0.00023	0.00023	0.00025	0.00024	0.00029	0.00029	0.00029	0.00026	0.00029
2900.0	0.00029	0.00031	0.00037	0.00042	0.00047	0.00142	0.00312	0.00538	0.00640	0.01376
3000.0	0.02397	0.04139	0.06047	0.06109	0.14617	0.17148	0.24072	0.31972	0.40249	0.40100
3100.0	0.46728	0.70033	0.72738	0.81596	0.89076	0.93731	0.89319	1.18104	1.15294	1.22916
3200.0	1.36347	1.41429	1.32887	1.27873	1.50993	1.38030	1.26740	0.32688	0.14188	1.22642
3300.0	1.80194	0.22369	0.25920	0.19725	0.12963	0.24259	0.89235	1.62465	0.56975	0.10125
3400.0	0.20604	0.04411	0.07911	0.34833	1.55289	1.68221	1.72336	1.71887	1.65070	1.61633
3500.0	1.00000	1.18924	1.66672	1.63580	0.13281	0.86480	1.70626	1.42828	1.27804	1.45577
3600.0	1.72787	1.48846	1.54069	1.63542	1.63242	1.69769	1.90547	1.82794	1.68541	1.73740
3700.0	1.76449	1.65968	1.55715	1.39722	1.26892	1.35017	1.47687	1.57153	1.79494	1.52656
3800.0	1.44215	1.51575	1.13426	0.89797	1.01709	1.25194	1.17249	1.19085	1.14887	1.23709
3900.0	1.39905	1.47667	1.35425	0.79249	0.88933	1.37227	1.18929	0.81867	1.41712	1.69551
4000.0	1.75057									
ZENITH SCAN STARTING AT 19.18.46 ON 9/10/73. NORMALIZING FACTOR = 4.6294E 00										
2600.0	0.00021	0.00017	0.00022	0.00021	0.00021	0.00023	0.00023	0.00022	0.00020	0.00023
2700.0	0.00021	0.00024	0.00023	0.00027	0.00025	0.00024	0.00028	0.00029	0.00027	0.00031
2800.0	0.00029	0.00024	0.00028	0.00035	0.00045	0.00029	0.00029	0.00029	0.00034	0.00032
2900.0	0.00032	0.00036	0.00040	0.00057	0.00017	0.00148	0.00305	0.00555	0.00674	0.01654
3000.0	0.02655	0.04521	0.06936	0.11784	0.18324	0.26316	0.30203	0.42627	0.54400	0.56753
3100.0	0.70114	1.06139	1.15617	1.32509	1.43631	1.48779	1.35768	1.02801	1.54136	1.60754
3200.0	0.89843	0.62283	1.58511	1.45742	0.88297	0.70536	1.35837	1.08725	0.18004	0.91394
3300.0	2.00009	0.24572	0.27013	0.21461	0.15785	0.25461	1.08291	1.66826	0.59874	0.10305
3400.0	0.18993	0.07008	0.09912	0.15943	1.46826	1.71907	1.74913	1.75173	1.68099	1.64493
3500.0	1.00000	1.56611	1.67750	1.63786	0.13554	1.22917	1.69622	1.42951	1.25435	1.46186
3600.0	1.69886	1.46378	1.51815	1.60915	1.60676	1.64371	1.87997	1.80700	1.66820	1.72658
3700.0	1.76021	1.64181	1.54314	1.38047	1.25368	1.30463	1.45522	1.56054	1.76774	1.50994
3800.0	1.43749	1.50239	1.15065	0.89580	0.99299	1.25584	1.17826	1.20609	1.16992	1.25791
3900.0	1.42084	1.52205	1.37636	0.81684	0.90914	1.25268	1.19831	0.86417	1.46816	1.72757
4000.0	1.78004									
ZENITH SCAN STARTING AT 19.20.31 ON 9/10/73. NORMALIZING FACTOR = 5.3575E 00										
2600.0	0.00021	0.00017	0.00020	0.00017	0.00017	0.00019	0.00017	0.00019	0.00027	0.00019
2700.0	0.00020	0.00019	0.00020	0.00019	0.00019	0.00019	0.00023	0.00022	0.00020	0.00021
2800.0	0.00022	0.00023	0.00026	0.00024	0.00024	0.00024	0.00024	0.00025	0.00028	0.00027
2900.0	0.00027	0.00027	0.00033	0.00046	0.00035	0.00104	0.00256	0.00448	0.00696	0.01261
3000.0	0.02060	0.03566	0.05344	0.06813	0.13337	0.18097	0.20986	0.28479	0.35412	0.36010
3100.0	0.43724	0.63399	0.66372	0.74376	0.79687	0.83378	0.80320	1.07756	1.03870	1.10227
3200.0	1.22563	1.25659	1.18448	1.12570	1.33470	1.21716	0.26930	0.30071	0.14262	1.09850
3300.0	1.43368	0.20747	0.23553	0.18010	0.12304	0.21970	0.92237	1.42441	0.49863	0.08970
3400.0	0.17717	0.04993	0.07788	0.30210	1.37182	1.47994	1.49610	1.49320	1.43613	1.40226
3500.0	1.00000	1.33696	1.43719	1.40188	0.10319	1.05312	1.45368	1.22610	1.07921	1.25731
3600.0	1.47477	1.25960	1.32699	1.39693	1.40176	1.44493	1.63500	1.58126	1.46375	1.45499
3700.0	1.47025	1.40290	1.31778	1.17724	1.06449	1.11009	1.23121	1.30940	1.51123	1.27863
3800.0	1.22563	1.27622	0.97329	0.75495	0.86023	1.06752	0.99939	1.01065	0.98309	1.05413
3900.0	1.18674	1.25716	1.14006	0.69053	0.74906	1.14107	1.01522	0.71119	1.18769	1.42726
4000.0	1.46762									
ZENITH SCAN STARTING AT 19.22.52 ON 9/10/73. NORMALIZING FACTOR = 4.6213E 00										
2600.0	0.00022	0.00020	0.00022	0.00020	0.00020	0.00023	0.00021	0.00021	0.00020	0.00021
2700.0	0.00021	0.00023	0.00031	0.00024	0.00026	0.00026	0.00022	0.00023	0.00025	0.00025
2800.0	0.00023	0.00030	0.00036	0.00027	0.00029	0.00056	0.00043	0.00028	0.00029	0.00046
2900.0	0.00033	0.00033	0.00039	0.00052	0.00037	0.00157	0.00289	0.00509	0.00781	0.01255
3000.0	0.02303	0.03866	0.05708	0.06542	0.14794	0.20820	0.23271	0.31237	0.39259	0.40022
3100.0	0.47003	0.69712	0.73011	0.86508	0.90133	0.95657	0.91416	1.19811	1.16819	1.25887
3200.0	1.39048	1.44669	1.35885	1.30963	1.55352	1.42625	0.31035	0.36462	0.17394	1.10134
3300.0	2.03089	0.26317	0.29260	0.23682	0.17413	0.27640	0.76196	1.67964	0.26314	0.14782
3400.0	0.26050	0.11244	0.13900	0.20708	1.52082	1.70991	1.74572	1.74680	1.68138	1.64496
3500.0	1.00000	1.55417	1.67311	1.71195	0.39628	1.21629	1.67763	1.41722	1.24669	1.42996
3600.0	1.69879	1.44811	1.51775	1.59847	1.59796	1.64196	1.86337	1.80079	1.66982	1.70079
3700.0	1.74950	1.64781	1.54363	1.37536	1.24807	1.32203	1.46261	1.55997	1.78965	1.53201
3800.0	1.44905	1.52713	1.16101	0.90675	1.02838	1.27685	1.19645	1.21354	1.17510	1.26395
3900.0	1.42856	1.51646	1.38224	0.81578	0.89768	1.41398	1.23987	0.84513	1.45636	1.70500
4000.0	1.76245									
ZENITH SCAN STARTING AT 19.24.38 ON 9/10/73. NORMALIZING FACTOR = 3.3248E 00										
2600.0	0.00036	0.00037	0.00033	0.00043	0.00048	0.00030	0.00034	0.00039	0.00035	0.00037
2700.0	0.00035	0.00034	0.00035	0.00036	0.00037	0.00042	0.00036	0.00037	0.00036	0.00036
2800.0	0.00042	0.00038	0.00041	0.00047	0.00039	0.00043	0.00040	0.00043	0.00046	0.00053
2900.0	0.00042	0.00052	0.00061	0.00075	0.00024	0.00182	0.00426	0.00746	0.01114	0.02016
3000.0	0.03290	0.05732	0.08600	0.10997	0.21432	0.25901	0.34030	0.46862	0.58317	0.59627
3100.0	0.72113	1.05251	1.11219	1.26095	1.39016	1.48340	1.44940	1.90230	1.84316	1.96469
3200.0	1.58294	1.25603	2.22614	2.09816	0.45177	0.25220	3.01179	3.20708	0.88376	2.42136
3300.0	3.25219	0.63569	0.49913	0.40209	0.31367	0.47725	1.10446	2.18935	0.16831	0.25868
3400.0	0.39972	0.19525	0.24368	0.26592	1.70160	1.43164	1.88129	1.66349	2.42600	2.37168
3500.0	1.00000	1.28438	2.42713	1.50733	0.14546	0.79328	2.43985	2.06147	1.80655	2.07866
3600.0	2.45561	2.11445	2.19930	2.33197	2.32855	2.37675	2.70621	2.60934	2.40061	2.46766
3700.0	2.53206	2.36649	2.22257	1.98624	1.73059	1.85865	2.08923	2.24667	2.55196	2.19130
3800.0	2.08729	2.19932	1.66468	1.30591	1.48424	1.83509	1.72579	1.73446	1.67751	1.82125
3900.0	2.03525	2.15016	1.97071	1.15829	1.29969	1.99674	1.72312	1.19776	2.06055	2.45044
4000.0	2.52220									
ZENITH SCAN STARTING AT 19.26.59 ON 9/10/73. NORMALIZING FACTOR = 3.4621E 00										
2600.0	0.00053	0.00032	0.00027	0.00032	0.00031	0.00031	0.00029	0.00026	0.00028	0.00030
2700.0	0.00029	0.00031	0.00030	0.00031	0.00034	0.00031	0.00030	0.00034	0.00035	0.00035
2800.0	0.00039	0.00046	0.00042	0.00038	0.00034	0.00042	0.00037	0.00039	0.00036	0.00046
2900.0	0.00044	0.00046	0.00058	0.00056	0.00091	0.00193	0.00425	0.00737	0.01117	0.01859
3000.0	0.03205	0.05570	0.08243	0.10558	0.20551	0.21830	0.32271	0.43048	0.54442	0.55214
3100.0	0.65197	0.97520	1.01607	1.13823	1.24884	1.31133	1.25261	1.67848	1.62834	1.73898
3200.0	1.93407	1.99647	1.88072	1.79607	2.13158	1.52095	1.78029	1.93086	0.30373	2.24776
3300.0	2.78839	0.42173	0.47290	0.39781	0.30553	0.46618	0.89260	2.12043	0.19699	0.30084
3400.0	0.46708	0.25475	0.30381	0.35150	1.66201	0.96113	0.52925	0.35501	2.42358	2.33680
3500.0	1.00000	1.25668	2.37581	1.95202	0.17186	0.32662	2.35597	1.99235	1.76176	2.03811
3600.0	2.44124	2.06262	2.17124	2.28408	2.28472	2.31668	0.92854	2.58756	2.39358	2.46178
3700.0	2.51992	2.37569	2.23230	1.99066	1.80423	1.92469	2.12199	2.26103	2.59503	2.22355
3800.0	2.09987	2.21671	1.66143	1.32430	1.49012	1.85460	1.74239	1.77384	1.71556	1.85711
3900.0	2.10101	2.22523	2.01199	1.19501	1.34523	2.03241	1.74719	1.22686	2.14718	2.52260
4000.0	2.60524									

Table VIII-16

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 19.28.48 ON 9/10/73, NORMALIZING FACTOR = 2.7208E 00									
2600.0	0.00040	0.00036	0.00038	0.00036	0.00045	0.00037	0.00039	0.00045	0.00063	0.00047
2700.0	0.00043	0.00040	0.00041	0.00042	0.00040	0.00048	0.00045	0.00050	0.00037	0.00045
2800.0	0.00052	0.00047	0.00049	0.00053	0.00054	0.00054	0.00056	0.00057	0.00054	0.00061
2900.0	0.00056	0.00059	0.00073	0.00092	0.00097	0.00250	0.00517	0.00907	0.01059	0.02282
3000.0	0.04073	0.06828	0.10171	0.13233	0.25797	0.36760	0.40968	0.55435	0.69282	0.70695
3100.0	0.83919	1.22931	1.29369	1.45820	1.58402	1.68304	1.61825	2.09826	2.03386	2.18792
3200.0	2.41116	2.52044	2.36463	2.25527	2.63701	1.92901	1.66726	1.86594	2.39162	2.23866
3300.0	3.90219	0.76813	0.61468	0.50852	0.43069	0.66265	0.84773	2.71583	0.26207	0.36485
3400.0	0.53869	0.28255	0.33098	0.37147	2.10046	1.17644	1.76592	1.60460	3.03147	2.97339
3500.0	1.00000	0.12748	2.15571	1.92420	0.26915	0.19053	2.70670	2.59562	2.29621	2.68163
3600.0	3.10212	2.67656	2.77755	2.91838	2.91668	2.99163	2.09270	3.26273	3.02924	3.19447
3700.0	3.29204	3.09797	2.89669	2.62762	2.36141	2.45813	2.74234	2.95394	3.34807	2.84673
3800.0	2.71400	2.82597	2.16391	1.67288	1.90828	2.35285	2.21043	2.24131	2.16454	2.32944
3900.0	2.62843	2.78432	2.54198	1.48336	1.63965	2.56200	2.20725	1.50798	2.63527	3.14500
4000.0	3.25176									
	ZENITH SCAN STARTING AT 19.30.33 ON 9/10/73, NORMALIZING FACTOR = 8.8961E 00									
2600.0	0.00010	0.00011	0.00011	0.00014	0.00014	0.00011	0.00013	0.00015	0.00011	0.00012
2700.0	0.00013	0.00021	0.00018	0.00011	0.00012	0.00013	0.00013	0.00012	0.00013	0.00013
2800.0	0.00013	0.00015	0.00014	0.00014	0.00014	0.00013	0.00014	0.00014	0.00014	0.00016
2900.0	0.00015	0.00019	0.00021	0.00029	0.00044	0.00084	0.00165	0.00275	0.00481	0.00837
3000.0	0.01205	0.02039	0.03059	0.05706	0.07540	0.10477	0.11799	0.16087	0.19905	0.20154
3100.0	0.24184	0.35201	0.36766	0.40987	0.45230	0.47862	0.45773	0.61574	0.59717	0.64322
3200.0	0.71731	0.74389	0.70420	0.66963	0.79834	0.84680	1.06473	1.09335	1.00425	1.13868
3300.0	1.20463	1.06298	1.09042	1.05794	1.02276	1.08604	0.96517	0.89140	0.99926	1.06655
3400.0	1.10397	0.97279	1.05336	1.06270	0.88053	0.94068	0.77543	0.95772	0.91918	0.90161
3500.0	1.00000	1.00009	0.93515	0.82654	0.42996	1.01231	0.92050	0.76406	0.68300	0.77630
3600.0	0.93242	0.79264	0.81414	0.86552	0.86593	0.88553	1.02180	0.97954	0.90805	0.93199
3700.0	0.95087	0.89374	0.84149	0.79124	0.68044	0.72345	0.79585	0.85032	0.96527	0.83013
3800.0	0.78625	0.82689	0.62628	0.48981	0.55520	0.68228	0.64348	0.65480	0.63452	0.67800
3900.0	0.77136	0.81540	0.74494	0.44161	0.49013	0.75411	0.65075	0.45379	0.79786	0.93392
4000.0	0.96364									
	ZENITH SCAN STARTING AT 19.32.54 ON 9/10/73, NORMALIZING FACTOR = 9.0527E 00									
2600.0	0.00010	0.00011	0.00011	0.00012	0.00014	0.00011	0.00012	0.00019	0.00016	0.00013
2700.0	0.00013	0.00016	0.00015	0.00022	0.00014	0.00013	0.00013	0.00016	0.00014	0.00015
2800.0	0.00017	0.00017	0.00015	0.00016	0.00024	0.00018	0.00017	0.00016	0.00018	0.00017
2900.0	0.00017	0.00019	0.00021	0.00031	0.00045	0.00079	0.00151	0.00257	0.00456	0.00765
3000.0	0.01121	0.01915	0.02885	0.05517	0.07221	0.10005	0.11341	0.15166	0.19269	0.19755
3100.0	0.23209	0.34905	0.37105	0.42173	0.46428	0.49576	0.47570	0.62803	0.61910	0.66755
3200.0	0.74011	0.77269	0.72649	0.70039	0.83325	0.88504	1.09126	1.12766	1.00744	1.12357
3300.0	1.22104	1.07475	1.09757	1.07255	1.04118	1.10136	0.96937	0.90399	0.99233	1.05268
3400.0	1.11412	1.04260	1.05951	1.07601	0.89015	0.94608	0.96413	0.96098	0.92308	0.89951
3500.0	1.00000	1.00905	0.93020	0.95101	1.06715	1.05049	0.94468	0.79727	0.70617	0.81857
3600.0	0.95391	0.81816	0.85240	0.90149	0.89355	0.91020	1.03424	1.00104	0.92326	0.95158
3700.0	0.98141	0.92072	0.87059	0.77423	0.69410	0.72203	0.80536	0.85884	0.99442	0.83950
3800.0	0.80143	0.84871	0.64908	0.51610	0.57353	0.69820	0.65698	0.66650	0.64575	0.68708
3900.0	0.78058	0.82728	0.75726	0.44305	0.48340	0.76579	0.66137	0.45346	0.80083	0.94708
4000.0	0.97377									
	ZENITH SCAN STARTING AT 19.38.45 ON 9/10/73, NORMALIZING FACTOR = 8.2916E 00									
2600.0	0.00011	0.00015	0.00013	0.00012	0.00012	0.00013	0.00013	0.00016	0.00014	0.00014
2700.0	0.00013	0.00014	0.00015	0.00013	0.00015	0.00016	0.00014	0.00016	0.00014	0.00015
2800.0	0.00015	0.00014	0.00014	0.00014	0.00017	0.00018	0.00016	0.00016	0.00015	0.00017
2900.0	0.00018	0.00019	0.00022	0.00030	0.00052	0.00087	0.00171	0.00281	0.00496	0.00823
3000.0	0.01216	0.02009	0.02957	0.05856	0.07504	0.10657	0.11997	0.16014	0.19675	0.20642
3100.0	0.24200	0.35411	0.37530	0.42489	0.46399	0.49466	0.47428	0.61752	0.60389	0.64897
3200.0	0.71473	0.75254	0.70403	0.67009	0.80669	0.85825	1.08357	1.08917	0.99691	1.10042
3300.0	1.18806	1.04774	1.06832	1.04369	1.01510	1.08547	0.95803	0.88917	0.97522	1.03018
3400.0	1.09120	1.02353	1.04533	1.06290	0.87527	0.94169	0.96460	0.96620	0.92187	0.90415
3500.0	1.00000	1.00723	0.93634	0.95353	1.07826	1.05959	0.96530	0.80224	0.71734	0.81129
3600.0	0.98632	0.83640	0.86008	0.91277	0.90034	0.92058	1.05447	1.01184	0.93610	0.95182
3700.0	0.97977	0.91543	0.86346	0.77186	0.69108	0.71820	0.80075	0.84866	0.97896	0.83898
3800.0	0.78237	0.83505	0.63604	0.49387	0.55826	0.69798	0.65535	0.66549	0.64401	0.68737
3900.0	0.78694	0.83723	0.77302	0.46163	0.50580	0.77171	0.69710	0.49191	0.80517	0.97590
4000.0	1.00458									
	ZENITH SCAN STARTING AT 19.40.30 ON 9/10/73, NORMALIZING FACTOR = 8.3284E 00									
2600.0	0.00011	0.00014	0.00014	0.00012	0.00013	0.00013	0.00012	0.00013	0.00014	0.00017
2700.0	0.00018	0.00012	0.00015	0.00013	0.00013	0.00013	0.00014	0.00023	0.00015	0.00016
2800.0	0.00014	0.00016	0.00020	0.00020	0.00015	0.00017	0.00016	0.00016	0.00018	0.00019
2900.0	0.00018	0.00019	0.00023	0.00030	0.00049	0.00081	0.00161	0.00272	0.00469	0.00819
3000.0	0.01183	0.01989	0.02948	0.05589	0.07425	0.10331	0.11742	0.16041	0.20182	0.20723
3100.0	0.24629	0.36338	0.38330	0.43024	0.47375	0.50404	0.48456	0.64269	0.62644	0.67041
3200.0	0.74199	0.77545	0.73202	0.69441	0.83586	0.88226	1.10650	1.13549	1.03782	1.16562
3300.0	1.24820	1.09202	1.11310	1.08991	1.04977	1.12143	1.00254	0.90747	0.96614	1.02656
3400.0	1.09007	1.02003	1.03250	1.06027	0.86449	0.92139	0.95360	0.95689	0.91805	0.90227
3500.0	1.00000	1.01174	0.93575	0.95243	1.06461	1.04913	0.94893	0.79797	0.70757	0.79888
3600.0	0.95207	0.82047	0.84791	0.90518	0.90486	0.92075	1.06129	1.02375	0.94580	0.97167
3700.0	1.00281	0.93439	0.88080	0.79385	0.70821	0.74477	0.82626	0.88099	0.99968	0.86415
3800.0	0.81476	0.85508	0.66406	0.51378	0.57455	0.71853	0.67447	0.69004	0.66997	0.71092
3900.0	0.81309	0.86281	0.79581	0.53420	0.53079	0.78106	0.70961	0.48848	0.80751	0.97888
4000.0	1.00849									
	ZENITH SCAN STARTING AT 19.42.54 ON 9/10/73, NORMALIZING FACTOR = 8.7225E 00									
2600.0	0.00008	0.00009	0.00010	0.00007	0.00009	0.00007	0.00007	0.00009	0.00007	0.00007
2700.0	0.00006	0.00009	0.00011	0.00007	0.00008	0.00008	0.00011	0.00008	0.00007	0.00009
2800.0	0.00008	0.00009	0.00009	0.00009	0.00008	0.00008	0.00011	0.00010	0.00009	0.00008
2900.0	0.00009	0.00011	0.00017	0.00022	0.00039	0.00078	0.00151	0.00257	0.00748	0.01100
3000.0	0.01275	0.02049	0.03080	0.05877	0.07458	0.10013	0.11248	0.15087	0.19080	0.19513
3100.0	0.23226	0.34614	0.36243	0.41091	0.45355	0.48369	0.46588	0.61265	0.60063	0.65011
3200.0	0.71691	0.74827	0.70193	0.67956	0.80788	0.85917	1.05899	1.09041	0.99781	1.12308
3300.0	1.20469	1.06064	1.07874	1.05179	1.02704	1.08543	0.94246	0.89485	0.98292	1.03940
3400.0	1.10196	1.03120	1.05360	1.06271	0.87789	0.94446	0.95878	0.95828	0.92197	0.89971
3500.0	1.00000	1.00152	0.92293	0.95467	1.06711	1.04076	0.93532	0.79057	0.70027	0.82859
3600.0	0.95409	0.81692	0.85859	0.90449	0.90466	0.92640	1.05324	1.01340	0.94042	0.96406
3700.0	0.98309	0.92889	0.86460	0.76789	0.70345	0.75351	0.82567	0.88494	1.00260	0.85914
3800.0	0.81642	0.84788	0.64697	0.50531	0.58259	0.71278	0.67070	0.67909	0.65653	0.71370
3900.0	0.80103	0.84823	0.76804	0.45021	0.52493	0.78243	0.67538	0.49951	0.82041	0.97200
4000.0	0.99525									

Table VIII-17

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 19.44.40 ON 9/10/73, NORMALIZING FACTOR = 8.6008E 00									
2600.0	0.00011	0.00011	0.00012	0.00012	0.00013	0.00011	0.00012	0.00014	0.00013	0.00012
2700.0	0.00011	0.00012	0.00013	0.00013	0.00012	0.00012	0.00013	0.00012	0.00014	0.00016
2800.0	0.00015	0.00016	0.00014	0.00013	0.00016	0.00017	0.00018	0.00021	0.00021	0.00019
2900.0	0.00016	0.00018	0.00021	0.00026	0.00054	0.00091	0.00134	0.00221	0.00403	0.00651
3000.0	0.01005	0.01584	0.02389	0.04647	0.06387	0.09040	0.10365	0.13813	0.18255	0.19497
3100.0	0.21341	0.32332	0.35952	0.40115	0.44616	0.48454	0.46530	0.58890	0.61284	0.64074
3200.0	0.69381	0.77031	0.72494	0.67781	0.80578	0.86927	1.06311	1.15303	1.06300	1.12716
3300.0	1.28522	1.13906	1.13680	1.12676	1.07325	1.14760	1.06161	0.93730	1.01308	1.08133
3400.0	1.14083	1.09605	1.07637	1.08815	0.93384	0.91452	0.99241	0.99476	0.94802	0.93958
3500.0	1.00000	1.05961	0.98080	0.97891	1.09984	1.08274	0.98636	0.82115	0.73331	0.81345
3600.0	1.00033	0.85517	0.87432	0.93098	0.93019	0.95015	1.10087	1.05914	0.97785	1.00529
3700.0	1.04440	0.96611	0.91377	0.83633	0.74839	0.78771	0.87581	0.93233	1.06560	0.92664
3800.0	0.86695	0.92121	0.71212	0.54633	0.59484	0.76807	0.72207	0.73608	0.71384	0.75679
3900.0	0.86968	0.92115	0.85481	0.51223	0.55391	0.84456	0.75366	0.51121	0.83268	0.94183
4000.0	1.05830									
	ZENITH SCAN STARTING AT 19.47. 1 ON 9/10/73, NORMALIZING FACTOR = 8.8245E 00									
2600.0	0.00012	0.00014	0.00021	0.00013	0.00011	0.00012	0.00011	0.00012	0.00015	0.00016
2700.0	0.00017	0.00016	0.00013	0.00013	0.00013	0.00013	0.00012	0.00014	0.00013	0.00014
2800.0	0.00013	0.00015	0.00016	0.00014	0.00016	0.00017	0.00015	0.00017	0.00016	0.00017
2900.0	0.00016	0.00018	0.00022	0.00027	0.00045	0.00073	0.00147	0.00238	0.00420	0.00728
3000.0	0.01032	0.01775	0.02656	0.05048	0.06730	0.09374	0.10934	0.14766	0.18777	0.19309
3100.0	0.22790	0.34096	0.36126	0.40634	0.45108	0.48125	0.46114	0.60790	0.58807	0.63512
3200.0	0.70352	0.74355	0.70055	0.66655	0.79276	0.84214	1.04376	1.09511	0.99376	1.11775
3300.0	1.21356	1.05085	1.07220	1.05175	1.01415	1.07913	0.96560	0.88432	0.96996	1.02554
3400.0	1.09062	1.02435	1.03416	1.05875	0.88294	0.92678	0.95623	0.96023	0.92580	0.90965
3500.0	1.00000	1.02322	0.94575	0.96066	1.07978	1.06582	0.96258	0.80918	0.71221	0.80963
3600.0	0.96713	0.83034	0.85995	0.92367	0.92033	0.93481	1.07615	1.04610	0.96402	0.98562
3700.0	1.03220	0.96140	0.89532	0.77993	0.71451	0.75037	0.83274	0.88560	1.01050	0.86951
3800.0	0.81804	0.86073	0.66500	0.51024	0.56180	0.71836	0.67034	0.68025	0.65760	0.69605
3900.0	0.79876	0.84340	0.78642	0.46442	0.49988	0.77293	0.69134	0.48128	0.81118	0.97277
4000.0	1.01072									
	ZENITH SCAN STARTING AT 19.48.47 ON 9/10/73, NORMALIZING FACTOR = 8.6933E 00									
2600.0	0.00016	0.00014	0.00013	0.00012	0.00012	0.00012	0.00013	0.00012	0.00012	0.00011
2700.0	0.00015	0.00014	0.00016	0.00017	0.00015	0.00014	0.00013	0.00018	0.00018	0.00015
2800.0	0.00015	0.00015	0.00015	0.00018	0.00015	0.00017	0.00015	0.00016	0.00016	0.00017
2900.0	0.00018	0.00019	0.00028	0.00031	0.00045	0.00075	0.00141	0.00238	0.00419	0.00687
3000.0	0.01037	0.01730	0.02559	0.05157	0.06678	0.09473	0.10809	0.14643	0.18581	0.19282
3100.0	0.22558	0.33512	0.35794	0.40827	0.44947	0.48401	0.46393	0.60547	0.60098	0.64942
3200.0	0.72223	0.76574	0.71872	0.68735	0.82608	0.87737	1.07620	1.12543	1.02913	1.14043
3300.0	1.24081	1.08892	1.10547	1.08346	1.04768	1.11733	0.98907	0.91017	0.99708	1.05706
3400.0	1.11420	1.04503	1.06346	1.07966	0.89642	0.95233	0.97938	0.96909	0.92457	0.90926
3500.0	1.00000	1.01215	0.94130	0.94716	1.06807	1.05689	0.96275	0.79837	0.71959	0.80051
3600.0	0.97366	0.83387	0.85141	0.91453	0.91178	0.92677	1.07997	1.04082	0.96444	0.98680
3700.0	1.02581	0.94705	0.89603	0.81097	0.73021	0.77076	0.85188	0.90517	1.03780	0.90104
3800.0	0.83955	0.88985	0.69083	0.52741	0.58272	0.73883	0.69194	0.70339	0.68016	0.72482
3900.0	0.82426	0.87453	0.80941	0.48502	0.51612	0.78701	0.72670	0.49293	0.81120	0.99750
4000.0	1.03336									
	ZENITH SCAN STARTING AT 19.50.33 ON 9/10/73, NORMALIZING FACTOR = 8.8734E 00									
2600.0	0.00011	0.00011	0.00013	0.00012	0.00011	0.00014	0.00017	0.00020	0.00012	0.00013
2700.0	0.00014	0.00013	0.00014	0.00016	0.00013	0.00016	0.00014	0.00018	0.00016	0.00018
2800.0	0.00015	0.00017	0.00015	0.00016	0.00015	0.00020	0.00015	0.00019	0.00017	0.00028
2900.0	0.00019	0.00019	0.00023	0.00027	0.00042	0.00071	0.00134	0.00231	0.00389	0.00677
3000.0	0.00983	0.01655	0.02468	0.04709	0.06282	0.08879	0.10001	0.14050	0.17795	0.18409
3100.0	0.21888	0.32142	0.34302	0.38907	0.43112	0.46494	0.44725	0.59437	0.58543	0.63407
3200.0	0.70302	0.74512	0.68454	0.66124	0.80264	0.84513	1.06036	1.09832	0.99953	1.12111
3300.0	1.20348	1.06032	1.06086	1.05962	1.01976	1.09261	0.98320	0.89105	0.97790	1.03065
3400.0	1.09609	1.02754	1.04015	1.06029	0.87012	0.93434	0.96654	0.96591	0.91900	0.90438
3500.0	1.00000	1.00681	0.93092	0.94418	1.05794	1.05052	0.95452	0.80521	0.72256	0.80425
3600.0	0.96460	0.83513	0.85738	0.92450	0.92188	0.93511	1.08248	1.05119	0.97169	0.99562
3700.0	1.02540	0.95696	0.90961	0.82035	0.74142	0.78509	0.86666	0.91008	1.02834	0.90158
3800.0	0.83829	0.88817	0.68466	0.52726	0.57952	0.73728	0.69030	0.70342	0.67677	0.72286
3900.0	0.82270	0.86927	0.80132	0.49064	0.51524	0.78509	0.72183	0.49862	0.81511	0.99651
4000.0	1.02741									
	ZENITH SCAN STARTING AT 19.57. 3 ON 9/10/73, NORMALIZING FACTOR = 7.1749E 00									
2600.0	0.00014	0.00012	0.00012	0.00012	0.00013	0.00015	0.00017	0.00022	0.00014	0.00013
2700.0	0.00012	0.00012	0.00013	0.00015	0.00015	0.00014	0.00018	0.00015	0.00014	0.00014
2800.0	0.00015	0.00016	0.00016	0.00017	0.00018	0.00016	0.00016	0.00015	0.00018	0.00017
2900.0	0.00020	0.00020	0.00023	0.00030	0.00045	0.00084	0.00161	0.00261	0.00473	0.00791
3000.0	0.01166	0.01933	0.02907	0.05579	0.07364	0.10221	0.11658	0.15824	0.20327	0.20855
3100.0	0.24450	0.36295	0.38281	0.42935	0.47509	0.50299	0.48023	0.64045	0.63094	0.67223
3200.0	0.74490	0.77934	0.73709	0.69680	0.82497	0.87613	1.08701	1.13062	1.02867	1.15427
3300.0	1.24835	1.08517	1.10668	1.08447	1.04570	1.11013	0.99362	0.90559	0.99394	1.05074
3400.0	1.11499	1.04547	1.04810	1.07128	0.87415	0.92225	0.95886	0.96072	0.91875	0.90398
3500.0	1.00000	1.01264	0.93864	0.95532	1.07227	1.06114	0.95146	0.80480	0.70143	0.79228
3600.0	0.95888	0.82346	0.85613	0.91557	0.91329	0.92652	1.06102	1.03884	0.96385	0.97694
3700.0	1.01619	0.94853	0.90408	0.80896	0.72326	0.74541	0.83775	0.88387	1.02680	0.88405
3800.0	0.82738	0.87985	0.67279	0.51619	0.56910	0.71260	0.67186	0.68814	0.66810	0.70583
3900.0	0.80353	0.84718	0.79111	0.48365	0.48929	0.78080	0.70357	0.46715	0.79730	0.97504
4000.0	1.00647									
	ZENITH SCAN STARTING AT 19.58.49 ON 9/10/73, NORMALIZING FACTOR = 7.0508E 00									
2600.0	0.00008	0.00007	0.00016	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00009
2700.0	0.00008	0.00009	0.00008	0.00011	0.00010	0.00010	0.00023	0.00010	0.00011	0.00010
2800.0	0.00009	0.00010	0.00008	0.00009	0.00009	0.00009	0.00012	0.00015	0.00012	0.00011
2900.0	0.00011	0.00013	0.00020	0.00026	0.00042	0.00081	0.00152	0.00258	0.00929	0.01262
3000.0	0.01283	0.02136	0.03074	0.06085	0.07953	0.11248	0.12103	0.16433	0.20774	0.21263
3100.0	0.25353	0.37367	0.39382	0.44754	0.49201	0.52491	0.50434	0.66089	0.65089	0.70211
3200.0	0.77470	0.81109	0.76124	0.73579	0.87230	0.93013	1.14077	1.17449	1.07428	1.20731
3300.0	1.28365	1.11095	1.12410	1.10382	1.07418	1.13113	0.98622	0.92304	1.00729	1.05461
3400.0	1.10727	1.03509	1.05591	1.06333	0.87934	0.95212	0.97266	0.97437	0.93115	0.91029
3500.0	1.00000	0.99524	0.92096	0.94457	1.06218	1.04316	0.94957	0.79764	0.70893	0.81900
3600.0	0.98401	0.83737	0.87793	0.92454	0.92392	0.95857	1.08278	1.04657	0.96826	0.98857
3700.0	1.00903	0.95219	0.89262	0.79548	0.72069	0.76489	0.84013	0.89249	1.01507	0.87215
3800.0	0.82235	0.85842	0.65581	0.51165	0.58376	0.71075	0.66353	0.67028	0.65821	0.70918
3900.0	0.79735	0.84804	0.76312	0.45819	0.52293	0.76870	0.67362	0.49092	0.80804	0.96001
4000.0	0.98733									

Table VIII-18

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 20. 0.35 ON 9/10/73, NORMALIZING FACTOR = 6.9818E 00										
2600.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2800.0	0.0	0.0	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
2900.0	0.00001	0.00002	0.00001	0.00001	0.00002	0.00014	0.00022	0.00023	0.00025	0.00069
3000.0	0.00093	0.00093	0.00093	0.00092	0.00092	0.00091	0.01104	0.15580	0.20322	0.20945
3100.0	0.24994	0.35678	0.37925	0.42592	0.46867	0.49774	0.48171	0.62841	0.61300	0.65651
3200.0	0.72675	0.76735	0.72252	0.68933	0.83059	0.87630	1.08567	1.11707	1.02746	1.14158
3300.0	1.22451	1.07855	1.09177	1.06511	1.03060	1.10050	0.97762	0.89393	0.98252	1.03306
3400.0	1.09217	1.01796	1.03439	1.05561	0.86425	0.92825	0.95642	0.96014	0.91825	0.90147
3500.0	1.00000	1.01176	0.94058	0.95086	1.06623	1.05879	0.96378	0.80484	0.72642	0.79223
3600.0	0.97054	0.82378	0.84024	0.90495	0.90394	0.91825	1.06774	1.02482	0.95297	0.97493
3700.0	1.00515	0.93080	0.87814	0.79480	0.71634	0.75500	0.83170	0.88092	1.00415	0.86123
3800.0	0.81441	0.85630	0.66638	0.51537	0.57141	0.71778	0.67404	0.68317	0.65686	0.69084
3900.0	0.78900	0.83387	0.77928	0.46370	0.49594	0.76094	0.68620	0.47680	0.78711	0.94624
4000.0	0.98595									
ZENITH SCAN STARTING AT 20. 2.56 ON 9/10/73, NORMALIZING FACTOR = 7.3577E-02										
2600.0	0.00011	0.00014	0.00013	0.00012	0.00011	0.00014	0.00011	0.00012	0.00014	0.00011
2700.0	0.00011	0.00015	0.00011	0.00014	0.00012	0.00012	0.00015	0.00013	0.00015	0.00013
2800.0	0.00015	0.00026	0.00016	0.00024	0.00014	0.00014	0.00016	0.00015	0.00015	0.00016
2900.0	0.00015	0.00017	0.00021	0.00028	0.00043	0.00075	0.00142	0.00238	0.00424	0.00692
3000.0	0.00915	0.00968	0.00988	0.01016	0.01025	0.01036	0.02153	0.14076	0.19543	0.20061
3100.0	0.23425	0.35082	0.36577	0.41121	0.45369	0.47891	0.45750	0.60387	0.60143	0.63995
3200.0	0.70879	0.74354	0.70196	0.66741	0.78946	0.83999	1.04247	1.08286	0.98401	1.10022
3300.0	1.19630	1.04019	1.06143	1.04284	1.00770	1.06684	0.92384	0.82764	0.90071	0.94442
3400.0	0.99664	0.94960	0.94396	0.97021	0.80494	0.87054	0.91593	0.93259	0.90380	0.88479
3500.0	1.00000	1.00313	0.90479	0.91902	1.05605	1.03283	0.91313	0.76217	0.67153	0.75343
3600.0	0.91481	0.77951	0.81103	0.87066	0.87067	0.89300	1.04384	1.00777	0.92081	0.94503
3700.0	0.99052	0.91359	0.86813	0.78375	0.70009	0.72005	0.80520	0.84918	0.99237	0.85322
3800.0	0.79219	0.84971	0.65085	0.51557	0.56714	0.70727	0.66843	0.67883	0.65966	0.69675
3900.0	0.78798	0.78935	0.73825	0.47423	0.48557	0.76079	0.69923	0.46074	0.77512	0.95149
4000.0	0.98658									
SOLAR SCAN STARTING AT 20. 7.56 ON 9/10/73, NORMALIZING FACTOR = 2.2276E-02										
2600.0	0.00004	0.00008	0.00007	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003
2700.0	0.00002	0.00003	0.00011	0.00014	0.00015	0.00016	0.00015	0.00017	0.00015	0.00017
2800.0	0.00019	0.00016	0.00015	0.00017	0.00017	0.00015	0.00015	0.00017	0.00019	0.00016
2900.0	0.00018	0.00018	0.00019	0.00027	0.00038	0.00066	0.00129	0.00211	0.00387	0.00630
3000.0	0.00945	0.01079	0.01112	0.01144	0.01157	0.01170	0.01173	0.10363	0.20126	0.21221
3100.0	0.22903	0.34603	0.38229	0.42980	0.47481	0.50681	0.47105	0.61565	0.64186	0.66820
3200.0	0.72665	0.81663	0.76189	0.71256	0.82453	0.88212	1.06300	1.16925	1.07967	1.13717
3300.0	1.29721	1.13482	1.12890	1.12073	1.06716	1.12787	1.03322	0.91668	0.97144	1.03445
3400.0	1.08709	1.04906	1.03169	1.07573	0.91566	0.91606	0.98171	0.98157	0.93155	0.91475
3500.0	1.00000	1.01254	0.93775	0.94716	1.06259	1.04538	0.94448	0.79142	0.70353	0.78515
3600.0	0.97505	0.82763	0.85775	0.90912	0.90921	0.92940	1.05703	1.02162	0.94640	0.96581
3700.0	1.00198	0.94526	0.89139	0.79540	0.70967	0.73787	0.82302	0.87671	1.00900	0.87127
3800.0	0.81176	0.86648	0.65746	0.51773	0.55980	0.71061	0.66811	0.67959	0.65790	0.70275
3900.0	0.79166	0.84189	0.76305	0.49152	0.50152	0.77869	0.69253	0.48333	0.80327	0.97055
4000.0	0.98865									
ZENITH SCAN STARTING AT 20.12.34 ON 9/10/73, NORMALIZING FACTOR = 8.3030E-02										
2600.0	0.00010	0.00012	0.00010	0.00016	0.00014	0.00023	0.00013	0.00011	0.00012	0.00012
2700.0	0.00013	0.00011	0.00011	0.00013	0.00013	0.00013	0.00014	0.00012	0.00017	0.00014
2800.0	0.00014	0.00015	0.00014	0.00013	0.00014	0.00014	0.00015	0.00017	0.00015	0.00014
2900.0	0.00017	0.00016	0.00019	0.00024	0.00032	0.00051	0.00094	0.00166	0.00312	0.00539
3000.0	0.00788	0.00852	0.00872	0.00899	0.00907	0.00919	0.05199	0.16555	0.21084	0.21969
3100.0	0.26317	0.39983	0.41994	0.46224	0.49676	0.51703	0.49750	0.66334	0.64808	0.69211
3200.0	0.75073	0.78310	0.74737	0.71457	0.84694	0.89220	1.10061	1.14140	1.03837	1.17346
3300.0	1.25188	1.10186	1.12606	1.11137	1.07523	1.13770	1.00976	0.92476	1.01716	1.05694
3400.0	1.11552	1.04237	1.05609	1.07847	0.87592	0.93385	0.96201	0.96126	0.92134	0.90538
3500.0	1.00000	1.00536	0.93702	0.95869	1.07343	1.05124	0.96322	0.80576	0.72073	0.79966
3600.0	0.97076	0.82513	0.85652	0.90673	0.90337	0.92263	1.05902	1.01323	0.93720	0.95818
3700.0	0.97286	0.91826	0.87561	0.79941	0.71591	0.70926	0.74262	0.83353	0.94920	0.80756
3800.0	0.77021	0.80282	0.61897	0.47645	0.53263	0.66157	0.61510	0.62093	0.59772	0.63811
3900.0	0.71732	0.76512	0.70842	0.43214	0.45358	0.70561	0.62733	0.42029	0.71284	0.86465
4000.0	0.89835									
ZENITH SCAN STARTING AT 20.14.55 ON 9/10/73, NORMALIZING FACTOR = 3.8879E-01										
2600.0	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003
2700.0	0.00003	0.00003	0.00003	0.00003	0.00004	0.00004	0.00003	0.00003	0.00003	0.00003
2800.0	0.00004	0.00003	0.00003	0.00003	0.00003	0.00003	0.00004	0.00004	0.00005	0.00004
2900.0	0.00004	0.00004	0.00004	0.00005	0.00009	0.00029	0.00021	0.00035	0.00059	0.00167
3000.0	0.01076	0.01544	0.01566	0.01587	0.01576	0.01552	0.01838	0.03508	0.04532	0.04780
3100.0	0.05893	0.08767	0.09517	0.11038	0.12298	0.13420	0.13089	0.19529	0.18539	0.23440
3200.0	0.36800	0.49081	0.34283	0.29722	0.78340	1.25693	2.38858	2.39221	2.38846	2.40179
3300.0	2.40286	2.40445	2.40904	2.40397	2.40593	2.41266	1.85542	1.13295	2.17973	2.43009
3400.0	2.44452	2.38846	2.41944	2.41137	0.93506	1.31042	1.32862	1.30029	0.93429	0.76049
3500.0	1.00000	1.04474	0.71736	0.81477	1.53350	1.35581	0.73331	0.30411	0.21149	0.36249
3600.0	0.68176	0.32236	0.38520	0.53671	0.51399	0.54525	1.11420	0.88028	0.54649	0.62169
3700.0	0.73366	0.50613	0.39302	0.25823	0.20170	0.22421	0.28186	0.36481	0.63982	0.31127
3800.0	0.26120	0.29143	0.18036	0.13696	0.15224	0.19072	0.18043	0.18495	0.17809	0.19024
3900.0	0.21852	0.23836	0.21370	0.12454	0.13133	0.20124	0.18490	0.12357	0.21773	0.30412
4000.0	0.33210									
ZENITH SCAN STARTING AT 20.16.43 ON 9/10/73, NORMALIZING FACTOR = 1.0342E 00										
2600.0	0.00032	0.00032	0.00032	0.00031	0.00031	0.00031	0.00030	0.00030	0.00030	0.00030
2700.0	0.00031	0.00029	0.00029	0.00029	0.00028	0.00028	0.00028	0.00028	0.00028	0.00027
2800.0	0.00027	0.00027	0.00027	0.00026	0.00026	0.00026	0.00026	0.00026	0.00025	0.00025
2900.0	0.00026	0.00026	0.00025	0.00025	0.00027	0.00077	0.00299	0.00316	0.00322	0.00383
3000.0	0.00605	0.00642	0.00639	0.00636	0.00632	0.00627	0.09196	0.47562	0.47363	0.47191
3100.0	0.46748	0.46829	0.47048	0.47208	0.46588	0.46383	0.45742	0.51817	0.50046	0.54566
3200.0	0.64031	0.69408	0.62033	0.57473	0.80471	0.83577	1.06537	1.07310	1.07454	1.07660
3300.0	1.07883	1.08170	1.08463	1.08707	1.08881	1.08866	1.00924	0.83353	1.09800	1.10332
3400.0	1.10592	1.10765	1.10742	1.09087	0.71389	0.94841	0.94563	0.95470	0.77387	0.73078
3500.0	1.00000	1.01850	0.74089	0.83216	1.14806	1.13586	0.78115	0.50212	0.39642	0.52976
3600.0	0.74333	0.53136	0.59485	0.67718	0.66037	0.68982	1.17884	0.96303	0.70438	0.74053
3700.0	0.79276	0.65164	0.56454	0.42896	0.33690	0.36671	0.45283	0.51947	0.71463	0.48347
3800.0	0.37975	0.38738	0.23711	0.21524	0.21599	0.23664	0.22033	0.21685	0.20838	0.21502
3900.0	0.24964	0.28308	0.24724	0.19725	0.20433	0.24619	0.22589	0.19381	0.25414	0.37441
4000.0	0.42117									

Table VIII-19

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/10/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 20.18.29 ON 9/10/73, NORMALIZING FACTOR = 1.0865E 01									
2600.0	0.00010	0.00009	0.00009	0.00009	0.00010	0.00011	0.00010	0.00010	0.00010	0.00011
2700.0	0.00011	0.00011	0.00010	0.00010	0.00013	0.00010	0.00012	0.00013	0.00012	0.00016
2800.0	0.00019	0.00014	0.00014	0.00012	0.00012	0.00012	0.00012	0.00013	0.00013	0.00013
2900.0	0.00017	0.00016	0.00015	0.00024	0.00027	0.00038	0.00069	0.00122	0.00210	0.00344
3000.0	0.00530	0.00975	0.01511	0.03240	0.04445	0.06668	0.07985	0.11484	0.15218	0.16021
3100.0	0.19535	0.30145	0.32502	0.37524	0.41896	0.45355	0.43858	0.58794	0.58660	0.63500
3200.0	0.70786	0.74700	0.70213	0.67921	0.80790	0.85633	1.06403	1.10451	1.00405	1.14128
3300.0	1.22418	1.06366	1.08726	1.06800	1.03266	1.08793	0.96358	0.89331	0.98205	1.03332
3400.0	1.08629	1.01852	1.02886	1.04948	0.85787	0.91607	0.94112	0.94701	0.91168	0.89021
3500.0	1.00000	0.99814	0.92912	0.95507	1.06155	1.01208	0.93527	0.78174	0.69594	0.77921
3600.0	0.94538	0.81376	0.83622	0.89235	0.89149	0.90809	1.05565	1.01355	0.94201	0.96948
3700.0	0.98597	0.91904	0.87136	0.78585	0.72120	0.75324	0.82605	0.87888	0.74938	0.13358
3800.0	0.12905	0.13255	0.11844	0.11609	0.11689	0.11947	0.11830	0.11825	0.11770	0.11961
3900.0	0.12340	0.12735	0.12439	0.11873	0.11929	0.12251	0.11997	0.11711	0.12451	0.13759
4000.0	0.14247									
	ZENITH SCAN STARTING AT 20.20.50 ON 9/10/73, NORMALIZING FACTOR = 1.1087E 01									
2600.0	0.00010	0.00013	0.00010	0.00009	0.00011	0.00010	0.00011	0.00011	0.00013	0.00011
2700.0	0.00012	0.00012	0.00012	0.00013	0.00016	0.00014	0.00012	0.00012	0.00011	0.00012
2800.0	0.00016	0.00013	0.00013	0.00013	0.00015	0.00014	0.00013	0.00013	0.00014	0.00014
2900.0	0.00016	0.00015	0.00018	0.00019	0.00026	0.00041	0.00069	0.00115	0.00200	0.00337
3000.0	0.00532	0.00937	0.01481	0.03149	0.04308	0.06551	0.07752	0.11452	0.14716	0.15718
3100.0	0.19609	0.29045	0.31775	0.36986	0.41170	0.44789	0.43787	0.57882	0.57102	0.62361
3200.0	0.69064	0.73672	0.68909	0.66379	0.80851	0.86140	1.06359	1.10016	1.01207	1.12973
3300.0	1.17326	1.04284	1.06288	1.03641	1.00676	1.07343	0.94597	0.88297	0.97505	1.02987
3400.0	1.08958	1.01569	1.03899	1.05575	0.87777	0.93971	0.95781	0.95797	0.92022	0.89678
3500.0	1.00000	1.00726	0.93656	0.96161	1.08298	1.08409	1.00346	0.85077	0.75183	0.86443
3600.0	1.03654	0.89139	0.92896	0.99539	0.99637	1.01407	1.17345	1.13468	1.04876	1.08589
3700.0	1.11266	1.04292	0.99216	0.89385	0.80659	0.84559	0.92657	0.97931	1.13312	0.96458
3800.0	0.90577	0.94132	0.71777	0.56119	0.59738	0.66047	0.64426	0.65350	0.63168	0.67175
3900.0	0.75700	0.79892	0.73914	0.42980	0.46754	0.73380	0.66741	0.44168	0.75532	0.91654
4000.0	0.95437									
	ZENITH SCAN STARTING AT 20.22.36 ON 9/10/73, NORMALIZING FACTOR = 1.0845E 01									
2600.0	0.00013	0.00009	0.00009	0.00011	0.00010	0.00012	0.00010	0.00010	0.00010	0.00010
2700.0	0.00010	0.00010	0.00012	0.00011	0.00010	0.00010	0.00013	0.00014	0.00013	0.00012
2800.0	0.00016	0.00012	0.00012	0.00012	0.00013	0.00014	0.00013	0.00016	0.00014	0.00013
2900.0	0.00014	0.00015	0.00015	0.00018	0.00024	0.00038	0.00069	0.00113	0.00199	0.00351
3000.0	0.00528	0.00964	0.01497	0.03192	0.04242	0.06242	0.07566	0.11318	0.14857	0.15693
3100.0	0.19706	0.29736	0.32307	0.37142	0.41687	0.44979	0.43777	0.59610	0.58367	0.63514
3200.0	0.70786	0.74424	0.70335	0.67491	0.81248	0.85897	1.08606	1.11423	1.01557	1.15867
3300.0	1.22371	1.07393	1.09911	1.07180	1.03706	1.10283	0.97807	0.89696	0.99123	1.04087
3400.0	1.10184	1.02370	1.04105	1.05579	0.85783	0.94425	0.95551	0.95734	0.91881	0.90339
3500.0	1.00000	1.00058	0.93339	0.95244	1.07220	1.05706	0.96149	0.80583	0.71250	0.79950
3600.0	0.91781	0.82329	0.87004	0.90967	0.90741	0.92758	1.06756	1.03126	0.95812	0.98042
3700.0	1.00381	0.94698	0.89752	0.80043	0.72600	0.76671	0.85022	0.90724	1.03530	0.87765
3800.0	0.84317	0.88355	0.66684	0.52335	0.59282	0.73866	0.69699	0.70963	0.68926	0.74132
3900.0	0.83183	0.87758	0.80837	0.49623	0.52270	0.80384	0.70473	0.48600	0.83794	0.99922
4000.0	1.03642									

Table VIII-20

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 23. 7.56 ON 9/12/73, NORMALIZING FACTOR = 8.6616E 01									
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005
2700.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005
2800.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006
2900.0	0.00006	0.00006	0.00006	0.00007	0.00009	0.00017	0.00044	0.00109	0.00146	0.00318
3000.0	0.00553	0.01081	0.01768	0.03497	0.04733	0.07105	0.08334	0.12221	0.15283	0.15833
3100.0	0.20802	0.29616	0.31547	0.36295	0.39736	0.41900	0.41905	0.54482	0.52273	0.57114
3200.0	0.64669	0.64604	0.61808	0.60968	0.70943	0.79845	0.96846	0.96766	0.91108	1.04064
3300.0	1.06554	0.96902	0.98428	0.94986	0.95536	0.99572	0.85987	0.83988	0.92422	0.96903
3400.0	1.02312	0.95233	0.99172	0.98518	0.81698	0.91843	0.92123	0.91979	0.89947	0.88493
3500.0	1.00000	0.98207	0.91899	0.97414	1.08687	1.05462	0.95238	0.80723	0.71503	0.88364
3600.0	0.99669	0.86057	0.92397	0.96749	0.97933	1.03484	1.17825	1.12915	1.04973	1.11682
3700.0	1.10423	1.06912	0.98132	0.88254	0.82097	0.89660	0.96901	1.06507	1.17887	0.98868
3800.0	0.98855	0.99988	0.73804	0.60476	0.72173	0.85623	0.81669	0.82929	0.80757	0.89608
3900.0	0.99987	1.06599	0.92643	0.52248	0.70662	1.01781	0.79760	0.62764	1.11892	1.28110
4000.0	1.31894									
	ZENITH SCAN STARTING AT 18.26.19 ON 9/12/73, NORMALIZING FACTOR = 1.6118E 01									
2600.0	0.00005	0.00005	0.00004	0.00005	0.00005	0.00005	0.00005	0.00006	0.00005	0.00005
2700.0	0.00005	0.00006	0.00006	0.00006	0.00010	0.00008	0.00007	0.00006	0.00008	0.00007
2800.0	0.00007	0.00009	0.00008	0.00009	0.00010	0.00008	0.00008	0.00009	0.00011	0.00009
2900.0	0.00011	0.00016	0.00025	0.00052	0.00104	0.00222	0.00468	0.00810	0.01378	0.02308
3000.0	0.03154	0.05135	0.06969	0.12273	0.15139	0.19558	0.21050	0.27522	0.33394	0.32897
3100.0	0.38731	0.54969	0.55597	0.60824	0.64678	0.66050	0.62018	0.80889	0.76081	0.79037
3200.0	0.88000	0.86747	0.81461	0.76885	0.89537	0.96434	1.18490	1.19489	1.11151	1.23346
3300.0	1.25973	1.12823	1.12476	1.08397	1.06072	1.10919	0.96824	0.91494	1.00545	1.04922
3400.0	1.11017	1.02870	1.04227	1.05347	0.85782	0.92782	0.94716	0.94044	0.90792	0.89319
3500.0	1.00000	0.99401	0.92638	0.95017	1.06798	1.05005	0.95509	0.80068	0.71231	0.82302
3600.0	0.97455	0.82674	0.87625	0.91610	0.91266	0.93732	1.07407	1.03423	0.95698	0.98151
3700.0	1.01161	0.95057	0.89164	0.79675	0.72194	0.76116	0.84280	0.90605	1.03587	0.87187
3800.0	0.83592	0.87685	0.67367	0.51921	0.57755	0.69821	0.67649	0.68842	0.66619	0.71162
3900.0	0.81077	0.86452	0.78907	0.47277	0.51070	0.79980	0.69824	0.48130	0.82280	0.98798
4000.0	1.01437									
	ZENITH SCAN STARTING AT 18.34.26 ON 9/12/73, NORMALIZING FACTOR = 1.7430E 01									
2600.0	0.00004	0.00003	0.00003	0.00004	0.00004	0.00004	0.00004	0.00007	0.00007	0.00004
2700.0	0.00004	0.00004	0.00004	0.00005	0.00006	0.00010	0.00005	0.00006	0.00006	0.00005
2800.0	0.00005	0.00005	0.00005	0.00007	0.00009	0.00006	0.00006	0.00006	0.00006	0.00006
2900.0	0.00008	0.00012	0.00022	0.00047	0.00094	0.00798	0.00537	0.00787	0.01352	0.02200
3000.0	0.03033	0.04563	0.06588	0.11482	0.14204	0.18991	0.20391	0.27092	0.32358	0.31594
3100.0	0.37339	0.52345	0.52930	0.56416	0.61998	0.63450	0.60636	0.77312	0.72647	0.76709
3200.0	0.85326	0.83976	0.79326	0.76138	0.88263	0.95551	1.14457	1.14335	1.05800	1.17975
3300.0	1.22438	1.08932	1.09341	1.05535	1.04268	1.08271	0.94754	0.89756	0.98537	1.02488
3400.0	1.07949	0.99540	1.02769	1.03099	0.85161	0.93325	0.93454	0.93248	0.90475	0.88240
3500.0	1.00000	0.98182	0.90677	0.94703	1.04149	1.01556	0.90729	0.76569	0.67918	0.82184
3600.0	0.92554	0.79607	0.83702	0.87726	0.87377	0.90954	1.03286	0.99765	0.92624	0.96548
3700.0	0.97817	0.93601	0.87061	0.77280	0.70563	0.75874	0.82988	0.89800	1.00665	0.84846
3800.0	0.81317	0.82665	0.62212	0.48605	0.56292	0.68858	0.64876	0.65210	0.63350	0.68906
3900.0	0.77830	0.83475	0.74109	0.43760	0.53732	0.74287	0.64451	0.47653	0.80398	0.94547
4000.0	0.96852									
	ZENITH SCAN STARTING AT 18.36.12 ON 9/12/73, NORMALIZING FACTOR = 1.8354E 01									
2600.0	0.00003	0.00003	0.00003	0.00003	0.00003	0.00005	0.00004	0.00004	0.00004	0.00004
2700.0	0.00004	0.00003	0.00004	0.00004	0.00003	0.00004	0.00004	0.00004	0.00004	0.00005
2800.0	0.00005	0.00004	0.00006	0.00005	0.00005	0.00004	0.00004	0.00005	0.00005	0.00006
2900.0	0.00007	0.00011	0.00020	0.00041	0.00087	0.00354	0.00682	0.00732	0.01255	0.02054
3000.0	0.02886	0.04446	0.06241	0.10787	0.13401	0.17575	0.19011	0.25496	0.30328	0.29676
3100.0	0.35822	0.49933	0.50161	0.54946	0.57762	0.59259	0.56672	0.73850	0.68542	0.72422
3200.0	0.81170	0.79098	0.75284	0.71537	0.83962	0.91042	1.10610	1.09709	1.02338	1.14837
3300.0	1.18027	1.06298	1.06994	1.02795	1.01632	1.05904	0.91331	0.87548	0.96267	1.00819
3400.0	1.06658	0.99177	1.02392	1.02637	0.84678	0.93065	0.93468	0.93428	0.90549	0.88315
3500.0	1.00000	0.97845	0.90684	0.94573	1.04918	1.02106	0.92409	0.77575	0.68346	0.82735
3600.0	0.94324	0.81264	0.86838	0.90364	0.90402	0.93580	1.04589	0.99211	0.90358	0.91777
3700.0	0.92572	0.87483	0.80368	0.72073	0.65520	0.69024	0.75340	0.81889	0.91879	0.76549
3800.0	0.75440	0.76865	0.58237	0.46078	0.54096	0.66062	0.62267	0.63102	0.61807	0.68446
3900.0	0.76855	0.82279	0.73418	0.43793	0.51980	0.76331	0.62746	0.46870	0.79198	0.92537
4000.0	0.94804									
	ZENITH SCAN STARTING AT 18.37.57 ON 9/12/73, NORMALIZING FACTOR = 1.7105E 01									
2600.0	0.00008	0.00008	0.00008	0.00008	0.00008	0.00009	0.00008	0.00008	0.00009	0.00008
2700.0	0.00009	0.00010	0.00010	0.00009	0.00009	0.00013	0.00010	0.00010	0.00010	0.00010
2800.0	0.00011	0.00011	0.00011	0.00011	0.00012	0.00011	0.00012	0.00013	0.00014	0.00017
2900.0	0.00017	0.00021	0.00029	0.00051	0.00095	0.00204	0.00416	0.00729	0.01292	0.02134
3000.0	0.03002	0.04845	0.06668	0.12227	0.15172	0.20134	0.21858	0.28375	0.34661	0.33795
3100.0	0.38656	0.56522	0.56626	0.61538	0.65467	0.66943	0.62453	0.81060	0.77466	0.80352
3200.0	0.89563	0.88537	0.83520	0.78493	0.90652	0.97468	1.18227	1.19401	1.09695	1.22340
3300.0	1.28572	1.13568	1.14247	1.10706	1.08354	1.13823	0.99861	0.93373	1.02992	1.07321
3400.0	1.14158	1.05456	1.07853	1.09120	0.88617	0.94352	0.94894	0.94967	0.91364	0.88920
3500.0	1.00000	0.98941	0.91979	0.94195	1.04081	1.01840	0.91376	0.76699	0.67115	0.79288
3600.0	0.92294	0.78273	0.82356	0.86168	0.86034	0.88288	1.01803	0.97421	0.90490	0.93482
3700.0	0.95142	0.89386	0.83938	0.75236	0.68098	0.71702	0.79785	0.85977	0.97852	0.82307
3800.0	0.79415	0.83015	0.62708	0.48892	0.55926	0.68690	0.65010	0.65982	0.63804	0.68196
3900.0	0.77817	0.83514	0.74909	0.42866	0.49664	0.76029	0.66877	0.46159	0.77512	0.94097
4000.0	0.95724									
	ZENITH SCAN STARTING AT 18.40.22 ON 9/12/73, NORMALIZING FACTOR = 1.6155E 01									
2600.0	0.00009	0.00008	0.00010	0.00014	0.00013	0.00011	0.00011	0.00011	0.00010	0.00011
2700.0	0.00012	0.00011	0.00012	0.00012	0.00012	0.00013	0.00012	0.00013	0.00013	0.00014
2800.0	0.00014	0.00014	0.00017	0.00014	0.00015	0.00015	0.00015	0.00015	0.00016	0.00016
2900.0	0.00022	0.00023	0.00031	0.00054	0.00095	0.00211	0.00358	0.00735	0.01274	0.02081
3000.0	0.02953	0.04710	0.05700	0.11711	0.14557	0.19510	0.20982	0.27619	0.33279	0.32874
3100.0	0.37660	0.53929	0.54794	0.60443	0.64308	0.66167	0.62360	0.80432	0.75890	0.77133
3200.0	0.86608	0.86406	0.81231	0.76875	0.88910	0.95667	1.15281	1.16904	1.07547	1.18352
3300.0	1.25826	1.11072	1.11600	1.08137	1.05759	1.10910	0.97812	0.90997	1.00231	1.04812
3400.0	1.11496	1.02965	1.04938	1.06232	0.86166	0.94933	0.95987	0.95957	0.91930	0.89269
3500.0	1.00000	0.99874	0.91997	0.94893	1.05910	1.03810	0.92217	0.78201	0.69137	0.81039
3600.0	0.94107	0.80863	0.84089	0.88648	0.88695	0.91114	1.04794	1.00853	0.93337	0.97102
3700.0	0.99548	0.93755	0.88199	0.78360	0.70081	0.73184	0.81059	0.87693	0.99427	0.85087
3800.0	0.80819	0.85148	0.64198	0.50454	0.57756	0.71029	0.66800	0.67345	0.65300	0.69773
3900.0	0.79349	0.84309	0.76343	0.45320	0.51377	0.77305	0.67155	0.48832	0.81605	0.97092
4000.0	0.99764									

Table VIII-21

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 18.42. 7 ON 9/12/73. NORMALIZING FACTOR = 1.5718E 01									
2600.0	0.00004	0.00005	0.00008	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006
2700.0	0.00005	0.00005	0.00005	0.00006	0.00005	0.00006	0.00 107	0.00009	0.00005	0.00006
2800.0	0.00006	0.00005	0.00006	0.00006	0.00008	0.00007	0.00006	0.00006	0.00006	0.00007
2900.0	0.00009	0.00015	0.00013	0.00040	0.00090	0.00297	0.00556	0.00740	0.01323	0.02182
3000.0	0.02440	0.03130	0.06447	0.11530	0.14173	0.18533	0.20121	0.26508	0.31859	0.30959
3100.0	0.34326	0.47689	0.48858	0.57648	0.61271	0.62303	0.59241	0.77696	0.72478	0.76135
3200.0	0.85141	0.82554	0.78437	0.74669	0.87319	0.93646	1.14244	1.13491	1.05392	1.18229
3300.0	1.21121	1.09132	1.09863	1.05428	1.04590	1.09070	0.94059	0.90194	0.98610	1.02892
3400.0	1.08546	1.00597	1.03461	1.04320	0.85192	0.93323	0.93379	0.93581	0.89605	0.87642
3500.0	1.00000	0.97692	0.90748	0.94363	1.04386	1.01587	0.90711	0.76342	0.67961	0.81704
3600.0	0.93325	0.79765	0.84770	0.88261	0.88266	0.91827	1.03240	0.99172	0.90656	0.94827
3700.0	0.95718	0.91354	0.84646	0.75121	0.68474	0.72491	0.79472	0.86765	0.96961	0.81600
3800.0	0.79319	0.81757	0.31292	0.48804	0.27680	0.65503	0.38618	0.55587	0.29163	0.71028
3900.0	0.79756	0.85163	0.73779	0.42768	0.47044	0.78439	0.64227	0.45864	0.72065	0.95651
4000.0	0.98826									
	ZENITH SCAN STARTING AT 18.44.29 ON 9/12/73. NORMALIZING FACTOR = 1.5269E 01									
2600.0	0.00009	0.00008	0.00011	0.00013	0.00013	0.00010	0.00012	0.00011	0.00015	0.00012
2700.0	0.00012	0.00012	0.00013	0.00012	0.00012	0.00012	0.00012	0.00013	0.00013	0.00014
2800.0	0.00014	0.00013	0.00014	0.00015	0.00015	0.00012	0.00015	0.00015	0.00016	0.00017
2900.0	0.00018	0.00014	0.00016	0.00049	0.00095	0.00189	0.00338	0.00723	0.01262	0.02103
3000.0	0.02240	0.04175	0.04831	0.11656	0.14474	0.19364	0.21027	0.27192	0.33258	0.32543
3100.0	0.37080	0.09101	0.02511	0.07777	0.21802	0.47875	0.15934	0.78840	0.75537	0.78898
3200.0	0.87779	0.87815	0.82770	0.76923	0.87772	0.95213	1.15108	1.16658	1.07391	1.19350
3300.0	1.26332	1.11484	1.11812	1.06660	1.06288	1.11050	0.97671	0.91133	1.00332	1.04770
3400.0	1.11605	1.03048	1.05001	1.08211	0.85910	0.93871	0.95738	0.95360	0.91788	0.89326
3500.0	1.00000	0.99646	0.91829	0.94834	1.05549	1.03176	0.92259	0.77966	0.24423	0.76038
3600.0	0.93716	0.80285	0.83814	0.86495	0.88598	0.90923	1.04495	1.00030	0.92474	0.96174
3700.0	0.97504	0.91760	0.85883	0.53261	0.13674	0.21439	0.82627	0.88416	0.96983	0.69255
3800.0	0.44789	0.71231	0.44422	0.49674	0.48060	0.42701	0.45861	0.46051	0.64379	0.40142
3900.0	0.20375	0.48202	0.49342	0.43745	0.49588	0.45408	0.30971	0.45643	0.46325	0.95518
4000.0	0.98532									
	ZENITH SCAN STARTING AT 18.46.14 ON 9/12/73. NORMALIZING FACTOR = 1.5321E 01									
2600.0	0.00011	0.00010	0.00011	0.00011	0.00010	0.00012	0.00010	0.00010	0.00012	0.00011
2700.0	0.00011	0.00012	0.00011	0.00017	0.00012	0.00013	0.00013	0.00013	0.00013	0.00013
2800.0	0.00014	0.00014	0.00015	0.00014	0.00015	0.00015	0.00015	0.00015	0.00016	0.00016
2900.0	0.00017	0.00020	0.00010	0.00036	0.00083	0.00169	0.00280	0.00604	0.01112	0.01868
3000.0	0.02561	0.03301	0.05930	0.10564	0.13887	0.18084	0.20261	0.25727	0.32037	0.32533
3100.0	0.34841	0.26089	0.01776	0.06106	0.10922	0.42314	0.10252	0.72085	0.75639	0.76266
3200.0	0.83652	0.87199	0.81244	0.75470	0.86757	0.93141	1.13070	1.17623	1.09403	1.15069
3300.0	1.27545	1.13504	1.12455	1.09876	1.06167	1.11666	1.00788	0.91531	0.98859	1.04869
3400.0	1.10838	1.05711	1.04597	1.08813	0.90356	0.91610	0.97216	0.97779	0.93602	0.91858
3500.0	1.00000	1.04275	0.95965	0.93076	1.02932	1.06356	0.97012	0.80193	0.37347	0.42683
3600.0	0.95232	0.82270	0.81562	0.89216	0.88341	0.88211	1.03490	1.00882	0.94028	0.93549
3700.0	0.98880	0.90491	0.87658	0.55336	0.06804	0.20059	0.81892	0.85446	0.99363	0.82276
3800.0	0.29155	0.82141	0.34577	0.51976	0.50945	0.07512	0.31560	0.18344	0.62362	0.25912
3900.0	0.12698	0.62717	0.37106	0.44919	0.47133	0.11339	0.32058	0.45507	0.50079	0.97065
4000.0	1.00202									
	ZENITH SCAN STARTING AT 18.50.21 ON 9/12/73. NORMALIZING FACTOR = 1.5310E 01									
2600.0	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	0.00012	0.00014
2700.0	0.00013	0.00013	0.00014	0.00016	0.00014	0.00013	0.00014	0.00014	0.00015	0.00015
2800.0	0.00015	0.00016	0.00016	0.00015	0.00016	0.00020	0.00019	0.00017	0.00018	0.00020
2900.0	0.00020	0.00014	0.00026	0.00048	0.00091	0.00188	0.00220	0.00705	0.01219	0.01994
3000.0	0.02208	0.03988	0.06259	0.10966	0.13738	0.18460	0.20140	0.26303	0.31914	0.31400
3100.0	0.35735	0.16553	0.20194	0.05600	0.09447	0.10800	0.13635	0.75783	0.72232	0.75641
3200.0	0.83727	0.84007	0.79136	0.75224	0.87133	0.94363	1.13811	1.15502	1.06530	1.17771
3300.0	1.25359	1.10556	1.11401	1.08133	1.05677	1.10689	0.97610	0.91107	1.00470	1.05056
3400.0	1.11865	1.03271	1.05231	1.06246	0.86850	0.95726	0.96488	0.96354	0.92591	0.89959
3500.0	1.00000	0.99938	0.92167	0.95302	1.06142	1.04015	0.92820	0.77976	0.21722	0.58423
3600.0	0.92693	0.79179	0.82927	0.87485	0.87492	0.89919	1.03268	0.99478	0.91963	0.95504
3700.0	0.97332	0.91312	0.85560	0.47051	0.06482	0.27056	0.71155	0.84700	0.99162	0.61015
3800.0	0.47161	0.68467	0.29960	0.49424	0.46156	0.04436	0.37639	0.33651	0.65060	0.30971
3900.0	0.11621	0.48790	0.23619	0.43394	0.48433	0.10297	0.38518	0.46892	0.30590	0.97118
4000.0	1.00002									
	ZENITH SCAN STARTING AT 18.52.10 ON 9/12/73. NORMALIZING FACTOR = 1.4813E 01									
2600.0	0.00013	0.00012	0.00012	0.00012	0.00012	0.00012	0.00020	0.00014	0.00015	0.00013
2700.0	0.00013	0.00014	0.00014	0.00015	0.00014	0.00014	0.00016	0.00018	0.00015	0.00017
2800.0	0.00017	0.00018	0.00018	0.00018	0.00019	0.00019	0.00019	0.00020	0.00020	0.00021
2900.0	0.00018	0.00004	0.00023	0.00048	0.00093	0.00181	0.00218	0.00679	0.01166	0.01984
3000.0	0.02330	0.04031	0.04346	0.11323	0.14107	0.18539	0.20241	0.26876	0.32247	0.31722
3100.0	0.37320	0.19299	0.32771	0.04986	0.09073	0.10630	0.14460	0.78690	0.73657	0.77145
3200.0	0.86033	0.85248	0.80694	0.75847	0.88887	0.95754	1.16711	1.17133	1.09079	1.20304
3300.0	1.27061	1.13933	1.14093	1.07428	1.05838	1.10938	0.96559	0.91098	0.99680	1.04272
3400.0	1.10245	1.02543	1.04356	1.08090	0.85609	0.93373	0.95210	0.95300	0.91696	0.89596
3500.0	1.00000	0.99172	0.91888	0.93986	1.05491	1.02840	0.93305	0.77576	0.21081	0.57201
3600.0	0.94200	0.79702	0.83307	0.88317	0.88232	0.90367	1.04158	0.99914	0.92292	0.95816
3700.0	0.97291	0.91450	0.85279	0.34103	0.05013	0.19711	0.44519	0.82241	1.00610	0.62271
3800.0	0.40952	0.55982	0.42734	0.50255	0.45709	0.08073	0.47509	0.33082	0.63645	0.29667
3900.0	0.09078	0.14021	0.27999	0.45398	0.52424	0.16691	0.42806	0.45856	0.28269	0.93468
4000.0	0.99309									
	ZENITH SCAN STARTING AT 18.54.31 ON 9/12/73. NORMALIZING FACTOR = 1.4764E 01									
2600.0	0.00012	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	0.00014	0.00014	0.00014
2700.0	0.00021	0.00014	0.00016	0.00016	0.00015	0.00015	0.00016	0.00016	0.00016	0.00017
2800.0	0.00016	0.00017	0.00018	0.00018	0.00018	0.00018	0.00017	0.00019	0.00021	0.00022
2900.0	0.00023	0.00007	0.00024	0.00049	0.00090	0.00196	0.00224	0.00673	0.01166	0.01912
3000.0	0.02573	0.03408	0.04573	0.11198	0.13980	0.18755	0.20422	0.26099	0.31507	0.31278
3100.0	0.35990	0.32016	0.34718	0.03943	0.08162	0.09490	0.06447	0.73563	0.73963	0.76957
3200.0	0.85871	0.85518	0.80473	0.75860	0.87734	0.94443	1.14855	1.16188	1.07163	1.19325
3300.0	1.25227	1.11269	1.11959	1.08322	1.06044	1.11617	0.97866	0.91418	1.00674	1.04943
3400.0	1.11408	1.02855	1.05249	1.06037	0.87424	0.94642	0.95390	0.94992	0.91156	0.88831
3500.0	1.00000	0.99263	0.91293	0.94576	1.05104	1.02831	0.91867	0.75747	0.11917	0.58589
3600.0	0.94417	0.80893	0.83180	0.85449	0.87502	0.89302	1.03148	0.98672	0.90894	0.94696
3700.0	0.96532	0.90129	0.60874	0.19408	0.03664	0.19250	0.28520	0.62925	0.98819	0.47282
3800.0	0.26660	0.61367	0.40832	0.49543	0.54172	0.10224	0.63866	0.66647	0.64642	0.42234
3900.0	0.08881	0.13342	0.15026	0.43682	0.47169	0.12347	0.44518	0.47785	0.26728	0.92524
4000.0	0.97895									

Table VIII-22

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 19. 0.15 ON 9/12/73. NORMALIZING FACTOR = 1.3499E 01										
2600.0	0.00013	0.00014	0.00015	0.00017	0.00016	0.00020	0.00016	0.00016	0.00017	0.00015
2700.0	0.00015	0.00016	0.00016	0.00017	0.00016	0.00017	0.00019	0.00017	0.00019	0.00018
2800.0	0.00020	0.00020	0.00019	0.00019	0.00023	0.00020	0.00021	0.00029	0.00025	0.00025
2900.0	0.00028	0.00030	0.00037	0.00054	0.00089	0.00187	0.00366	0.00657	0.01141	0.01874
3000.0	0.02708	0.04362	0.06071	0.11208	0.14030	0.18875	0.20605	0.26928	0.33195	0.32829
3100.0	0.37320	0.54545	0.55194	0.60704	0.64893	0.66435	0.62392	0.80673	0.76974	0.80736
3200.0	0.89334	0.89760	0.84607	0.79989	0.93298	1.01052	1.22498	1.24941	1.15908	1.27778
3300.0	1.37062	1.21836	1.22090	1.17514	1.13502	1.16519	1.00624	0.93189	1.01878	1.06729
3400.0	1.13958	1.06058	1.05639	1.06793	0.88340	0.94470	0.95495	0.94906	0.91341	0.88944
3500.0	1.00000	0.98535	0.91366	0.93766	1.04557	1.02172	0.92583	0.77139	0.69064	0.78474
3600.0	0.94090	0.80813	0.83911	0.88876	0.89492	0.91866	1.06125	1.01712	0.93790	0.96923
3700.0	0.99001	0.91980	0.85759	0.63718	0.70015	0.75184	0.82555	0.74931	1.00656	0.84292
3800.0	0.57107	0.79716	0.65956	0.51234	0.58601	0.72710	0.68216	0.68906	0.66929	0.72994
3900.0	0.66988	0.72492	0.49591	0.44988	0.52193	0.67825	0.55213	0.56545	0.57500	0.65918
4000.0	1.03083									
ZENITH SCAN STARTING AT 19. 2. 1 ON 9/12/73. NORMALIZING FACTOR = 1.3393E 01										
2600.0	0.00014	0.00017	0.00019	0.00015	0.00019	0.00016	0.00018	0.00016	0.00016	0.00020
2700.0	0.00019	0.00017	0.00017	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00020
2800.0	0.00020	0.00023	0.00022	0.00021	0.00024	0.00023	0.00023	0.00023	0.00023	0.00025
2900.0	0.00026	0.00029	0.00036	0.00051	0.00095	0.00172	0.00351	0.00618	0.01073	0.01832
3000.0	0.02554	0.04234	0.06051	0.10823	0.13578	0.17895	0.19716	0.26047	0.31788	0.31565
3100.0	0.36840	0.52970	0.53756	0.59239	0.63539	0.65234	0.61538	0.76081	0.70677	0.73785
3200.0	0.81731	0.81598	0.76908	0.72481	0.85164	0.91296	1.12322	1.13671	1.05769	1.17340
3300.0	1.24023	1.11326	1.12925	1.09780	1.07954	1.14126	0.99018	0.93097	1.01317	1.05326
3400.0	1.10506	1.01888	1.03481	1.04198	0.85426	0.92990	0.94322	0.94946	0.91477	0.89859
3500.0	1.00000	1.01005	0.93572	0.96476	1.08305	1.05872	0.94739	0.79435	0.69758	0.82199
3600.0	0.94727	0.80416	0.84249	0.89526	0.89642	0.92054	1.05864	1.03145	0.95501	0.98417
3700.0	1.01945	0.96057	0.88502	0.77253	0.69880	0.74085	0.81855	0.87395	1.00786	0.84995
3800.0	0.82700	0.86983	0.66134	0.51498	0.58908	0.73464	0.69180	0.69874	0.67560	0.72725
3900.0	0.84348	0.91402	0.83137	0.46985	0.52603	0.82068	0.70682	0.47563	0.81918	0.97945
4000.0	0.99900									
ZENITH SCAN STARTING AT 19. 4.22 ON 9/12/73. NORMALIZING FACTOR = 1.3340E 01										
2600.0	0.00014	0.00015	0.00015	0.00015	0.00016	0.00015	0.00015	0.00017	0.00019	0.00016
2700.0	0.00016	0.00017	0.00017	0.00017	0.00017	0.00018	0.00019	0.00018	0.00020	0.00019
2800.0	0.00019	0.00020	0.00020	0.00020	0.00023	0.00021	0.00021	0.00021	0.00022	0.00022
2900.0	0.00024	0.00029	0.00040	0.00053	0.00082	0.00163	0.00333	0.00574	0.01043	0.01740
3000.0	0.02491	0.04154	0.05888	0.10900	0.13517	0.17911	0.19651	0.25525	0.31592	0.31207
3100.0	0.35494	0.52635	0.53418	0.58512	0.63177	0.64845	0.60926	0.80412	0.77412	0.80414
3200.0	0.89629	0.89829	0.84156	0.78997	0.90846	0.97562	1.17808	1.19931	1.09777	1.21443
3300.0	1.29642	1.14093	1.14837	1.12052	1.09842	1.15696	1.02449	0.95365	1.04780	1.09922
3400.0	1.17198	1.08869	1.10313	1.14506	0.91836	0.98003	0.99644	0.95198	0.91871	0.89300
3500.0	1.00000	0.99308	0.91288	0.93489	1.04463	1.02148	0.92222	0.77001	0.68867	0.78314
3600.0	0.93295	0.79882	0.82540	0.87386	0.87479	0.89921	1.03642	0.99281	0.91635	0.94560
3700.0	0.96379	0.90482	0.84788	0.77154	0.69218	0.73277	0.81065	0.87349	0.99407	0.84075
3800.0	0.81209	0.84892	0.64819	0.50142	0.57128	0.71489	0.66821	0.67464	0.65616	0.69823
3900.0	0.79553	0.84776	0.77755	0.45101	0.51310	0.78543	0.68238	0.46458	0.82392	0.97714
4000.0	1.01043									
ZENITH SCAN STARTING AT 19. 6. 8 ON 9/12/73. NORMALIZING FACTOR = 1.3388E 01										
2600.0	0.00008	0.00007	0.00007	0.00008	0.00008	0.00010	0.00013	0.00008	0.00009	0.00007
2700.0	0.00010	0.00009	0.00008	0.00009	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009
2800.0	0.00010	0.00009	0.00009	0.00011	0.00010	0.00009	0.00009	0.00011	0.00010	0.00010
2900.0	0.00011	0.00014	0.00020	0.00035	0.00067	0.00150	0.00838	0.00698	0.01042	0.01772
3000.0	0.02532	0.04120	0.05541	0.10004	0.12584	0.16844	0.18441	0.24541	0.29293	0.28914
3100.0	0.34151	0.47964	0.48886	0.54323	0.58171	0.60094	0.57916	0.74437	0.70329	0.74208
3200.0	0.82656	0.81622	0.75820	0.72299	0.83876	0.90957	1.09531	1.10774	1.03129	1.14596
3300.0	1.21232	1.08455	1.09237	1.05543	1.03731	1.07655	0.93497	0.88064	0.95911	0.99766
3400.0	1.05767	0.98043	1.00468	1.02113	0.83246	0.91978	0.94097	0.94312	0.91310	0.88996
3500.0	1.00000	0.97313	0.89701	0.92521	1.01326	0.97983	0.87342	0.73868	0.65310	0.77764
3600.0	0.89464	0.77679	0.82434	0.86922	0.87002	0.89510	1.02082	0.96846	0.88413	0.91558
3700.0	0.92428	0.86660	0.80604	0.72040	0.65593	0.69647	0.77231	0.85657	0.99096	0.83246
3800.0	0.78778	0.81377	0.59635	0.47650	0.55181	0.66717	0.63050	0.64410	0.62943	0.70104
3900.0	0.78551	0.84368	0.74446	0.44571	0.52620	0.76617	0.62910	0.47253	0.80873	0.93154
4000.0	0.95403									
ZENITH SCAN STARTING AT 19. 7.56 ON 9/12/73. NORMALIZING FACTOR = 1.2830E 01										
2600.0	0.00013	0.00013	0.00013	0.00014	0.00014	0.00015	0.00015	0.00014	0.00015	0.00016
2700.0	0.00014	0.00015	0.00018	0.00015	0.00015	0.00015	0.00017	0.00017	0.00017	0.00018
2800.0	0.00017	0.00022	0.00020	0.00018	0.00018	0.00019	0.00020	0.00021	0.00020	0.00021
2900.0	0.00021	0.00025	0.00032	0.00047	0.00075	0.00152	0.00294	0.00539	0.00957	0.01642
3000.0	0.02307	0.03838	0.05582	0.10057	0.12654	0.16758	0.18524	0.24492	0.30010	0.29876
3100.0	0.34744	0.50051	0.50984	0.55724	0.59816	0.61242	0.57630	0.74809	0.70898	0.73481
3200.0	0.81468	0.81386	0.76971	0.72376	0.84545	0.90842	1.11645	1.13618	1.05394	1.16707
3300.0	1.23532	1.09608	1.10041	1.06565	1.03429	1.08797	0.96255	0.88615	0.97717	1.02286
3400.0	1.09166	1.01054	1.03547	1.05481	0.86095	0.93608	0.95829	0.96091	0.92186	0.90483
3500.0	1.00000	0.99645	0.88651	0.91596	1.02559	1.00708	0.91151	0.76272	0.68197	0.77100
3600.0	0.93657	0.79969	0.82066	0.87431	0.87368	0.88726	1.02603	0.98546	0.90585	0.93546
3700.0	0.95655	0.89396	0.84059	0.74754	0.68983	0.73718	0.81364	0.87467	0.99790	0.86057
3800.0	0.80818	0.85074	0.64684	0.49966	0.56519	0.70753	0.66183	0.66833	0.64916	0.69562
3900.0	0.79535	0.84394	0.77575	0.44981	0.49876	0.79182	0.69827	0.47594	0.85157	1.01443
4000.0	1.04766									
ZENITH SCAN STARTING AT 19.10.17 ON 9/12/73. NORMALIZING FACTOR = 1.2493E 01										
2600.0	0.00015	0.00019	0.00015	0.00017	0.00020	0.00026	0.00018	0.00017	0.00017	0.00018
2700.0	0.00018	0.00024	0.00019	0.00020	0.00021	0.00021	0.00021	0.00020	0.00021	0.00021
2800.0	0.00021	0.00022	0.00022	0.00022	0.00023	0.00023	0.00025	0.00024	0.00024	0.00026
2900.0	0.00027	0.00029	0.00036	0.00048	0.00078	0.00157	0.00308	0.00545	0.00966	0.01597
3000.0	0.02357	0.03795	0.05419	0.10207	0.12879	0.17394	0.19079	0.24773	0.30708	0.30592
3100.0	0.34394	0.50776	0.51746	0.56948	0.60949	0.63077	0.58811	0.75713	0.73531	0.76687
3200.0	0.84356	0.86086	0.81067	0.76924	0.89281	0.96423	1.14909	1.15105	1.06768	1.16992
3300.0	1.25420	1.11085	1.11240	1.07891	1.05519	1.11050	0.97517	0.91084	0.99529	1.04414
3400.0	1.10711	1.03379	1.04665	1.06662	0.87331	0.93224	0.95061	0.94881	0.91116	0.89114
3500.0	1.00000	0.99797	0.91848	0.94065	1.05102	1.03429	0.92960	0.78321	0.69452	0.78595
3600.0	0.93659	0.80370	0.82984	0.88221	0.87870	0.90218	1.04247	1.00208	0.92598	0.95406
3700.0	0.98028	0.91180	0.85983	0.77543	0.70181	0.74734	0.82561	0.88744	1.01020	0.86948
3800.0	0.82561	0.84152	0.62832	0.50374	0.56232	0.70041	0.65941	0.67272	0.65177	0.70413
3900.0	0.79914	0.84928	0.76869	0.45697	0.50668	0.77573	0.66823	0.47503	0.81257	0.95651
4000.0	0.98594									

Table VIII-23

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 19.12. 3 ON 9/12/73, NORMALIZING FACTOR = 1.2257E 01									
2600.0	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00009	0.00008	0.00008	0.00008
2700.0	0.00008	0.00008	0.00010	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010	0.00010
2800.0	0.00010	0.00010	0.00010	0.00013	0.00010	0.00010	0.00012	0.00012	0.00010	0.00012
2900.0	0.00012	0.00014	0.00020	0.00040	0.00066	0.00139	0.00519	0.00673	0.01040	0.01707
3000.0	0.02520	0.04723	0.05674	0.09897	0.12465	0.16517	0.18226	0.24561	0.29405	0.29195
3100.0	0.34652	0.49087	0.50007	0.55345	0.59380	0.61074	0.58815	0.75390	0.70706	0.74369
3200.0	0.82810	0.81994	0.77406	0.73203	0.85692	0.92427	1.12522	1.12560	1.04698	1.16312
3300.0	1.21666	1.08949	1.09916	1.06188	1.04675	1.10016	0.95691	0.90299	0.99115	1.03492
3400.0	1.08977	1.00706	1.03181	1.03597	0.84877	0.93291	0.94417	0.94304	0.90879	0.89300
3500.0	1.00000	0.98658	0.91860	0.94445	1.05120	1.02477	0.90878	0.77632	0.68142	0.79330
3600.0	0.93330	0.79677	0.83718	0.88238	0.88626	0.91952	1.03865	0.99543	0.92366	0.94719
3700.0	0.96280	0.90922	0.84623	0.75251	0.68037	0.72957	0.80265	0.86298	0.98899	0.83765
3800.0	0.80251	0.84106	0.62480	0.49512	0.56036	0.68775	0.64930	0.66099	0.63827	0.69685
3900.0	0.78073	0.83119	0.73898	0.44700	0.52478	0.76084	0.64160	0.49188	0.80958	0.94667
4000.0	0.96977									
	ZENITH SCAN STARTING AT 19.14.24 ON 9/12/73, NORMALIZING FACTOR = 1.1679E 01									
2600.0	0.00014	0.00016	0.00014	0.00014	0.00014	0.00017	0.00015	0.00015	0.00015	0.00017
2700.0	0.00019	0.00016	0.00016	0.00017	0.00018	0.00019	0.00024	0.00018	0.00020	0.00020
2800.0	0.00019	0.00020	0.00024	0.00030	0.00024	0.00022	0.00022	0.00024	0.00023	0.00024
2900.0	0.00025	0.00027	0.00035	0.00047	0.00077	0.00147	0.00302	0.00521	0.00949	0.01568
3000.0	0.02290	0.03866	0.05546	0.10335	0.12912	0.17095	0.18899	0.24639	0.30544	0.30277
3100.0	0.34731	0.50773	0.51682	0.56302	0.60753	0.62337	0.58536	0.76812	0.73750	0.76315
3200.0	0.84756	0.85339	0.80719	0.75551	0.87706	0.94391	1.15148	1.17804	1.08667	1.20232
3300.0	1.28749	1.10472	1.11239	1.08566	1.05874	1.11256	0.98472	0.91269	0.99721	1.04911
3400.0	1.11871	1.03905	1.04869	1.07378	0.87187	0.92964	0.95797	0.96053	0.92166	0.90502
3500.0	1.00000	1.00199	0.93247	0.94362	1.06372	1.04781	0.95138	0.79078	0.70070	0.78716
3600.0	0.96332	0.81934	0.83769	0.89708	0.89002	0.90814	1.05011	1.00874	0.93248	0.95649
3700.0	0.98577	0.91859	0.86784	0.77752	0.70980	0.75122	0.83505	0.89195	1.02610	0.87781
3800.0	0.83052	0.87799	0.67065	0.51842	0.58193	0.73056	0.67232	0.67751	0.66360	0.71091
3900.0	0.80817	0.85379	0.78902	0.46049	0.51094	0.78145	0.69805	0.48368	0.80827	0.97416
4000.0	1.00104									
	ZENITH SCAN STARTING AT 19.16.10 ON 9/12/73, NORMALIZING FACTOR = 1.0949E 01									
2600.0	0.00017	0.00017	0.00016	0.00019	0.00017	0.00017	0.00019	0.00017	0.00017	0.00018
2700.0	0.00018	0.00018	0.00020	0.00019	0.00020	0.00019	0.00020	0.00020	0.00021	0.00020
2800.0	0.00021	0.00022	0.00022	0.00030	0.00023	0.00022	0.00023	0.00024	0.00024	0.00024
2900.0	0.00026	0.00028	0.00035	0.00047	0.00080	0.00158	0.00312	0.00566	0.00981	0.01675
3000.0	0.02426	0.03934	0.05807	0.10452	0.13500	0.17969	0.19641	0.26134	0.31931	0.31808
3100.0	0.35718	0.51676	0.52721	0.57820	0.62063	0.64217	0.60083	0.77756	0.75460	0.79232
3200.0	0.87725	0.89622	0.84481	0.79547	0.92301	0.99155	1.19000	1.20387	1.10777	1.19757
3300.0	1.28265	1.13962	1.14276	1.11150	1.09222	1.16094	1.02430	0.96557	1.06463	1.12107
3400.0	1.18706	1.10830	1.11714	1.13106	0.93360	0.97076	0.98455	0.97525	0.93015	0.90616
3500.0	1.00000	1.00546	0.92345	0.93757	1.05298	1.03977	0.93875	0.79484	0.70876	0.81756
3600.0	0.96315	0.83654	0.88508	0.94682	0.94190	0.95422	1.09344	1.04878	0.95758	0.97015
3700.0	1.00241	0.92814	0.87262	0.76562	0.70090	0.72927	0.81999	0.87029	1.01328	0.86615
3800.0	0.82451	0.87997	0.66939	0.52422	0.57532	0.72692	0.68718	0.70606	0.68493	0.73510
3900.0	0.83271	0.88686	0.80827	0.49625	0.52681	0.80055	0.71494	0.48482	0.82558	0.99828
4000.0	1.02606									
	ZENITH SCAN STARTING AT 19.17.56 ON 9/12/73, NORMALIZING FACTOR = 1.1079E 01									
2600.0	0.00018	0.00018	0.00017	0.00024	0.00019	0.00017	0.00018	0.00020	0.00017	0.00018
2700.0	0.00018	0.00019	0.00018	0.00018	0.00020	0.00021	0.00020	0.00023	0.00020	0.00021
2800.0	0.00025	0.00026	0.00023	0.00024	0.00024	0.00024	0.00025	0.00028	0.00026	0.00027
2900.0	0.00029	0.00034	0.00037	0.00052	0.00081	0.00153	0.00314	0.00538	0.00946	0.01628
3000.0	0.02295	0.03830	0.05511	0.10062	0.12948	0.17111	0.19016	0.25167	0.30767	0.30790
3100.0	0.35457	0.50856	0.51981	0.57030	0.61324	0.63138	0.59763	0.76763	0.73227	0.76346
3200.0	0.84725	0.85908	0.81008	0.76294	0.89855	0.95699	1.17445	1.19285	1.10469	1.20967
3300.0	1.27903	1.13666	1.14150	1.11062	1.07794	1.13498	0.99398	0.92338	1.01480	1.06487
3400.0	1.13297	1.05112	1.05973	1.07811	0.87385	0.93217	0.96157	0.96014	0.92004	0.90503
3500.0	1.00000	1.00561	0.94104	0.95386	1.07405	1.06084	0.95799	0.79760	0.70436	0.79618
3600.0	0.96445	0.81492	0.82916	0.88574	0.88523	0.90750	1.04189	1.00653	0.93814	0.95715
3700.0	0.99814	0.94017	0.88894	0.76908	0.70838	0.74423	0.82774	0.87647	0.99659	0.86148
3800.0	0.80808	0.84958	0.65410	0.50633	0.57245	0.72134	0.68433	0.69574	0.67706	0.72755
3900.0	0.82906	0.81601	0.75952	0.45685	0.49406	0.76048	0.68667	0.46583	0.79368	0.96745
4000.0	0.99773									
	ZENITH SCAN STARTING AT 19.22. 5 ON 9/12/73, NORMALIZING FACTOR = 1.0922E 01									
2600.0	0.00017	0.00017	0.00017	0.00021	0.00018	0.00018	0.00018	0.00020	0.00023	0.00019
2700.0	0.00019	0.00019	0.00020	0.00020	0.00021	0.00025	0.00021	0.00021	0.00021	0.00022
2800.0	0.00023	0.00021	0.00024	0.00024	0.00034	0.00032	0.00027	0.00027	0.00027	0.00028
2900.0	0.00034	0.00032	0.00039	0.00049	0.00080	0.00151	0.00301	0.00542	0.00925	0.01588
3000.0	0.02303	0.03743	0.05511	0.10012	0.12919	0.17365	0.19109	0.25250	0.30985	0.31198
3100.0	0.35618	0.51360	0.52931	0.58345	0.62959	0.65030	0.61446	0.78119	0.75148	0.78343
3200.0	0.86181	0.87777	0.82459	0.77539	0.90593	0.97565	1.17951	1.19818	1.11074	1.20637
3300.0	1.29057	1.14701	1.15102	1.11770	1.09153	1.15503	1.01442	0.94562	1.03922	1.09028
3400.0	1.14798	1.04628	1.06273	1.07759	0.88929	0.95139	0.97399	0.97300	0.92713	0.90807
3500.0	1.00000	1.00886	0.93698	0.94441	1.06777	1.04602	0.94893	0.78984	0.69555	0.79075
3600.0	0.96611	0.81624	0.84044	0.89649	0.89548	0.91283	1.05529	1.01711	0.94638	0.96766
3700.0	0.99489	0.93264	0.88146	0.76785	0.71081	0.74852	0.83625	0.89190	1.01658	0.88299
3800.0	0.82441	0.87358	0.66984	0.52229	0.58262	0.72736	0.68398	0.70155	0.67899	0.72146
3900.0	0.82919	0.88075	0.80717	0.47873	0.52818	0.78855	0.61193	0.47513	0.80274	0.97833
4000.0	1.00779									
	ZENITH SCAN STARTING AT 19.24.26 ON 9/12/73, NORMALIZING FACTOR = 1.1226E 01									
2600.0	0.00025	0.00017	0.00017	0.00024	0.00018	0.00018	0.00018	0.00019	0.00019	0.00024
2700.0	0.00021	0.00020	0.00020	0.00027	0.00033	0.00020	0.00021	0.00021	0.00022	0.00022
2800.0	0.00022	0.00022	0.00023	0.00024	0.00024	0.00023	0.00024	0.00024	0.00025	0.00033
2900.0	0.00027	0.00030	0.00036	0.00049	0.00078	0.00147	0.00292	0.00498	0.00903	0.01481
3000.0	0.02190	0.03658	0.05290	0.09892	0.12434	0.16623	0.18327	0.23475	0.29465	0.29433
3100.0	0.33041	0.49162	0.50253	0.54951	0.59336	0.59604	0.55749	0.73464	0.71085	0.73415
3200.0	0.81568	0.82734	0.77604	0.72605	0.84450	0.91291	1.10533	1.14128	1.05245	1.15999
3300.0	1.25291	1.10581	1.10979	1.08380	1.05470	1.10719	0.98272	0.90738	0.99027	1.03646
3400.0	1.10165	1.02206	1.03215	1.05901	0.86246	0.91568	0.94780	0.95589	0.91923	0.89773
3500.0	1.00000	1.00441	0.93467	0.94545	1.05116	1.03242	0.92833	0.77063	0.69390	0.77730
3600.0	0.94002	0.81042	0.84011	0.90377	0.90246	0.92229	1.07572	1.04485	0.96450	0.98863
3700.0	1.02215	0.96382	0.90012	0.81259	0.73511	0.78777	0.88913	0.95440	1.10324	0.96495
3800.0	0.90289	0.96442	0.72055	0.55972	0.60972	0.75814	0.69432	0.70042	0.67095	0.71448
3900.0	0.81265	0.86292	0.78825	0.47174	0.51533	0.78081	0.68968	0.48604	0.80648	0.95789
4000.0	0.98484									

Table VIII-24

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
				SOLAR SCAN STARTING AT 19.26.12 ON 9/12/73, NORMALIZING FACTOR = 4.3734E 00						
2600.0	0.00013	0.00013	0.00013	0.00014	0.00014	0.00013	0.00013	0.00020	0.00018	0.00014
2700.0	0.00015	0.00016	0.00014	0.00014	0.00016	0.00015	0.00014	0.00015	0.00017	0.00015
2800.0	0.00017	0.00015	0.00017	0.00015	0.00016	0.00016	0.00016	0.00017	0.00016	0.00017
2900.0	0.00018	0.00016	0.00016	0.00016	0.00018	0.00017	0.00017	0.00017	0.00018	0.00017
3000.0	0.00017	0.00018	0.00019	0.00019	0.00019	0.00020	0.00019	0.00021	0.00022	0.00028
3100.0	0.00025	0.00030	0.00041	0.00063	0.00125	0.00235	0.00414	0.00730	0.01211	0.01782
3200.0	0.02923	0.04254	0.08378	0.10232	0.13944	0.15394	0.20273	0.25177	0.25132	0.28894
3300.0	0.42171	0.43550	0.48265	0.51842	0.53821	0.50837	0.65887	0.63383	0.67020	0.74308
3400.0	0.75164	0.70880	0.67324	0.78213	0.84543	1.01892	1.03595	0.95991	1.05127	1.12238
3500.0	1.00000	1.00342	0.97144	0.95372	1.00412	0.87550	0.82443	0.90224	0.94334	0.99859
3600.0	0.93221	0.95358	0.96563	0.79884	0.83590	0.84635	0.84985	0.81516	0.79856	0.88349
3700.0	0.88254	0.81613	0.83589	0.93571	0.91211	0.81794	0.68629	0.60353	0.71526	0.82923
3800.0	0.70429	0.74038	0.77924	0.77743	0.79916	0.91055	0.87544	0.81293	0.83281	0.84934
3900.0	0.80255	0.74919	0.66863	0.60768	0.64344	0.71108	0.76575	0.86387	0.74404	0.70734
4000.0	0.74522									
				ZENITH SCAN STARTING AT 19.30.14 ON 9/12/73, NORMALIZING FACTOR = 1.0149E 01						
2600.0	0.00019	0.00018	0.00018	0.00019	0.00020	0.00019	0.00018	0.00018	0.00018	0.00019
2700.0	0.00018	0.00019	0.00019	0.00020	0.00020	0.00022	0.00021	0.00021	0.00027	0.00025
2800.0	0.00022	0.00022	0.00023	0.00023	0.00023	0.00023	0.00023	0.00023	0.00025	0.00025
2900.0	0.00026	0.00032	0.00035	0.00050	0.00081	0.00152	0.00301	0.00529	0.00925	0.01532
3000.0	0.02239	0.03608	0.05220	0.09860	0.12700	0.17214	0.18896	0.24754	0.30789	0.31192
3100.0	0.35046	0.51439	0.53436	0.58826	0.62965	0.65080	0.60681	0.77717	0.75291	0.78148
3200.0	0.85856	0.87948	0.82444	0.78018	0.90316	0.97420	1.17599	1.21478	1.12124	1.21742
3300.0	1.31943	1.16395	1.16034	1.12516	1.09078	1.14398	1.01058	0.93580	1.01767	1.06986
3400.0	1.13661	1.06842	1.08082	1.11078	0.92473	0.97568	1.00409	1.01108	0.97540	0.95115
3500.0	1.00000	1.02982	0.95689	0.98546	1.09647	1.08421	0.98269	0.82184	0.72758	0.82914
3600.0	1.00710	0.84753	0.87716	0.93234	0.92532	0.94105	1.08061	1.04375	0.96810	0.98262
3700.0	1.02200	0.96185	0.90577	0.81069	0.72784	0.76116	0.85360	0.90573	1.03410	0.89747
3800.0	0.83035	0.88541	0.87583	0.52159	0.57838	0.73312	0.68656	0.69872	0.67993	0.73049
3900.0	0.83331	0.88791	0.82360	0.50774	0.53287	0.81530	0.74583	0.50222	0.83231	1.00963
4000.0	1.04334									
				ZENITH SCAN STARTING AT 19.31.59 ON 9/12/73, NORMALIZING FACTOR = 1.0959E 01						
2600.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00001
2700.0	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
2800.0	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	0.00002
2900.0	0.00002	0.00002	0.00003	0.00013	0.00075	0.00141	0.00272	0.00482	0.00830	0.01413
3000.0	0.02036	0.03334	0.04875	0.09013	0.11747	0.15543	0.17213	0.22814	0.28012	0.28290
3100.0	0.32236	0.46967	0.48842	0.53986	0.58478	0.61032	0.57876	0.73919	0.71702	0.75319
3200.0	0.82703	0.85106	0.80123	0.75567	0.88015	0.92622	1.13761	1.16066	1.07721	1.17179
3300.0	1.25466	1.11700	1.11943	1.08733	1.05501	1.11161	0.98461	0.90367	0.99020	1.03728
3400.0	1.09994	1.02652	1.04442	1.06216	0.88016	0.94281	0.96857	0.97039	0.92627	0.90998
3500.0	1.00000	1.00879	0.93345	0.94233	1.05694	1.04219	0.94368	0.79348	0.70719	0.78776
3600.0	0.95647	0.82523	0.84733	0.90568	0.90582	0.92391	1.06513	1.02657	0.94668	0.96790
3700.0	0.99371	0.92879	0.87907	0.80039	0.71167	0.74147	0.83761	0.89603	1.02563	0.88103
3800.0	0.82046	0.85574	0.66808	0.50956	0.56574	0.71683	0.67301	0.68601	0.66488	0.71493
3900.0	0.81583	0.86527	0.79766	0.48843	0.51249	0.77600	0.70790	0.47880	0.79533	0.96511
4000.0	0.99582									
				ZENITH SCAN STARTING AT 19.34.23 ON 9/12/73, NORMALIZING FACTOR = 1.1387E-01						
2600.0	0.00016	0.00016	0.00017	0.00016	0.00017	0.00017	0.00017	0.00017	0.00017	0.00018
2700.0	0.00019	0.00018	0.00019	0.00019	0.00019	0.00019	0.00020	0.00019	0.00020	0.00020
2800.0	0.00021	0.00021	0.00024	0.00021	0.00021	0.00022	0.00023	0.00023	0.00024	0.00023
2900.0	0.00025	0.00028	0.00031	0.00046	0.00071	0.00136	0.00249	0.00428	0.00611	0.00635
3000.0	0.00648	0.00660	0.00685	0.00544	0.11222	0.14972	0.16589	0.21383	0.27039	0.27145
3100.0	0.30340	0.45560	0.46805	0.51517	0.55700	0.57708	0.54020	0.70253	0.68817	0.71522
3200.0	0.79221	0.80986	0.76193	0.71838	0.82975	0.89115	0.98639	0.99894	0.98000	1.00444
3300.0	1.02204	1.00256	1.00859	1.00569	0.99950	1.01691	0.96611	0.91285	0.97475	1.00367
3400.0	1.02803	1.00122	1.00646	1.02037	0.87756	0.92406	0.95798	0.96443	0.93317	0.91821
3500.0	1.00000	1.01539	0.95250	0.95987	1.0 .319	1.00082	0.91803	0.77330	0.68410	0.78255
3600.0	0.94558	0.79997	0.83105	0.88580	0.88463	0.90187	1.03566	1.00985	0.93816	0.99475
3700.0	1.12387	1.17523	1.11284	0.92011	0.74 44	0.82807	1.08946	1.33414	2.03059	1.37597
3800.0	1.06642	1.38055	0.70685	0.52315	0.56205	0.75282	0.68225	0.69615	0.67247	0.73780
3900.0	0.94547	1.14190	0.91750	0.49202	0.50564	0.89125	0.77387	0.47465	1.05689	1.85628
4000.0	2.15298									
				ZENITH SCAN STARTING AT 19.36. 9 ON 9/12/73, NORMALIZING FACTOR = 8.4251E-03						
2600.0	0.00111	0.00114	0.00117	0.00156	0.00131	0.00124	0.00139	0.00135	0.00118	0.00121
2700.0	0.00119	0.00138	0.00150	0.00176	0.00239	0.00144	0.00129	0.00153	0.00140	0.00156
2800.0	0.00139	0.00148	0.00207	0.00153	0.00145	0.00194	0.00164	0.00181	0.00180	0.00169
2900.0	0.00192	0.00214	0.00275	0.00466	0.00778	0.01584	0.07743	0.13094	0.10890	0.19062
3000.0	0.26830	0.43597	0.62972	0.83168	0.85063	0.86334	0.86500	0.87508	0.88050	0.87794
3100.0	0.88089	0.89341	0.89369	0.89661	0.89859	0.89908	0.89637	0.90400	0.90144	0.90271
3200.0	0.90556	0.90844	0.90831	0.90867	0.91724	0.92221	0.93214	0.93505	0.93376	0.93981
3300.0	0.94482	0.94321	0.94655	0.94834	0.95082	0.95625	0.95407	0.95525	0.96180	0.96669
3400.0	0.97256	0.97275	0.97673	0.98034	0.97592	0.98211	0.98594	0.98906	0.99065	0.99271
3500.0	1.00000	1.00404	1.00501	1.01009	1.01856	1.02124	1.02123	1.01698	1.01672	1.02613
3600.0	1.03837	1.03655	1.04409	1.05263	1.05804	1.06493	1.07641	1.08044	1.08247	1.08951
3700.0	1.09560	1.09726	1.09813	1.09720	1.09794	1.10435	1.11285	1.12110	1.13132	1.12776
3800.0	1.12956	1.13626	1.12839	1.12188	1.13050	1.14321	1.14966	1.15498	1.15795	1.16690
3900.0	1.17721	1.18750	1.18983	1.17085	1.18386	1.21233	1.21124	1.20346	1.23651	1.25234
4000.0	1.26132									
				ZENITH SCAN STARTING AT 19.37.55 ON 9/12/73, NORMALIZING FACTOR = 1.0690E-01						
2600.0	0.00014	0.00015	0.00015	0.00016	0.00015	0.00016	0.00016	0.00016	0.00016	0.00016
2700.0	0.00017	0.00016	0.00017	0.00019	0.00018	0.00017	0.00018	0.00018	0.00018	0.00019
2800.0	0.00019	0.00021	0.00019	0.00021	0.00021	0.00022	0.00021	0.00021	0.00021	0.00021
2900.0	0.00022	0.00024	0.00029	0.00041	0.00065	0.00126	0.00240	0.00407	0.00638	0.00669
3000.0	0.00682	0.00696	0.00723	0.07946	0.11133	0.14957	0.16731	0.21827	0.27287	0.27437
3100.0	0.31435	0.46148	0.47614	0.52248	0.56734	0.58670	0.55403	0.72652	0.70473	0.73245
3200.0	0.81499	0.82691	0.78204	0.73528	0.85320	0.91621	1.03513	1.04599	1.02132	1.05190
3300.0	1.06862	1.04206	1.04572	1.03591	1.02257	1.05161	0.97382	0.90254	0.98207	1.02252
3400.0	1.06082	1.01382	1.02688	1.04490	0.86919	0.93148	0.95569	0.96090	0.92299	0.90603
3500.0	1.00000	1.00826	0.94205	0.95433	1.06319	1.05458	0.97064	0.81609	0.72968	0.79103
3600.0	0.94220	0.82750	0.85356	0.90878	0.90957	0.92996	1.06584	1.03154	0.95401	0.98179
3700.0	1.02150	0.95175	0.90495	0.81547	0.72629	0.74763	0.84628	0.90156	1.03827	0.88467
3800.0	0.83379	0.89146	0.67338	0.52768	0.57639	0.72573	0.68308	0.69938	0.67711	0.71650
3900.0	0.82358	0.87146	0.81000	0.48116	0.50427	0.80148	0.70329	0.47305	0.83385	0.99155
4000.0	1.02749									

Table VIII-25

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 19.40.16 ON 9/12/73, NORMALIZING FACTOR = 9.8745E-02										
2600.0	0.00016	0.00015	0.00016	0.00016	0.00017	0.00016	0.00016	0.00017	0.00017	0.00018
2700.0	0.00020	0.00019	0.00018	0.00019	0.00024	0.00020	0.00020	0.00019	0.00022	0.00032
2800.0	0.00023	0.00022	0.00022	0.00022	0.00022	0.00023	0.00023	0.00024	0.00024	0.00026
2900.0	0.00027	0.00028	0.00033	0.00046	0.00071	0.00132	0.00252	0.00443	0.00679	0.00720
3000.0	0.00735	0.00749	0.00759	0.05901	0.11745	0.15722	0.17386	0.22514	0.28138	0.28415
3100.0	0.31775	0.47063	0.48686	0.53706	0.57936	0.60030	0.56253	0.72771	0.71535	0.74628
3200.0	0.82659	0.84828	0.79627	0.75297	0.87208	0.93928	1.08753	1.10899	1.06520	1.10907
3300.0	1.14227	1.09937	1.10619	1.09109	1.05049	1.09549	0.99023	0.92271	1.00114	1.04929
3400.0	1.10192	1.04288	1.05177	1.07211	0.89643	0.94168	0.96456	0.96598	0.92938	0.90971
3500.0	1.00000	1.02264	0.94724	0.98151	1.07733	1.06307	0.96257	0.80816	0.71451	0.81332
3600.0	0.98756	0.83791	0.87586	0.93454	0.93255	0.95459	1.09198	1.06202	0.98435	0.99855
3700.0	1.04330	0.97593	0.92548	0.82624	0.73822	0.77065	0.86300	0.91250	1.05278	0.91616
3800.0	0.84750	0.90390	0.69408	0.54096	0.59590	0.74518	0.70573	0.71940	0.70036	0.73192
3900.0	0.79374	0.88856	0.81332	0.50516	0.52823	0.80731	0.73734	0.49299	0.83712	1.01693
4000.0	1.05247									
ZENITH SCAN STARTING AT 19.42. 1 ON 9/12/73, NORMALIZING FACTOR = 9.0962E-02										
2600.0	0.00021	0.00009	0.00010	0.00010	0.00010	0.00010	0.00011	0.00009	0.00010	0.00010
2700.0	0.00014	0.00010	0.00010	0.00010	0.00013	0.00011	0.00010	0.00013	0.00011	0.00011
2800.0	0.00011	0.00011	0.00011	0.00014	0.00012	0.00011	0.00012	0.00014	0.00014	0.00013
2900.0	0.00014	0.00017	0.00023	0.00038	0.00065	0.00131	0.00415	0.01260	0.00906	0.01537
3000.0	0.02140	0.03605	0.05214	0.09312	0.11956	0.15903	0.17568	0.23667	0.28558	0.28792
3100.0	0.34006	0.48154	0.49493	0.54834	0.59111	0.61190	0.58793	0.75891	0.72074	0.76016
3200.0	0.86389	0.84560	0.80194	0.76039	0.89339	0.94002	1.00270	1.00624	0.99332	1.01342
3300.0	1.02303	1.00817	1.01198	1.00565	1.00334	1.01987	0.96368	0.92737	0.98883	1.01059
3400.0	1.03012	1.00522	1.01748	1.02108	0.88516	0.95287	0.96650	0.96465	0.93283	0.91637
3500.0	1.00000	0.99889	0.93981	0.96028	1.04922	1.03616	0.95617	0.79983	0.70877	0.82232
3600.0	0.97797	0.83765	0.87532	0.91893	0.90318	0.94900	1.07856	1.04309	0.97018	1.00041
3700.0	1.02168	0.96755	0.89900	0.79970	0.72712	0.77649	0.84965	0.91742	1.03167	0.87145
3800.0	0.83918	0.87205	0.66736	0.51512	0.58342	0.72973	0.68762	0.69432	0.67201	0.72458
3900.0	0.82000	0.86675	0.78861	0.48146	0.54403	0.79834	0.67811	0.50655	0.84689	0.99165
4000.0	1.02238									
ZENITH SCAN STARTING AT 19.44.22 ON 9/12/73, NORMALIZING FACTOR = 8.3011E-03										
2600.0	0.00084	0.00085	0.00123	0.00101	0.00138	0.00094	0.00087	0.00095	0.00085	0.00092
2700.0	0.00102	0.00092	0.00109	0.00116	0.00102	0.00114	0.00098	0.00097	0.00105	0.00098
2800.0	0.00098	0.00105	0.00111	0.00173	0.00189	0.00121	0.00114	0.00122	0.00118	0.00154
2900.0	0.00146	0.00174	0.00223	0.00372	0.00625	0.01420	0.03870	0.10424	0.09787	0.16268
3000.0	0.23974	0.38217	0.55538	0.82438	0.84593	0.86183	0.86394	0.87360	0.88022	0.87734
3100.0	0.88018	0.89389	0.89376	0.89644	0.89842	0.89862	0.89555	0.90489	0.90220	0.90293
3200.0	0.90638	0.90889	0.90886	0.90863	0.91699	0.92193	0.93206	0.93511	0.93363	0.94064
3300.0	0.94495	0.94292	0.94647	0.94858	0.95074	0.95599	0.95434	0.95496	0.96160	0.96646
3400.0	0.97252	0.97248	0.97646	0.98020	0.97549	0.98169	0.98570	0.98865	0.99016	0.99254
3500.0	1.00000	1.00389	1.00473	1.00991	1.01814	1.02095	1.02083	1.01710	1.01539	1.02590
3600.0	1.03758	1.03555	1.04335	1.05181	1.05738	1.06638	1.07541	1.07960	1.08188	1.08872
3700.0	1.09494	1.09667	1.09765	1.09631	1.09639	1.10300	1.11205	1.11958	1.13068	1.12596
3800.0	1.12839	1.13546	1.12652	1.12019	1.13022	1.14580	1.14744	1.15318	1.15602	1.16463
3900.0	1.17545	1.18538	1.18742	1.16744	1.18562	1.20906	1.20927	1.19794	1.23326	1.25013
4000.0	1.25895									
ZENITH SCAN STARTING AT 19.46. 8 ON 9/12/73, NORMALIZING FACTOR = 9.0432E-02										
2600.0	0.00013	0.00015	0.00013	0.00014	0.00014	0.00015	0.00014	0.00015	0.00015	0.00015
2700.0	0.00015	0.00017	0.00015	0.00016	0.00015	0.00016	0.00017	0.00019	0.00017	0.00017
2800.0	0.00018	0.00021	0.00019	0.00018	0.00020	0.00020	0.00019	0.00018	0.00020	0.00021
2900.0	0.00023	0.00024	0.00032	0.00042	0.00062	0.00123	0.00244	0.00425	0.00704	0.00775
3000.0	0.00793	0.00809	0.00820	0.00840	0.08174	0.15643	0.17229	0.22457	0.27845	0.28241
3100.0	0.31968	0.46594	0.48400	0.53102	0.55811	0.58855	0.55692	0.71479	0.69442	0.73016
3200.0	0.80491	0.83050	0.78121	0.74169	0.86667	0.93517	1.11808	1.14426	1.07345	1.14594
3300.0	1.20335	1.11692	1.12297	1.09329	1.06451	1.11689	0.98647	0.91729	0.99578	1.04501
3400.0	1.10550	1.03658	1.04393	1.06686	0.88830	0.93124	0.95574	0.95860	0.92279	0.90361
3500.0	1.00000	1.01665	0.94158	0.95844	1.07614	1.06326	0.96052	0.80678	0.71587	0.80685
3600.0	0.99262	0.84003	0.86842	0.93548	0.93661	0.96544	1.10467	1.07054	0.98914	0.98654
3700.0	1.03140	0.96766	0.91588	0.81844	0.73318	0.77272	0.86024	0.91305	1.04542	0.90919
3800.0	0.84696	0.89957	0.68930	0.53845	0.59446	0.74546	0.69679	0.71101	0.68748	0.73871
3900.0	0.83891	0.88852	0.81346	0.49879	0.53644	0.80409	0.72912	0.51268	0.83903	1.01543
4000.0	1.05023									
ZENITH SCAN STARTING AT 19.47.57 ON 9/12/73, NORMALIZING FACTOR = 8.5699E-02										
2600.0	0.00014	0.00016	0.00015	0.00020	0.00016	0.00015	0.00015	0.00015	0.00016	0.00015
2700.0	0.00016	0.00023	0.00015	0.00017	0.00016	0.00018	0.00018	0.00021	0.00019	0.00017
2800.0	0.00018	0.00018	0.00018	0.00019	0.00018	0.00018	0.00019	0.00022	0.00029	0.00025
2900.0	0.00027	0.00026	0.00030	0.00042	0.00068	0.00131	0.00249	0.00425	0.00738	0.00813
3000.0	0.00833	0.00852	0.00863	0.00885	0.06509	0.15795	0.17526	0.23052	0.28450	0.28612
3100.0	0.33093	0.47909	0.49346	0.54106	0.58576	0.60662	0.57500	0.74683	0.71904	0.75114
3200.0	0.83305	0.84367	0.79781	0.74892	0.88005	0.93899	1.14823	1.16626	1.08296	1.17583
3300.0	1.23344	1.12499	1.13053	1.09780	1.06803	1.12766	0.99889	0.92155	1.01204	1.05862
3400.0	1.12063	1.04695	1.06651	1.07636	0.86366	0.93383	0.96142	0.96237	0.92111	0.90721
3500.0	1.00000	1.00596	0.93595	0.94605	1.06606	1.05159	0.95932	0.80109	0.71794	0.79599
3600.0	0.97164	0.83494	0.85333	0.91102	0.91315	0.93145	1.08341	1.06302	0.96981	0.99177
3700.0	1.01980	0.95213	0.90124	0.81448	0.73247	0.76997	0.85531	0.90944	1.04167	0.88965
3800.0	0.84274	0.88898	0.68747	0.52941	0.59027	0.74053	0.69430	0.70403	0.68110	0.72497
3900.0	0.82728	0.87886	0.80827	0.48259	0.53496	0.80371	0.70846	0.49914	0.84153	1.00208
4000.0	0.98320									
ZENITH SCAN STARTING AT 19.50.18 ON 9/12/73, NORMALIZING FACTOR = 8.6849E-02										
2600.0	0.00015	0.00014	0.00017	0.00025	0.00016	0.00022	0.00017	0.00016	0.00016	0.00017
2700.0	0.00017	0.00016	0.00016	0.00017	0.00018	0.00017	0.00018	0.00019	0.00019	0.00019
2800.0	0.00024	0.00018	0.00020	0.00020	0.00020	0.00021	0.00025	0.00021	0.00021	0.00023
2900.0	0.00022	0.00025	0.00033	0.00045	0.00065	0.00125	0.00243	0.00425	0.00718	0.00800
3000.0	0.00820	0.00838	0.00850	0.00872	0.05436	0.15741	0.17485	0.22543	0.28287	0.28353
3100.0	0.32007	0.47766	0.48890	0.53998	0.58409	0.60539	0.56827	0.74154	0.71210	0.73683
3200.0	0.82353	0.84181	0.79252	0.74994	0.86669	0.93391	1.12356	1.15476	1.06759	1.15580
3300.0	1.22651	1.11027	1.11427	1.08649	1.05902	1.10719	0.98224	0.91282	0.99289	1.03742
3400.0	1.10473	1.03086	1.04051	1.06186	0.87463	0.92449	0.95062	0.95487	0.91647	0.89825
3500.0	1.00000	1.00804	0.93387	0.95133	1.06350	1.05195	0.95130	0.80303	0.71489	0.81423
3600.0	0.96803	0.83335	0.86125	0.94192	0.92168	0.94220	1.08167	1.04825	0.96945	0.99882
3700.0	1.03298	0.96497	0.90789	0.81739	0.73955	0.74994	0.84072	0.89078	1.02876	0.88485
3800.0	0.82496	0.88115	0.66797	0.52754	0.58148	0.72016	0.67769	0.69046	0.67082	0.71493
3900.0	0.81160	0.85991	0.78367	0.48465	0.50694	0.78668	0.71351	0.47693	0.80723	0.98374
4000.0	1.01545									

Table VIII-26

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 19.52. 3 ON 9/12/73, NORMALIZING FACTOR = 8.0055E-02										
2600.0	0.00019	0.00014	0.00014	0.00015	0.00015	0.00015	0.00016	0.00020	0.00016	0.00017
2700.0	0.00015	0.00018	0.00018	0.00022	0.00017	0.00017	0.00017	0.00019	0.00019	0.00019
2800.0	0.00023	0.00020	0.00018	0.00019	0.00019	0.00021	0.00026	0.00024	0.00027	0.00024
2900.0	0.00021	0.00024	0.00031	0.00051	0.00069	0.00126	0.00251	0.00435	0.00749	0.00863
3000.0	0.00885	0.00907	0.00919	0.00941	0.04405	0.15858	0.17497	0.23089	0.28143	0.28377
3100.0	0.32642	0.46797	0.48373	0.53588	0.57830	0.60198	0.57246	0.73320	0.70656	0.74062
3200.0	0.82071	0.83887	0.79053	0.74743	0.87859	0.94332	1.14083	1.16317	1.08043	1.17571
3300.0	1.25492	1.12205	1.12685	1.09256	1.06677	1.12761	0.98965	0.92406	1.00927	1.05948
3400.0	1.12155	1.05039	1.06537	1.08414	0.90359	0.95873	0.98474	0.98683	0.92063	0.90204
3500.0	1.00000	1.01413	0.93982	0.95388	1.07747	1.06204	0.95787	0.80430	0.71644	0.80859
3600.0	0.98792	0.83590	0.86546	0.92372	0.92239	0.93875	1.08947	1.04965	0.97555	0.98947
3700.0	1.02484	0.96130	0.90993	0.80939	0.72967	0.76494	0.84970	0.91070	1.04025	0.89300
3800.0	0.84142	0.89320	0.67756	0.53156	0.59418	0.74402	0.69781	0.70689	0.68525	0.73382
3900.0	0.83277	0.88368	0.81647	0.49270	0.53612	0.80240	0.72752	0.51440	0.84020	1.01722
4000.0	1.05322									
ZENITH SCAN STARTING AT 19.53.49 ON 9/12/73, NORMALIZING FACTOR = 7.7248E-02										
2600.0	0.00013	0.00016	0.00016	0.00015	0.00016	0.00017	0.00019	0.00020	0.00023	0.00016
2700.0	0.00021	0.00016	0.00019	0.00018	0.00019	0.00018	0.00019	0.00018	0.00023	0.00018
2800.0	0.00021	0.00019	0.00019	0.00019	0.00020	0.00021	0.00021	0.00021	0.00022	0.00026
2900.0	0.00025	0.00028	0.00031	0.00043	0.00067	0.00134	0.00246	0.00425	0.00758	0.00887
3000.0	0.00916	0.00936	0.00949	0.00974	0.04520	0.15927	0.17707	0.22976	0.28463	0.28532
3100.0	0.32881	0.48003	0.49361	0.53968	0.58448	0.60422	0.57028	0.75038	0.72059	0.75716
3200.0	0.84139	0.85383	0.80783	0.76124	0.86447	0.93168	1.13593	1.16412	1.07163	1.18335
3300.0	1.26135	1.11406	1.12219	1.08905	1.05940	1.11745	0.99263	0.91343	1.00417	1.04916
3400.0	1.11201	1.03169	1.04685	1.06684	0.87556	0.94592	0.96423	0.96408	0.92403	0.90924
3500.0	1.00000	1.00727	0.93876	0.95430	1.07280	1.06028	0.96317	0.80559	0.72212	0.80461
3600.0	0.97843	0.84244	0.86363	0.92088	0.92211	0.94101	1.09345	1.05297	0.97924	1.00422
3700.0	1.03298	0.96445	0.91517	0.81996	0.73995	0.78600	0.87035	0.93050	0.99115	0.87963
3800.0	0.84087	0.88936	0.68266	0.52468	0.58047	0.73708	0.68668	0.70036	0.67894	0.72132
3900.0	0.81971	0.86863	0.80339	0.48835	0.52091	0.80443	0.70567	0.48016	0.83687	0.99541
4000.0	1.03003									
ZENITH SCAN STARTING AT 19.56.10 ON 9/12/73, NORMALIZING FACTOR = 7.9037E-02										
2600.0	0.00015	0.00014	0.00016	0.00020	0.00015	0.00014	0.00014	0.00015	0.00018	0.00015
2700.0	0.00017	0.00015	0.00018	0.00016	0.00017	0.00016	0.00017	0.00016	0.00019	0.00018
2800.0	0.00018	0.00018	0.00017	0.00020	0.00018	0.00019	0.00019	0.00019	0.00021	0.00021
2900.0	0.00020	0.00024	0.00031	0.00039	0.00063	0.00121	0.00238	0.00413	0.00699	0.00869
3000.0	0.00894	0.00915	0.00928	0.00951	0.06271	0.15487	0.17049	0.22425	0.27544	0.27765
3100.0	0.31710	0.46006	0.47641	0.52741	0.56893	0.59258	0.55819	0.72175	0.69959	0.73620
3200.0	0.81239	0.83238	0.78329	0.74534	0.86377	0.93028	1.12390	1.15150	1.06287	1.15965
3300.0	1.24921	1.10855	1.11115	1.08179	1.05395	1.10218	0.97608	0.90857	0.98946	1.03492
3400.0	1.10036	1.02769	1.03570	1.05706	0.87153	0.92349	0.94838	0.95005	0.91542	0.89691
3500.0	1.00000	1.00894	0.92942	0.92901	1.04245	1.03397	0.93319	0.78744	0.69633	0.80304
3600.0	0.96628	0.81503	0.84749	0.90491	0.90623	0.92642	1.05895	1.02714	0.94581	0.97131
3700.0	1.00703	0.94078	0.89114	0.80241	0.71831	0.74431	0.83342	0.88168	1.02195	0.86800
3800.0	0.82670	0.86812	0.66663	0.51499	0.57093	0.71890	0.67399	0.68731	0.66542	0.71354
3900.0	0.80613	0.85475	0.78186	0.48006	0.51230	0.78377	0.70352	0.47915	0.80674	0.97736
4000.0	1.00995									
ZENITH SCAN STARTING AT 20. 4.18 ON 9/12/73, NORMALIZING FACTOR = 7.3960E-02										
2600.0	0.00015	0.00015	0.00015	0.00016	0.00014	0.00014	0.00015	0.00015	0.00024	0.00020
2700.0	0.00016	0.00020	0.00018	0.00016	0.00016	0.00017	0.00017	0.00018	0.00018	0.00017
2800.0	0.00018	0.00019	0.00020	0.00022	0.00019	0.00019	0.00019	0.00021	0.00022	0.00020
2900.0	0.00021	0.00022	0.00031	0.00039	0.00059	0.00117	0.00225	0.00387	0.00703	0.00915
3000.0	0.00957	0.00982	0.00997	0.01022	0.04338	0.15097	0.16670	0.21465	0.26733	0.26950
3100.0	0.31395	0.45578	0.46948	0.51632	0.55917	0.57850	0.54827	0.72325	0.69073	0.72642
3200.0	0.80928	0.81750	0.77149	0.72842	0.85360	0.91414	1.12079	1.13881	1.05353	1.16825
3300.0	1.23163	1.09570	1.10254	1.06727	1.04064	1.10074	0.96956	0.89780	0.98705	1.03195
3400.0	1.09416	1.01334	1.03466	1.05290	0.86206	0.93693	0.95430	0.95723	0.91837	0.90343
3500.0	1.00000	1.00320	0.93678	0.95458	1.07800	1.06075	0.95850	0.80746	0.71587	0.82950
3600.0	0.99585	0.84262	0.85110	0.89530	0.91589	0.93674	1.07519	1.03518	0.95380	0.98901
3700.0	1.01733	0.95202	0.89405	0.81224	0.72828	0.75675	0.84235	0.90289	1.03065	0.88754
3800.0	0.83277	0.88500	0.66971	0.52558	0.59068	0.73097	0.68554	0.69706	0.67481	0.72115
3900.0	0.81900	0.87135	0.79929	0.47145	0.53708	0.79984	0.69282	0.49573	0.84450	0.99454
4000.0	1.03016									
ZENITH SCAN STARTING AT 20. 6. 4 ON 9/12/73, NORMALIZING FACTOR = 7.2252E-02										
2600.0	0.00016	0.00013	0.00015	0.00014	0.00015	0.00016	0.00014	0.00014	0.00015	0.00014
2700.0	0.00017	0.00018	0.00015	0.00015	0.00016	0.00015	0.00019	0.00018	0.00017	0.00018
2800.0	0.00020	0.00022	0.00033	0.00021	0.00026	0.00019	0.00021	0.00019	0.00020	0.00022
2900.0	0.00023	0.00024	0.00029	0.00043	0.00120	0.00124	0.00230	0.00414	0.01274	0.03174
3000.0	0.03494	0.03766	0.03982	0.03880	0.04074	0.15247	0.17400	0.22636	0.28108	0.28245
3100.0	0.32412	0.47640	0.49147	0.54485	0.58839	0.61141	0.57599	0.75322	0.72849	0.76648
3200.0	0.85079	0.86655	0.80536	0.75616	0.87668	0.94275	1.14523	1.17230	1.07868	1.19071
3300.0	1.27654	1.12390	1.13528	1.10886	1.08205	1.13398	1.00389	0.91704	0.99168	1.04580
3400.0	1.11239	1.03499	1.04678	1.06549	0.86746	0.92947	0.95485	0.95525	0.91912	0.90305
3500.0	1.00000	0.99770	0.93207	0.95483	1.06477	1.04565	0.94925	0.79862	0.71185	0.80070
3600.0	0.96712	0.83131	0.85835	0.90949	0.91353	0.93673	1.08179	1.04036	0.96362	0.99637
3700.0	1.01712	0.95324	0.89597	0.80616	0.73277	0.77969	0.85883	0.92478	1.03994	0.88303
3800.0	0.85066	0.88707	0.68482	0.53120	0.60113	0.74563	0.69988	0.71243	0.69242	0.74263
3900.0	0.83993	0.89368	0.65758	0.41746	0.52386	0.80312	0.70843	0.48746	0.83483	1.00066
4000.0	1.03170									
ZENITH SCAN STARTING AT 20. 7.50 ON 9/12/73, NORMALIZING FACTOR = 6.3494E-01										
2600.0	0.00085	0.00084	0.00083	0.00083	0.00082	0.00082	0.00081	0.00080	0.00080	0.00080
2700.0	0.00080	0.00080	0.00079	0.00078	0.00078	0.00077	0.00077	0.00076	0.00075	0.00075
2800.0	0.00074	0.00074	0.00075	0.00074	0.00073	0.00071	0.00071	0.00070	0.00075	0.00071
2900.0	0.00069	0.00067	0.00067	0.00073	0.00266	0.00859	0.00870	0.00883	0.01072	0.01243
3000.0	0.01231	0.01220	0.01216	0.01215	0.07083	1.12285	1.30240	1.29835	1.29366	1.27670
3100.0	1.26193	1.26375	1.27283	1.18929	1.17951	1.16604	1.14928	1.15011	1.12893	1.11739
3200.0	1.15108	1.15557	1.13506	1.11652	1.16418	1.21609	1.50733	1.51272	1.36008	1.53765
3300.0	1.63213	1.37829	1.37630	1.29903	1.26708	1.36610	1.15454	1.05861	1.13014	1.17352
3400.0	1.24828	1.12493	1.13158	1.13384	0.94464	0.96635	0.96172	0.97436	0.94733	0.93184
3500.0	1.00000	0.97912	0.88559	0.90130	1.00043	0.96407	0.84015	0.76680	0.74268	0.75787
3600.0	0.82415	0.77150	0.77057	0.75932	0.73522	0.73718	0.82782	0.75370	0.64214	0.62870
3700.0	0.63404	0.58147	0.54639	0.51790	0.49492	0.48278	0.49508	0.52140	0.54962	0.47725
3800.0	0.44591	0.43208	0.40072	0.38003	0.36646	0.36257	0.34314	0.32978	0.33048	0.34048
3900.0	0.35278	0.33921	0.27407	0.16807	0.15413	0.16738	0.14530	0.11580	0.13764	0.14928
4000.0	0.14894									

Table VIII-27

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 20.10.11 ON 9/12/73, NORMALIZING FACTOR = 7.1673E 00										
2600.0	0.00015	0.00013	0.00013	0.00018	0.00018	0.00014	0.00014	0.00013	0.00014	0.00013
2700.0	0.00014	0.00015	0.00015	0.00015	0.00015	0.00015	0.00023	0.00019	0.00015	0.00020
2800.0	0.00015	0.00017	0.00017	0.00019	0.00020	0.00023	0.00022	0.00028	0.00022	0.00020
2900.0	0.00021	0.00022	0.00030	0.00041	0.00060	0.00111	0.00215	0.00376	0.00658	0.01136
3000.0	0.01639	0.02847	0.04203	0.08021	0.10460	0.14648	0.16463	0.21765	0.27013	0.27132
3100.0	0.31970	0.46446	0.47743	0.52632	0.56959	0.58929	0.55917	0.73859	0.70595	0.74038
3200.0	0.82480	0.83015	0.78737	0.74433	0.86943	0.93213	1.13999	1.16584	1.07225	1.19147
3300.0	1.25684	1.11434	1.12350	1.08908	1.06264	1.12353	0.99010	0.91969	1.01357	1.06258
3400.0	1.12993	1.04541	1.03502	1.05846	0.86949	0.94592	0.95714	0.96246	0.92292	0.90894
3500.0	1.00000	1.01166	0.93476	0.95851	1.07761	1.05871	0.95392	0.80132	0.70697	0.81724
3600.0	0.96939	0.83105	0.87009	0.92078	0.91866	0.94545	1.07631	1.04140	0.96833	0.99053
3700.0	1.02032	0.96429	0.90756	0.80866	0.72811	0.76611	0.85371	0.91270	1.03773	0.89112
3800.0	0.84145	0.89025	0.66765	0.53287	0.59621	0.73325	0.69460	0.70933	0.68673	0.74608
3900.0	0.83833	0.89247	0.81068	0.49047	0.53229	0.82265	0.71635	0.63332	0.82474	1.01556
4000.0	1.04909									
ZENITH SCAN STARTING AT 20.11.57 ON 9/12/73, NORMALIZING FACTOR = 7.4584E 00										
2600.0	0.00017	0.00024	0.00016	0.00013	0.00012	0.00015	0.00014	0.00014	0.00013	0.00014
2700.0	0.00014	0.00016	0.00017	0.00015	0.00017	0.00017	0.00015	0.00017	0.00016	0.00016
2800.0	0.00016	0.00018	0.00016	0.00017	0.00017	0.00018	0.00018	0.00018	0.00020	0.00025
2900.0	0.00020	0.00024	0.00027	0.00038	0.00058	0.00110	0.00203	0.00357	0.00630	0.01073
3000.0	0.01593	0.02666	0.03973	0.07864	0.10040	0.14309	0.15942	0.21315	0.26275	0.26637
3100.0	0.31009	0.44928	0.46662	0.52152	0.56298	0.58903	0.55251	0.69873	0.68308	0.72267
3200.0	0.79820	0.81543	0.76938	0.73203	0.85724	0.92218	1.11787	1.13601	1.05110	1.15750
3300.0	1.23305	1.09224	1.09792	1.06652	1.04364	1.09114	0.96091	0.90034	0.98069	1.02708
3400.0	1.09262	1.01881	1.03196	1.05071	0.86290	0.92351	0.94356	0.94504	0.91003	0.89448
3500.0	1.00000	0.99780	0.92576	0.95022	1.05601	1.03866	0.94529	0.78942	0.70167	0.79798
3600.0	0.95674	0.81789	0.84771	0.89956	0.89963	0.92137	1.06437	1.02293	0.94960	0.98308
3700.0	0.99934	0.93980	0.86479	0.78461	0.70941	0.74406	0.82380	0.88051	1.00517	0.86193
3800.0	0.81417	0.86184	0.65159	0.51387	0.57495	0.70535	0.67063	0.68091	0.65883	0.70753
3900.0	0.80366	0.85302	0.76767	0.45919	0.53322	0.78515	0.67767	0.46955	0.82430	0.97536
4000.0	1.00975									
ZENITH SCAN STARTING AT 20.16. 6 ON 9/12/73, NORMALIZING FACTOR = 8.0543E 00										
2600.0	0.00013	0.00013	0.00012	0.00013	0.00013	0.00016	0.00025	0.00014	0.00013	0.00013
2700.0	0.00016	0.00015	0.00021	0.00017	0.00023	0.00015	0.00014	0.00016	0.00015	0.00017
2800.0	0.00016	0.00016	0.00016	0.00016	0.00018	0.00020	0.00018	0.00019	0.00019	0.00019
2900.0	0.00021	0.00022	0.00026	0.00038	0.00056	0.00094	0.00179	0.00310	0.00561	0.00955
3000.0	0.01454	0.02486	0.03669	0.07393	0.09566	0.13421	0.15132	0.19944	0.25214	0.25422
3100.0	0.29454	0.43998	0.45311	0.50418	0.54648	0.57105	0.54039	0.70759	0.68929	0.72617
3200.0	0.80889	0.80383	0.75061	0.72340	0.84171	0.90334	1.09899	1.12442	1.03281	1.14280
3300.0	1.22310	1.07761	1.08832	1.05929	1.03460	1.08918	0.96348	0.89270	0.98292	1.03079
3400.0	1.09658	1.01795	1.03599	1.05139	0.85697	0.92805	0.95568	0.95721	0.91922	0.90470
3500.0	1.00000	1.00062	0.93254	0.95190	1.07061	1.04717	0.94098	0.79534	0.70373	0.80299
3600.0	0.97411	0.82591	0.86589	0.91334	0.91499	0.93998	1.08427	1.03904	0.96562	0.99062
3700.0	1.01832	0.96086	0.90739	0.81090	0.72889	0.77562	0.85024	0.89234	1.01816	0.86434
3800.0	0.82600	0.86967	0.64942	0.51609	0.58115	0.71371	0.67210	0.68497	0.66061	0.71332
3900.0	0.80644	0.85812	0.77537	0.47113	0.53437	0.78167	0.67354	0.49583	0.82791	0.97476
4000.0	1.00341									
ZENITH SCAN STARTING AT 20.17.52 ON 9/12/73, NORMALIZING FACTOR = 7.7789E 00										
2600.0	0.00012	0.00013	0.00013	0.00016	0.00013	0.00013	0.00012	0.00012	0.00016	0.00015
2700.0	0.00015	0.00014	0.00014	0.00018	0.00015	0.00014	0.00017	0.00017	0.00016	0.00016
2800.0	0.00015	0.00015	0.00015	0.00015	0.00016	0.00016	0.00017	0.00017	0.00019	0.00019
2900.0	0.00021	0.00021	0.00024	0.00033	0.00052	0.00093	0.00182	0.00317	0.00549	0.00968
3000.0	0.01432	0.02414	0.03669	0.07023	0.09071	0.13034	0.14601	0.19933	0.24375	0.24728
3100.0	0.29436	0.42396	0.44057	0.49214	0.53335	0.55789	0.53505	0.68760	0.65985	0.70067
3200.0	0.77593	0.78908	0.74383	0.70680	0.83591	0.90041	1.09024	1.10559	1.02502	1.12936
3300.0	1.20382	1.06875	1.07593	1.04631	1.02378	1.07123	0.94531	0.88701	0.96692	1.01472
3400.0	1.07800	1.00810	1.02329	1.04337	0.86604	0.92359	0.93982	0.94208	0.91245	0.89452
3500.0	1.00000	0.97939	0.90531	0.93929	1.04063	1.01927	0.92258	0.77764	0.68879	0.79455
3600.0	0.93378	0.80360	0.83179	0.88309	0.88035	0.90687	1.03682	0.99871	0.92351	0.95332
3700.0	0.97751	0.91720	0.85599	0.77674	0.69886	0.74146	0.81488	0.87729	0.99863	0.84149
3800.0	0.81095	0.85428	0.64976	0.50737	0.56431	0.70848	0.66515	0.67905	0.65659	0.70976
3900.0	0.80181	0.85151	0.76755	0.47044	0.51968	0.77852	0.68825	0.49021	0.81882	0.97624
4000.0	1.00750									
ZENITH SCAN STARTING AT 20.20.13 ON 9/12/73, NORMALIZING FACTOR = 7.2682E 00										
2600.0	0.00012	0.00013	0.00013	0.00013	0.00013	0.00015	0.00013	0.00014	0.00016	0.00017
2700.0	0.00017	0.00024	0.00017	0.00019	0.00016	0.00016	0.00017	0.00019	0.00016	0.00017
2800.0	0.00020	0.00020	0.00021	0.00018	0.00020	0.00019	0.00019	0.00021	0.00022	0.00020
2900.0	0.00021	0.00022	0.00026	0.00036	0.00057	0.00096	0.00184	0.00325	0.00561	0.01010
3000.0	0.01451	0.02517	0.03806	0.07230	0.09555	0.12980	0.15063	0.20392	0.25201	0.25472
3100.0	0.30261	0.44214	0.45845	0.50699	0.55098	0.57119	0.54897	0.72295	0.68915	0.72830
3200.0	0.81254	0.82060	0.77688	0.73508	0.86648	0.92682	1.11419	1.13293	1.04649	1.16952
3300.0	1.22939	1.09221	1.10476	1.06974	1.04464	1.10540	0.97578	0.90581	0.99577	1.04175
3400.0	1.10487	1.02478	1.04737	1.05727	0.86872	0.94739	0.96150	0.96256	0.92316	0.90294
3500.0	1.00000	1.00802	0.93019	0.95790	1.07087	1.05135	0.94551	0.79774	0.70344	0.82298
3600.0	0.96544	0.82471	0.86431	0.91609	0.91382	0.93944	1.07332	1.03774	0.96319	0.98472
3700.0	1.01722	0.95335	0.89422	0.80777	0.73057	0.76709	0.84861	0.90681	1.04551	0.89955
3800.0	0.84621	0.86393	0.68588	0.52090	0.58833	0.73789	0.68908	0.70500	0.68253	0.73595
3900.0	0.83018	0.88499	0.79638	0.49104	0.54490	0.81337	0.71549	0.51142	0.85245	1.02132
4000.0	1.05023									
ZENITH SCAN STARTING AT 20.21.59 ON 9/12/73, NORMALIZING FACTOR = 7.2615E 00										
2600.0	0.00013	0.00014	0.00014	0.00015	0.00014	0.00015	0.00013	0.00012	0.00013	0.00013
2700.0	0.00013	0.00015	0.00014	0.00018	0.00024	0.00015	0.00015	0.00021	0.00016	0.00025
2800.0	0.00016	0.00016	0.00016	0.00018	0.00019	0.00018	0.00021	0.00019	0.00017	0.00018
2900.0	0.00018	0.00021	0.00025	0.00033	0.00054	0.00096	0.00176	0.00312	0.00546	0.00943
3000.0	0.01406	0.02338	0.03581	0.07233	0.09256	0.13233	0.14832	0.19985	0.24720	0.25096
3100.0	0.29359	0.42684	0.44446	0.49717	0.53751	0.56344	0.53320	0.69121	0.66830	0.70984
3200.0	0.78334	0.79881	0.75303	0.71945	0.83836	0.90165	1.09362	1.11472	1.02302	1.13635
3300.0	1.21558	1.07057	1.07828	1.04981	1.02622	1.08023	0.95449	0.88808	0.97817	1.02340
3400.0	1.08699	1.01117	1.02749	1.04371	0.84437	0.91574	0.94103	0.94337	0.91017	0.89522
3500.0	1.00000	0.99170	0.92828	0.95470	1.06479	1.04535	0.90040	0.77045	0.68807	0.79130
3600.0	0.94228	0.80235	0.82967	0.87982	0.88158	0.90485	1.04123	0.99829	0.92710	0.95664
3700.0	0.97498	0.91355	0.85893	0.76706	0.69944	0.74390	0.81860	0.88414	0.99657	0.84925
3800.0	0.81305	0.85233	0.64451	0.50533	0.57235	0.71646	0.66938	0.68200	0.66237	0.70725
3900.0	0.80294	0.85431	0.76883	0.45496	0.50907	0.79345	0.69120	0.47590	0.82014	0.98111
4000.0	1.01013									

Table VIII-28

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 20.24.19 ON 9/12/73, NORMALIZING FACTOR = 7.1543E 00										
2600.0	0.00014	0.00014	0.00017	0.00016	0.00013	0.00012	0.00020	0.00014	0.00014	0.00013
2700.0	0.00015	0.00013	0.00015	0.00014	0.00015	0.00022	0.00024	0.00017	0.00021	0.00017
2800.0	0.00017	0.00017	0.00017	0.00023	0.00022	0.00019	0.00019	0.00019	0.00019	0.00019
2900.0	0.00021	0.00022	0.00028	0.00036	0.00054	0.00101	0.00181	0.00309	0.00535	0.00957
3000.0	0.01404	0.02405	0.03680	0.06928	0.09206	0.12924	0.14789	0.20224	0.24804	0.25137
3100.0	0.30210	0.43231	0.44873	0.50027	0.54320	0.56732	0.54649	0.70609	0.67286	0.71339
3200.0	0.79126	0.80405	0.75818	0.71895	0.85309	0.91949	1.11872	1.13148	1.05170	1.16554
3300.0	1.23117	1.07138	1.08799	1.05392	1.03161	1.08952	0.95368	0.89477	0.97894	1.02665
3400.0	1.08753	1.01535	1.03530	1.05097	0.87122	0.92817	0.94268	0.94595	0.91051	0.89019
3500.0	1.00000	0.99739	0.92254	0.95083	1.05486	1.03581	0.93211	0.78451	0.69491	0.79898
3600.0	0.94656	0.81350	0.84120	0.88926	0.89289	0.91387	1.04943	1.01007	0.93274	0.96624
3700.0	0.99110	0.92952	0.86622	0.76701	0.71120	0.74626	0.82973	0.89387	1.01996	0.85654
3800.0	0.82672	0.86887	0.66827	0.51991	0.58370	0.72938	0.68553	0.68619	0.66928	0.71993
3900.0	0.81036	0.85796	0.79007	0.46971	0.51301	0.79743	0.69959	0.48775	0.82485	0.99166
4000.0	1.02172									
ZENITH SCAN STARTING AT 20.30. 4 ON 9/12/73, NORMALIZING FACTOR = 7.3564E 00										
2600.0	0.00012	0.00013	0.00013	0.00017	0.00014	0.00014	0.00013	0.00014	0.00015	0.00017
2700.0	0.00018	0.00014	0.00015	0.00016	0.00015	0.00022	0.00016	0.00023	0.00018	0.00017
2800.0	0.00019	0.00017	0.00017	0.00019	0.00017	0.00016	0.00018	0.00016	0.00020	0.00019
2900.0	0.00022	0.00023	0.00026	0.00033	0.00023	0.00072	0.00161	0.00283	0.00467	0.00610
3000.0	0.01268	0.02173	0.03349	0.04030	0.07003	0.12035	0.10622	0.18779	0.23448	0.23764
3100.0	0.27873	0.40776	0.42753	0.47555	0.51815	0.53918	0.51975	0.68569	0.65667	0.69121
3200.0	0.77051	0.78018	0.73837	0.69822	0.82301	0.88287	0.48805	0.45961	1.02096	0.39280
3300.0	0.13468	0.99615	1.08357	1.05062	1.03084	1.08947	0.95236	0.89666	0.98394	1.03202
3400.0	1.09439	1.01797	1.04208	1.05570	0.87212	0.94466	0.95626	0.95980	0.92195	0.90309
3500.0	1.00000	1.00392	0.93229	0.94963	1.07058	1.04920	0.93934	0.79358	0.70022	0.81120
3600.0	0.97254	0.82588	0.87103	0.92024	0.92078	0.92553	1.03233	1.03164	0.95580	0.97898
3700.0	1.00830	0.95455	0.89845	0.80365	0.72533	0.76561	0.85080	0.91153	1.05016	0.88786
3800.0	0.85109	0.90095	0.67904	0.53477	0.60582	0.74791	0.70754	0.72045	0.69711	0.76103
3900.0	0.85421	0.90993	0.81406	0.48949	0.56485	0.83413	0.72087	0.52988	0.88664	1.04634
4000.0	1.08061									
ZENITH SCAN STARTING AT 20.33.46 ON 9/12/73, NORMALIZING FACTOR = 7.5311E 00										
2600.0	0.00024	0.00014	0.00013	0.00015	0.00014	0.00015	0.00015	0.00014	0.00014	0.00016
2700.0	0.00016	0.00014	0.00019	0.00020	0.00015	0.00018	0.00017	0.00016	0.00017	0.00017
2800.0	0.00017	0.00017	0.00017	0.00017	0.00020	0.00020	0.00020	0.00020	0.00019	0.00019
2900.0	0.00022	0.00023	0.00026	0.00031	0.00023	0.00051	0.00147	0.00252	0.00438	0.00649
3000.0	0.01161	0.01982	0.03057	0.03252	0.03965	0.11333	0.12650	0.17965	0.22074	0.22646
3100.0	0.27482	0.39440	0.41330	0.46480	0.50506	0.51353	0.50591	0.66024	0.63067	0.67072
3200.0	0.74606	0.76013	0.71708	0.68243	0.81311	0.86966	0.27837	0.25083	1.00529	0.38642
3300.0	0.14353	0.98195	1.06492	1.03477	1.01423	1.07028	0.93832	0.88502	0.96944	1.01826
3400.0	1.08000	1.01017	1.03089	1.04731	0.86776	0.93383	0.94459	0.94758	0.91206	0.89216
3500.0	1.00000	0.99757	0.92411	0.95455	1.05935	1.04015	0.93670	0.78912	0.70028	0.81051
3600.0	0.95320	0.82011	0.84883	0.89757	0.90278	0.92843	1.07016	1.03034	0.95424	0.98036
3700.0	0.97013	0.93494	0.87898	0.78572	0.71314	0.76075	0.83962	0.90018	1.03455	0.88103
3800.0	0.83770	0.88798	0.66870	0.52803	0.60109	0.73444	0.69396	0.70945	0.68656	0.74532
3900.0	0.83861	0.89318	0.80248	0.48067	0.55841	0.82584	0.70341	0.49647	0.87630	1.02284
4000.0	1.05344									
ZENITH SCAN STARTING AT 20.36. 7 ON 9/12/73, NORMALIZING FACTOR = 7.0157E 00										
2600.0	0.00013	0.00015	0.00016	0.00014	0.00015	0.00014	0.00014	0.00014	0.00015	0.00023
2700.0	0.00016	0.00015	0.00015	0.00015	0.00020	0.00017	0.00016	0.00016	0.00016	0.00016
2800.0	0.00017	0.00017	0.00024	0.00018	0.00017	0.00019	0.00018	0.00020	0.00020	0.00021
2900.0	0.00031	0.00028	0.00028	0.00033	0.00031	0.00026	0.00142	0.00222	0.00420	0.00438
3000.0	0.01070	0.01857	0.02801	0.05308	0.02621	0.10684	0.10534	0.15371	0.21958	0.22962
3100.0	0.25082	0.38814	0.41549	0.45979	0.50674	0.53373	0.50295	0.65335	0.66073	0.68071
3200.0	0.74458	0.79576	0.74415	0.69791	0.80253	0.86805	1.05705	0.68684	1.03647	0.76644
3300.0	0.12521	1.01556	1.09516	1.07929	1.03325	1.10419	1.01391	0.90409	0.98528	1.04710
3400.0	1.11269	1.05811	1.06468	1.08702	0.89445	0.91619	0.96195	0.96367	0.92471	0.90039
3500.0	1.00000	1.00294	0.92537	0.95046	1.06386	1.04069	0.92827	0.78351	0.68787	0.81416
3600.0	0.94247	0.80540	0.85016	0.89467	0.89471	0.92483	1.05079	1.01285	0.93931	0.96543
3700.0	0.99067	0.93744	0.87973	0.78631	0.71763	0.76205	0.84609	0.90416	1.04360	0.88385
3800.0	0.84632	0.89867	0.67633	0.53822	0.61006	0.75106	0.70789	0.72358	0.70275	0.76323
3900.0	0.85777	0.91248	0.82733	0.50163	0.56653	0.84054	0.74135	0.53286	0.89228	1.05474
4000.0	1.06553									
ZENITH SCAN STARTING AT 20.37.53 ON 9/12/73, NORMALIZING FACTOR = 2.7593E 00										
2600.0	0.00027	0.00016	0.00019	0.00105	0.00045	0.00025	0.00021	0.00038	0.00018	0.00019
2700.0	0.00018	0.00023	0.00026	0.00023	0.00027	0.00022	0.00023	0.00024	0.00023	0.00020
2800.0	0.00023	0.00024	0.00025	0.00036	0.00041	0.00029	0.00023	0.00026	0.00028	0.00031
2900.0	0.00030	0.00037	0.00047	0.00064	0.00093	0.00110	0.00375	0.00644	0.02343	0.02753
3000.0	0.03009	0.05479	0.07988	0.10317	0.06586	0.17593	0.30932	0.43656	0.53871	0.54840
3100.0	0.67942	0.97107	1.02127	1.15981	1.25960	1.32362	1.28675	1.67209	1.60169	1.72261
3200.0	1.90179	1.93857	1.82536	1.77368	2.10632	1.52096	0.42634	0.44407	0.23360	1.72524
3300.0	2.24144	0.34189	0.37396	0.27901	0.23782	0.35100	1.46016	2.29332	0.37332	0.19097
3400.0	0.34281	0.13971	0.20429	0.27403	2.03924	1.53665	2.36347	2.43266	2.35717	2.29981
3500.0	1.00000	1.46572	2.36131	1.98645	0.14129	1.00553	2.37228	1.99735	1.78170	2.11812
3600.0	2.41747	2.08944	2.19443	2.29783	2.30476	2.35046	1.20160	2.59817	2.40218	2.51548
3700.0	2.53057	2.40791	2.23931	2.00252	1.85157	2.02368	2.17098	2.36941	2.65308	2.23385
3800.0	2.19539	2.24914	1.72300	1.35068	1.56113	1.92228	1.81629	1.83727	1.80160	1.98373
3900.0	2.21164	2.36375	2.06487	1.24220	1.50844	2.15591	1.81163	1.37340	2.27834	2.65613
4000.0	2.71456									
ZENITH SCAN STARTING AT 20.40.14 ON 9/12/73, NORMALIZING FACTOR = 7.1384E 00										
2600.0	0.00012	0.00012	0.00012	0.00013	0.00014	0.00013	0.00012	0.00013	0.00014	0.00013
2700.0	0.00013	0.00013	0.00014	0.00015	0.00014	0.00013	0.00017	0.00015	0.00017	0.00023
2800.0	0.00016	0.00015	0.00019	0.00020	0.00017	0.00016	0.00018	0.00028	0.00016	0.00017
2900.0	0.00019	0.00021	0.00024	0.00032	0.00024	0.00043	0.00144	0.00241	0.00407	0.00461
3000.0	0.01031	0.01794	0.02732	0.05244	0.03525	0.09641	0.10309	0.15411	0.20249	0.20712
3100.0	0.25357	0.36707	0.38626	0.43366	0.47645	0.50017	0.48331	0.64106	0.61594	0.65553
3200.0	0.73060	0.74489	0.70848	0.67487	0.80521	0.85942	1.07025	1.08463	1.00699	0.57754
3300.0	0.24163	1.06248	1.07847	1.04749	1.02350	1.08842	0.95354	0.89778	0.98705	1.03988
3400.0	1.10405	1.03187	1.06092	1.07586	0.89260	0.97285	0.98898	0.98995	0.95361	0.92687
3500.0	1.00000	1.01145	0.93687	0.96239	1.08380	1.06100	0.95620	0.80475	0.71255	0.81985
3600.0	0.98958	0.83993	0.88001	0.92279	0.92211	0.94822	1.08639	1.05101	0.98025	1.00908
3700.0	1.03433	0.97970	0.92192	0.82748	0.75293	0.80235	0.89022	0.95305	1.09695	0.93385
3800.0	0.88557	0.93659	0.70757	0.55896	0.63636	0.78152	0.73734	0.75481	0.73120	0.80088
3900.0	0.90319	0.96405	0.87091	0.52225	0.59920	0.88948	0.75999	0.56293	0.93796	1.10646
4000.0	1.13658									

Table VIII-29

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 20.42. 3 ON 9/12/73, NORMALIZING FACTOR = 6.6342E 00										
2600.0	0.00013	0.00014	0.00016	0.00015	0.00014	0.00014	0.00014	0.00016	0.00017	0.00027
2700.0	0.00015	0.00016	0.00017	0.00017	0.00018	0.00017	0.00017	0.00017	0.00017	0.00017
2800.0	0.00017	0.00019	0.00017	0.00019	0.00021	0.00020	0.00025	0.00022	0.00022	0.00020
2900.0	0.00022	0.00020	0.00029	0.00037	0.00052	0.00086	0.00151	0.00248	0.00432	0.00447
3000.0	0.01058	0.01797	0.02745	0.05458	0.04753	0.09704	0.09362	0.14643	0.20297	0.20737
3100.0	0.24523	0.36801	0.38516	0.43425	0.47418	0.50035	0.47839	0.63196	0.61853	0.65966
3200.0	0.73076	0.75259	0.71012	0.68278	0.79402	0.84476	1.04486	1.07593	0.98780	0.97070
3300.0	0.62386	1.04651	1.06142	1.03560	1.01163	1.07009	0.95049	0.88399	0.97451	1.02586
3400.0	1.09312	1.01358	1.03418	1.05553	0.85420	0.91921	0.94140	0.94445	0.90751	0.89138
3500.0	1.00000	0.99526	0.92137	0.95268	1.06011	1.04161	0.94082	0.79504	0.70718	0.81876
3600.0	0.95567	0.82537	0.85775	0.91207	0.91397	0.94311	1.08795	1.04631	0.96769	1.00291
3700.0	1.03159	0.96429	0.90589	0.82231	0.74669	0.80465	0.89441	0.97941	1.10981	0.95108
3800.0	0.93291	0.95544	0.72479	0.56318	0.63083	0.78656	0.73741	0.74706	0.72469	0.77719
3900.0	0.88747	0.94742	0.86266	0.51405	0.59435	0.88583	0.77845	0.56308	0.93808	1.10697
4000.0	1.13051									
ZENITH SCAN STARTING AT 20.43.49 ON 9/12/73, NORMALIZING FACTOR = 5.5921E 00										
2600.0	0.00008	0.00008	0.00009	0.00009	0.00010	0.00011	0.00010	0.00019	0.00009	0.00009
2700.0	0.00010	0.00009	0.00009	0.00009	0.00010	0.00011	0.00010	0.00012	0.00016	0.00015
2800.0	0.00011	0.00012	0.00011	0.00013	0.00019	0.00013	0.00015	0.00014	0.00011	0.00015
2900.0	0.00013	0.00015	0.00020	0.00029	0.00051	0.00096	0.00169	0.00293	0.01920	0.02530
3000.0	0.01559	0.02095	0.03223	0.06069	0.08023	0.11237	0.12340	0.16499	0.20369	0.20819
3100.0	0.25748	0.36659	0.38560	0.43503	0.47370	0.49873	0.48985	0.63341	0.60393	0.64897
3200.0	0.72405	0.73133	0.69241	0.66694	0.79960	0.86223	1.05707	1.06379	0.99035	1.11945
3300.0	1.16742	1.04859	1.06800	1.03481	1.02346	1.07951	0.93758	0.89165	0.98029	1.02841
3400.0	1.08242	1.00659	1.03495	1.03548	0.85452	0.94220	0.94830	0.94944	0.91482	0.89626
3500.0	1.00000	0.99045	0.91768	0.95554	1.05779	1.03925	0.93799	0.79302	0.70139	0.83053
3600.0	0.96464	0.82449	0.86502	0.91030	0.91423	0.95159	1.08072	1.03731	0.96582	1.00483
3700.0	1.01517	0.96239	0.89989	0.80461	0.73899	0.79399	0.87032	0.94184	1.05980	0.90370
3800.0	0.87513	0.90114	0.69089	0.54532	0.63950	0.76996	0.72893	0.74448	0.72287	0.79012
3900.0	0.88751	0.94921	0.83106	0.49821	0.60961	0.88445	0.72981	0.56794	0.94803	1.10387
4000.0	1.12865									
ZENITH SCAN STARTING AT 20.46.10 ON 9/12/73, NORMALIZING FACTOR = 5.0137E 00										
2600.0	0.00016	0.00018	0.00018	0.00014	0.00019	0.00017	0.00017	0.00016	0.00016	0.00017
2700.0	0.00016	0.00020	0.00022	0.00020	0.00028	0.00018	0.00079	0.00020	0.00019	0.00020
2800.0	0.00017	0.00018	0.00022	0.00021	0.00022	0.00025	0.00022	0.00019	0.00024	0.00022
2900.0	0.00022	0.00028	0.00029	0.00045	0.00063	0.00101	0.00183	0.00291	0.00502	0.00843
3000.0	0.01206	0.02070	0.03066	0.05865	0.07704	0.10733	0.12224	0.17105	0.21490	0.21871
3100.0	0.25976	0.37745	0.39497	0.44111	0.48392	0.50765	0.48706	0.64979	0.62838	0.66544
3200.0	0.74399	0.76735	0.72314	0.68778	0.81436	0.87022	1.07539	1.10780	1.01494	1.10969
3300.0	1.18350	1.04961	1.07141	1.05272	1.02610	1.08534	0.96712	0.89540	0.98267	1.03376
3400.0	1.10233	1.02665	1.04121	1.06452	0.86646	0.93162	0.95344	0.95490	0.91977	0.89962
3500.0	1.00000	1.01044	0.93359	0.95871	1.07044	1.05270	0.94553	0.79838	0.70759	0.82293
3600.0	0.96471	0.82586	0.86057	0.91908	0.91547	0.93579	1.07817	1.04323	0.96298	0.99476
3700.0	1.03635	0.97274	0.92056	0.83005	0.75039	0.78577	0.87470	0.93749	1.07103	0.92606
3800.0	0.87969	0.92765	0.72089	0.55894	0.61964	0.76827	0.73566	0.74767	0.72796	0.77744
3900.0	0.88147	0.93292	0.85635	0.49731	0.56403	0.86744	0.76039	0.52258	0.89638	1.07126
4000.0	1.10305									
ZENITH SCAN STARTING AT 20.47.56 ON 9/12/73, NORMALIZING FACTOR = 4.8683E 00										
2600.0	0.00015	0.00018	0.00016	0.00017	0.00019	0.00022	0.00018	0.00015	0.00021	0.00019
2700.0	0.00016	0.00016	0.00015	0.00016	0.00019	0.00020	0.00020	0.00022	0.00018	0.00029
2800.0	0.00020	0.00018	0.00022	0.00019	0.00019	0.00018	0.00018	0.00022	0.00021	0.00021
2900.0	0.00026	0.00025	0.00031	0.00040	0.00060	0.00100	0.00175	0.00295	0.00499	0.00815
3000.0	0.01209	0.01994	0.02960	0.05624	0.07264	0.10576	0.12100	0.16541	0.20961	0.21801
3100.0	0.25727	0.37435	0.39465	0.44437	0.48226	0.51068	0.48971	0.63134	0.61602	0.65651
3200.0	0.72265	0.75123	0.70833	0.68004	0.80608	0.86485	1.05532	1.08777	1.00509	1.10772
3300.0	1.19896	1.06267	1.07473	1.04525	1.02260	1.08306	0.95369	0.89297	0.97605	1.02841
3400.0	1.08718	1.02121	1.04180	1.05641	0.87879	0.94212	0.96002	0.95816	0.92117	0.90569
3500.0	1.00000	1.00410	0.92884	0.95461	1.07228	1.05123	0.94845	0.80056	0.70234	0.78307
3600.0	0.93771	0.81795	0.85294	0.90522	0.90633	0.93104	1.06624	1.02775	0.95620	0.97783
3700.0	1.01014	0.95470	0.89885	0.80542	0.72580	0.76588	0.85531	0.91207	1.04890	0.89360
3800.0	0.84843	0.90169	0.69054	0.54200	0.61260	0.76049	0.71267	0.73064	0.70815	0.76634
3900.0	0.86304	0.91897	0.83415	0.5.547	0.56504	0.83656	0.74333	0.52852	0.87646	1.04946
4000.0	1.07788									
ZENITH SCAN STARTING AT 20.50.17 ON 9/12/73, NORMALIZING FACTOR = 5.0762E 00										
2600.0	0.00019	0.00015	0.00017	0.00016	0.00014	0.00016	0.00015	0.00017	0.00023	0.00017
2700.0	0.00016	0.00019	0.00016	0.00016	0.00016	0.00024	0.00022	0.00020	0.00025	0.00031
2800.0	0.00018	0.00020	0.00021	0.00019	0.00019	0.00022	0.00021	0.00022	0.00021	0.00021
2900.0	0.00025	0.00029	0.00030	0.00040	0.00061	0.00100	0.00174	0.00277	0.00479	0.00782
3000.0	0.01126	0.01886	0.02821	0.05373	0.07155	0.10106	0.11478	0.16117	0.20199	0.21052
3100.0	0.25106	0.36421	0.38171	0.42733	0.47008	0.49603	0.47795	0.62969	0.61028	0.64980
3200.0	0.71915	0.74311	0.70547	0.67102	0.80034	0.85280	1.06395	1.08733	1.00389	1.12455
3300.0	1.19710	1.06274	1.08248	1.05268	0.99931	1.07418	0.96359	0.88722	0.97780	1.02751
3400.0	1.09148	1.01458	1.03488	1.05048	0.85930	0.93194	0.95540	0.95485	0.91632	0.89903
3500.0	1.00000	1.00205	0.92888	0.95105	1.05803	1.04344	0.94288	0.79406	0.70784	0.80283
3600.0	0.95352	0.81935	0.84290	0.89644	0.89961	0.92125	1.06520	1.02865	0.95357	0.98234
3700.0	1.01960	0.94995	0.89856	0.80955	0.73390	0.77894	0.86786	0.92495	1.06070	0.92115
3800.0	0.86200	0.91406	0.70259	0.55082	0.62238	0.77345	0.72854	0.74005	0.71468	0.76031
3900.0	0.84330	0.91504	0.83189	0.48796	0.56002	0.84749	0.72660	0.52460	0.89772	1.05131
4000.0	1.08185									
ZENITH SCAN STARTING AT 20.52. 3 ON 9/12/73, NORMALIZING FACTOR = 5.2618E 00										
2600.0	0.00015	0.00016	0.00016	0.00021	0.00015	0.00015	0.00015	0.00016	0.00019	0.00018
2700.0	0.00016	0.00016	0.00016	0.00022	0.00028	0.00017	0.00017	0.00019	0.00027	0.00020
2800.0	0.00025	0.00019	0.00022	0.00019	0.00020	0.00018	0.00021	0.00020	0.00022	0.00021
2900.0	0.00022	0.00023	0.00028	0.00038	0.00055	0.00084	0.00159	0.00249	0.00426	0.00705
3000.0	0.00997	0.01708	0.02593	0.05046	0.06714	0.09507	0.10975	0.15593	0.19445	0.19702
3100.0	0.23435	0.34901	0.37031	0.41892	0.45943	0.48722	0.46428	0.60675	0.59830	0.63991
3200.0	0.70882	0.73835	0.69349	0.66536	0.78403	0.83687	1.02888	1.06925	0.98063	1.09377
3300.0	1.18546	1.04127	1.05979	1.03772	1.01116	1.07358	0.95874	0.89062	0.97571	1.02996
3400.0	1.09968	1.03101	1.04542	1.07076	0.88887	0.93358	0.95704	0.95764	0.92119	0.90081
3500.0	1.00000	1.01326	0.93386	0.95625	1.07294	1.05702	0.95472	0.80443	0.71725	0.82477
3600.0	0.99302	0.84441	0.88003	0.92978	0.89139	0.93650	1.07792	1.03479	0.96273	0.98560
3700.0	1.01914	0.95362	0.90854	0.81446	0.73704	0.77368	0.86677	0.92165	1.06900	0.90383
3800.0	0.86196	0.91743	0.69914	0.54806	0.60235	0.76396	0.71804	0.73410	0.71438	0.76967
3900.0	0.87039	0.92551	0.84626	0.51988	0.55760	0.85269	0.76126	0.52122	0.88737	1.05970
4000.0	1.08944									

Table VIII-30

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 20.53.51 ON 9/12/73. NORMALIZING FACTOR = 5.4097E 00										
2600.0	0.00015	0.00016	0.00022	0.00016	0.00014	0.00015	0.00015	0.00017	0.00019	0.00019
2700.0	0.00022	0.00017	0.00016	0.00024	0.00017	0.00016	0.00016	0.00017	0.00018	0.00017
2800.0	0.00020	0.00018	0.00021	0.00035	0.00025	0.00024	0.00020	0.00020	0.00021	0.00022
2900.0	0.00024	0.00028	0.00033	0.00039	0.00053	0.00088	0.00151	0.00237	0.00394	0.00638
3000.0	0.00945	0.01587	0.02382	0.04755	0.06322	0.09210	0.10565	0.14685	0.18889	0.19732
3100.0	0.23444	0.34097	0.36283	0.40936	0.44919	0.48089	0.46452	0.60138	0.58574	0.62793
3200.0	0.69406	0.72655	0.68648	0.63452	0.78652	0.84008	1.03375	1.06461	0.98572	1.09142
3300.0	1.17809	1.04737	1.06644	1.04572	1.01948	1.09353	0.97218	0.90146	0.97759	1.00469
3400.0	1.07437	1.00458	1.02730	1.04521	0.85948	0.93161	0.95485	0.95706	0.91789	0.90449
3500.0	1.00000	1.00173	0.93061	0.93999	1.05364	1.03469	0.94049	0.78790	0.70721	0.78834
3600.0	0.95363	0.82014	0.84032	0.89928	0.90386	0.92629	1.07765	1.04039	0.96578	0.99524
3700.0	1.02623	0.95689	0.90784	0.81161	0.72925	0.76697	0.85775	0.91413	1.05743	0.91592
3800.0	0.86048	0.92197	0.70195	0.55413	0.61889	0.77611	0.72966	0.74828	0.72549	0.77764
3900.0	0.88732	0.94425	0.85492	0.52675	0.60920	0.79113	0.75144	0.51473	0.87054	1.05130
4000.0	1.08373									
ZENITH SCAN STARTING AT 20.56.13 ON 9/12/73. NORMALIZING FACTOR = 5.4232E 00										
2600.0	0.00016	0.00015	0.00018	0.00016	0.00017	0.00018	0.00019	0.00016	0.00016	0.00018
2700.0	0.00019	0.00018	0.00019	0.00020	0.00017	0.00017	0.00022	0.00018	0.00020	0.00021
2800.0	0.00018	0.00024	0.00020	0.00020	0.00019	0.00021	0.00021	0.00021	0.00023	0.00022
2900.0	0.00023	0.00025	0.00030	0.00034	0.00051	0.00080	0.00153	0.00232	0.00386	0.00646
3000.0	0.00906	0.01552	0.02311	0.04511	0.06044	0.08612	0.10032	0.14306	0.18294	0.19372
3100.0	0.23084	0.34239	0.36328	0.40050	0.43935	0.46903	0.44788	0.59830	0.58855	0.62759
3200.0	0.69598	0.72732	0.68780	0.65544	0.77244	0.82555	1.02109	1.06005	0.97040	1.08464
3300.0	1.17702	1.02922	1.04928	1.02977	0.99830	1.06313	0.95431	0.87806	0.96371	1.02174
3400.0	1.08761	1.01978	1.03099	1.05846	0.86324	0.91715	0.94687	0.95100	0.91351	0.89771
3500.0	1.00000	1.00972	0.93367	0.94971	1.06288	1.05245	0.95248	0.80412	0.71225	0.81508
3600.0	0.97285	0.83290	0.86389	0.92456	0.92004	0.94101	1.07718	1.05058	0.97094	0.98993
3700.0	1.02859	0.95985	0.90981	0.82454	0.74430	0.78358	0.87361	0.92745	1.06224	0.92316
3800.0	0.85629	0.91604	0.69815	0.54856	0.61205	0.76892	0.72227	0.73887	0.71870	0.76705
3900.0	0.87897	0.93337	0.85867	0.51206	0.56805	0.85418	0.75499	0.54085	0.89198	1.06454
4000.0	1.09650									
ZENITH SCAN STARTING AT 20.57.58 ON 9/12/73. NORMALIZING FACTOR = 5.1645E 00										
2600.0	0.00015	0.00016	0.00016	0.00017	0.00019	0.00017	0.00016	0.00017	0.00018	0.00021
2700.0	0.00022	0.00021	0.00019	0.00017	0.00019	0.00019	0.00036	0.00020	0.00018	0.00020
2800.0	0.00019	0.00019	0.00018	0.00020	0.00019	0.00022	0.00022	0.00023	0.00038	0.00023
2900.0	0.00025	0.00028	0.00036	0.00043	0.00053	0.00087	0.00144	0.00224	0.00381	0.00607
3000.0	0.00894	0.01486	0.02215	0.04528	0.06022	0.08750	0.10197	0.14258	0.18624	0.19231
3100.0	0.23028	0.33896	0.36106	0.41110	0.45149	0.48538	0.46551	0.61076	0.60296	0.64997
3200.0	0.71552	0.75452	0.70900	0.67984	0.80246	0.85678	1.04795	1.09124	1.00005	1.10486
3300.0	1.20205	1.05636	1.06975	1.04920	1.02362	1.09295	0.97256	0.90347	0.99229	1.05470
3400.0	1.12070	1.05546	1.07191	1.07300	0.87633	0.93207	0.95785	0.96161	0.92034	0.90884
3500.0	1.00000	1.01322	0.94232	0.94967	1.07201	1.05359	0.96063	0.80411	0.72399	0.80285
3600.0	0.98224	0.84216	0.86399	0.92985	0.92741	0.95162	1.11366	1.08718	1.02409	1.05195
3700.0	1.10250	1.03971	0.99348	0.89512	0.80359	0.83409	0.93201	0.98841	1.12839	0.95108
3800.0	0.89378	0.94943	0.71507	0.56119	0.61662	0.76808	0.72174	0.73750	0.71511	0.76632
3900.0	0.86385	0.91369	0.84121	0.51692	0.55542	0.83679	0.76613	0.53382	0.88008	1.08127
4000.0	1.14111									
ZENITH SCAN STARTING AT 20.59.44 ON 9/12/73. NORMALIZING FACTOR = 5.0670E 00										
2600.0	0.00015	0.00015	0.00021	0.00029	0.00019	0.00018	0.00019	0.00022	0.00018	0.00023
2700.0	0.00019	0.00019	0.00021	0.00019	0.00027	0.00018	0.00019	0.00025	0.00021	0.00019
2800.0	0.00023	0.00021	0.00020	0.00021	0.00025	0.00023	0.00022	0.00020	0.00021	0.00021
2900.0	0.00023	0.00024	0.00032	0.00036	0.00052	0.00084	0.00144	0.00233	0.00378	0.00618
3000.0	0.00909	0.01500	0.02268	0.04378	0.05912	0.08586	0.09876	0.14356	0.18201	0.18887
3100.0	0.23043	0.34181	0.36521	0.41213	0.45504	0.48816	0.47359	0.61470	0.58272	0.63751
3200.0	0.70595	0.73888	0.70159	0.66709	0.79980	0.84556	1.05409	1.08211	0.99247	1.10635
3300.0	1.18900	1.04558	1.06401	1.03980	1.00781	1.07692	0.96613	0.88064	0.96746	1.02072
3400.0	1.08239	1.01206	1.02647	1.05248	0.86178	0.91443	0.94773	0.95304	0.91487	0.89938
3500.0	1.00000	1.00982	0.93755	0.95642	1.06580	1.05484	0.95766	0.81022	0.72232	0.81146
3600.0	0.97092	0.83600	0.85949	0.92256	0.97092	0.93662	1.07187	1.03997	0.96378	0.99045
3700.0	1.03321	0.96484	0.91442	0.81997	0.75182	0.76169	0.85465	0.91194	1.05789	0.90947
3800.0	0.85361	0.92095	0.70154	0.55302	0.60921	0.75787	0.71765	0.73784	0.72132	0.77635
3900.0	0.87788	0.92995	0.85260	0.52589	0.54359	0.83812	0.76383	0.51283	0.87485	1.05902
4000.0	1.09541									
ZENITH SCAN STARTING AT 21. 2. 5 ON 9/12/73. NORMALIZING FACTOR = 4.8761E 00										
2600.0	0.00018	0.00020	0.00018	0.00016	0.00016	0.00017	0.00016	0.00019	0.00017	0.00018
2700.0	0.00018	0.00035	0.00017	0.00018	0.00022	0.00018	0.00022	0.00022	0.00022	0.00019
2800.0	0.00020	0.00022	0.00020	0.00021	0.00020	0.00023	0.00024	0.00023	0.00021	0.00021
2900.0	0.00022	0.00024	0.00032	0.00054	0.00056	0.00084	0.00142	0.00218	0.00366	0.00592
3000.0	0.00862	0.01464	0.02173	0.04465	0.05999	0.08567	0.10047	0.14151	0.18516	0.19170
3100.0	0.22606	0.34172	0.36544	0.41286	0.45612	0.48487	0.46259	0.61205	0.60473	0.64784
3200.0	0.71487	0.75387	0.70858	0.67480	0.79340	0.84594	1.04014	1.08947	0.99998	1.11359
3300.0	1.21915	1.06741	1.08318	1.06501	1.02628	1.08604	0.97095	0.88812	0.96760	1.01727
3400.0	1.07967	1.00877	1.01950	1.04975	0.86837	0.91300	0.94831	0.94980	0.89488	0.89506
3500.0	1.00000	1.01498	0.94717	0.96078	1.08613	1.07337	0.97504	0.81795	0.72471	0.81297
3600.0	0.99609	0.84351	0.87753	0.93503	0.93597	0.95675	1.09313	1.06243	0.98701	1.00334
3700.0	1.04889	0.98447	0.93728	0.84314	0.75796	0.78636	0.88365	0.94090	1.08395	0.93090
3800.0	0.88435	0.92874	0.71902	0.56215	0.61500	0.78038	0.73175	0.74992	0.73003	0.78364
3900.0	0.89038	0.94159	0.86833	0.54473	0.56475	0.87533	0.79980	0.53570	0.90367	1.09498
4000.0	1.13285									
ZENITH SCAN STARTING AT 21. 3.51 ON 9/12/73. NORMALIZING FACTOR = 4.8207E 00										
2600.0	0.00018	0.00018	0.00016	0.00016	0.00017	0.00016	0.00018	0.00029	0.00031	0.00026
2700.0	0.00023	0.00019	0.00020	0.00021	0.00019	0.00023	0.00020	0.00020	0.00021	0.00021
2800.0	0.00021	0.00022	0.00025	0.00021	0.00027	0.00025	0.00023	0.00021	0.00026	0.00022
2900.0	0.00023	0.00032	0.00030	0.00038	0.00053	0.00090	0.00142	0.00225	0.00370	0.00578
3000.0	0.00857	0.01419	0.02146	0.04378	0.05830	0.08514	0.09937	0.13950	0.18196	0.18971
3100.0	0.23212	0.33966	0.36613	0.41606	0.45851	0.49349	0.47603	0.61562	0.60666	0.65421
3200.0	0.72039	0.76050	0.71264	0.66439	0.80771	0.86256	1.05912	1.09501	1.00919	1.11298
3300.0	1.20339	1.06619	1.08070	1.05562	1.02656	1.09612	0.96883	0.89742	0.98258	1.03655
3400.0	1.09332	1.02724	1.04408	1.06572	0.88853	0.93955	0.96563	0.96796	0.92548	0.91271
3500.0	1.00000	1.00894	0.94087	0.94739	1.06844	1.05871	0.96522	0.81138	0.73090	0.80373
3600.0	0.98151	0.84900	0.86816	0.93063	0.93697	0.95452	1.10860	1.07279	0.99517	1.02210
3700.0	1.06020	0.98083	0.92808	0.84187	0.75754	0.79812	0.89119	0.94192	1.03638	0.91449
3800.0	0.87148	0.92313	0.71592	0.55733	0.60225	0.77146	0.72573	0.73943	0.71910	0.76141
3900.0	0.86562	0.91389	0.84936	0.52055	0.54896	0.85390	0.75283	0.51432	0.89449	1.07041
4000.0	1.11056									

Table VIII-31

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 21. 6.14 ON 9/12/73, NORMALIZING FACTOR = 4.8300E 00									
2600.0	0.00017	0.00018	0.00016	0.00071	0.00020	0.00017	0.00018	0.00018	0.00019	0.00019
2700.0	0.00018	0.00019	0.00019	0.00020	0.00021	0.00021	0.00019	0.00018	0.00020	0.00022
2800.0	0.00018	0.00019	0.00019	0.00019	0.00019	0.00020	0.00031	0.00026	0.00023	0.00028
2900.0	0.00021	0.00023	0.00030	0.00038	0.00048	0.00079	0.00133	0.00214	0.00352	0.00568
3000.0	0.00821	0.01412	0.02097	0.04089	0.05519	0.07914	0.09266	0.13299	0.17147	0.17818
3100.0	0.21656	0.32801	0.35027	0.39334	0.43606	0.46433	0.44620	0.59670	0.58748	0.62620
3200.0	0.69316	0.72642	0.68854	0.65321	0.77431	0.82518	1.03064	1.06651	0.97555	1.09052
3300.0	1.18039	1.03446	1.05361	1.03457	0.99952	1.06703	0.95858	0.87550	0.96242	1.01733
3400.0	1.08153	1.01464	1.02566	1.05247	0.86175	0.91725	0.95061	0.95608	0.91759	0.90357
3500.0	1.00000	1.01313	0.93573	0.92557	1.05201	1.04275	0.94411	0.79968	0.70971	0.80684
3600.0	0.97338	0.82818	0.86130	0.91866	0.91978	0.94202	1.07119	1.04151	0.97184	0.97990
3700.0	1.02275	0.95634	0.90814	0.82179	0.73559	0.76009	0.85817	0.90743	1.05641	0.90623
3800.0	0.85588	0.91686	0.70235	0.55312	0.59673	0.75971	0.71342	0.72984	0.70792	0.75061
3900.0	0.85859	0.91039	0.84554	0.51911	0.53686	0.85044	0.77007	0.51317	0.87958	1.05900
4000.0	1.09431									
	ZENITH SCAN STARTING AT 21.12. 2 ON 9/12/73, NORMALIZING FACTOR = 4.8428E 00									
2600.0	0.00017	0.00016	0.00018	0.00017	0.00016	0.00017	0.00020	0.00024	0.00018	0.00018
2700.0	0.00017	0.00019	0.00021	0.00017	0.00023	0.00024	0.00024	0.00036	0.00023	0.00028
2800.0	0.00021	0.00024	0.00022	0.00021	0.00021	0.00021	0.00024	0.00024	0.00022	0.00024
2900.0	0.00025	0.00026	0.00030	0.00039	0.00050	0.00076	0.00129	0.00196	0.00323	0.00526
3000.0	0.00756	0.01274	0.01920	0.03725	0.05082	0.07377	0.08626	0.12589	0.16185	0.16972
3100.0	0.20759	0.32140	0.34368	0.39170	0.43665	0.46788	0.44797	0.59327	0.59529	0.63871
3200.0	0.70666	0.75100	0.70693	0.67403	0.79935	0.85229	1.05073	1.10666	1.01050	1.12954
3300.0	1.23368	1.07066	1.06527	1.04563	1.01833	1.08037	0.97006	0.88787	0.97282	1.03048
3400.0	1.09291	1.03162	1.04053	1.05848	0.88500	0.92963	0.96090	0.96248	0.92568	0.91020
3500.0	1.00000	1.02667	0.95202	0.96842	1.08997	1.07854	0.98234	0.82715	0.73530	0.81868
3600.0	1.01812	0.86449	0.88590	0.95404	0.95015	0.96685	1.11449	1.08087	1.00901	1.02227
3700.0	1.06179	0.99025	0.95018	0.85425	0.76903	0.80600	0.89976	0.94553	1.09780	0.96354
3800.0	0.88907	0.95522	0.73180	0.57589	0.62600	0.78407	0.74020	0.75338	0.72981	0.77993
3900.0	0.88923	0.94281	0.86947	0.55030	0.55105	0.86376	0.78919	0.52256	0.88275	1.08078
4000.0	1.11883									
	ZENITH SCAN STARTING AT 21.13.48 ON 9/12/73, NORMALIZING FACTOR = 5.1164E 00									
2600.0	0.00002	0.00002	0.00002	0.00003	0.00002	0.00002	0.00002	0.00002	0.00002	0.00003
2700.0	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00004	0.00004
2800.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005
2900.0	0.00005	0.00005	0.00005	0.00005	0.00006	0.00010	0.00061	0.00072	0.00075	0.00078
3000.0	0.00084	0.00127	0.00136	0.00137	0.00138	0.00139	0.00139	0.00142	0.00148	0.00149
3100.0	0.14240	0.29583	0.32171	0.36916	0.40981	0.44614	0.43294	0.56483	0.56020	0.60348
3200.0	0.66706	0.71257	0.67067	0.64132	0.77609	0.82456	1.01456	1.05991	0.97573	1.07619
3300.0	1.17631	1.03930	1.05622	1.03409	1.00151	1.06835	0.94913	0.87461	0.95552	1.01455
3400.0	1.07235	1.01142	1.02553	1.05132	0.88261	0.92586	0.95740	0.96744	0.92489	0.91505
3500.0	1.00000	1.02252	0.95119	0.95662	1.08843	1.07861	0.98836	0.82911	0.74401	0.81791
3600.0	1.02046	0.87230	0.86910	0.92719	0.94087	0.95569	1.10857	1.07670	0.99589	1.02031
3700.0	1.06123	0.97904	0.92821	0.84165	0.75613	0.79291	0.88518	0.93680	1.07428	0.93104
3800.0	0.87222	0.92536	0.72537	0.55681	0.60367	0.77842	0.73282	0.74518	0.72189	0.76872
3900.0	0.87893	0.92919	0.87216	0.52357	0.55420	0.85979	0.77598	0.54821	0.89857	1.08500
4000.0	1.12680									
	ZENITH SCAN STARTING AT 21.16. 8 ON 9/12/73, NORMALIZING FACTOR = 5.0332E-02									
2600.0	0.00022	0.00015	0.00016	0.00019	0.00026	0.00017	0.00016	0.00016	0.00018	0.00016
2700.0	0.00021	0.00020	0.00017	0.00018	0.00018	0.00021	0.00027	0.00021	0.00020	0.00018
2800.0	0.00020	0.00028	0.00032	0.00022	0.00022	0.00023	0.00043	0.00028	0.00022	0.00021
2900.0	0.00028	0.00025	0.00027	0.00034	0.00044	0.00071	0.00113	0.00185	0.00288	0.00443
3000.0	0.00654	0.01097	0.01345	0.01433	0.01451	0.01471	0.01477	0.01494	0.01506	0.01504
3100.0	0.12601	0.29239	0.31529	0.35783	0.40007	0.43110	0.41506	0.55645	0.55089	0.59398
3200.0	0.65541	0.69634	0.66160	0.62970	0.75359	0.79899	0.99920	1.04037	0.95453	1.06823
3300.0	1.15562	1.01634	1.03822	1.02122	0.98550	1.05320	0.94471	0.84299	0.93742	0.99584
3400.0	1.05974	0.99435	1.00764	1.03471	0.84660	0.89913	0.93670	0.96079	0.91747	0.90461
3500.0	1.00000	1.01584	0.94205	0.95585	1.07406	1.06931	0.97193	0.82498	0.73379	0.82282
3600.0	1.00126	0.85720	0.88753	0.95143	0.95110	0.97054	1.10942	1.07788	1.00520	1.01893
3700.0	1.01186	1.00077	0.96034	0.88547	0.77494	0.79914	0.90508	0.95508	1.11314	0.96726
3800.0	0.90200	0.96470	0.74638	0.58018	0.62244	0.79099	0.74429	0.75938	0.74002	0.78080
3900.0	0.89662	0.95342	0.83411	0.58963	0.55618	0.87663	0.80359	0.53224	0.89478	1.09729
4000.0	1.13419									
	ZENITH SCAN STARTING AT 21.17.54 ON 9/12/73, NORMALIZING FACTOR = 4.5561E-02									
2600.0	0.00018	0.00018	0.00017	0.00028	0.00019	0.00018	0.00018	0.00018	0.00018	0.00034
2700.0	0.00025	0.00021	0.00018	0.00023	0.00019	0.00023	0.00021	0.00018	0.00021	0.00022
2800.0	0.00031	0.00020	0.00026	0.00022	0.00022	0.00025	0.00025	0.00023	0.00022	0.00026
2900.0	0.00032	0.00023	0.00028	0.00033	0.00047	0.00076	0.00119	0.00190	0.00304	0.00469
3000.0	0.00681	0.01112	0.01459	0.01567	0.01589	0.01614	0.01620	0.01638	0.01653	0.01652
3100.0	0.12935	0.30223	0.32226	0.37617	0.41681	0.45133	0.43438	0.57095	0.57025	0.61952
3200.0	0.68016	0.72998	0.68823	0.66294	0.78729	0.83849	1.03038	1.07967	0.98735	1.09257
3300.0	1.20027	1.05403	1.06824	1.05165	1.01956	1.07870	0.96470	0.89027	0.96995	1.02691
3400.0	1.08677	1.02756	1.03612	1.05931	0.88729	0.92504	0.95432	0.95881	0.92625	0.91173
3500.0	1.00000	1.02392	0.95004	0.96421	1.08593	1.07514	0.97924	0.82496	0.73782	0.81621
3600.0	1.01474	0.86052	0.89735	0.96102	0.95820	0.97953	1.12284	1.06830	1.01254	1.02453
3700.0	1.06337	0.99868	0.94871	0.84814	0.76869	0.80349	0.89780	0.94640	1.08293	0.95474
3800.0	0.88339	0.93746	0.73233	0.56986	0.62823	0.78978	0.74295	0.75805	0.73594	0.78776
3900.0	0.89410	0.94569	0.87333	0.55364	0.57141	0.86170	0.79725	0.55505	0.89314	1.09036
4000.0	1.12873									
	ZENITH SCAN STARTING AT 21.19.40 ON 9/12/73, NORMALIZING FACTOR = 4.3282E-02									
2600.0	0.00016	0.00018	0.00017	0.00019	0.00019	0.00025	0.00018	0.00019	0.00020	0.00021
2700.0	0.00016	0.00019	0.00017	0.00018	0.00017	0.00018	0.00024	0.00019	0.00019	0.00018
2800.0	0.00020	0.00019	0.00021	0.00022	0.00021	0.00022	0.00035	0.00032	0.00024	0.00024
2900.0	0.00024	0.00039	0.00032	0.00035	0.00047	0.00073	0.00124	0.00186	0.00302	0.00478
3000.0	0.00689	0.01153	0.01507	0.01639	0.01663	0.01687	0.01694	0.01715	0.01728	0.01727
3100.0	0.13297	0.30097	0.32648	0.37211	0.41344	0.45044	0.43916	0.57447	0.56912	0.61328
3200.0	0.67661	0.72116	0.68138	0.65313	0.79046	0.83451	1.03462	1.07391	0.99154	1.09691
3300.0	1.18774	1.04983	1.06917	1.04747	1.01286	1.08474	0.96243	0.88721	0.97185	1.02795
3400.0	1.08784	1.01303	1.01159	1.05007	0.86815	0.92281	0.95734	0.96252	0.92117	0.90665
3500.0	1.00000	1.01235	0.94137	0.95086	1.07302	1.06712	0.97282	0.82272	0.73892	0.80885
3600.0	0.98873	0.85455	0.87817	0.93916	0.94087	0.95740	1.10694	1.07535	0.99517	1.01744
3700.0	1.05894	0.98331	0.93566	0.85349	0.76474	0.78852	0.89132	0.94622	1.08992	0.93604
3800.0	0.88794	0.94349	0.72666	0.57186	0.61418	0.78342	0.73856	0.75054	0.72886	0.77236
3900.0	0.88361	0.93164	0.87797	0.53070	0.56186	0.86435	0.77517	0.61047	0.89216	1.07197
4000.0	1.11480									

Table VIII-32

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 21.26.10 ON 9/12/73. NORMALIZING FACTOR = 4.1637E-02										
2600.0	0.00019	0.00022	0.00019	0.00019	0.00036	0.00023	0.00046	0.00022	0.00019	0.00023
2700.0	0.00016	0.00018	0.00019	0.00017	0.00021	0.00022	0.00018	0.00021	0.00020	0.00023
2800.0	0.00033	0.00018	0.00021	0.00024	0.00024	0.00022	0.00021	0.00021	0.00023	0.00023
2900.0	0.00026	0.00024	0.00028	0.00031	0.00045	0.00073	0.00107	0.00162	0.00276	0.00422
3000.0	0.00602	0.01035	0.01428	0.01675	0.01702	0.01729	0.01737	0.01760	0.01774	0.01774
3100.0	0.05960	0.28666	0.31588	0.38074	0.40140	0.43634	0.42548	0.56232	0.55592	0.60273
3200.0	0.66457	0.68951	0.66688	0.63858	0.76707	0.81503	1.02439	1.05925	0.97236	1.09064
3300.0	1.17613	1.03586	1.06029	1.03797	1.00236	1.07520	0.96622	0.87895	0.96420	1.01751
3400.0	1.07954	1.01056	1.02770	1.04692	0.86561	0.92481	0.95410	0.95979	0.92064	0.90851
3500.0	1.00000	1.00941	0.96527	0.95331	1.07069	1.05863	0.96369	0.81798	0.73499	0.80978
3600.0	0.97975	0.84852	0.87544	0.93541	0.93916	0.95858	1.10565	1.07284	0.99579	1.01981
3700.0	1.05966	0.98569	0.93357	0.84748	0.76637	0.80781	0.89278	0.94370	1.07722	0.92321
3800.0	0.87480	0.93092	0.72023	0.58061	0.60695	0.76895	0.72252	0.73375	0.71447	0.75498
3900.0	0.85926	0.90975	0.85337	0.52892	0.53943	0.85148	0.75655	0.51895	0.88592	1.06440
4000.0	1.10569									
ZENITH SCAN STARTING AT 21.27.56 ON 9/12/73. NORMALIZING FACTOR = 3.9822E-02										
2600.0	0.00012	0.00013	0.00012	0.00013	0.00015	0.00022	0.00014	0.00013	0.00013	0.00018
2700.0	0.00015	0.00016	0.00011	0.00015	0.00015	0.00011	0.00012	0.00013	0.00014	0.00014
2800.0	0.00013	0.00013	0.00028	0.00013	0.00017	0.00015	0.00013	0.00016	0.00020	0.00014
2900.0	0.00016	0.00017	0.00022	0.00034	0.00036	0.00072	0.00118	0.00173	0.00281	0.00444
3000.0	0.00629	0.01373	0.02685	0.03251	0.04403	0.06481	0.07623	0.11062	0.14612	0.15362
3100.0	0.17995	0.28372	0.30704	0.35378	0.39567	0.42650	0.41813	0.55494	0.54926	0.60111
3200.0	0.66835	0.70645	0.66687	0.65056	0.77845	0.82639	1.02684	1.06187	0.96887	1.09848
3300.0	1.17907	1.03328	1.05572	1.03524	1.00767	1.06423	0.94220	0.87789	0.96311	1.01484
3400.0	1.07473	1.00547	1.02271	1.04052	0.85813	0.91645	0.94040	0.94151	0.90953	0.89160
3500.0	1.00000	1.00356	0.92460	0.95433	1.06189	1.04281	0.94181	0.80254	0.70995	0.83508
3600.0	0.97746	0.83476	0.87898	0.92955	0.93003	0.95459	1.08645	1.04937	0.98068	1.00237
3700.0	1.02855	0.97371	0.91973	0.82550	0.74657	0.78724	0.87108	0.92628	1.06097	0.90848
3800.0	0.86214	0.90773	0.68793	0.54836	0.61556	0.75064	0.71050	0.72238	0.70437	0.76272
3900.0	0.85398	0.90738	0.82184	0.50965	0.55644	0.83931	0.74436	0.52607	0.87148	1.04726
4000.0	1.07662									
ZENITH SCAN STARTING AT 21.29.42 ON 9/12/73. NORMALIZING FACTOR = 3.9715E-02										
2600.0	0.00018	0.00019	0.00018	0.00019	0.00015	0.00015	0.00014	0.00017	0.00017	0.00020
2700.0	0.00026	0.00037	0.00020	0.00016	0.00017	0.00020	0.00021	0.00019	0.00018	0.00018
2800.0	0.00017	0.00018	0.00018	0.00019	0.00019	0.00018	0.00019	0.00019	0.00019	0.00023
2900.0	0.00024	0.00026	0.00025	0.00029	0.00042	0.00065	0.00111	0.00161	0.00264	0.00416
3000.0	0.00585	0.00961	0.01399	0.01733	0.01767	0.01798	0.01807	0.01832	0.01848	0.01847
3100.0	0.09386	0.28625	0.31349	0.36042	0.40160	0.43939	0.43032	0.56251	0.55968	0.61362
3200.0	0.67519	0.72647	0.68492	0.65891	0.80232	0.84571	1.01092	1.06657	0.98480	1.09959
3300.0	1.18629	1.04730	1.06844	1.04476	1.01465	1.08345	0.96200	0.88991	0.97326	1.02999
3400.0	1.08364	1.02239	1.03991	1.05537	0.88393	0.93295	0.95615	0.96429	0.92552	0.91009
3500.0	1.00000	1.02081	0.94908	0.96261	1.08734	1.07295	0.97886	0.82593	0.73566	0.82707
3600.0	1.00624	0.85914	0.89910	0.95996	0.96013	0.98236	1.12389	1.09700	1.02459	1.03933
3700.0	1.08524	1.01811	0.96790	0.87022	0.78450	0.82398	0.91774	0.96813	1.11300	0.97276
3800.0	0.90499	0.91278	0.75035	0.57221	0.62864	0.79511	0.75115	0.76045	0.73543	0.78138
3900.0	0.89297	0.94484	0.87702	0.53664	0.57936	0.86338	0.77928	0.56156	0.90465	1.08621
4000.0	1.12580									
ZENITH SCAN STARTING AT 21.32. 3 ON 9/12/73. NORMALIZING FACTOR = 4.0525E-02										
2600.0	0.00015	0.00013	0.00016	0.00020	0.00016	0.00019	0.00017	0.00038	0.00017	0.00018
2700.0	0.00016	0.00016	0.00024	0.00031	0.00015	0.00017	0.00015	0.00019	0.00017	0.00021
2800.0	0.00021	0.00018	0.00021	0.00018	0.00018	0.00017	0.00021	0.00018	0.00020	0.00020
2900.0	0.00025	0.00023	0.00022	0.00031	0.00039	0.00061	0.00099	0.00143	0.00243	0.00378
3000.0	0.00531	0.00894	0.01289	0.01694	0.01727	0.01758	0.01767	0.01791	0.01808	0.01806
3100.0	0.07189	0.27334	0.29722	0.33981	0.38178	0.41399	0.40302	0.54376	0.54069	0.58538
3200.0	0.64727	0.69088	0.65498	0.62854	0.75723	0.79816	1.00339	1.06400	0.95145	1.07974
3300.0	1.16050	1.01351	1.04143	1.02090	0.98655	1.05094	0.94372	0.86154	0.94842	1.00410
3400.0	1.06318	0.99511	1.01697	1.03467	0.85136	0.91685	0.94647	0.95223	0.91447	0.89953
3500.0	1.00000	1.00765	0.93907	0.95428	1.06939	1.05467	0.93934	0.80728	0.72696	0.80794
3600.0	0.97804	0.84560	0.87045	0.92681	0.93049	0.94757	1.10017	1.05933	0.98561	1.01067
3700.0	1.04297	0.97634	0.92789	0.84452	0.75746	0.79794	0.88600	0.94289	1.07350	0.92206
3800.0	0.87462	0.91878	0.71819	0.55780	0.61546	0.77417	0.72589	0.73631	0.71307	0.75573
3900.0	0.86183	0.91293	0.85274	0.51377	0.55176	0.85228	0.75787	0.52033	0.88924	1.06499
4000.0	1.10227									
ZENITH SCAN STARTING AT 21.39.44 ON 9/12/73. NORMALIZING FACTOR = 3.7809E-02										
2600.0	0.00016	0.00020	0.00018	0.00015	0.00014	0.00016	0.00018	0.00016	0.00017	0.00015
2700.0	0.00015	0.00015	0.00016	0.00017	0.00019	0.00014	0.00016	0.00017	0.00016	0.00017
2800.0	0.00016	0.00019	0.00019	0.00026	0.00017	0.00018	0.00018	0.00020	0.00019	0.00020
2900.0	0.00020	0.00020	0.00022	0.00027	0.00038	0.00056	0.00093	0.00146	0.00224	0.00351
3000.0	0.00491	0.00788	0.01184	0.01777	0.01838	0.01877	0.01889	0.01917	0.01935	0.01935
3100.0	0.01945	0.14140	0.27975	0.32609	0.36534	0.40454	0.39834	0.52414	0.52219	0.57696
3200.0	0.63702	0.68812	0.64911	0.62839	0.76948	0.81487	1.00959	1.05090	0.96713	1.08920
3300.0	1.17713	1.03570	1.06170	1.04416	1.01362	1.07951	0.95496	0.88808	0.97162	1.02735
3400.0	1.08263	1.01552	1.03012	1.04854	0.87365	0.92677	0.95169	0.95414	0.92067	0.90599
3500.0	1.00000	1.01607	0.94584	0.96167	1.08282	1.07107	0.97217	0.82030	0.72954	0.82564
3600.0	0.98873	0.85630	0.89521	0.95795	0.95572	0.96393	1.08420	1.07882	1.00941	1.02526
3700.0	1.06363	0.99122	0.94078	0.84747	0.76459	0.79895	0.88760	0.94276	1.08141	0.94177
3800.0	0.87989	0.93588	0.71377	0.57241	0.63404	0.77537	0.73454	0.75124	0.72634	0.78114
3900.0	0.87717	0.92765	0.84689	0.53633	0.57242	0.84961	0.77024	0.54896	0.89389	1.07751
4000.0	1.11200									
ZENITH SCAN STARTING AT 21.42. 5 ON 9/12/73. NORMALIZING FACTOR = 3.7814E-02										
2600.0	0.00023	0.00017	0.00014	0.00017	0.00017	0.00016	0.00018	0.00014	0.00014	0.00014
2700.0	0.00015	0.00016	0.00022	0.00015	0.00018	0.00016	0.00018	0.00017	0.00017	0.00017
2800.0	0.00024	0.00022	0.00018	0.00019	0.00029	0.00033	0.00021	0.00017	0.00018	0.00021
2900.0	0.00020	0.00021	0.00023	0.00027	0.00035	0.00056	0.00093	0.00130	0.00222	0.00329
3000.0	0.00469	0.00752	0.01135	0.01783	0.01840	0.01878	0.01890	0.01919	0.01937	0.01936
3100.0	0.01952	0.01985	0.20756	0.31892	0.36057	0.39420	0.38973	0.52368	0.51838	0.56900
3200.0	0.63199	0.67739	0.64123	0.62056	0.75448	0.79815	1.01024	1.04185	0.95406	1.09277
3300.0	1.16467	1.02475	1.05646	1.03703	1.00113	1.07515	0.96208	0.88043	0.97161	1.02528
3400.0	1.05081	0.99975	1.02374	1.04327	0.85764	0.92294	0.94828	0.95385	0.91678	0.90412
3500.0	1.00000	1.00601	0.93743	0.95375	1.07369	1.06133	0.96851	0.81525	0.73081	0.81514
3600.0	0.99446	0.85625	0.88109	0.94259	0.94743	0.97184	1.11630	1.08092	1.00594	1.02492
3700.0	1.06510	1.00069	0.94616	0.84899	0.76726	0.81069	0.89870	0.95932	1.08654	0.93528
3800.0	0.88570	0.93437	0.72957	0.56799	0.63292	0.78874	0.74057	0.75274	0.73103	0.78116
3900.0	0.88322	0.93958	0.86402	0.52294	0.57950	0.77245	0.72331	0.53804	0.91141	1.07679
4000.0	1.11629									

Table VIII-33

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
				ZENITH SCAN STARTING AT 21.47.52 ON 9/12/73, NORMALIZING FACTOR = 3.6780E 00						
2600.0	0.00016	0.00012	0.00015	0.00017	0.00037	0.00019	0.00016	0.00015	0.00015	0.00019
2700.0	0.00014	0.00013	0.00022	0.00014	0.00018	0.00014	0.00016	0.00019	0.00019	0.00017
2800.0	0.00016	0.00025	0.00021	0.00018	0.00018	0.00027	0.00016	0.00017	0.00016	0.00016
2900.0	0.00019	0.00021	0.00021	0.00025	0.00033	0.00051	0.00091	0.00129	0.00199	0.00312
3000.0	0.00424	0.00684	0.01029	0.01977	0.02698	0.04057	0.04854	0.07480	0.09900	0.10779
3100.0	0.14723	0.22198	0.24954	0.30186	0.34233	0.37671	0.37263	0.50725	0.50609	0.55272
3200.0	0.60633	0.65909	0.62374	0.60843	0.73691	0.77538	0.97989	1.02720	0.93053	1.07500
3300.0	1.14788	1.00081	1.03469	1.01885	0.98189	1.05161	0.94006	0.86244	0.95306	1.00838
3400.0	1.06348	0.99244	1.01474	1.03255	0.84652	0.91755	0.94482	0.95024	0.91446	0.90371
3500.0	1.00000	1.00391	0.93796	0.95351	1.07158	1.05989	0.96119	0.80897	0.72349	0.81175
3600.0	0.99061	0.84425	0.88370	0.94052	0.94334	0.97116	1.10738	1.07650	1.00612	1.02638
3700.0	1.05916	0.99724	0.94357	0.84545	0.76581	0.80835	0.88680	0.94028	1.08166	0.93739
3800.0	0.88183	0.93475	0.71308	0.56991	0.62535	0.77312	0.73428	0.75203	0.72501	0.78125
3900.0	0.87462	0.92994	0.84521	0.52281	0.58408	0.85143	0.76350	0.55701	0.89904	1.08242
4000.0	1.11822									
				ZENITH SCAN STARTING AT 21.49.40 ON 9/12/73, NORMALIZING FACTOR = 3.6340E 00						
2600.0	0.00013	0.00011	0.00015	0.00018	0.00015	0.00015	0.00013	0.00012	0.00014	0.00019
2700.0	0.00018	0.00014	0.00022	0.00017	0.00018	0.00015	0.00018	0.00014	0.00018	0.00016
2800.0	0.00016	0.00016	0.00017	0.00024	0.00014	0.00016	0.00018	0.00019	0.00017	0.00021
2900.0	0.00022	0.00021	0.00021	0.00033	0.00059	0.00057	0.00085	0.00121	0.00196	0.00297
3000.0	0.00410	0.00653	0.00952	0.01952	0.02595	0.03922	0.04747	0.07020	0.09609	0.10421
3100.0	0.13747	0.21643	0.24010	0.29396	0.33238	0.37091	0.36931	0.49056	0.49143	0.55103
3200.0	0.61043	0.66263	0.62476	0.61121	0.74709	0.78932	0.98504	1.03134	0.93907	1.06991
3300.0	1.15805	1.01330	1.04152	1.02560	0.99571	1.05976	0.94110	0.87473	0.95659	1.01284
3400.0	1.07405	1.00984	1.02412	1.04593	0.87319	0.92527	0.94965	0.95420	0.92212	0.89745
3500.0	1.00000	1.00404	0.93245	0.95824	1.06831	1.05668	0.95960	0.81314	0.72464	0.82113
3600.0	0.97475	0.84687	0.87533	0.93639	0.94009	0.96083	1.10629	1.07392	0.99738	1.02888
3700.0	1.06015	0.98825	0.92964	0.84659	0.76656	0.80246	0.89074	0.94078	1.08601	0.92194
3800.0	0.88569	0.93212	0.71902	0.56562	0.62393	0.78107	0.73628	0.74802	0.72791	0.78489
3900.0	0.88266	0.93366	0.85633	0.53513	0.57690	0.85949	0.78234	0.55131	0.90187	1.09136
4000.0	1.12970									
				ZENITH SCAN STARTING AT 21.52. 2 ON 9/12/73, NORMALIZING FACTOR = 3.5550E 00						
2600.0	0.00016	0.00013	0.00014	0.00018	0.00018	0.00018	0.00013	0.00014	0.00022	0.00036
2700.0	0.00017	0.00014	0.00014	0.00017	0.00017	0.00019	0.00018	0.00015	0.00017	0.00017
2800.0	0.00015	0.00019	0.00016	0.00018	0.00017	0.00019	0.00029	0.00018	0.00017	0.00018
2900.0	0.00019	0.00018	0.00023	0.00025	0.00033	0.00051	0.00085	0.00125	0.00189	0.00301
3000.0	0.00403	0.00648	0.00963	0.01874	0.02538	0.03838	0.04554	0.07039	0.09320	0.10171
3100.0	0.13930	0.20928	0.23737	0.28804	0.32927	0.36771	0.36947	0.49506	0.49168	0.54664
3200.0	0.60739	0.66048	0.62425	0.60796	0.73523	0.77468	0.99307	1.02656	0.93639	1.08097
3300.0	1.14504	1.00690	1.04218	1.02033	0.98622	1.06450	0.94216	0.87332	0.96389	1.01952
3400.0	1.07552	1.00862	1.03266	1.04782	0.86819	0.93687	0.95719	0.96053	0.92178	0.90873
3500.0	1.00000	1.01023	0.93944	0.95835	1.08236	1.06750	0.97200	0.82227	0.73073	0.83924
3600.0	1.00565	0.85894	0.90251	0.95977	0.96259	0.99056	1.12684	1.09077	1.01476	1.03579
3700.0	1.07654	1.01417	0.95935	0.86222	0.77910	0.82148	0.91211	0.96924	1.10642	0.96110
3800.0	0.92012	0.93967	0.72733	0.57515	0.64028	0.78589	0.74569	0.76225	0.74238	0.80069
3900.0	0.89666	0.95317	0.87198	0.54235	0.58977	0.87827	0.79097	0.56449	0.91638	1.10455
4000.0	1.13851									
				ZENITH SCAN STARTING AT 21.53.49 ON 9/12/73, NORMALIZING FACTOR = 3.4313E 00						
2600.0	0.00013	0.00013	0.00017	0.00012	0.00014	0.00018	0.00019	0.00014	0.00014	0.00013
2700.0	0.00019	0.00015	0.00023	0.00017	0.00017	0.00018	0.00016	0.00017	0.00019	0.00015
2800.0	0.00018	0.00014	0.00016	0.00015	0.00026	0.00016	0.00016	0.00019	0.00018	0.00017
2900.0	0.00018	0.00016	0.00020	0.00024	0.00036	0.00057	0.00084	0.00122	0.00192	0.00301
3000.0	0.00402	0.00658	0.00958	0.01861	0.02506	0.03715	0.04489	0.06757	0.09136	0.09970
3100.0	0.13567	0.20881	0.23393	0.28040	0.32597	0.36281	0.35950	0.48517	0.49080	0.54722
3200.0	0.60643	0.65854	0.62290	0.61233	0.74315	0.78078	0.98285	1.03175	0.93405	1.07893
3300.0	1.15811	1.00478	1.03721	1.02086	0.98886	1.05856	0.94864	0.86972	0.95809	1.01656
3400.0	1.07556	1.00768	1.02750	1.04794	0.85439	0.91378	0.94321	0.94659	0.91325	0.89705
3500.0	1.00000	1.00246	0.93162	0.95712	1.04151	1.03725	0.94957	0.79783	0.70671	0.80443
3600.0	0.97696	0.83511	0.86733	0.92263	0.92361	0.94909	1.07495	1.04101	0.96833	0.98222
3700.0	1.01478	0.94685	0.89111	0.80999	0.72583	0.76033	0.84577	0.89978	1.02377	0.88745
3800.0	0.83713	0.88553	0.67918	0.54777	0.59546	0.73886	0.70033	0.71323	0.69059	0.73727
3900.0	0.83559	0.88724	0.82303	0.45660	0.53449	0.82221	0.72191	0.50111	0.85905	1.01733
4000.0	1.05609									
				ZENITH SCAN STARTING AT 21.56.10 ON 9/12/73, NORMALIZING FACTOR = 3.3861E 00						
2600.0	0.00013	0.00012	0.00012	0.00014	0.00013	0.00014	0.00016	0.00016	0.00017	0.00016
2700.0	0.00014	0.00013	0.00017	0.00027	0.00035	0.00018	0.00016	0.00024	0.00014	0.00016
2800.0	0.00024	0.00017	0.00019	0.00017	0.00018	0.00016	0.00015	0.00020	0.00016	0.00018
2900.0	0.00018	0.00021	0.00025	0.00026	0.00032	0.00051	0.00082	0.00126	0.00188	0.00287
3000.0	0.00401	0.00615	0.00910	0.01799	0.02406	0.03648	0.04381	0.06639	0.08944	0.09752
3100.0	0.13197	0.20112	0.22908	0.27423	0.32306	0.36224	0.36334	0.48333	0.48441	0.54531
3200.0	0.60311	0.66015	0.62234	0.60815	0.75583	0.79670	1.00016	1.04374	0.94953	1.05517
3300.0	1.14619	1.01394	1.04416	1.02415	0.99474	1.06169	0.94034	0.87397	0.95909	1.01607
3400.0	1.07193	1.00943	1.03233	1.04848	0.87302	0.93261	0.95353	0.95424	0.92268	0.90463
3500.0	1.00000	1.01073	0.94084	0.96345	1.07815	1.06380	0.96265	0.81732	0.72755	0.83659
3600.0	0.98336	0.85300	0.89055	0.95000	0.95237	0.97154	1.10929	1.07844	0.99799	1.03073
3700.0	1.05752	0.99187	0.93111	0.84863	0.76734	0.80354	0.89219	0.94618	1.08979	0.93892
3800.0	0.88415	0.93668	0.72315	0.57116	0.62011	0.76766	0.73258	0.74517	0.72119	0.77266
3900.0	0.87508	0.92716	0.85806	0.52209	0.59510	0.86176	0.75510	0.54661	0.90979	1.08126
4000.0	1.11749									
				ZENITH SCAN STARTING AT 21.57.57 ON 9/12/73, NORMALIZING FACTOR = 3.4252E 00						
2600.0	0.00013	0.00013	0.00016	0.00015	0.00015	0.00015	0.00014	0.00014	0.00020	0.00013
2700.0	0.00013	0.00017	0.00015	0.00013	0.00013	0.00016	0.00015	0.00015	0.00020	0.00014
2800.0	0.00014	0.00015	0.00018	0.00014	0.00015	0.00022	0.00016	0.00015	0.00019	0.00020
2900.0	0.00022	0.00018	0.00020	0.00022	0.00030	0.00054	0.00078	0.00112	0.00186	0.00273
3000.0	0.00368	0.00608	0.00876	0.01691	0.02261	0.03404	0.04112	0.06431	0.08436	0.09259
3100.0	0.13026	0.19588	0.22366	0.26626	0.31357	0.34687	0.34548	0.47497	0.47640	0.53123
3200.0	0.59655	0.64001	0.60651	0.59238	0.72608	0.76173	0.97408	1.00824	0.91661	1.06747
3300.0	1.13070	0.98863	1.02664	1.00779	0.97680	1.05296	0.93746	0.86101	0.94854	1.00441
3400.0	1.06023	0.99223	1.01938	1.03325	0.85118	0.92299	0.94641	0.95148	0.91217	0.90035
3500.0	1.00000	1.00296	0.93112	0.95067	1.07446	1.05578	0.96460	0.81023	0.72772	0.81547
3600.0	0.98157	0.83601	0.87399	0.93275	0.93283	0.95408	1.09275	1.06019	0.98700	1.00788
3700.0	1.04417	0.98282	0.92814	0.83349	0.75259	0.79000	0.87568	0.93154	1.06681	0.92049
3800.0	0.86822	0.91510	0.69782	0.55840	0.61965	0.76029	0.72185	0.73415	0.71305	0.76529
3900.0	0.86439	0.91866	0.84403	0.51069	0.58623	0.84933	0.73786	0.52546	0.89576	1.05855
4000.0	1.09456									

Table VIII-34

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 21.59.43 ON 9/12/73, NORMALIZING FACTOR = 3.5667E 00									
2600.0	0.00015	0.00014	0.00012	0.00019	0.00012	0.00014	0.00013	0.00012	0.00012	0.00016
2700.0	0.00017	0.00019	0.00017	0.00015	0.00013	0.00013	0.00017	0.00018	0.00036	0.00030
2800.0	0.00020	0.00021	0.00018	0.00014	0.00020	0.00019	0.00027	0.00019	0.00018	0.00018
2900.0	0.00017	0.00018	0.00024	0.00023	0.00037	0.00045	0.00073	0.00112	0.00167	0.00253
3000.0	0.00349	0.00557	0.00806	0.01609	0.02155	0.03202	0.03872	0.05925	0.08027	0.08810
3100.0	0.12222	0.18886	0.21499	0.25799	0.30113	0.33971	0.33930	0.45770	0.46489	0.52710
3200.0	0.58446	0.63646	0.60061	0.59336	0.72744	0.76188	0.96076	1.01282	0.91289	1.05522
3300.0	1.14435	0.99316	1.02856	1.00754	0.95379	1.03519	0.92355	0.85290	0.93991	0.99898
3400.0	1.05977	0.99472	1.01441	1.03662	0.84497	0.91211	0.94355	0.94614	0.91381	0.89942
3500.0	1.00000	1.00240	0.93481	0.95261	1.06754	1.04854	0.96193	0.80626	0.72040	0.80791
3600.0	0.98247	0.84317	0.87091	0.93084	0.93408	0.95507	1.10131	1.05992	0.98791	1.01559
3700.0	1.03459	0.97222	0.91889	0.82638	0.75230	0.79994	0.87995	0.94111	1.06349	0.91711
3800.0	0.87794	0.91358	0.70489	0.55613	0.62046	0.77811	0.73582	0.74560	0.72680	0.78886
3900.0	0.86881	0.91545	0.83882	0.50309	0.55911	0.86063	0.75072	0.52346	0.89943	1.07333
4000.0	1.11019									
	ZENITH SCAN STARTING AT 22. 2. 7 ON 9/12/73, NORMALIZING FACTOR = 3.8533E 00									
2600.0	0.00014	0.00016	0.00015	0.00018	0.00017	0.00014	0.00021	0.00016	0.00012	0.00012
2700.0	0.00015	0.00013	0.00011	0.00013	0.00012	0.00014	0.00020	0.00018	0.00040	0.00018
2800.0	0.00015	0.00016	0.00016	0.00017	0.00020	0.00030	0.00015	0.00017	0.00028	0.00016
2900.0	0.00018	0.00018	0.00018	0.00020	0.00028	0.00041	0.00068	0.00103	0.00152	0.00231
3000.0	0.00315	0.00507	0.00733	0.01394	0.01915	0.02857	0.03423	0.05361	0.07013	0.07850
3100.0	0.11105	0.17090	0.19723	0.24102	0.28056	0.31553	0.31896	0.43846	0.43968	0.49730
3200.0	0.55036	0.60553	0.57383	0.56162	0.70203	0.73837	0.94449	0.97727	0.89172	1.03489
3300.0	1.10343	0.96856	1.00523	0.98619	0.95741	1.03214	0.91327	0.85055	0.93719	0.99707
3400.0	1.05409	0.99322	1.01972	1.03560	0.86290	0.92756	0.94797	0.95037	0.91709	0.89923
3500.0	1.00000	1.00825	0.93451	0.95670	1.07942	1.06510	0.96437	0.81999	0.73066	0.85287
3600.0	0.98797	0.85838	0.90076	0.94861	0.93467	0.96341	1.10882	1.07632	0.99452	1.02474
3700.0	1.06233	0.99605	0.93665	0.85057	0.77126	0.80589	0.89670	0.95187	1.10104	0.93336
3800.0	0.89053	0.93937	0.72527	0.57045	0.63490	0.78265	0.74508	0.76087	0.73771	0.80114
3900.0	0.90126	0.96129	0.88075	0.54107	0.60899	0.88644	0.77991	0.57173	0.94110	1.11322
4000.0	1.14990									
	ZENITH SCAN STARTING AT 22. 4. 8 ON 9/12/73, NORMALIZING FACTOR = 3.6191E 00									
2600.0	0.00015	0.00013	0.00013	0.00012	0.00014	0.00012	0.00012	0.00017	0.00011	0.00015
2700.0	0.00012	0.00015	0.00020	0.00021	0.00015	0.00018	0.00015	0.00015	0.00021	0.00015
2800.0	0.00014	0.00021	0.00018	0.00041	0.00016	0.00017	0.00016	0.00018	0.00017	0.00017
2900.0	0.00022	0.00032	0.00020	0.00025	0.00034	0.00048	0.00072	0.00118	0.00163	0.00240
3000.0	0.00322	0.00515	0.00746	0.01432	0.01937	0.02856	0.03449	0.05322	0.07166	0.07937
3100.0	0.11075	0.17078	0.19778	0.23853	0.28217	0.31590	0.31655	0.43776	0.44103	0.49900
3200.0	0.55474	0.60740	0.57369	0.56781	0.69731	0.73008	0.93370	0.97952	0.88347	1.04058
3300.0	1.11066	0.96530	1.00968	0.99350	0.96278	1.04020	0.92968	0.85385	0.92973	0.98635
3400.0	1.05806	0.99325	1.01398	1.03896	0.84664	0.91464	0.94430	0.94816	0.91463	0.89894
3500.0	1.00000	1.00972	0.93758	0.96614	1.07706	1.05931	0.95656	0.81455	0.72707	0.83762
3600.0	0.98660	0.85476	0.88462	0.94448	0.95170	0.98135	1.12529	1.08803	1.01220	1.03629
3700.0	1.07137	1.00977	0.95519	0.86058	0.77731	0.82045	0.91233	0.97538	1.11711	0.96503
3800.0	0.91382	0.96818	0.73737	0.58477	0.66265	0.82355	0.77855	0.78716	0.76643	0.81748
3900.0	0.92784	0.98171	0.90983	0.64134	0.64838	0.92401	0.80736	0.56816	0.97369	1.16009
4000.0	1.20351									
	ZENITH SCAN STARTING AT 22. 7.55 ON 9/12/73, NORMALIZING FACTOR = 3.2799E 00									
2600.0	0.00013	0.00014	0.00026	0.00017	0.00016	0.00017	0.00012	0.00024	0.00025	0.00021
2700.0	0.00015	0.00013	0.00014	0.00017	0.00019	0.00014	0.00019	0.00016	0.00023	0.00015
2800.0	0.00023	0.00013	0.00029	0.00018	0.00017	0.00014	0.00021	0.00031	0.00040	0.00018
2900.0	0.00023	0.00020	0.00018	0.00022	0.00057	0.00059	0.00075	0.00115	0.00168	0.00253
3000.0	0.00337	0.00524	0.00776	0.01452	0.01940	0.02910	0.03444	0.05409	0.07195	0.07942
3100.0	0.11157	0.17015	0.19749	0.23965	0.27962	0.31661	0.31918	0.44628	0.45065	0.50860
3200.0	0.56421	0.62040	0.58809	0.57595	0.71367	0.74617	0.96230	0.99434	0.90612	1.06016
3300.0	1.12357	0.98345	1.02799	1.00648	0.97582	1.05547	0.93157	0.86847	0.95688	1.01745
3400.0	1.07449	1.00859	1.03196	1.01317	0.86506	0.93500	0.95320	0.95728	0.92244	0.90592
3500.0	1.00000	1.00929	0.93949	0.96176	1.07879	1.06082	0.95834	0.81080	0.72408	0.82911
3600.0	0.98811	0.84173	0.88305	0.94739	0.94120	0.96383	1.09855	1.07215	0.99922	1.01586
3700.0	1.05374	0.99253	0.94297	0.84686	0.76459	0.79823	0.88887	0.94658	1.08977	0.94051
3800.0	0.88266	0.94148	0.71823	0.57389	0.63522	0.78497	0.74540	0.76113	0.73856	0.79869
3900.0	0.90064	0.95709	0.87163	0.53017	0.60900	0.88663	0.77115	0.54514	0.89527	1.04938
4000.0	1.13675									
	ZENITH SCAN STARTING AT 22. 9.41 ON 9/12/73, NORMALIZING FACTOR = 3.3271E 00									
2600.0	0.00012	0.00018	0.00035	0.00030	0.00014	0.00025	0.00037	0.00024	0.00017	0.00020
2700.0	0.00014	0.00015	0.00015	0.00017	0.00018	0.00018	0.00018	0.00015	0.00020	0.00015
2800.0	0.00020	0.00014	0.00014	0.00018	0.00016	0.00015	0.00016	0.00018	0.00015	0.00018
2900.0	0.00024	0.00018	0.00020	0.00023	0.00030	0.00043	0.00075	0.00105	0.00164	0.00239
3000.0	0.00324	0.00513	0.00737	0.01378	0.01853	0.02706	0.03265	0.05116	0.06780	0.07539
3100.0	0.10595	0.16373	0.19136	0.23046	0.27084	0.30349	0.31138	0.42568	0.42333	0.49458
3200.0	0.54945	0.60813	0.57092	0.56994	0.70627	0.73633	0.92957	0.98084	0.88341	1.02888
3300.0	1.11247	0.96268	1.00147	0.98715	0.95481	1.02826	0.92202	0.84439	0.93687	0.99583
3400.0	1.05375	0.98519	1.01087	1.03025	0.83471	0.90740	0.93571	0.94180	0.90686	0.89402
3500.0	1.00000	0.99842	0.92979	0.95627	1.06517	1.04913	0.95491	0.80104	0.72356	0.80913
3600.0	0.97797	0.83790	0.86968	0.92517	0.92847	0.95584	1.09599	1.05818	0.98697	1.01207
3700.0	1.03350	0.97459	0.91243	0.78413	0.73966	0.77800	0.86688	0.92573	1.04817	0.90479
3800.0	0.85761	0.90373	0.69239	0.54856	0.61900	0.76607	0.72225	0.73247	0.71406	0.76235
3900.0	0.86352	0.91869	0.87576	0.49151	0.56566	0.85155	0.76111	0.53469	0.88623	1.06475
4000.0	1.10053									
	ZENITH SCAN STARTING AT 22.12. 4 ON 9/12/73, NORMALIZING FACTOR = 3.3926E 00									
2600.0	0.00013	0.00014	0.00011	0.00012	0.00014	0.00023	0.00014	0.00020	0.00016	0.00012
2700.0	0.00014	0.00013	0.00013	0.00012	0.00015	0.00016	0.00034	0.00018	0.00016	0.00014
2800.0	0.00015	0.00018	0.00018	0.00018	0.00019	0.00016	0.00015	0.00018	0.00018	0.00021
2900.0	0.00015	0.00020	0.00034	0.00038	0.00037	0.00045	0.00066	0.00100	0.00156	0.00226
3000.0	0.00311	0.00476	0.00674	0.01323	0.01716	0.02585	0.03089	0.04685	0.06418	0.07047
3100.0	0.09754	0.15472	0.17750	0.21891	0.25768	0.29427	0.30807	0.41495	0.41858	0.47998
3200.0	0.53138	0.59191	0.55822	0.54997	0.69652	0.72956	0.93098	0.97023	0.88426	1.03017
3300.0	1.10507	0.96695	1.00761	0.99321	0.96540	1.03988	0.92323	0.85804	0.94761	1.00970
3400.0	1.06737	1.00630	1.03264	1.04946	0.87530	0.93845	0.96078	0.95812	0.90866	0.89822
3500.0	1.00000	1.00475	0.93202	0.95927	1.07203	1.05537	0.95563	0.81251	0.71799	0.82469
3600.0	0.98112	0.85005	0.89089	0.94819	0.94988	0.97806	1.11361	1.07997	1.00048	1.03753
3700.0	1.06416	1.00169	0.94107	0.85852	0.77455	0.80789	0.90225	0.96185	1.10932	0.93955
3800.0	0.90386	0.95364	0.72798	0.57821	0.63863	0.80344	0.75554	0.77334	0.75049	0.81079
3900.0	0.91283	0.97321	0.88007	0.53939	0.61663	0.89633	0.79534	0.58501	0.94948	1.13562
4000.0	1.17063									

Table VIII-35

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 22.13.53 ON 9/12/73. NORMALIZING FACTOR = 3.3216E 00										
2600.0	0.00013	0.00011	0.00010	0.00010	0.00012	0.00013	0.00012	0.00040	0.00037	0.00020
2700.0	0.00016	0.00011	0.00017	0.00017	0.00014	0.00009	0.00018	0.00018	0.00024	0.00023
2800.0	0.00012	0.00019	0.00012	0.00019	0.00017	0.00016	0.00020	0.00018	0.00015	0.00015
2900.0	0.00024	0.00039	0.00020	0.00022	0.00030	0.00043	0.00071	0.00105	0.00111	0.00243
3000.0	0.00307	0.00486	0.00696	0.01287	0.01447	0.02474	0.02960	0.04604	0.06126	0.06780
3100.0	0.09669	0.14826	0.17477	0.21209	0.25086	0.28580	0.22363	0.41341	0.41871	0.47655
3200.0	0.53129	0.58590	0.54836	0.54024	0.68285	0.71269	0.90998	0.96370	0.86584	1.01829
3300.0	1.09347	0.94607	0.99681	0.98051	0.94531	1.02701	0.91589	0.84281	0.93789	0.99664
3400.0	1.05639	0.98823	1.01548	1.03179	0.84415	0.92346	0.94569	0.94914	0.91656	0.90245
3500.0	1.00000	1.00183	0.93770	0.95672	1.07343	1.05974	0.96872	0.81240	0.72275	0.82587
3600.0	0.99457	0.84872	0.89051	0.94257	0.94325	0.97263	1.10977	1.07378	1.00086	1.02503
3700.0	1.05480	0.99778	0.94327	0.84764	0.77404	0.82385	0.90993	0.96446	1.04818	0.93955
3800.0	0.89598	0.93581	0.71767	0.57158	0.64344	0.80011	0.75635	0.76690	0.74933	0.80795
3900.0	0.91740	0.96897	0.88814	0.54225	0.60071	0.90780	0.78867	0.55244	0.95572	1.12853
4000.0	1.16719									
ZENITH SCAN STARTING AT 22.15.39 ON 9/12/73. NORMALIZING FACTOR = 3.2824E 00										
2600.0	0.00014	0.00008	0.00010	0.00009	0.00013	0.00016	0.00009	0.00007	0.00013	0.00016
2700.0	0.00012	0.00015	0.00016	0.00017	0.00007	0.00016	0.00017	0.00013	0.00017	0.00013
2800.0	0.00015	0.00010	0.00011	0.00016	0.00009	0.00013	0.00015	0.00017	0.00015	0.00019
2900.0	0.00026	0.00017	0.00022	0.00022	0.00026	0.00045	0.00069	0.00124	0.00151	0.00225
3000.0	0.00321	0.00470	0.00654	0.01106	0.01015	0.02423	0.02871	0.04318	0.05952	0.06549
3100.0	0.08974	0.08989	0.13931	0.20474	0.24282	0.27618	0.28058	0.39370	0.39996	0.46189
3200.0	0.51057	0.57340	0.53882	0.53868	0.67752	0.70771	0.90063	0.94616	0.85448	0.99607
3300.0	1.07982	0.93845	0.97965	0.97005	0.93905	1.01165	0.90950	0.83724	0.92637	0.98782
3400.0	1.04533	0.98390	1.00885	1.03114	0.84915	0.90706	0.93700	0.93956	0.90974	0.89401
3500.0	1.00000	1.00032	0.92232	0.95522	1.06011	1.04492	0.94363	0.80165	0.71550	0.81439
3600.0	0.95952	0.83327	0.85992	0.91613	0.91984	0.94818	1.09372	1.05198	0.97783	1.01005
3700.0	1.04004	0.97584	0.91596	0.82994	0.75649	0.79918	0.87512	0.94293	1.07147	0.91374
3800.0	0.88143	0.92029	0.71694	0.56119	0.63120	0.78884	0.74479	0.75650	0.73863	0.79275
3900.0	0.89434	0.95277	0.87341	0.52446	0.58889	0.88423	0.77780	0.55030	0.92597	1.10791
4000.0	1.14465									
ZENITH SCAN STARTING AT 22.18. 1 ON 9/12/73. NORMALIZING FACTOR = 3.2098E 00										
2600.0	0.00006	0.00010	0.00018	0.00008	0.00004	0.00012	0.00012	0.00009	0.00012	0.00009
2700.0	0.00011	0.00026	0.00037	0.00012	0.00015	0.00010	0.00022	0.00012	0.00015	0.00010
2800.0	0.00010	0.00014	0.00015	0.00018	0.00017	0.00010	0.00015	0.00014	0.00017	0.00015
2900.0	0.00019	0.00025	0.00025	0.00029	0.00031	0.00045	0.00067	0.00064	0.00088	0.00212
3000.0	0.00299	0.00456	0.00653	0.01189	0.00296	0.02296	0.02785	0.04264	0.05752	0.06388
3100.0	0.08957	0.06874	0.04035	0.20236	0.23995	0.27613	0.22220	0.39879	0.40538	0.46523
3200.0	0.51587	0.57548	0.54620	0.54115	0.68476	0.71404	0.92272	0.93630	0.85154	1.02392
3300.0	1.09098	0.94764	0.99733	0.98124	0.94999	1.03373	0.91644	0.84782	0.93677	0.99684
3400.0	1.05001	0.98894	1.01970	1.02909	0.85511	0.92984	0.95204	0.95151	0.92039	0.90365
3500.0	1.00000	1.00608	0.93486	0.96306	1.08208	1.06060	0.95925	0.81259	0.71836	0.83361
3600.0	0.98283	0.84738	0.89048	0.94472	0.94800	0.98250	1.10954	1.08180	1.00782	1.02762
3700.0	1.05723	0.99879	0.94729	0.85026	0.76925	0.80633	0.89776	0.95750	1.10124	0.95435
3800.0	0.90095	0.95085	0.72095	0.59661	0.63637	0.79515	0.74599	0.76154	0.74068	0.79918
3900.0	0.89762	0.95540	0.86833	0.53950	0.60148	0.88914	0.79403	0.57265	0.93521	1.12501
4000.0	1.16181									
ZENITH SCAN STARTING AT 22.19.47 ON 9/12/73. NORMALIZING FACTOR = 3.2140E 00										
2600.0	0.00012	0.00011	0.00012	0.00010	0.00008	0.00016	0.00008	0.00008	0.00006	0.00007
2700.0	0.00009	0.00015	0.00052	0.00005	0.00005	0.00018	0.00012	0.00015	0.00014	0.00016
2800.0	0.00019	0.00019	0.00017	0.00013	0.00017	0.00020	0.00008	0.00017	0.00010	0.00012
2900.0	0.00013	0.00016	0.00020	0.00021	0.00029	0.00042	0.00066	0.00066	0.00114	0.00209
3000.0	0.00280	0.00426	0.00612	0.01137	0.01020	0.02087	0.02586	0.03934	0.05330	0.05967
3100.0	0.08448	0.13264	0.05614	0.18061	0.22872	0.26072	0.26895	0.37661	0.38711	0.44981
3200.0	0.49736	0.56012	0.52656	0.52892	0.66449	0.69062	0.88742	0.93995	0.84352	0.99369
3300.0	1.07833	0.92862	0.97805	0.96821	0.93278	1.01503	0.91251	0.83181	0.92607	0.98735
3400.0	1.04507	0.97933	1.00548	1.02717	0.83645	0.90753	0.94106	0.94482	0.91192	0.89982
3500.0	1.00000	0.99997	0.93129	0.95873	1.06818	1.05300	0.95101	0.78488	0.71041	0.81567
3600.0	0.96212	0.83274	0.86066	0.91583	0.91804	0.94176	1.08814	1.04663	0.97037	1.00545
3700.0	1.02590	0.96672	0.90754	0.82190	0.75220	0.79764	0.87627	0.94429	1.06700	0.91899
3800.0	0.87997	0.92455	0.72019	0.56393	0.63848	0.78752	0.74416	0.75208	0.73177	0.78488
3900.0	0.88810	0.94202	0.86317	0.51250	0.57937	0.88730	0.77009	0.54412	0.92712	1.10308
4000.0	1.14137									
ZENITH SCAN STARTING AT 22.21.33 ON 9/12/73. NORMALIZING FACTOR = 3.1583E 00										
2600.0	0.00010	0.00008	0.00014	0.00008	0.00008	0.00016	0.00008	0.00009	0.00021	0.00004
2700.0	0.00010	0.00008	0.00015	0.00011	0.00013	0.00013	0.00025	0.00046	0.00013	0.00014
2800.0	0.00018	0.00018	0.00017	0.00016	0.00017	0.00016	0.00017	0.00017	0.00033	0.00013
2900.0	0.00036	0.00021	0.00021	0.00022	0.00030	0.00045	0.00067	0.00071	0.00089	0.00209
3000.0	0.00292	0.00443	0.00617	0.01162	0.01007	0.02150	0.02582	0.03923	0.05241	0.05855
3100.0	0.08161	0.12864	0.07279	0.19310	0.22238	0.25899	0.26823	0.37519	0.38285	0.44361
3200.0	0.49458	0.55859	0.52483	0.52387	0.67086	0.69987	0.89695	0.94313	0.85588	1.00686
3300.0	1.08973	0.94261	0.96700	0.96625	0.93713	1.01505	0.89890	0.83478	0.92211	0.98451
3400.0	1.03779	0.98174	1.01033	1.02580	0.85252	0.91461	0.93632	0.94127	0.90764	0.89334
3500.0	1.00000	1.00043	0.92827	0.96145	1.06688	1.05044	0.94969	0.80782	0.71946	0.82925
3600.0	0.97296	0.84270	0.87620	0.93014	0.93750	0.96098	1.09926	1.06197	0.98541	1.02056
3700.0	1.04790	0.98721	0.92501	0.84298	0.76444	0.79560	0.89034	0.95282	1.09151	0.93401
3800.0	0.89893	0.93594	0.72922	0.57279	0.63630	0.80237	0.75003	0.74704	0.74066	0.80515
3900.0	0.90377	0.96172	0.87583	0.53665	0.61311	0.89368	0.77545	0.59020	0.94974	1.12034
4000.0	1.15611									
ZENITH SCAN STARTING AT 22.23.55 ON 9/12/73. NORMALIZING FACTOR = 3.2063E 00										
2600.0	0.00010	0.00010	0.00009	0.00009	0.00013	0.00007	0.00017	0.00008	0.00007	0.00010
2700.0	0.00020	0.00008	0.00022	0.00019	0.00006	0.00009	0.00015	0.00014	0.00010	0.00004
2800.0	0.00012	0.00017	0.00007	0.00006	0.00021	0.00022	0.00018	0.00004	0.00006	0.00016
2900.0	0.00012	0.00026	0.00022	0.00022	0.00027	0.00038	0.00067	0.00068	0.00099	0.00148
3000.0	0.00269	0.00420	0.00589	0.01100	0.00877	0.01757	0.02403	0.03491	0.04807	0.05358
3100.0	0.07685	0.11907	0.09349	0.07265	0.21103	0.24260	0.25483	0.36003	0.37255	0.43369
3200.0	0.48123	0.54053	0.51130	0.51433	0.64512	0.66512	0.86500	0.91183	0.81729	0.98241
3300.0	1.04406	0.90544	0.95845	0.94431	0.91170	0.99763	0.89129	0.81699	0.91249	0.97527
3400.0	1.03225	0.97134	1.00945	1.04116	0.84752	0.93271	0.95316	0.95424	0.92029	0.90878
3500.0	1.00000	1.00241	0.93273	0.95778	1.07618	1.06312	0.95796	0.81065	0.72019	0.83024
3600.0	0.99676	0.84119	0.86370	0.92871	0.92940	0.95321	1.08694	1.05977	0.98118	1.00962
3700.0	1.04301	0.98481	0.92654	0.83419	0.75436	0.79442	0.87753	0.93860	1.07751	0.91789
3800.0	0.87507	0.92394	0.70183	0.55294	0.61224	0.75731	0.71699	0.73303	0.71331	0.77213
3900.0	0.86805	0.92870	0.83751	0.42423	0.55931	0.86158	0.73903	0.53487	0.91390	1.06973
4000.0	1.10431									

Table VIII-36

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 22.25.44 ON 9/12/73, NORMALIZING FACTOR = 2.9731E 00									
2600.0	0.00010	0.00009	0.00010	0.00010	0.00009	0.00016	0.00008	0.00008	0.00010	0.00007
2700.0	0.00011	0.00017	0.00011	0.00015	0.00013	0.00012	0.00012	0.00011	0.00009	0.00016
2800.0	0.00007	0.00056	0.00009	0.00010	0.00013	0.00015	0.00009	0.00006	0.00007	0.00012
2900.0	0.00008	0.00014	0.00018	0.00017	0.00027	0.00052	0.00065	0.00088	0.00111	0.00168
3000.0	0.00290	0.00461	0.00630	0.01300	0.03551	0.02209	0.02623	0.04026	0.05297	0.05795
3100.0	0.08180	0.12675	0.12788	0.05984	0.22570	0.26114	0.25379	0.34959	0.35823	0.42234
3200.0	0.47478	0.53074	0.49744	0.51709	0.65042	0.67960	0.87601	0.91572	0.82715	0.99724
3300.0	1.05380	0.91514	0.97111	0.95487	0.93037	1.00513	0.89482	0.83749	0.92534	0.98374
3400.0	1.03679	0.96959	1.01240	1.00907	0.82796	0.92185	0.93719	0.93632	0.90604	0.89474
3500.0	1.00000	0.98356	0.91873	0.95272	1.06525	1.03558	0.93128	0.79088	0.69680	0.82504
3600.0	0.95465	0.82217	0.87505	0.91479	0.92099	0.95721	1.07598	1.04201	0.96910	1.00373
3700.0	1.01232	0.96508	0.89950	0.80828	0.74120	0.79382	0.86812	0.93649	1.06227	0.89873
3800.0	0.87442	0.90433	0.68619	0.55738	0.64128	0.77318	0.79710	3.45184	0.53130	0.03990
3900.0	0.03554	0.07541	0.60395	0.52548	0.62952	0.93521	0.83332	0.60168	0.98454	1.18172
4000.0	1.21549									
	ZENITH SCAN STARTING AT 22.28. 6 ON 9/12/73, NORMALIZING FACTOR = 3.0559E 00									
2600.0	0.00008	0.00009	0.00011	0.00013	0.00019	0.00005	0.00010	0.00009	0.00013	0.00006
2700.0	0.00013	0.00009	0.00012	0.00006	0.00008	0.00018	0.00013	0.00009	0.00009	0.00024
2800.0	0.00009	0.00009	0.00022	0.00027	0.00022	0.00008	0.00010	0.00014	0.00016	0.00008
2900.0	0.00015	0.00015	0.00024	0.00035	0.00027	0.00043	0.00064	0.00083	0.00076	0.00150
3000.0	0.00266	0.00416	0.00592	0.01059	0.01083	0.01335	0.02276	0.03517	0.04543	0.05008
3100.0	0.07075	0.10867	0.12465	0.02336	0.13842	0.23015	0.24298	0.34118	0.35755	0.41627
3200.0	0.46339	0.52787	0.49876	0.50161	0.64210	0.66012	0.87529	0.91517	0.82551	0.99172
3300.0	1.05510	0.91945	0.97367	0.96143	0.93152	1.01934	0.90338	0.83530	0.92619	0.99222
3400.0	1.04434	0.98582	1.01762	1.03313	0.85860	0.92965	0.94828	0.95200	0.91695	0.90240
3500.0	1.00000	1.00311	0.93090	0.95807	1.07932	1.05832	0.95534	0.81351	0.72021	0.82525
3600.0	0.99403	0.84809	0.89333	0.94504	0.95166	0.97938	1.10225	1.05882	0.99616	1.01724
3700.0	1.04525	0.98954	0.93621	0.84505	0.76759	0.80521	0.89622	0.95536	1.10519	0.94620
3800.0	0.90023	0.95487	0.72435	0.58303	0.65049	0.80096	0.75946	0.77845	0.75465	0.82003
3900.0	0.92368	0.98742	0.90419	0.52396	0.60703	0.91594	0.79075	0.56453	0.97314	1.14372
4000.0	1.17636									
	ZENITH SCAN STARTING AT 22.29.53 ON 9/12/73, NORMALIZING FACTOR = 2.9817E 00									
2600.0	0.00009	0.00015	0.00014	0.00011	0.00009	0.00010	0.00005	0.00016	0.00017	0.00007
2700.0	0.00007	0.00010	0.00005	0.00009	0.00016	0.00012	0.00003	0.00008	0.00007	0.00012
2800.0	0.00007	0.00018	0.00029	0.00011	0.00015	0.00021	0.00041	0.00012	0.00015	0.00020
2900.0	0.00027	0.00019	0.00022	0.00029	0.00033	0.00041	0.00061	0.00117	0.00085	0.00174
3000.0	0.00271	0.00412	0.00588	0.01043	0.01292	0.01051	0.02205	0.03303	0.04352	0.04812
3100.0	0.06887	0.10584	0.12653	0.06780	0.10039	0.21968	0.23240	0.33538	0.26485	0.40764
3200.0	0.45414	0.51920	0.48981	0.50004	0.63448	0.65227	0.85364	0.91348	0.81295	0.98407
3300.0	1.06403	0.91087	0.97163	0.96037	0.92562	1.01818	0.91389	0.83484	0.93427	0.99893
3400.0	1.05579	0.97217	1.00700	1.02579	0.84440	0.92228	0.94535	0.94979	0.91324	0.90489
3500.0	1.00000	0.99787	0.93100	0.95777	1.07683	1.05695	0.95793	0.80565	0.71697	0.82398
3600.0	0.98477	0.84158	0.88763	0.93576	0.94005	0.97041	1.10483	1.07085	0.99904	1.02437
3700.0	1.05451	0.99960	0.94360	0.84798	0.76987	0.80985	0.90224	0.96703	1.11267	0.94060
3800.0	0.90812	0.96279	0.73151	0.58429	0.64996	0.80449	0.76212	0.78219	0.76149	0.82548
3900.0	0.92732	0.99477	0.92772	0.52344	0.60730	0.92188	0.83123	0.69728	0.97010	1.13672
4000.0	1.17148									
	ZENITH SCAN STARTING AT 22.38. 1 ON 9/12/73, NORMALIZING FACTOR = 2.8183E 00									
2600.0	0.00011	0.00024	0.00012	0.00013	0.00012	0.00012	0.00020	0.00024	0.00011	0.00012
2700.0	0.00029	0.00013	0.00026	0.00015	0.00013	0.00017	0.00015	0.00016	0.00016	0.00015
2800.0	0.00018	0.00013	0.00018	0.00016	0.00016	0.00014	0.00020	0.00019	0.00017	0.00034
2900.0	0.00024	0.00016	0.00016	0.00022	0.00031	0.00050	0.00078	0.00087	0.00131	0.00185
3000.0	0.00248	0.00371	0.00514	0.00912	0.01167	0.01665	0.01889	0.02760	0.03551	0.03845
3100.0	0.05358	0.08259	0.09899	0.16411	0.15052	0.18104	0.19812	0.27864	0.29170	0.35415
3200.0	0.39591	0.46704	0.44096	0.45007	0.59610	0.60082	0.81068	0.86254	0.77226	0.94253
3300.0	1.01293	0.87405	0.94130	0.93301	0.89860	0.99620	0.88904	0.81428	0.90998	0.97661
3400.0	1.02980	0.97004	1.00799	1.02118	0.84038	0.91144	0.94550	0.94639	0.91544	0.90099
3500.0	1.00000	0.98209	0.92102	0.94382	1.06040	1.04428	0.94529	0.79974	0.71080	0.81227
3600.0	0.98379	0.83684	0.87439	0.93126	0.93741	0.95723	1.09731	1.06487	0.99521	1.01378
3700.0	1.05375	0.99655	0.94426	0.85081	0.77193	0.80527	0.90303	0.96415	1.11109	0.94665
3800.0	0.91210	0.96511	0.74039	0.58914	0.65161	0.80743	0.76742	0.78359	0.76485	0.82800
3900.0	0.93281	0.99527	0.91158	0.52546	0.63619	0.91982	0.79459	0.58348	0.97655	1.15144
4000.0	1.18230									
	ZENITH SCAN STARTING AT 22.39.50 ON 9/12/73, NORMALIZING FACTOR = 2.6482E 00									
2600.0	0.00010	0.00010	0.00010	0.00018	0.00014	0.00011	0.00009	0.00014	0.00010	0.00015
2700.0	0.00042	0.00021	0.00018	0.00012	0.00012	0.00008	0.00020	0.00016	0.00012	0.00011
2800.0	0.00016	0.00009	0.00012	0.00015	0.00015	0.00010	0.00012	0.00015	0.00015	0.00016
2900.0	0.00018	0.00021	0.00014	0.00029	0.00023	0.00035	0.00053	0.00096	0.00135	0.00189
3000.0	0.00248	0.00377	0.00532	0.00956	0.01228	0.01668	0.01663	0.03063	0.03981	0.04143
3100.0	0.05598	0.08765	0.10310	0.12873	0.15871	0.18557	0.19868	0.29255	0.28628	0.34446
3200.0	0.38881	0.45311	0.42478	0.45057	0.58089	0.59618	0.80075	0.85547	0.75958	0.94304
3300.0	1.01339	0.86917	0.94053	0.93280	0.90368	0.99079	0.88655	0.81542	0.91187	0.97886
3400.0	1.03197	0.97590	1.01093	1.02216	0.83904	0.91313	0.93722	0.93618	0.90888	0.89508
3500.0	1.00000	0.99816	0.92412	0.96093	1.07092	1.04703	0.94293	0.80423	0.70952	0.84782
3600.0	0.97356	0.83896	0.88600	0.93283	0.93916	0.97329	1.09617	1.06466	0.99165	1.02153
3700.0	1.04774	0.99495	0.93405	0.84041	0.76603	0.80766	0.89571	0.96836	1.09969	0.93060
3800.0	0.90057	0.90858	0.71287	0.56468	0.64579	0.79262	0.75002	0.76199	0.74399	0.81215
3900.0	0.90748	0.96669	0.85972	0.52035	0.60357	0.90755	0.75767	0.56118	0.96082	1.12505
4000.0	1.15380									
	ZENITH SCAN STARTING AT 22.41.36 ON 9/12/73, NORMALIZING FACTOR = 2.6307E 00									
2600.0	0.00009	0.00007	0.00012	0.00011	0.00011	0.00009	0.00014	0.00011	0.00012	0.00010
2700.0	0.00016	0.00018	0.00010	0.00009	0.00010	0.00013	0.00013	0.00008	0.00015	0.00012
2800.0	0.00031	0.00008	0.00011	0.00013	0.00011	0.00024	0.00041	0.00097	0.00028	0.00013
2900.0	0.00021	0.00017	0.00018	0.00016	0.00025	0.00051	0.00053	0.00086	0.00127	0.00192
3000.0	0.00255	0.00371	0.00508	0.00914	0.01192	0.01667	0.04015	0.02925	0.03722	0.04049
3100.0	0.05426	0.07983	0.09702	0.12160	0.14634	0.17763	0.19182	0.27407	0.27788	0.32656
3200.0	0.36930	0.44061	0.41069	0.43056	0.57308	0.58557	0.78547	0.83158	0.74932	0.92613
3300.0	0.98500	0.85193	0.92392	0.91286	0.88411	0.98003	0.86671	0.80367	0.89788	0.97021
3400.0	1.01822	0.96128	1.00480	1.00950	0.83102	0.91581	0.93632	0.93622	0.90632	0.89563
3500.0	1.00000	0.99047	0.92171	0.95455	1.06781	1.05455	0.94998	0.80018	0.71614	0.83145
3600.0	0.96704	0.83759	0.87181	0.92418	0.92951	0.96116	1.10273	1.06073	0.98495	1.02164
3700.0	1.03998	0.98739	0.92671	0.82918	0.75809	0.81290	0.89645	0.96554	1.09952	0.94164
3800.0	0.89771	0.94745	0.71516	0.57980	0.65802	0.80203	0.75782	0.77405	0.75141	0.82356
3900.0	0.92208	0.98631	0.87520	0.53125	0.63192	0.91926	0.77971	0.59851	0.98189	1.15392
4000.0	1.18224									

Table VIII-37

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 22.43.58 ON 9/12/73, NORMALIZING FACTOR = 2.5349E 00										
2600.0	0.00019	0.00009	0.00008	0.00016	0.00010	0.00009	0.00008	0.00008	0.00009	0.00014
2700.0	0.00013	0.00012	0.00010	0.00010	0.00021	0.00044	0.00018	0.00013	0.00014	0.00018
2800.0	0.00008	0.00010	0.00016	0.00019	0.00014	0.00012	0.00014	0.00009	0.00011	0.00011
2900.0	0.00015	0.00011	0.00014	0.00019	0.00026	0.00036	0.00056	0.00082	0.00137	0.00190
3000.0	0.00241	0.00373	0.00510	0.00901	0.01166	0.01615	0.03462	0.02940	0.03583	0.03730
3100.0	0.05087	0.07803	0.09152	0.11435	0.13870	0.16707	0.18233	0.26515	0.28243	0.33160
3200.0	0.35469	0.42545	0.40512	0.42315	0.55665	0.56659	0.77808	0.82398	0.73187	0.93386
3300.0	0.98859	0.84831	0.91862	0.91536	0.87995	0.97801	0.87993	0.79986	0.89732	0.97289
3400.0	1.02524	0.96799	1.00199	1.01576	0.82275	0.90220	0.93180	0.93046	0.90266	0.89081
3500.0	1.00000	0.99369	0.92223	0.96076	1.06762	1.04771	0.94661	0.80719	0.71618	0.84173
3600.0	0.97375	0.84129	0.88682	0.93582	0.94125	0.97447	1.10110	1.06988	0.99114	1.02667
3700.0	1.05926	1.00420	0.94371	0.84943	0.77634	0.81431	0.90506	0.97178	1.11831	0.94924
3800.0	0.91927	0.95277	0.72867	0.58662	0.66300	0.82573	0.79506	0.78715	0.76619	0.83616
3900.0	0.93675	0.99843	0.89640	0.54673	0.63748	0.91880	0.79966	0.59944	0.97523	1.15992
4000.0	1.18743									
ZENITH SCAN STARTING AT 22.45.44 ON 9/12/73, NORMALIZING FACTOR = 2.4955E 00										
2600.0	0.00016	0.00016	0.00017	0.00019	0.00011	0.00026	0.00016	0.00011	0.00013	0.00017
2700.0	0.00016	0.00013	0.00013	0.00012	0.00018	0.00019	0.00016	0.00027	0.00029	0.00017
2800.0	0.00018	0.00015	0.00013	0.00017	0.00014	0.00023	0.00021	0.00013	0.00018	0.00015
2900.0	0.00014	0.00017	0.00019	0.00022	0.00023	0.00034	0.00051	0.00085	0.00124	0.00180
3000.0	0.00232	0.00339	0.00465	0.00841	0.01069	0.01447	0.01676	0.02351	0.03048	0.03259
3100.0	0.04242	0.06717	0.07874	0.09803	0.12063	0.14387	0.15520	0.23162	0.24698	0.30692
3200.0	0.35009	0.42255	0.39444	0.41595	0.56084	0.56563	0.75554	0.83709	0.73430	0.90033
3300.0	1.00440	0.85132	0.92045	0.93049	0.88832	0.98601	0.89591	0.81039	0.89986	0.98010
3400.0	1.03325	0.98411	1.01500	1.03466	0.86268	0.91613	0.95015	0.95020	0.92096	0.90919
3500.0	1.00000	1.01646	0.94463	0.96613	1.09175	1.07764	0.98669	0.82987	0.74455	0.83902
3600.0	0.99368	0.86775	0.88954	0.94788	0.95564	0.97508	1.13115	1.10059	1.02447	1.05198
3700.0	1.09122	1.01852	0.96693	0.87822	0.79761	0.84126	0.93444	0.99827	1.14094	0.99702
3800.0	0.93629	0.99050	0.77902	0.60697	0.68089	0.84812	0.80490	0.81943	0.79643	0.84838
3900.0	0.97402	1.04194	0.95894	0.55462	0.62419	0.97761	0.83888	0.59066	0.99091	1.19513
4000.0	1.23269									
ZENITH SCAN STARTING AT 22.47.30 ON 9/12/73, NORMALIZING FACTOR = 2.4153E 00										
2600.0	0.00019	0.00013	0.00019	0.00016	0.00016	0.00013	0.00016	0.00021	0.00014	0.00018
2700.0	0.00016	0.00014	0.00018	0.00014	0.00014	0.00016	0.00026	0.00017	0.00019	0.00030
2800.0	0.00050	0.00051	0.00017	0.00022	0.00014	0.00020	0.00025	0.00019	0.00020	0.00016
2900.0	0.00022	0.00024	0.00017	0.00042	0.00032	0.00044	0.00057	0.00088	0.00128	0.00173
3000.0	0.00222	0.00331	0.00452	0.00826	0.01044	0.01462	0.01649	0.02255	0.02949	0.03159
3100.0	0.04007	0.06297	0.07327	0.09185	0.11301	0.13518	0.14602	0.21261	0.22922	0.29138
3200.0	0.32906	0.40688	0.37759	0.39414	0.54988	0.55693	0.74778	0.82086	0.72785	0.89890
3300.0	0.98932	0.84175	0.91637	0.92332	0.87693	0.96039	0.88501	0.79575	0.89204	0.96887
3400.0	1.02155	0.96518	1.00004	1.02099	0.83584	0.90674	0.94121	0.94742	0.91330	0.90240
3500.0	1.00000	1.01020	0.93875	0.95911	1.07592	1.06637	0.96976	0.82355	0.73899	0.82399
3600.0	0.99434	0.86262	0.88531	0.94377	0.95158	0.96680	1.12307	1.08752	1.01032	1.03850
3700.0	1.08016	1.00521	0.95445	0.86550	0.78110	0.82479	0.92419	0.97902	1.12905	0.98786
3800.0	0.92053	0.98304	0.76631	0.60628	0.67075	0.83840	0.79100	0.80567	0.78411	0.82890
3900.0	0.96547	1.03291	0.93800	0.54570	0.60272	0.97316	0.82957	0.57017	0.96809	1.16349
4000.0	1.20011									
ZENITH SCAN STARTING AT 22.49.53 ON 9/12/73, NORMALIZING FACTOR = 2.3507E 00										
2600.0	0.00017	0.00013	0.00017	0.00012	0.00013	0.00016	0.00013	0.00018	0.00017	0.00022
2700.0	0.00020	0.00018	0.00016	0.00020	0.00038	0.00017	0.00042	0.00014	0.00015	0.00014
2800.0	0.00016	0.00018	0.00015	0.00020	0.00017	0.00017	0.00017	0.00015	0.00016	0.00017
2900.0	0.00019	0.00017	0.00019	0.00023	0.00024	0.00034	0.00055	0.00079	0.00114	0.00178
3000.0	0.00218	0.00329	0.00444	0.00820	0.01021	0.01380	0.01572	0.02192	0.02801	0.02936
3100.0	0.03680	0.05882	0.06898	0.08532	0.10335	0.12539	0.13661	0.20044	0.21670	0.27275
3200.0	0.30677	0.38337	0.36085	0.38633	0.52407	0.52390	0.71231	0.79609	0.68914	0.87267
3300.0	0.97400	0.80912	0.88906	0.90383	0.85317	0.95753	0.88137	0.78690	0.87559	0.95766
3400.0	1.00838	0.96123	0.98968	1.01658	0.83760	0.89022	0.92949	0.93705	0.90563	0.89545
3500.0	1.00000	1.00506	0.93392	0.95582	1.07460	1.06350	0.96813	0.82208	0.73472	0.82616
3600.0	1.00527	0.85974	0.89516	0.95738	0.95550	0.97117	1.10150	1.08771	1.00683	1.02965
3700.0	1.07823	1.01307	0.96530	0.87182	0.78642	0.81491	0.91558	0.96738	1.12407	0.96821
3800.0	0.92139	0.96958	0.76466	0.60500	0.65723	0.82648	0.78404	0.80047	0.78290	0.83718
3900.0	0.95244	1.03490	0.93218	0.55804	0.62937	0.95919	0.83599	0.59143	0.96865	1.17587
4000.0	1.21112									
ZENITH SCAN STARTING AT 22.51.42 ON 9/12/73, NORMALIZING FACTOR = 2.3908E 00										
2600.0	0.00008	0.00011	0.00011	0.00010	0.00011	0.00011	0.00011	0.00018	0.00017	0.00013
2700.0	0.00019	0.00014	0.00009	0.00023	0.00031	0.00010	0.00041	0.00012	0.00011	0.00016
2800.0	0.00019	0.00011	0.00011	0.00013	0.00041	0.00039	0.00011	0.00016	0.00013	0.00013
2900.0	0.00010	0.00012	0.00012	0.00018	0.00023	0.00033	0.00051	0.00074	0.00106	0.00156
3000.0	0.00206	0.00306	0.00404	0.00767	0.00966	0.01331	0.01503	0.02449	0.03513	0.02973
3100.0	0.03643	0.05616	0.06349	0.07913	0.09712	0.11738	0.12608	0.18090	0.19770	0.25059
3200.0	0.28393	0.36025	0.33498	0.35847	0.50706	0.51221	0.71165	0.77730	0.68840	0.87909
3300.0	0.95645	0.80717	0.89556	0.89564	0.85814	0.96786	0.86145	0.78213	0.87972	0.96552
3400.0	1.01528	0.95776	1.00241	1.01147	0.82301	0.90992	0.93925	0.94153	0.90774	0.89621
3500.0	1.00000	0.99562	0.92815	0.95647	1.07346	1.05838	0.96038	0.79996	0.72046	0.82628
3600.0	0.98233	0.84824	0.87875	0.93689	0.94038	0.96928	1.11987	1.07983	1.00257	1.03754
3700.0	1.06924	0.99754	0.93656	0.83935	0.76197	0.82407	0.90331	0.97778	1.11390	0.95846
3800.0	0.91426	0.95303	0.73494	0.56808	0.65754	0.81426	0.76524	0.77917	0.75409	0.81778
3900.0	0.93060	0.99375	0.89342	0.52342	0.61143	0.86691	0.79332	0.58511	0.97678	1.17318
4000.0	1.20304									
ZENITH SCAN STARTING AT 22.54. 3 ON 9/12/73, NORMALIZING FACTOR = 2.1590E 00										
2600.0	0.00016	0.00016	0.00023	0.00016	0.00014	0.00012	0.00013	0.00017	0.00014	0.00012
2700.0	0.00031	0.00017	0.00017	0.00020	0.00020	0.00026	0.00021	0.00015	0.00037	0.00018
2800.0	0.00025	0.00013	0.00021	0.00016	0.00014	0.00017	0.00014	0.00015	0.00016	0.00017
2900.0	0.00056	0.00018	0.00018	0.00019	0.00025	0.00035	0.00052	0.00072	0.00112	0.00169
3000.0	0.00220	0.00341	0.00440	0.00769	0.00974	0.01311	0.01491	0.02084	0.02764	0.02790
3100.0	0.03568	0.05415	0.06238	0.07542	0.09004	0.10716	0.11997	0.17551	0.19082	0.24231
3200.0	0.27451	0.34900	0.32838	0.34945	0.49137	0.49470	0.68513	0.77135	0.66634	0.85597
3300.0	0.95356	0.78756	0.87973	0.88986	0.83702	0.95528	0.87802	0.77609	0.87176	0.95431
3400.0	1.00415	0.95682	0.98899	1.01678	0.83192	0.88651	0.93569	0.94188	0.90745	0.89986
3500.0	1.00000	1.01243	0.94057	0.96623	1.08208	1.07375	0.98123	0.83577	0.75128	0.83655
3600.0	1.00879	0.87459	0.90572	0.97181	0.97415	0.99418	1.14363	1.10979	1.03326	1.04932
3700.0	1.04799	1.02909	0.98521	0.88891	0.80198	0.83351	0.93408	0.98618	1.14781	1.00059
3800.0	0.97927	1.03702	0.76383	0.60584	0.69038	0.84910	0.80148	0.81745	0.79851	0.86614
3900.0	0.97754	1.04283	0.93701	0.57053	0.62846	0.97113	0.84781	0.59274	0.98524	1.19653
4000.0	1.23768									

Table VIII-38

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
				ZENITH SCAN STARTING AT 22.55.50 ON 9/12/73. NORMALIZING FACTOR = 2.0538E 00						
2600.0	0.00015	0.00018	0.00018	0.00048	0.00020	0.00014	0.00035	0.00015	0.00019	0.00019
2700.0	0.00015	0.00021	0.00016	0.00020	0.00017	0.00025	0.00015	0.00020	0.00017	0.00022
2800.0	0.00021	0.00016	0.00030	0.00016	0.00067	0.00023	0.00016	0.00017	0.00023	0.00065
2900.0	0.00034	0.00090	0.00144	0.00028	0.00029	0.00041	0.00055	0.00085	0.00107	0.00163
3000.0	0.00209	0.00332	0.00427	0.00758	0.00964	0.01288	0.01477	0.02023	0.02574	0.02708
3100.0	0.03418	0.05258	0.05910	0.07156	0.08639	0.10222	0.10913	0.16493	0.18004	0.22983
3200.0	0.26139	0.33254	0.31305	0.34270	0.47813	0.46801	0.67018	0.76610	0.66053	0.84287
3300.0	0.94815	0.78410	0.87133	0.89439	0.84009	0.94786	0.87270	0.77971	0.86583	0.95708
3400.0	1.00278	0.96153	0.99857	1.02134	0.84148	0.87888	0.93951	0.94606	0.91150	0.90336
3500.0	1.00000	1.01369	0.94655	0.97400	1.08736	1.08085	0.98400	0.84011	0.75858	0.85500
3600.0	1.01711	0.88322	0.91219	0.97843	0.97780	0.99690	1.14901	1.11803	1.04083	1.06211
3700.0	1.11002	1.03479	0.98709	0.90340	0.81793	0.85862	0.95507	1.01334	1.21303	1.02061
3800.0	0.95754	1.01501	0.76192	0.60480	0.68211	0.84447	0.79976	0.81776	0.79791	0.86256
3900.0	0.97689	1.04163	0.94395	0.56097	0.62782	0.98245	0.82655	0.59631	0.99461	1.19783
4000.0	1.21764									
				ZENITH SCAN STARTING AT 22.57.36 ON 9/12/73. NORMALIZING FACTOR = 1.9612E 00						
2600.0	0.00017	0.00017	0.00016	0.00025	0.00060	0.00024	0.00024	0.00022	0.00017	0.00018
2700.0	0.00025	0.00016	0.00016	0.00017	0.00020	0.00014	0.00016	0.00020	0.00018	0.00013
2800.0	0.00017	0.00015	0.00015	0.00016	0.00022	0.00017	0.00017	0.00023	0.00022	0.00022
2900.0	0.00016	0.00018	0.00019	0.00023	0.00026	0.00034	0.00051	0.00086	0.00116	0.00163
3000.0	0.00211	0.00312	0.00418	0.00740	0.00936	0.01272	0.01419	0.01960	0.02504	0.02621
3100.0	0.03302	0.04945	0.05584	0.06804	0.08036	0.09603	0.10468	0.15111	0.16409	0.20339
3200.0	0.23828	0.31237	0.29650	0.31873	0.46192	0.46068	0.65347	0.73228	0.63884	0.82660
3300.0	0.91478	0.76137	0.85889	0.87573	0.81587	0.94065	0.86368	0.76310	0.85769	0.94071
3400.0	0.98859	0.94171	0.98294	1.01302	0.82511	0.88201	0.93681	0.94411	0.91209	0.90390
3500.0	1.00000	1.01441	0.94521	0.96312	1.07872	1.07375	0.98385	0.83907	0.75878	0.83957
3600.0	1.00909	0.88102	0.90786	0.97671	0.98058	0.99771	1.15920	1.12232	1.04853	1.07268
3700.0	1.12077	1.03869	0.98946	0.89147	0.80679	0.85825	0.95171	1.01783	1.20023	1.00010
3800.0	0.96054	1.00823	0.77104	0.59472	0.67699	0.84912	0.79756	0.81348	0.78926	0.85723
3900.0	0.97491	1.04096	0.94685	0.54659	0.64724	0.96979	0.82848	0.56833	1.00440	1.19495
4000.0	1.23895									
				ZENITH SCAN STARTING AT 22.59.58 ON 9/12/73. NORMALIZING FACTOR = 1.8483E 00						
2600.0	0.00027	0.00014	0.00020	0.00025	0.00018	0.00034	0.00013	0.00016	0.00018	0.00021
2700.0	0.00022	0.00022	0.00020	0.00030	0.00040	0.00021	0.00021	0.00018	0.00020	0.00091
2800.0	0.00018	0.00018	0.00019	0.00018	0.00016	0.00017	0.00017	0.00021	0.00017	0.00020
2900.0	0.00019	0.00020	0.00023	0.00030	0.00071	0.00046	0.00048	0.00075	0.00106	0.00159
3000.0	0.00219	0.00317	0.00440	0.00769	0.00986	0.01332	0.01481	0.02045	0.02562	0.02696
3100.0	0.03377	0.05042	0.05650	0.06745	0.07963	0.09412	0.10139	0.14550	0.15790	0.20061
3200.0	0.22739	0.29897	0.27893	0.30167	0.43857	0.42945	0.63041	0.72694	0.62083	0.80974
3300.0	0.91976	0.75013	0.84743	0.87240	0.81078	0.93020	0.86681	0.76134	0.85230	0.93641
3400.0	0.98802	0.94597	0.98120	1.00913	0.83347	0.88599	0.93496	0.94341	0.91238	0.90417
3500.0	1.00000	1.01576	0.94915	0.97465	1.09008	1.08667	0.99925	0.85312	0.77236	0.86168
3600.0	1.02988	0.89851	0.92759	0.99858	1.00162	1.01728	1.16992	1.14834	1.06592	1.08534
3700.0	1.14108	1.06690	1.02117	0.93013	0.83877	0.86890	0.97730	1.05181	1.33512	1.02413
3800.0	0.97526	1.02246	0.77493	0.61339	0.69438	0.86023	0.81404	0.83248	0.80888	0.86994
3900.0	0.98834	1.05210	0.95752	0.57098	0.63901	0.99137	0.84488	0.58102	1.02516	1.23493
4000.0	1.28245									
				ZENITH SCAN STARTING AT 23. 5.31 ON 9/12/73. NORMALIZING FACTOR = 1.5837E 00						
2600.0	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010	0.00009
2700.0	0.00011	0.00011	0.00012	0.00013	0.00013	0.00011	0.00015	0.00013	0.00013	0.00012
2800.0	0.00013	0.00012	0.00013	0.00011	0.00016	0.00014	0.00012	0.00016	0.00011	0.00015
2900.0	0.00013	0.00014	0.00015	0.00019	0.00020	0.00021	0.00023	0.00023	0.00024	0.00025
3000.0	0.00029	0.00054	0.00364	0.00704	0.00876	0.01176	0.01306	0.01763	0.02264	0.02332
3100.0	0.02891	0.04382	0.04805	0.05677	0.06626	0.07564	0.07910	0.11636	0.12638	0.16223
3200.0	0.18494	0.24255	0.22873	0.26056	0.37988	0.36862	0.55213	0.64182	0.53356	0.73246
3300.0	0.84606	0.68641	0.80278	0.82580	0.77532	0.90678	0.82515	0.72974	0.83341	0.93482
3400.0	0.97225	0.93476	0.98932	1.00039	0.81388	0.89235	0.92893	0.93857	0.90325	0.90088
3500.0	1.00000	1.00484	0.93378	0.96534	1.09790	1.08152	0.98629	0.82576	0.73636	0.84031
3600.0	1.03065	0.88164	0.92603	0.98723	0.98964	1.01485	1.17692	1.14131	1.06492	1.09566
3700.0	1.12473	1.06098	1.00576	0.89803	0.8.421	0.86640	0.96359	1.03095	1.18459	1.02234
3800.0	0.96425	1.01729	0.77274	0.60085	0.68655	0.85792	0.81088	0.82096	0.79679	0.85849
3900.0	0.98146	1.04407	0.95034	0.55318	0.64299	0.97401	0.84015	0.58887	1.04245	1.23003
4000.0	1.27537									
				ZENITH SCAN STARTING AT 23. 7.53 ON 9/12/73. NORMALIZING FACTOR = 5.2947E-03						
2600.0	0.00066	0.00062	0.00079	0.00046	0.00048	0.00058	0.00033	0.00047	0.00063	0.00049
2700.0	0.00050	0.00031	0.00033	0.00041	0.00048	0.00207	0.00056	0.00034	0.00034	0.00057
2800.0	0.00047	0.00047	0.00038	0.00050	0.00046	0.00047	0.00088	0.00076	0.00041	0.00052
2900.0	0.00047	0.00044	0.00107	0.00050	0.00097	0.00076	0.00106	0.00174	0.00260	0.00412
3000.0	0.00608	0.00808	0.01091	0.01965	0.02465	0.03262	0.03649	0.04951	0.06227	0.06417
3100.0	0.07975	0.11584	0.12197	0.12572	0.12785	0.12935	0.12948	0.13220	0.13259	0.13397
3200.0	0.13452	0.13885	0.13857	0.13736	0.14051	0.14299	0.15974	0.19269	0.16658	0.17156
3300.0	0.19376	0.20829	0.25310	0.24403	0.22659	0.25288	0.27651	0.32558	0.35079	0.31069
3400.0	0.34296	0.38690	0.41730	0.54448	0.51797	0.47943	0.54541	0.63506	0.68892	0.90950
3500.0	1.00000	0.85498	0.97208	1.10410	1.11302	1.11803	1.12286	1.12737	1.13225	1.14012
3600.0	1.14753	1.15612	1.16436	1.17141	1.17866	1.18641	1.19433	1.20285	1.21006	1.21808
3700.0	1.22637	1.23417	1.24247	1.25045	1.25764	1.26524	1.27367	1.28106	1.28850	1.29430
3800.0	1.29960	1.30618	1.31363	1.32203	1.33170	1.34915	1.35690	1.36574	1.37609	1.38698
3900.0	1.39448	1.40618	1.42041	1.43397	1.45519	1.47652	1.49440	1.51686	1.54678	1.59547
4000.0	1.62580									
				ZENITH SCAN STARTING AT 23. 9.41 ON 9/12/73. NORMALIZING FACTOR = 8.3182E-04						
2600.0	0.00208	0.00288	0.00310	0.00244	0.00263	0.00214	0.00231	0.00259	0.00237	0.00271
2700.0	0.00232	0.00211	0.00378	0.00378	0.00226	0.00519	0.00237	0.00653	0.01332	0.00438
2800.0	0.00278	0.00217	0.00236	0.00208	0.00345	0.00176	0.00770	0.00291	0.00242	0.00389
2900.0	0.00331	0.00261	0.00173	0.00385	0.00556	0.00423	0.00667	0.00985	0.01690	0.02188
3000.0	0.03214	0.04769	0.06227	0.11487	0.14299	0.18999	0.21244	0.28617	0.36021	0.36963
3100.0	0.45779	0.68624	0.73787	0.78293	0.80049	0.81059	0.81134	0.83197	0.83433	0.84336
3200.0	0.84744	0.85982	0.85980	0.86617	0.88326	0.88366	0.90232	0.90918	0.90467	0.92128
3300.0	0.92663	0.92115	0.93237	0.93563	0.93620	0.94714	0.94726	0.94436	0.95390	0.96189
3400.0	0.96683	0.96836	0.97377	0.97758	0.97191	0.97886	0.98405	0.98736	0.98950	0.99249
3500.0	1.00000	1.00424	1.00494	1.01048	1.01998	1.02297	1.02236	1.01957	1.01786	1.02811
3600.0	1.04071	1.03971	1.04773	1.05563	1.06133	1.06868	1.08117	1.08542	1.08743	1.09437
3700.0	1.10209	1.10342	1.10501	1.10469	1.10405	1.11049	1.12050	1.12834	1.13995	1.13615
3800.0	1.13820	1.14577	1.13659	1.13144	1.14089	1.15615	1.15832	1.16402	1.16842	1.17646
3900.0	1.18754	1.19779	1.19981	1.18192	1.19370	1.22337	1.22354	1.21214	1.24712	1.26489
4000.0	1.27415									

Table VIII-39

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/12/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
		ZENITH SCAN STARTING AT 23.12. 2 ON 9/12/73. NORMALIZING FACTOR = 8.2560E-04								
2600.0	0.00414	0.00590	0.00224	0.00330	0.00253	0.00350	0.00283	0.00251	0.00241	0.00261
2700.0	0.00175	0.00222	0.00612	0.00329	0.00237	0.00316	0.00357	0.00244	0.00208	0.00296
2800.0	0.00311	0.00489	0.00513	0.00208	0.00453	0.00534	0.00300	0.00191	0.00306	0.00404
2900.0	0.00487	0.00237	0.00329	0.00290	0.00513	0.00756	0.00631	0.00954	0.01434	0.02111
3000.0	0.02832	0.04582	0.05658	0.10703	0.13184	0.17699	0.19785	0.26060	0.32979	0.34723
3100.0	0.41789	0.61990	0.67701	0.76149	0.79000	0.80497	0.80618	0.82761	0.83041	0.84047
3200.0	0.84456	0.85795	0.85695	0.86355	0.88154	0.88232	0.89974	0.90782	0.90338	0.91914
3300.0	0.92574	0.92090	0.93079	0.93522	0.93619	0.94633	0.94574	0.94440	0.95272	0.96139
3400.0	0.96622	0.96795	0.97383	0.97718	0.97136	0.97900	0.98395	0.98736	0.98905	0.99202
3500.0	1.00000	1.00425	1.00502	1.01060	1.01984	1.02321	1.02347	1.01938	1.01899	1.02799
3600.0	1.04100	1.03956	1.04704	1.05593	1.06171	1.06894	1.08132	1.08545	1.08817	1.09516
3700.0	1.10201	1.10388	1.10515	1.10406	1.10465	1.11193	1.12115	1.12901	1.13973	1.13717
3800.0	1.13864	1.14578	1.13798	1.13096	1.14115	1.15737	1.15974	1.16517	1.16875	1.17722
3900.0	1.18801	1.19906	1.20048	1.18136	1.19579	1.22346	1.22397	1.21566	1.24870	1.26649
4000.0	1.27507									
		ZENITH SCAN STARTING AT 23.13.48 ON 9/12/73. NORMALIZING FACTOR = 8.2769E-04								
2600.0	0.00359	0.00377	0.00261	0.00262	0.00392	0.00573	0.00199	0.00336	0.00365	0.00391
2700.0	0.00660	0.00428	0.00350	0.00299	0.00701	0.00468	0.00434	0.01268	0.00625	0.00260
2800.0	0.00354	0.00245	0.00461	0.00971	0.00216	0.00345	0.00211	0.00366	0.00255	0.00205
2900.0	0.00266	0.00437	0.00312	0.00360	0.00505	0.00941	0.00641	0.00874	0.01297	0.01869
3000.0	0.02530	0.04225	0.05344	0.09825	0.12201	0.16150	0.18148	0.24546	0.30742	0.31634
3100.0	0.39374	0.58018	0.62852	0.72630	0.77302	0.79123	0.79271	0.81891	0.82148	0.83106
3200.0	0.83605	0.84998	0.84941	0.85666	0.87608	0.87673	0.89602	0.90304	0.89894	0.91684
3300.0	0.92215	0.91701	0.92854	0.93252	0.93332	0.94513	0.94434	0.94195	0.94983	0.96010
3400.0	0.96530	0.96693	0.97300	0.97691	0.96923	0.97752	0.98327	0.98672	0.98860	0.99185
3500.0	1.00000	1.00347	1.00460	1.01041	1.01934	1.02273	1.02277	1.01889	1.01830	1.02846
3600.0	1.04000	1.03886	1.04685	1.05579	1.06158	1.06844	1.08044	1.08484	1.08734	1.09449
3700.0	1.10181	1.10340	1.10514	1.10432	1.10372	1.11017	1.12003	1.12843	1.13892	1.13541
3800.0	1.13773	1.14546	1.13660	1.13012	1.14000	1.15612	1.15848	1.16375	1.16755	1.17579
3900.0	1.18768	1.19793	1.19992	1.18762	1.19832	1.22215	1.21995	1.20936	1.24535	1.26226
4000.0	1.27183									
		ZENITH SCAN STARTING AT 23.15.34 ON 9/12/73. NORMALIZING FACTOR = 8.1393E-04								
2600.0	0.00340	0.00240	0.00232	0.00515	0.00263	0.00255	0.00177	0.00251	0.00377	0.00763
2700.0	0.00272	0.00525	0.00311	0.00184	0.00326	0.00204	0.00331	0.00181	0.00243	0.00289
2800.0	0.00437	0.00285	0.00244	0.00542	0.00429	0.00184	0.00199	0.00226	0.00216	0.00267
2900.0	0.00363	0.00257	0.00275	0.00278	0.00281	0.00359	0.00589	0.00842	0.01286	0.01619
3000.0	0.02338	0.03491	0.04581	0.08764	0.10734	0.14016	0.16214	0.20915	0.26426	0.27308
3100.0	0.32807	0.49543	0.53162	0.61209	0.71078	0.76607	0.76357	0.81406	0.81909	0.83064
3200.0	0.83649	0.84939	0.84878	0.85684	0.87558	0.87520	0.89452	0.90305	0.89825	0.91602
3300.0	0.92227	0.91531	0.92787	0.93292	0.93279	0.94401	0.94421	0.94177	0.95110	0.96035
3400.0	0.96501	0.96718	0.97323	0.97702	0.97075	0.97817	0.98366	0.98696	0.98896	0.99175
3500.0	1.00000	1.00436	1.00508	1.01167	1.01983	1.02340	1.02385	1.02041	1.01938	1.02981
3600.0	1.04215	1.04060	1.04906	1.05787	1.06390	1.07044	1.08203	1.08653	1.08954	1.09680
3700.0	1.10360	1.10604	1.10782	1.10707	1.10679	1.11412	1.12380	1.13139	1.14247	1.13939
3800.0	1.14190	1.14932	1.14063	1.13426	1.14533	1.16030	1.16243	1.16858	1.17216	1.18132
3900.0	1.19238	1.20291	1.20465	1.18553	1.19820	1.22824	1.22926	1.21769	1.25224	1.27020
4000.0	1.27948									
		ZENITH SCAN STARTING AT 23.17.55 ON 9/12/73. NORMALIZING FACTOR = 8.0446E-04								
2600.0	0.00184	0.00361	0.00330	0.00325	0.00397	0.00355	0.00229	0.00289	0.00233	0.00232
2700.0	0.00248	0.00300	0.00367	0.00272	0.00267	0.00449	0.00785	0.00262	0.00278	0.00267
2800.0	0.00408	0.00326	0.00182	0.00216	0.00446	0.00295	0.00280	0.00860	0.01042	0.00269
2900.0	0.00249	0.00583	0.00305	0.00230	0.00294	0.00386	0.00472	0.00682	0.00892	0.01412
3000.0	0.01876	0.03181	0.04127	0.08477	0.08905	0.11869	0.12964	0.17801	0.21960	0.22307
3100.0	0.27689	0.40736	0.44933	0.51789	0.58133	0.65264	0.66224	0.79588	0.80276	0.82054
3200.0	0.82839	0.84469	0.84312	0.84990	0.87188	0.87250	0.89209	0.89991	0.89611	0.91366
3300.0	0.91954	0.91420	0.92607	0.93065	0.93157	0.94346	0.94252	0.94038	0.94972	0.95908
3400.0	0.96326	0.96567	0.97165	0.97405	0.96929	0.97805	0.98328	0.98677	0.98911	0.99217
3500.0	1.00000	1.00327	1.00502	1.01047	1.01961	1.02317	1.02354	1.02006	1.01926	1.02905
3600.0	1.04171	1.04102	1.04892	1.05764	1.06345	1.07028	1.08361	1.08753	1.09012	1.09679
3700.0	1.10419	1.10575	1.10738	1.10738	1.10779	1.11553	1.12443	1.13235	1.14352	1.14023
3800.0	1.14303	1.14950	1.14177	1.13533	1.14631	1.16218	1.16422	1.16990	1.17282	1.18181
3900.0	1.19315	1.20366	1.20567	1.18631	1.20102	1.23011	1.23036	1.22029	1.25073	1.27064
4000.0	1.28215									
		ZENITH SCAN STARTING AT 23.19.40 ON 9/12/73. NORMALIZING FACTOR = 7.9348E-04								
2600.0	0.00231	0.00359	0.01262	0.00532	0.00204	0.00542	0.00266	0.00225	0.00497	0.00165
2700.0	0.00225	0.00518	0.00392	0.00782	0.00276	0.00215	0.00230	0.00457	0.00207	0.00260
2800.0	0.00551	0.01217	0.00643	0.00466	0.00411	0.00250	0.00344	0.00430	0.00264	0.00240
2900.0	0.00182	0.00303	0.00203	0.00267	0.00297	0.00393	0.00527	0.00546	0.00936	0.01213
3000.0	0.01812	0.02402	0.03095	0.05744	0.07001	0.09894	0.10858	0.14607	0.17999	0.18500
3100.0	0.22600	0.33063	0.35945	0.41066	0.46539	0.51230	0.52338	0.71764	0.73560	0.80066
3200.0	0.81696	0.83715	0.83525	0.84438	0.86807	0.86827	0.89124	0.89856	0.89323	0.91314
3300.0	0.91918	0.91228	0.92585	0.93010	0.93007	0.94324	0.94278	0.93901	0.95024	0.95961
3400.0	0.96391	0.96628	0.96952	0.97593	0.96907	0.97813	0.98339	0.98664	0.98928	0.99223
3500.0	1.00000	1.00382	1.00509	1.01163	1.02077	1.02433	1.02431	1.02135	1.02060	1.03115
3600.0	1.04224	1.04232	1.04987	1.05867	1.06445	1.07118	1.08454	1.08894	1.09082	1.09873
3700.0	1.10571	1.10747	1.10808	1.10686	1.11001	1.11745	1.12555	1.13405	1.14571	1.14186
3800.0	1.14403	1.15184	1.14360	1.13711	1.14786	1.16401	1.16622	1.17265	1.17603	1.18471
3900.0	1.19547	1.20627	1.20826	1.18725	1.20154	1.23272	1.23101	1.22096	1.25825	1.27552
4000.0	1.28511									

Table VIII-40

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 17. 2. 9 ON 9/23/73, NORMALIZING FACTOR = 4.6966E 01										
2600.0	0.00006	0.00007	0.00007	0.00008	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008
2700.0	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010
2800.0	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011	0.00012	0.00012	0.00012	0.00014
2900.0	0.00018	0.00030	0.00055	0.00112	0.00213	0.00430	0.00802	0.01254	0.02017	0.02909
3000.0	0.03792	0.05518	0.07140	0.12638	0.15023	0.18979	0.19949	0.25214	0.30138	0.29042
3100.0	0.32032	0.47187	0.46901	0.50617	0.53614	0.53849	0.49951	0.65468	0.61620	0.63290
3200.0	0.71078	0.70014	0.66616	0.62607	0.72608	0.78991	0.95817	0.97049	0.90073	0.99614
3300.0	1.05017	0.93988	0.94654	0.91999	0.90767	0.96433	0.85463	0.80232	0.89082	0.94094
3400.0	2.74292	0.93400	0.96201	0.98700	0.80832	0.89510	0.93697	0.94799	0.90884	0.88522
3500.0	1.00000	1.01486	0.94303	0.97905	1.10983	1.10234	1.00292	0.85680	0.76184	0.88660
3600.0	1.04818	0.88853	0.92663	0.98624	0.99746	1.03505	1.20896	1.18286	1.10542	1.13775
3700.0	24.13715	1.10629	1.03112	0.93015	0.83577	0.88467	20.07468	1.06233	1.25559	1.08148
3800.0	1.02434	1.06595	0.80789	0.63096	0.72465	0.91457	0.86088	0.88435	3.48421	14.76881
3900.0	1.07449	1.15653	1.04767	0.62537	0.67812	1.06873	0.93094	0.64077	1.13372	1.34924
4000.0	1.39379									
ZENITH SCAN STARTING AT 17. 5.58 ON 9/23/73, NORMALIZING FACTOR = 5.0514E 01										
2600.0	0.00009	0.00010	0.00009	0.00009	0.00010	0.00010	0.00010	0.00010	0.00049	0.00169
2700.0	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	0.00012	0.00013	0.00013
2800.0	0.00013	0.00013	0.00013	0.00014	0.00014	0.00014	0.00015	0.00015	0.00015	0.00021
2900.0	0.00022	0.00032	0.00055	0.00110	0.00209	0.00419	0.00777	0.01139	0.01881	0.02724
3000.0	0.03502	0.05175	0.06729	0.11416	0.13661	0.17133	0.17969	0.22870	0.27000	0.25962
3100.0	0.29648	0.42132	0.41802	0.45450	0.48608	0.49262	0.46288	0.60583	0.56828	0.59630
3200.0	0.67304	0.66058	0.63464	0.59683	1.92475	0.76611	0.93724	0.94278	0.88434	0.97104
3300.0	1.02674	0.92375	0.92483	0.89400	0.88388	0.93088	0.81314	0.73793	0.85972	0.90910
3400.0	0.97876	0.91490	0.94331	0.96821	0.79735	0.86575	0.89162	0.90176	0.88418	0.88175
3500.0	1.00000	1.01981	0.95571	0.97629	1.10011	1.08017	0.97857	0.81992	0.73142	0.84078
3600.0	1.00752	0.85726	0.88510	0.94546	0.94954	0.97626	1.13156	1.09220	1.01506	1.04583
3700.0	1.08059	1.02425	0.96138	0.86438	0.77888	0.82327	0.91849	0.98466	1.14031	0.97174
3800.0	0.92936	0.99234	0.75438	0.58370	0.65665	0.82042	0.77221	0.79156	0.76859	0.84392
3900.0	0.98147	1.08754	0.99242	0.58809	0.66878	0.99149	0.81139	0.55362	0.98590	1.14341
4000.0	1.16853									
ZENITH SCAN STARTING AT 17. 8.19 ON 9/23/73, NORMALIZING FACTOR = 4.2360E 01										
2600.0	0.00011	0.00012	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	0.00168	0.00081
2700.0	0.00013	0.00013	0.00015	0.00015	0.00015	0.00015	0.00015	0.00017	0.00015	0.00017
2800.0	0.00016	0.00017	0.00017	0.00017	0.00018	0.00018	0.00019	0.00020	0.00020	0.00022
2900.0	0.00028	0.00040	0.00066	0.00126	0.00229	0.00454	0.00835	0.01275	0.02066	0.02955
3000.0	0.03830	0.05490	0.07089	0.12421	0.14880	0.18901	0.19903	0.24983	0.29868	0.28678
3100.0	0.31606	0.45828	0.45811	0.49640	0.52586	0.53417	0.49718	0.64856	0.61833	0.63906
3200.0	0.72094	0.71262	0.67814	0.64202	0.74338	0.81516	0.99351	1.00438	0.92132	1.02085
3300.0	1.08860	0.96823	0.97726	0.90785	0.93983	0.99096	0.87879	0.82661	0.91760	19.21329
3400.0	1.04284	0.92257	0.99573	1.01188	0.82914	0.90893	0.93041	0.93548	2.48689	0.89184
3500.0	1.00000	1.01865	0.94854	0.99277	1.10909	1.09256	0.98211	0.82810	0.73898	0.86979
3600.0	1.01777	0.86962	0.91795	0.97966	0.98732	1.02264	1.17306	1.13618	1.05186	1.09038
3700.0	1.12374	1.04727	0.97802	0.87554	0.78912	0.83677	0.93684	10.00862	13.33478	3.95267
3800.0	8.42220	1.04696	0.79814	0.61250	0.70556	0.89078	0.82264	0.85600	0.82393	0.89584
3900.0	1.00589	1.06800	0.94798	0.56183	0.64524	0.99900	14.50169	0.61126	1.05045	1.24494
4000.0	1.28221									
ZENITH SCAN STARTING AT 17.10. 5 ON 9/23/73, NORMALIZING FACTOR = 4.1101E 01										
2600.0	0.00012	0.00011	0.00012	0.00012	0.00012	0.00012	0.00013	0.00013	0.00013	0.00013
2700.0	0.00013	0.00014	0.00014	0.00014	0.00014	0.00015	0.00015	0.00015	0.00016	0.00016
2800.0	0.00016	0.00017	0.00016	0.00017	0.00017	0.00017	0.00018	0.00019	0.00020	0.00021
2900.0	0.00027	0.00040	0.00068	0.00127	0.00248	0.00509	0.00903	0.01450	0.02188	0.03307
3000.0	0.04139	0.05982	0.07539	0.12927	0.15549	0.19749	0.20644	0.26590	0.31030	0.29961
3100.0	0.34025	0.48404	0.48147	0.52344	0.55408	0.55994	0.53132	0.67763	0.63054	0.65725
3200.0	0.73860	0.72860	0.69581	0.66071	0.77151	0.99749	2.54163	1.03175	0.95825	1.04398
3300.0	1.12434	1.01162	1.01259	0.97771	0.96491	1.01110	0.89343	0.84341	0.93015	0.98164
3400.0	1.05667	0.98333	1.00372	1.02791	0.74335	0.91133	0.93471	0.93670	0.90667	0.89736
3500.0	1.00000	1.00262	0.93722	0.96427	1.09193	1.07559	0.98209	0.81933	0.71678	0.82402
3600.0	1.00403	0.85365	0.88630	0.94614	0.95600	1.00012	1.15611	1.11402	1.02251	1.04373
3700.0	1.06869	0.98692	0.91858	0.82751	0.75240	0.81686	0.91277	0.98346	1.12107	0.92211
3800.0	0.86398	0.89285	0.66655	0.53523	0.63660	0.81673	0.75652	0.73807	0.66717	0.70122
3900.0	0.81574	0.92896	0.87562	0.51213	0.63680	0.75486	0.62673	0.44488	0.86978	1.04550
4000.0	1.03231									
ZENITH SCAN STARTING AT 17.11.51 ON 9/23/73, NORMALIZING FACTOR = 4.3324E 01										
2600.0	0.00348	0.00012	0.00012	0.00012	0.00012	0.00012	0.00013	0.00013	0.00013	0.00013
2700.0	0.00013	0.00014	0.00014	0.00014	0.00014	0.00015	0.00015	0.00016	0.00017	0.00017
2800.0	0.00017	0.00018	0.00019	0.00019	0.00019	0.00019	0.00020	0.00021	0.00022	0.00023
2900.0	0.00027	0.00038	0.00063	0.00114	0.00211	0.00399	0.00794	0.01212	0.02027	0.02793
3000.0	0.03816	0.05444	0.07450	0.12948	0.15434	0.19358	0.20384	0.25711	0.30513	0.29246
3100.0	0.32776	0.47539	0.47125	0.51037	0.54075	0.54456	0.50590	0.66527	0.62167	0.64231
3200.0	0.72268	0.71279	0.68170	0.63902	0.74824	0.73266	1.00807	1.01718	0.95815	2.76814
3300.0	1.12455	1.02154	1.00705	0.96527	0.95028	1.00532	0.87879	0.83814	0.92684	0.97360
3400.0	1.04402	0.97693	1.00557	1.02252	0.84475	0.91400	0.92663	0.92619	0.89798	0.88382
3500.0	1.00000	10.35538	0.93613	0.96998	1.09149	21.60538	0.96369	0.71132	0.71797	0.82879
3600.0	0.98373	0.84490	0.88383	2.57447	0.95784	0.88932	1.15550	1.12123	1.04379	1.07739
3700.0	1.10777	1.05506	0.99227	0.89553	0.81176	0.86832	0.98183	1.06473	1.23506	1.04488
3800.0	0.98499	1.03828	0.78911	0.60756	0.69670	0.87022	0.81640	0.76264	0.72685	0.78735
3900.0	0.91687	0.99576	0.89561	0.51258	0.56428	0.79899	0.67355	0.45956	0.80240	0.95525
4000.0	0.96295									
ZENITH SCAN STARTING AT 17.14.14 ON 9/23/73, NORMALIZING FACTOR = 4.3481E 01										
2600.0	0.00013	0.00013	0.00013	0.00014	0.00013	0.00014	0.00014	0.00014	0.00015	0.00041
2700.0	0.00015	0.00015	0.00015	0.00016	0.00016	0.00016	0.00016	0.00016	0.00017	0.00017
2800.0	0.00017	0.00018	0.00019	0.00019	0.00019	0.00020	0.00020	0.00020	0.00021	0.00023
2900.0	0.00027	0.00037	0.00062	0.00113	0.00209	0.00412	0.00793	0.01196	0.02024	0.02857
3000.0	0.03827	0.05229	0.06924	0.11773	0.15001	0.18972	0.20429	0.23953	0.29593	0.29673
3100.0	0.30171	0.44077	0.45617	0.48454	0.51927	0.53165	0.49497	0.61985	0.62940	0.63462
3200.0	0.69098	0.64379	0.68193	0.64091	0.72209	0.79013	0.95360	1.00488	0.94794	1.00467
3300.0	1.12768	1.00012	0.99261	0.95227	0.91783	0.99998	0.92006	0.83416	0.91709	0.98507
3400.0	1.05739	1.01551	1.00669	1.04649	0.87180	0.88590	0.95137	0.95858	0.92207	0.92138
3500.0	1.00000	1.06025	0.98037	0.96023	1.11041	11.94470	1.02596	0.86355	0.78134	0.90232
3600.0	1.09377	0.91476	0.94465	0.99689	1.01011	1.05402	1.20298	1.15164	1.06569	1.09809
3700.0	1.13510	1.07891	1.01238	0.92459	0.84660	0.90252	0.99450	10.48156	13.97667	1.55209
3800.0	1.66096	1.98084	0.80989	0.63330	0.72905	2.17253	1.11927	0.86009	0.83110	0.89868
3900.0	1.03524	1.12180	1.03003	0.61788	0.69294	1.06649	0.91338	0.62268	1.13779	1.33390
4000.0	1.38610									

Table VIII-41

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 17.16. 0 ON 9/23/73, NORMALIZING FACTOR = 4.0640E 01										
2600.0	0.00013	0.00013	0.00013	0.00014	0.00014	0.00014	0.00014	0.00038	0.00015	0.00015
2700.0	0.00015	0.00016	0.00016	0.00016	0.00016	0.00016	0.00016	0.00017	0.00017	0.00018
2800.0	0.00018	0.00019	0.00021	0.00021	0.00021	0.00021	0.00022	0.00023	0.00023	0.00026
2900.0	0.00027	0.00041	0.00066	0.00092	0.00225	0.00422	0.00836	0.01033	0.02038	0.02909
3000.0	0.03924	0.05524	0.07211	0.12006	0.15350	0.17311	0.19136	0.23556	0.31221	0.31024
3100.0	0.32237	0.47116	0.48164	0.51147	0.55288	0.56076	0.52305	0.65772	0.65493	0.65488
3200.0	0.72340	0.75153	0.70009	0.65144	0.74173	0.81025	0.98066	1.02229	0.96382	1.01313
3300.0	1.13675	1.02453	1.02382	1.01003	0.98155	1.04065	0.95005	0.85468	0.92888	0.98718
3400.0	1.05261	1.01318	1.00237	1.04929	8.76873	0.89824	0.95543	0.96379	0.93006	0.92600
3500.0	1.00000	20.50510	0.97689	0.96115	1.10116	1.10880	1.02035	0.84753	0.77273	0.79995
3600.0	1.04714	0.90623	0.90248	0.99408	0.99441	1.00662	1.18907	1.16959	1.09835	1.11845
3700.0	1.15236	1.09000	1.02530	0.91847	0.83285	0.88195	0.98959	1.07211	1.23689	1.03239
3800.0	1.00239	1.06078	0.79486	0.62593	0.73628	0.89642	0.84214	0.86783	0.84821	0.93525
3900.0	1.06730	1.12449	1.00921	0.60228	0.66331	1.03351	0.89094	0.61440	1.09802	1.27414
4000.0	1.29777									
ZENITH SCAN STARTING AT 17.20. 7 ON 9/23/73, NORMALIZING FACTOR = 3.9944E 01										
2600.0	0.00015	0.00013	0.00014	0.00014	0.00014	0.00015	0.00014	0.00015	0.00015	0.00015
2700.0	0.00016	0.00016	0.00323	0.00017	0.00017	0.00017	0.00017	0.00017	0.00018	0.00018
2800.0	0.00018	0.00019	0.00018	0.00019	0.00019	0.00020	0.00022	0.00023	0.00024	0.00027
2900.0	0.00032	0.00044	0.00071	0.00127	0.00243	0.00475	0.00858	0.00901	0.01867	0.02978
3000.0	0.04026	0.05752	0.07505	0.12701	0.15287	0.11036	0.11851	0.20055	0.30730	0.29793
3100.0	0.33584	0.47455	0.47158	0.51223	0.54141	0.55154	0.51766	0.65766	1.70046	0.65570
3200.0	0.73484	0.73042	0.70031	0.65176	0.76752	0.83964	1.00927	1.02127	0.95728	1.04599
3300.0	1.12551	1.01367	1.01810	0.99007	0.97559	1.01804	0.89784	0.84541	0.93745	0.99224
3400.0	1.07862	1.00247	0.99733	1.02126	0.83987	0.91145	0.93567	0.94332	0.91226	0.89866
3500.0	1.00000	1.00187	0.92767	0.95113	1.08414	1.06891	0.97438	0.81964	0.72834	0.86745
3600.0	2.81774	0.88710	0.92261	0.98463	0.99638	1.03914	1.20387	1.16492	1.08266	1.11827
3700.0	1.16295	1.09932	1.02176	0.91229	0.81046	0.87041	0.96823	10.64607	1.97779	1.01327
3800.0	0.98094	1.04642	0.78040	0.61084	0.64447	0.88504	0.82801	0.84840	0.82321	0.88335
3900.0	1.00866	1.07335	0.96367	0.57762	0.66051	1.02497	10.76295	0.63106	1.08065	1.26813
4000.0	1.30009									
ZENITH SCAN STARTING AT 17.21.53 ON 9/23/73, NORMALIZING FACTOR = 3.7941E 01										
2600.0	0.00014	0.00016	0.00016	0.00015	0.00015	0.00016	0.00017	0.00017	0.00017	0.00017
2700.0	0.00017	0.00018	0.00018	0.00017	0.00018	0.00018	0.00019	0.00021	0.00019	0.00019
2800.0	0.00020	0.00021	0.00022	0.00022	0.00022	0.00022	0.00023	0.00024	0.00024	0.00026
2900.0	0.00030	0.00042	0.00066	0.00094	0.00220	0.00420	0.00849	0.01150	0.02084	0.02390
3000.0	0.04015	0.05612	0.07330	0.12410	0.15664	0.16381	0.12455	0.13234	0.31808	0.31592
3100.0	5.94805	0.48412	0.49570	0.52495	0.56955	0.57868	0.53060	0.66891	0.66684	0.66612
3200.0	0.63714	0.76465	0.71316	0.66139	0.75189	0.81858	0.99596	1.03929	0.97582	1.02964
3300.0	1.14400	1.03124	1.02511	1.00394	0.97073	1.02866	0.92828	0.84065	0.90746	0.96433
3400.0	1.02719	0.99265	0.99323	1.04410	0.90050	0.91473	0.96187	0.96946	0.93235	0.92864
3500.0	1.00000	1.00601	1.00757	0.99866	1.14748	1.15707	1.05299	0.87472	0.77909	2.14218
3600.0	1.05005	0.90906	1.33927	2.33040	1.01440	1.02749	1.20069	1.17277	1.09816	1.09199
3700.0	1.17028	1.06573	23.77550	6.96578	0.84577	0.87719	1.01525	1.06182	1.26672	1.11539
3800.0	1.01223	1.10463	0.86561	0.65037	1.31825	0.88571	0.82910	0.84446	0.81416	0.87092
3900.0	2.72938	1.05612	0.94890	0.55263	0.65410	0.97262	0.84369	0.58740	1.04053	1.25983
4000.0	26.08391									
ZENITH SCAN STARTING AT 17.24.14 ON 9/23/73, NORMALIZING FACTOR = 3.8331E 01										
2600.0	0.00014	0.00015	0.00015	0.00015	0.00015	0.00015	0.00040	0.00016	0.00016	0.00016
2700.0	0.00016	0.00017	0.00017	0.00017	0.00020	0.00018	0.00018	0.00017	0.00018	0.00018
2800.0	0.00019	0.00019	0.00019	0.00020	0.00020	0.00021	0.00021	0.00021	0.00022	0.00024
2900.0	0.00027	0.00039	0.00066	0.00094	0.00207	0.01224	0.00798	0.00943	0.01966	0.02238
3000.0	0.03808	0.05286	0.06984	0.11914	0.15134	0.17466	0.17437	0.18679	0.30631	0.30419
3100.0	0.33124	0.47643	0.46694	0.51196	0.53927	0.54824	0.51010	0.65849	0.62990	0.65446
3200.0	0.73348	0.72729	0.67774	0.64781	0.74570	1.71667	1.60382	0.99873	0.93233	1.03223
3300.0	1.10613	0.98728	0.99481	0.96647	0.95168	1.00508	0.88639	0.83318	0.92116	0.96870
3400.0	1.04075	0.97897	1.01164	1.04394	0.84996	0.93815	0.90467	19.12743	0.90987	0.89561
3500.0	1.00000	1.00601	9.44428	2.66506	1.07947	0.95512	0.89569	0.79446	0.71463	0.85137
3600.0	1.02028	0.86832	0.90849	0.96253	0.80938	0.94593	1.15882	1.11475	1.03499	1.06629
3700.0	1.10106	1.04636	0.99303	0.89074	0.80731	0.86950	0.96632	1.04570	1.19992	1.00380
3800.0	0.96817	1.02917	0.77681	0.59971	0.68897	0.87851	0.82296	0.84722	0.82733	0.90697
3900.0	1.02453	1.09824	0.98363	2.57872	7.75696	1.03113	0.89237	0.62664	1.09924	1.32079
4000.0	1.35331									
ZENITH SCAN STARTING AT 17.25.59 ON 9/23/73, NORMALIZING FACTOR = 3.6390E 01										
2600.0	0.00014	0.00015	0.00015	0.00015	0.00015	0.00016	0.00018	0.00017	0.00019	0.00018
2700.0	0.00018	0.00019	0.00017	0.00018	0.00019	0.00021	0.00019	0.00020	0.00021	0.00021
2800.0	0.00021	0.00022	0.00022	0.00023	0.00023	0.00024	0.00024	0.00024	0.00025	0.00027
2900.0	0.00033	0.00046	0.00072	0.00054	0.00240	0.00467	0.00882	0.01009	0.02062	0.02851
3000.0	0.04123	0.05899	0.07691	0.12927	0.15609	0.19813	0.19827	0.17192	0.31462	0.30415
3100.0	0.34318	0.48457	0.47920	0.51913	0.55063	0.55915	0.52902	0.67801	0.64542	0.67688
3200.0	0.75965	0.72893	0.68622	0.64526	0.75594	0.82825	1.00035	1.54636	2.10356	1.03926
3300.0	1.11426	1.00062	1.00289	0.97360	0.96120	1.00670	0.88802	0.84099	0.92764	0.97490
3400.0	1.04964	0.98137	1.00772	1.02845	0.84648	0.92195	0.94328	0.94269	0.90904	0.89370
3500.0	1.00000	1.00255	0.93788	0.97595	1.09994	1.08562	0.98751	0.82386	0.73500	0.84606
3600.0	1.02850	0.87268	0.91195	0.97055	0.98048	1.02417	1.19010	1.15044	1.07551	1.12141
3700.0	1.15843	1.09204	1.02944	0.92686	0.83774	0.87782	0.96769	0.93259	1.23253	1.05103
3800.0	1.00941	1.07138	0.81375	0.62180	0.69986	0.89343	0.81832	0.85399	0.83764	0.92185
3900.0	1.05508	1.13555	1.02276	0.60522	0.71172	1.06179	18.94385	10.70088	1.11306	1.31590
4000.0	1.35410									
ZENITH SCAN STARTING AT 17.27.48 ON 9/23/73, NORMALIZING FACTOR = 3.6160E 01										
2600.0	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007
2700.0	0.00007	0.00007	0.00008	0.00008	0.00008	0.00006	0.00008	0.00007	0.00008	0.00008
2800.0	0.00008	0.00007	0.00009	0.00008	0.00007	0.00008	0.00011	0.00008	0.00007	0.00007
2900.0	0.00017	0.00029	0.00081	0.00267	0.00282	0.00648	0.01041	0.01033	0.01458	0.03119
3000.0	0.04037	0.05883	0.07837	0.13462	0.15236	0.02849	0.04618	0.26619	0.31512	0.30190
3100.0	0.34582	0.49269	0.48559	0.52701	0.55641	0.55856	0.52529	0.68560	0.64148	0.66427
3200.0	0.74840	0.64494	0.69922	0.66348	0.77115	0.84385	1.02677	1.02771	0.96002	1.07450
3300.0	1.11030	1.00434	1.01072	0.97654	0.97360	1.01946	0.89372	0.85557	0.94663	0.99043
3400.0	1.06023	0.98626	1.01676	1.01825	0.83405	0.93433	0.93515	0.93421	0.90665	0.89176
3500.0	1.00000	1.00132	0.92991	0.96988	1.08683	1.05888	0.94592	0.80451	0.71225	0.87769
3600.0	0.99440	0.85422	0.91205	0.95066	0.95569	1.00146	1.12787	1.08070	19.54305	1.05273
3700.0	1.07668	1.03061	0.85858	0.85601	0.78350	0.83998	0.93162	1.01499	1.15284	0.96867
3800.0	0.93989	0.98193	0.72722	0.58092	18.16994	5.02228	0.79518	0.81829	0.79790	0.88641
3900.0	0.99060	1.05679	0.93191	0.53691	0.65875	0.98076	0.80776	0.58524	1.06436	1.25170
4000.0	1.28533									

Table VIII-42

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	SOLAR SCAN STARTING AT 17.30. 9 ON 9/23/73. NORMALIZING FACTOR = 1.1762E 01									
2600.0	0.00006	0.00006	0.00007	0.00002	0.00004	0.00004	0.00005	0.00015	0.00018	0.00011
2700.0	0.00015	0.00015	0.00016	0.00018	0.00016	0.00016	0.00016	0.00017	0.00020	0.00021
2800.0	0.00020	0.00020	0.00020	0.00020	0.00021	0.00032	0.00027	0.00020	0.00021	0.00021
2900.0	0.00021	0.00022	0.00022	0.00022	0.00025	0.00026	0.00024	0.00026	0.00032	0.00043
3000.0	0.00071	0.00090	0.00233	0.00471	0.00870	0.02862	0.02123	0.03188	0.04118	0.05851
3100.0	0.07589	0.12919	0.15787	0.20222	0.19752	0.10737	0.32028	0.31295	0.34218	0.48991
3200.0	0.64313	15.59085	8.51765	3.11447	0.53409	0.68642	0.66076	0.69006	0.77423	0.78085
3300.0	0.73869	0.69651	0.79194	0.87468	0.93630	1.42883	2.36962	0.96402	3.20267	0.91398
3400.0	1.02091	0.99299	0.97371	1.02841	0.91687	0.85563	0.94201	0.81507	1.01842	0.99807
3500.0	1.00000	1.03784	0.85188	0.90926	0.94024	0.94697	0.91773	0.90506	1.01272	1.01962
3600.0	0.95392	0.96343	1.08505	1.07027	0.97307	0.81119	0.72145	1.58795	1.02666	0.87135
3700.0	0.90678	0.97043	16.93282	3.50351	1.15214	1.10325	1.01933	1.03939	1.07854	1.02651
3800.0	0.93745	0.83462	0.78214	0.85603	0.93147	1.04559	1.16771	0.95526	0.91843	0.95466
3900.0	0.70719	0.57448	0.71097	0.82153	0.78008	0.79747	0.77713	18.02617	0.97719	1.05626
4000.0	0.89663									
	ZENITH SCAN STARTING AT 17.34.11 ON 9/23/73. NORMALIZING FACTOR = 3.2138E 01									
2600.0	0.00020	0.00141	0.00194	0.00017	0.00032	0.00017	0.00021	0.00018	0.00017	0.00018
2700.0	0.00019	0.00019	0.00020	0.00021	0.00056	0.00023	0.00021	0.00023	0.00022	0.00023
2800.0	0.00022	0.00023	0.00026	0.00025	0.00024	0.00025	0.00026	0.00026	0.00027	0.00029
2900.0	0.00034	0.00045	0.00072	0.00082	0.00615	0.00443	0.00854	0.00871	0.27755	0.02248
3000.0	0.04116	0.05622	0.07419	0.12838	0.16117	0.20279	0.21890	0.10646	0.31978	0.27543
3100.0	0.24230	0.49531	0.50569	0.53301	0.56966	0.57794	1.43621	0.67178	0.68657	0.68443
3200.0	0.75387	0.78684	0.73449	0.68629	0.77223	0.82371	1.01863	1.08174	1.01461	1.07691
3300.0	3.29982	1.03575	1.03239	1.02035	0.98827	1.05411	0.96818	0.86956	0.94696	0.99841
3400.0	1.06134	1.01267	1.00465	1.05201	0.89036	0.88654	0.96919	0.98156	0.94206	0.93446
3500.0	1.00000	1.04492	2.69201	0.95392	1.08992	1.10090	1.00885	0.83587	0.74016	0.80061
3600.0	1.03554	0.88396	0.89880	0.96776	0.98474	0.89477	1.11256	1.14119	1.06719	1.05931
3700.0	1.14315	2.46723	1.49177	0.92086	0.81259	0.85358	0.96724	1.03049	1.21289	19.72493
3800.0	0.95817	1.06505	0.82927	0.63683	0.64389	0.86058	0.82288	0.84285	0.82300	0.85747
3900.0	1.00390	1.06380	1.01721	5.45002	0.63683	0.99897	0.83211	0.57856	1.04385	1.67751
4000.0	1.96165									
	ZENITH SCAN STARTING AT 17.35.57 ON 9/23/73. NORMALIZING FACTOR = 3.3976E 01									
2600.0	0.00007	0.00007	0.00008	0.00007	0.00007	0.00008	0.00008	0.00008	0.00008	0.00008
2700.0	0.00008	0.00008	0.00008	0.00009	0.00008	0.00010	0.00009	0.00008	0.00009	0.00008
2800.0	0.00009	0.00009	0.00009	0.00008	0.00009	0.00009	0.00007	0.00006	0.00010	0.00007
2900.0	0.00014	0.00028	0.00051	0.00191	0.00217	0.00436	0.00860	0.00897	0.02001	0.02746
3000.0	0.03693	0.05111	0.07098	0.11921	0.15007	0.08737	0.01188	0.19647	0.30507	6.12842
3100.0	0.32000	0.46411	0.47117	0.50510	0.54391	0.55312	0.51876	0.65083	0.63317	0.64006
3200.0	0.70712	0.72352	0.67744	0.64278	0.75465	0.82616	20.22556	1.00201	0.94966	1.04093
3300.0	13.79137	7.75410	10.28460	0.95726	0.95428	0.99469	0.87557	0.84317	49.33783	15.05552
3400.0	1.04324	0.96985	0.99187	1.00148	0.82700	0.90236	0.91039	1.41581	8.71604	0.87686
3500.0	1.00000	0.93621	0.87176	0.86544	1.06652	1.03929	0.93122	0.78560	0.69564	0.83371
3600.0	0.95124	0.83241	0.87666	0.91573	0.92218	0.96645	1.10144	1.07058	0.99468	1.05452
3700.0	1.06896	1.02278	0.95300	0.84888	0.77479	0.81459	0.82433	0.99648	1.14013	11.79449
3800.0	24.37897	0.98674	0.74066	0.58633	0.68810	0.83156	0.79198	0.80023	0.77135	0.85639
3900.0	0.96417	1.04346	0.91697	0.53771	0.64927	0.99467	0.81198	0.59456	1.07140	1.23523
4000.0	1.26254									
	ZENITH SCAN STARTING AT 17.38.18 ON 9/23/73. NORMALIZING FACTOR = 8.4910E 01									
2600.0	0.00005	0.00006	0.00123	0.00006	0.00006	0.00006	0.00011	0.00006	0.00006	0.00006
2700.0	0.00006	0.00006	0.00010	0.00007	0.00019	0.00008	0.00142	0.00007	0.00007	0.00007
2800.0	0.00008	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009	0.00009	0.00010
2900.0	0.00012	0.00017	0.00028	0.00051	0.00121	0.00397	0.00334	0.00529	0.00848	0.01211
3000.0	0.01590	0.02309	0.02971	0.03158	0.06188	0.07754	0.08202	0.10453	0.12343	0.11885
3100.0	0.13370	0.19153	0.18898	4.08514	0.21494	4.31852	0.20139	0.26390	0.24959	0.25659
3200.0	0.28889	0.28511	0.27215	0.25459	0.29532	0.34831	0.67396	0.39436	0.36816	0.40830
3300.0	4.61649	0.38843	0.39339	0.36597	0.38413	1.17682	0.85154	0.58516	0.37406	0.37420
3400.0	0.40154	0.37627	0.38391	0.39263	1.09655	0.34529	0.35441	0.35576	0.34310	0.33797
3500.0	1.00000	0.80109	0.35657	0.36639	0.40558	0.39000	0.36539	0.30768	0.27225	0.31431
3600.0	0.38274	0.32363	0.34272	0.97101	0 36583	1.04198	0.43661	0.42134	0.39179	0.40224
3700.0	0.41640	0.39350	3.26010	0.76616	0.30089	0.31877	0.35797	0.38572	0.44882	0.47294
3800.0	0.87577	0.74400	0.29687	0.23299	0.26435	0.32752	0.30833	0.31763	0.30929	0.61290
3900.0	1.12297	0.42889	0.34994	0.20246	0.23836	7.54046	0.31195	0.23071	0.39487	0.46154
4000.0	0.47466									
	ZENITH SCAN STARTING AT 17.41.52 ON 9/23/73. NORMALIZING FACTOR = 3.1904E 01									
2600.0	0.00017	0.00017	0.00017	0.00018	0.00018	0.00018	0.00018	0.00018	0.00019	0.00019
2700.0	0.00021	0.00021	0.00020	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021
2800.0	0.00021	0.00022	0.00022	0.00023	0.00024	0.00025	0.00026	0.00027	0.00028	0.00029
2900.0	0.00033	0.00044	0.00068	0.00116	0.00217	0.00410	0.00834	0.01232	0.02079	0.03002
3000.0	0.03980	0.05527	0.07831	0.13224	0.16003	0.20108	0.21334	0.27308	0.32228	0.31142
3100.0	0.34917	0.49773	0.49062	0.52790	0.55964	0.56541	0.53405	0.68436	0.64372	1.80743
3200.0	0.74984	0.74212	0.70433	0.66134	0.76856	0.82946	2.81560	2.76904	0.95930	1.04957
3300.0	1.09888	1.01225	1.02107	0.99825	0.98627	1.04211	0.91808	0.87165	0.96157	1.00983
3400.0	1.04727	0.86093	1.00342	1.02337	0.82999	0.90620	18.81522	0.93733	0.90639	0.89859
3500.0	1.00000	1.00438	0.93343	0.94770	21.54593	1.05529	0.96107	0.80296	0.71083	0.83746
3600.0	0.99488	0.85097	0.89142	0.94933	0.94408	0.96694	1.11839	1.08517	1.00659	1.04884
3700.0	1.09890	1.04147	0.99590	0.89769	0.80290	0.83651	0.93781	1.00636	1.16115	0.98442
3800.0	0.95225	1.02324	0.77972	0.60664	0.68351	0.85507	0.80412	0.82366	0.80140	0.87150
3900.0	0.99011	1.06737	0.97833	0.59267	0.63852	0.93484	0.83840	0.56815	1.01195	1.21209
4000.0	1.24717									
	ZENITH SCAN STARTING AT 17.44.13 ON 9/23/73. NORMALIZING FACTOR = 2.9744E 01									
2600.0	0.00021	0.00019	0.00020	0.00020	0.00020	0.00020	0.00020	0.00023	0.00023	0.00022
2700.0	0.00022	0.00022	0.00023	0.00023	0.00024	0.00023	0.00024	0.00023	0.00024	0.00025
2800.0	0.00024	0.00025	0.00026	0.00026	0.00027	0.00027	0.00027	0.00029	0.00029	0.00031
2900.0	0.00035	0.00045	0.00071	0.00120	0.00221	0.00423	0.00824	0.22923	0.61362	0.02994
3000.0	0.04223	0.05678	0.07726	0.12853	0.16340	0.20540	0.22338	0.26587	0.33338	0.33382
3100.0	0.33678	0.50610	0.52494	0.55559	0.59393	0.58750	0.54807	0.67886	13.76607	0.68654
3200.0	0.74963	0.79207	0.73397	0.66744	15.21580	0.84364	1.01106	1.07473	2.70096	1.05310
3300.0	1.18620	1.05140	1.04195	1.02546	1.17248	2.65143	0.96951	0.87099	0.95063	1.01102
3400.0	1.08222	1.03686	1.02383	1.00610	1.42025	1.10099	0.96615	0.97444	0.93328	0.92399
3500.0	1.00000	1.06144	0.98540	0.96081	11.71310	1.12457	1.00424	0.84272	0.71236	0.85754
3600.0	1.02669	0.88680	0.92214	0.98813	1.00006	1.03391	1.21044	3.23270	1.09868	1.11842
3700.0	1.13650	1.08170	1.02885	0.96504	0.96539	2.17432	0.98989	1.06855	1.21276	1.04137
3800.0	0.98946	1.04564	0.80208	0.62848	0.72831	0.90516	16.16663	0.86978	0.84590	0.92397
3900.0	1.04341	1.11217	1.01568	0.56716	0.65893	1.02698	0.89923	0.60944	1.07298	1.29287
4000.0	1.33703									

Table VIII-43

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 17.45.59 ON 9/23/73, NORMALIZING FACTOR = 2.9815E 01										
2600.0	0.00221	0.00329	0.00048	0.00018	0.00019	0.00019	0.00020	0.00021	0.00021	0.00021
2700.0	0.00020	0.00021	0.00021	0.00021	0.00022	0.00023	0.00023	0.00024	0.00023	0.00024
2800.0	0.00023	0.00023	0.00023	0.00024	0.00025	0.00025	0.00025	0.00025	0.00026	0.00029
2900.0	0.00036	0.00047	0.00071	0.00126	0.00225	0.00419	0.00854	0.01334	0.02269	0.03402
3000.0	0.04369	0.06257	0.08177	0.13732	0.16753	0.21282	0.22352	0.28302	0.33460	0.32525
3100.0	4.55100	5.67582	0.50889	1.51192	0.58018	12.31014	9.24248	0.70354	0.66743	0.68981
3200.0	0.76709	0.76637	0.72513	0.68216	0.79484	0.86680	1.04155	1.06057	0.99273	1.07656
3300.0	1.16140	1.04019	0.91169	1.01347	0.99940	1.05147	0.93100	8.99330	0.96374	1.01905
3400.0	1.09441	1.02813	1.05061	1.07770	0.87219	0.94402	0.95611	0.96197	0.92262	0.90349
3500.0	1.00000	1.01017	0.93981	0.95876	1.08467	1.07277	0.97139	0.81799	0.72506	0.83477
3600.0	1.00941	0.85242	0.89319	0.94896	0.95004	0.97498	3.11111	1.09433	1.01365	1.02714
3700.0	1.09860	1.02552	0.95446	0.88570	0.79222	0.82381	0.92879	0.99409	1.15524	0.98715
3800.0	0.94171	0.98574	0.77134	0.59369	0.67986	0.85586	0.79925	0.81861	0.79205	0.85819
3900.0	0.97405	1.04426	0.94791	0.54287	1.52962	0.99579	0.87531	12.29121	1.02161	1.20913
4000.0	1.23157									
ZENITH SCAN STARTING AT 17.47.45 ON 9/23/73, NORMALIZING FACTOR = 2.9677E 01										
2600.0	0.00021	0.00021	0.00021	0.00051	0.00021	0.00020	0.00022	0.00021	0.00022	0.00022
2700.0	0.00022	0.00022	0.00023	0.00240	0.00026	0.00022	0.00024	0.00023	0.00024	0.00028
2800.0	0.00025	0.00025	0.00026	0.00026	0.00027	0.00027	0.00030	0.00028	0.00029	0.00032
2900.0	0.00037	0.00052	0.00073	0.00129	0.00237	0.00455	0.00872	0.01355	0.02167	0.03293
3000.0	0.04211	0.06121	0.07953	0.13531	0.16381	0.20581	0.21828	0.27581	0.32851	0.31829
3100.0	0.35387	0.51289	0.50913	0.54496	0.58071	0.58484	0.54485	10.58442	5.01349	0.68822
3200.0	0.75985	0.74300	0.71538	0.66874	0.76707	0.83750	1.01752	1.04210	0.97085	1.06944
3300.0	11.88353	1.01896	1.02304	0.99758	0.97806	1.03220	0.92036	0.85382	0.94344	0.99260
3400.0	27.04044	5.59104	1.01475	1.03849	0.85204	0.92412	0.93768	0.95608	0.91376	0.89252
3500.0	1.00000	1.00632	1.87907	1.53630	1.07551	1.06686	0.96793	0.81440	0.72631	0.82268
3600.0	0.99567	0.85724	0.88737	0.94503	0.94945	1.50789	1.53018	1.07335	1.02571	1.06845
3700.0	1.10183	1.04013	0.99464	0.90966	0.79473	0.83496	0.94070	1.01395	1.17727	0.99531
3800.0	0.94776	0.99870	0.76752	0.59641	0.67195	5.61259	10.82117	0.80974	0.79103	3.51947
3900.0	3.05576	1.05516	0.96966	0.56304	0.63173	0.98381	0.86086	0.57099	0.99967	1.20394
4000.0	1.24646									
ZENITH SCAN STARTING AT 17.50. 6 ON 9/23/73, NORMALIZING FACTOR = 2.8157E 01										
2600.0	0.00046	0.00026	0.00020	0.00019	0.00020	0.00020	0.00020	0.00021	0.00022	0.00021
2700.0	0.00022	0.00022	0.00023	0.00064	0.00023	0.00024	0.00025	0.00074	0.00057	0.00023
2800.0	0.00024	0.00025	0.00025	0.00025	0.00025	0.00026	0.00026	0.00027	0.00027	0.00029
2900.0	0.00033	0.00043	0.00068	0.00113	0.00211	0.00422	0.00827	0.01263	0.02115	0.03715
3000.0	0.04214	0.05749	0.07647	0.12605	0.16390	0.20734	0.22540	0.26915	0.33344	0.33705
3100.0	0.33929	0.49597	0.52210	0.55044	0.59149	0.60127	0.56046	0.68243	0.69872	0.69293
3200.0	0.75527	0.80296	0.74561	7.13322	0.78316	0.85968	1.02654	1.09380	1.02671	1.05876
3300.0	1.18207	0.95817	1.06104	1.04587	1.01069	1.06953	0.99077	0.89206	0.96978	1.18608
3400.0	1.88587	18.20482	3.23420	13.73576	8.98742	0.93268	1.00240	1.01956	0.98208	0.96728
3500.0	1.00000	1.06465	0.98256	0.95893	1.10799	1.12739	1.03242	0.87007	0.77892	0.80161
3600.0	1.03763	2.44728	0.89759	0.98881	0.97888	0.98607	1.16212	1.15391	1.07167	12.42867
3700.0	11.34132	1.04301	1.01888	0.92816	2.17435	0.82408	0.96220	1.00358	1.20019	1.07567
3800.0	0.96288	28.45972	3.29902	0.62634	0.65225	0.87035	0.82560	0.83798	0.82356	0.85359
3900.0	1.00143	2.82592	0.98370	0.59354	0.64761	1.00006	0.87143	0.57718	1.05149	24.50223
4000.0	1.28898									
ZENITH SCAN STARTING AT 17.51.51 ON 9/23/73, NORMALIZING FACTOR = 2.5555E 02										
2600.0	0.00002	0.00002	0.00002	0.00003	0.00002	0.00002	0.00002	0.00002	0.00002	0.00003
2700.0	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003
2800.0	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00004
2900.0	0.00004	0.00005	0.00008	0.00014	0.00026	0.00124	0.00096	0.00141	0.00234	0.00346
3000.0	0.00460	0.00664	0.00886	0.01455	0.01790	0.02253	0.02403	0.03055	0.03643	0.03554
3100.0	0.03971	0.05664	0.05662	0.06128	0.06521	0.06608	0.06117	0.07850	0.06761	0.07744
3200.0	0.08674	0.08679	0.08288	0.07789	0.08753	0.09358	0.11471	0.11661	0.10902	0.31078
3300.0	0.12682	0.11381	0.11407	0.11043	0.10891	0.11526	0.26702	0.09500	0.10437	0.10987
3400.0	0.11712	0.10991	0.11194	0.11553	0.09434	0.10128	0.10520	0.10652	0.10253	0.10062
3500.0	1.00000	1.46773	0.10472	0.10719	0.12088	0.11969	0.10913	0.09063	0.08067	0.09137
3600.0	0.11197	0.09498	0.09808	0.10584	0.10581	0.10861	0.12692	0.12248	0.11363	0.11739
3700.0	0.12241	0.11409	0.10824	0.09682	0.08812	0.09422	0.10457	0.11318	0.13086	0.11137
3800.0	0.10331	0.10996	0.23350	0.08457	0.07275	0.09222	0.08706	0.08929	0.16034	0.09315
3900.0	0.10639	0.11366	0.10343	0.08266	0.07030	0.10518	0.09168	0.16959	0.10814	0.13021
4000.0	0.13504									
ZENITH SCAN STARTING AT 17.54.15 ON 9/23/73, NORMALIZING FACTOR = 2.8214E 01										
2600.0	0.00018	0.00019	0.00020	0.00021	0.00020	0.00020	0.00021	0.00020	0.00020	0.00021
2700.0	0.00024	0.00022	0.00021	0.00022	0.00022	0.00023	0.00024	0.00023	0.00024	0.00025
2800.0	0.00023	0.00023	0.00024	0.00025	0.00025	0.00025	0.00026	0.00027	0.00027	0.00029
2900.0	0.00033	0.00045	0.00070	0.00125	0.00227	0.00456	0.00840	0.01300	0.02089	0.02951
3000.0	0.04104	0.05797	0.07506	0.13163	0.15975	0.20279	0.21533	0.26858	0.32360	0.31423
3100.0	0.33814	0.50082	0.49649	0.53301	0.56597	0.57374	0.52957	0.68322	0.65900	0.67254
3200.0	0.74997	0.74871	0.70766	0.66466	0.75947	0.82720	0.99989	1.02658	0.95397	1.04458
3300.0	1.12855	0.99646	0.99484	0.98378	0.96461	1.01921	0.91138	0.84599	0.93175	0.98260
3400.0	1.05682	0.98778	1.00426	1.03195	0.84904	0.91068	0.94675	0.95157	0.91525	0.90516
3500.0	1.00000	1.01777	0.96028	0.97700	1.05869	1.03834	0.93778	0.79285	0.69978	0.80956
3600.0	0.97614	0.83699	0.87576	0.94012	19.00745	0.96749	1.11130	1.07892	1.00482	1.02740
3700.0	1.07470	1.00902	0.96328	0.86699	0.77637	0.81064	0.91672	19.17760	1.13412	0.97219
3800.0	0.91946	0.97845	0.76175	0.58357	0.62846	0.82247	0.78775	0.80328	0.77309	0.83330
3900.0	0.94835	1.01243	0.93339	0.55706	0.58830	0.95021	0.83798	0.55218	0.98774	1.18501
4000.0	1.22472									
ZENITH SCAN STARTING AT 17.56. 1 ON 9/23/73, NORMALIZING FACTOR = 2.5896E 01										
2600.0	0.00020	0.00020	0.00020	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00035
2700.0	0.00048	0.00022	0.00023	0.00044	0.00032	0.00027	0.00026	0.00028	0.00025	0.00026
2800.0	0.00027	0.00027	0.00028	0.00029	0.00029	0.00030	0.00030	0.00030	0.00031	0.00033
2900.0	0.00039	0.00049	0.00073	0.00119	0.00224	0.00424	0.00815	0.01236	0.02097	0.03042
3000.0	0.04241	0.05851	0.07747	0.12701	0.16621	0.21088	0.22909	0.27670	0.34066	0.34389
3100.0	0.34497	0.50061	0.52374	0.55409	0.60268	0.62151	0.59271	0.73429	0.76501	0.77087
3200.0	0.84939	0.90604	0.84528	0.79582	0.88836	0.95538	1.11799	1.15925	1.07115	1.05630
3300.0	1.17700	1.05793	1.04925	1.00646	1.00834	1.07211	0.98462	0.88397	0.95327	1.01484
3400.0	1.07741	1.04127	1.02525	1.27927	2.52495	0.91121	0.98202	0.98847	0.94432	0.93207
3500.0	1.00000	1.06090	0.98335	0.96670	1.10633	1.12486	1.03205	0.86456	0.77244	7.82640
3600.0	1.02845	0.87549	0.90002	0.97327	0.97745	1.00359	1.18550	1.14996	1.06436	1.10201
3700.0	1.14367	1.06634	1.01061	0.91542	0.82210	0.86405	0.97681	1.04690	1.22559	1.05809
3800.0	1.00836	1.07422	0.82360	0.63704	0.71916	0.89985	0.84444	0.86913	0.83903	0.90015
3900.0	1.02149	1.09168	0.98716	0.59784	0.66236	1.02953	0.90254	0.60475	1.09920	1.30306
4000.0	1.34309									

Table VIII-44

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 17.57.47 ON 9/23/73, NORMALIZING FACTOR = 2.4898E 01										
2600.0	0.00019	0.00019	0.00019	0.00021	0.00020	0.00021	0.00021	0.00021	0.00023	0.00023
2700.0	0.00023	0.00025	0.00026	0.00023	0.00023	0.00024	0.00024	0.00026	0.00025	0.00250
2800.0	0.00043	0.00027	0.00028	0.00028	0.00026	0.00028	0.00027	0.00028	0.00029	0.00031
2900.0	0.00035	0.00047	0.00070	0.00125	0.00232	0.00447	0.18432	0.01348	0.02190	0.03188
3000.0	0.04178	0.06150	0.08029	0.13290	0.16258	0.20548	0.21869	0.27619	0.32971	0.31944
3100.0	0.35805	0.51097	0.63366	1.34087	0.58680	0.59302	0.55220	0.71968	0.68691	0.69932
3200.0	0.77805	0.69859	0.73436	0.68521	0.79219	0.85739	1.04883	1.06836	0.99463	1.08403
3300.0	1.15683	1.03268	1.03547	1.01040	0.99040	1.05238	0.92930	0.86943	0.95846	1.00329
3400.0	1.06831	0.99686	1.01342	1.03897	0.86419	0.91680	0.93946	14.71520	0.90652	0.89090
3500.0	1.00000	1.01047	0.93704	0.96024	1.08566	1.07634	0.98147	0.82674	0.73934	0.80468
3600.0	0.97848	0.84332	0.86937	0.93217	0.93723	0.95608	1.11974	1.08015	1.00759	1.02847
3700.0	1.06792	0.99996	0.95534	0.85613	0.77406	0.82087	0.91708	0.97777	1.11069	0.95018
3800.0	0.90196	0.95552	0.73860	0.57192	0.65195	0.82058	0.77473	0.79018	0.76853	0.82118
3900.0	0.94765	1.00153	0.92132	0.53065	0.60665	0.92432	0.80937	0.54891	0.98006	1.15816
4000.0	1.19840									
ZENITH SCAN STARTING AT 18. 4. 9 ON 9/23/73, NORMALIZING FACTOR = 2.3499E 01										
2600.0	0.00018	0.00018	0.00019	0.00019	0.00019	0.00019	0.00019	0.00021	0.00023	0.00021
2700.0	0.00021	0.00022	0.00021	0.00057	0.00022	0.00022	0.00022	0.00023	0.00024	0.00024
2800.0	0.00024	0.00024	0.00026	0.00028	0.00028	0.00027	0.00028	0.00028	0.00030	0.00032
2900.0	0.00035	0.00044	0.00066	0.00112	0.00206	0.01032	0.00789	0.01064	0.01913	0.02893
3000.0	0.03987	0.05560	0.07315	0.12348	0.15913	0.19775	0.21724	0.25839	0.32492	0.32631
3100.0	0.33123	0.50003	0.51832	0.54500	0.58990	0.59928	0.55521	0.67992	0.71253	0.70176
3200.0	0.76685	0.81415	0.75613	0.70577	0.78436	0.86303	1.02971	1.10436	1.02718	1.07000
3300.0	1.21093	1.07294	1.06014	1.03638	1.01483	1.07147	0.96067	0.89469	0.95567	0.99249
3400.0	1.06348	0.99412	1.00592	1.04027	0.86232	0.91427	0.94942	0.95855	0.92158	0.90987
3500.0	1.00000	1.01797	0.94421	0.96102	1.08673	1.07530	0.97914	0.82012	0.73173	0.83578
3600.0	1.00556	0.86568	0.90160	0.96751	0.96659	0.98914	1.13585	1.10062	1.02073	1.03730
3700.0	1.08720	1.00762	0.96381	0.82698	0.77545	0.80939	0.91730	0.98066	1.14721	0.98829
3800.0	0.93025	0.99740	0.75050	0.57807	0.64091	0.81132	0.75900	0.78099	0.75893	0.81097
3900.0	0.93534	1.00520	0.93345	0.57998	0.60958	0.90139	0.79617	0.53873	0.95326	1.13872
4000.0	1.17443									
ZENITH SCAN STARTING AT 18. 5.55 ON 9/23/73, NORMALIZING FACTOR = 2.3282E 01										
2600.0	0.00019	0.00019	0.00019	0.00020	0.00020	0.00020	0.00021	0.00020	0.00022	0.00021
2700.0	0.00021	0.00023	0.00022	0.00022	0.00023	0.00023	0.00026	0.00024	0.00024	0.00025
2800.0	0.00025	0.00027	0.00026	0.00077	0.00027	0.00027	0.00028	0.00028	0.00029	0.00033
2900.0	0.00036	0.00045	0.00072	0.00127	0.00227	0.00458	0.00844	0.01300	0.02121	0.03114
3000.0	0.04167	0.06071	0.07937	0.13565	0.16553	0.21179	0.22407	0.27766	0.33478	0.32733
3100.0	0.35374	0.51333	0.51706	10.68667	0.58490	0.59473	0.55271	0.70380	0.67974	0.70021
3200.0	0.77569	0.78766	0.74416	0.70105	2.23215	1.03476	2.61447	1.07298	1.00041	1.07638
3300.0	1.16843	1.04361	1.04324	1.01731	0.99572	1.04643	0.92531	0.86668	0.94262	0.98973
3400.0	1.05569	0.99241	1.00150	1.03434	0.86615	0.90928	0.94718	0.95305	0.91741	0.90120
3500.0	1.00000	20.49979	0.94028	0.95142	1.07200	1.06692	0.97952	0.82016	0.72772	0.83097
3600.0	1.02622	0.86679	0.86220	0.96675	0.96751	0.98981	1.14447	1.11640	1.01589	1.02890
3700.0	1.07129	0.99951	0.95538	9.14949	8.31365	0.82440	0.91837	0.97684	1.12405	0.96654
3800.0	0.90368	0.96207	0.74331	0.57017	0.62605	0.80958	0.75649	0.78098	0.75647	0.80898
3900.0	0.92475	0.98390	0.90136	0.53891	0.58350	0.90090	0.78745	0.53135	0.94401	1.14117
4000.0	1.18708									
ZENITH SCAN STARTING AT 18.10. 5 ON 9/23/73, NORMALIZING FACTOR = 1.0121E 00										
2600.0	0.00003	0.00003	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004
2700.0	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00004	0.00005	0.00005	0.00005
2800.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00014	0.00005	0.00006
2900.0	0.00007	0.00010	0.00015	0.00026	0.00050	0.00069	0.00074	0.00075	0.00076	0.00077
3000.0	0.00372	0.01357	0.01762	0.03008	0.03706	0.04740	0.05044	0.06225	0.07533	0.07346
3100.0	0.07850	0.10817	0.10960	0.11160	0.11286	0.11298	0.11156	0.11487	0.15861	0.14390
3200.0	0.14631	0.15022	0.17655	0.21143	0.21472	0.21149	0.23388	0.25626	0.26673	0.27118
3300.0	0.27774	0.28789	0.35421	0.40243	0.40886	0.41714	0.44985	0.47166	1.37412	0.50575
3400.0	0.52928	0.62223	0.69920	0.70311	0.72326	0.83323	0.86226	0.88530	0.90774	0.98444
3500.0	1.00000	1.00463	1.00943	1.01409	2.77313	1.02315	1.02865	1.03405	1.03834	1.04330
3600.0	1.04900	1.05551	1.06258	1.06876	1.07687	1.08474	1.09181	1.09899	1.10649	1.11402
3700.0	1.12163	1.12731	1.13159	1.14675	1.15754	1.16426	1.17090	1.17638	1.18149	1.18843
3800.0	1.19428	1.20026	1.19847	1.15361	1.20054	1.23193	1.23918	1.24651	1.25475	1.26482
3900.0	1.27553	1.28673	1.29110	0.53992	0.72391	1.34461	1.28194	0.53522	1.43936	1.46792
4000.0	1.47699									
ZENITH SCAN STARTING AT 18.11.51 ON 9/23/73, NORMALIZING FACTOR = 1.2847E-01										
2600.0	0.00028	0.00029	0.00031	0.00031	0.00032	0.00032	0.00032	0.00032	0.00033	0.00032
2700.0	0.00032	0.00034	0.00040	0.00034	0.00034	0.00034	0.00035	0.00036	0.00038	0.00037
2800.0	0.00101	0.00038	0.00038	0.00039	0.00039	0.00040	0.00040	0.00039	0.00040	0.00040
2900.0	0.00053	0.00064	0.00098	0.00162	0.00309	0.00506	0.00569	0.00580	0.00593	0.00599
3000.0	0.01649	0.08998	0.12549	0.19399	0.27217	0.32827	0.38673	0.43285	0.65159	1.00302
3100.0	0.56590	0.78742	0.85700	0.86282	0.87947	0.88219	0.87410	0.88866	0.89900	0.89424
3200.0	0.90043	0.90926	0.90606	0.90315	0.91015	0.92091	0.93245	0.94004	0.93923	0.94065
3300.0	0.95075	0.94934	0.95046	0.95329	0.95419	0.96006	0.96055	0.95501	0.96221	0.97037
3400.0	0.97606	0.97951	0.98030	0.98589	0.98271	0.97816	0.99076	0.99342	0.99402	0.99598
3500.0	1.00000	1.01158	1.01049	1.01036	1.02265	1.02912	1.02920	1.02118	1.01449	1.00943
3600.0	1.04225	1.04124	1.04195	1.05625	1.06043	1.06632	1.08208	1.08894	1.08984	1.09528
3700.0	1.10418	1.10431	1.10354	1.09592	1.08864	1.09896	1.11528	1.12411	1.14115	1.13221
3800.0	1.13117	1.14176	1.11040	1.01745	1.06135	1.14125	1.13662	1.14293	1.14104	1.15613
3900.0	1.17832	1.19145	1.18913	0.95496	1.01501	1.21025	1.19055	1.00498	1.23211	1.26382
4000.0	1.27419									
ZENITH SCAN STARTING AT 18.14.12 ON 9/23/73, NORMALIZING FACTOR = 1.2805E-01										
2600.0	0.00029	0.00032	0.00029	0.00030	0.00030	0.00030	0.00032	0.00038	0.00035	0.00034
2700.0	0.00035	0.00035	0.00036	0.00036	0.00036	0.00038	0.00037	0.00040	0.00039	0.00040
2800.0	0.00040	0.00040	0.00040	0.00040	0.00040	0.00040	0.00041	0.00041	0.00041	0.00049
2900.0	0.00057	0.00070	0.00107	0.00159	0.00338	0.00519	0.00572	0.00582	0.00594	0.00601
3000.0	0.02740	0.09797	0.12868	0.21642	0.27912	0.34808	0.38193	0.45445	0.57092	0.57249
3100.0	0.58045	0.83073	0.85548	0.86724	0.88146	0.88287	0.87137	0.89562	0.89856	0.89658
3200.0	0.90293	0.90900	0.90596	0.90022	0.91136	0.92005	0.93291	0.93868	0.93725	0.94147
3300.0	0.95009	0.94703	0.94991	0.95251	0.95324	0.95970	0.95802	0.95288	0.96176	0.96907
3400.0	0.97574	0.97668	0.97885	0.98464	0.97695	0.97866	0.98794	0.99058	0.99034	0.99269
3500.0	1.00000	1.00929	1.00710	1.00953	1.02304	1.02827	1.02623	1.01673	1.00922	1.01335
3600.0	1.04196	1.03675	1.04197	1.05407	1.05958	1.06676	1.08423	1.08767	1.08746	1.09481
3700.0	1.10402	1.58479	2.53284	1.09723	1.08920	1.09651	1.11526	1.12410	1.13655	1.12992
3800.0	1.12779	1.13887	1.10506	0.99328	1.05254	1.13688	1.12974	1.13743	1.13655	1.15250
3900.0	1.17406	1.18773	1.18129	0.91525	0.98037	1.20183	1.16450	0.91505	1.22569	1.25742
4000.0	1.26817									

Table VIII-45

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 18.15.57 ON 9/23/73, NORMALIZING FACTOR = 1.2765E-01									
2600.0	0.00029	0.00028	0.00028	0.00028	0.00029	0.00030	0.00030	0.00031	0.00031	0.00032
2700.0	0.00033	0.00032	0.00032	0.00033	0.00033	0.00034	0.00035	0.00036	0.00035	0.00038
2800.0	0.00038	0.00037	0.00039	0.00037	0.00038	0.00039	0.00039	0.00039	0.00108	0.00040
2900.0	0.00049	0.18553	0.00098	0.00167	0.00319	0.00511	0.00572	0.00581	0.00594	0.00601
3000.0	0.02061	0.09633	0.12640	0.20602	0.26890	0.33761	0.36874	0.44369	0.54814	0.55900
3100.0	0.56589	0.80078	0.84296	0.85956	0.87532	0.87756	0.86356	0.88954	0.89340	0.89217
3200.0	0.89826	0.90623	0.90248	0.89888	0.91010	0.91912	0.93207	0.93770	0.93610	0.93999
3300.0	0.94862	0.94642	0.94883	0.95151	0.95211	0.95880	0.95613	0.95251	0.96028	0.96738
3400.0	0.97466	0.97544	0.97674	0.98347	0.97442	0.97647	0.98598	0.98976	0.98982	0.99267
3500.0	1.00000	1.00789	1.00543	1.00760	1.02100	1.02637	1.02402	1.01212	1.00462	1.00640
3600.0	1.03994	1.03362	1.03751	1.05254	1.05715	1.06289	1.07780	1.07117	1.08608	1.08335
3700.0	1.10081	1.09813	1.10059	1.09323	1.08212	1.08928	1.10996	1.11737	1.13541	1.12748
3800.0	1.12580	1.13712	1.09501	0.98171	1.04403	1.13177	1.12475	1.13341	1.13193	1.14734
3900.0	1.56092	1.81264	1.17904	0.89313	0.94790	1.20213	1.16865	0.90887	1.21615	1.25686
4000.0	1.26746									
	ZENITH SCAN STARTING AT 18.17.43 ON 9/23/73, NORMALIZING FACTOR = 1.2725E-01									
2600.0	0.00030	0.00029	0.00028	0.00029	0.00029	0.00029	0.00030	0.00030	0.00030	0.00031
2700.0	0.00031	0.00034	0.00039	0.00035	0.00036	0.00035	0.00037	0.00037	0.00038	0.00040
2800.0	0.00038	0.00040	0.00040	0.00039	0.00040	0.00040	0.00040	0.00040	0.00040	0.00042
2900.0	0.00056	0.00072	0.00111	0.00193	0.00346	0.00537	0.00565	0.00584	0.00595	0.00602
3000.0	0.02764	0.10371	0.13477	0.24555	0.27484	0.34510	0.36737	0.46197	0.55143	0.53711
3100.0	0.59572	0.82776	0.83519	0.85973	0.87391	0.87602	0.86404	0.89576	0.89039	0.89333
3200.0	0.90098	0.90344	0.90111	0.89801	0.91271	0.92060	0.93551	0.93730	0.93460	0.94207
3300.0	0.94755	0.94476	0.94813	0.94919	0.95074	0.95784	0.95303	0.95108	0.96071	0.96706
3400.0	0.97402	0.97263	0.97674	0.98116	0.97068	0.97842	0.98361	0.98772	0.98785	0.98920
3500.0	1.00000	1.00533	1.00320	1.00839	1.02096	1.02423	1.02158	1.00970	0.99920	1.01373
3600.0	1.03890	1.03094	1.03902	1.05133	1.05720	1.06346	1.08124	1.08414	1.08432	1.08981
3700.0	1.09939	1.09857	1.09745	1.09051	1.08260	1.09385	1.11059	1.12146	1.13731	1.12768
3800.0	1.12483	1.13821	1.08152	0.96917	1.03027	1.13183	1.12601	1.13172	1.12920	1.14290
3900.0	1.16947	1.18259	1.17638	0.87532	0.94049	1.19558	1.16425	0.93825	1.22064	1.25510
4000.0	1.26543									
	ZENITH SCAN STARTING AT 18.21.53 ON 9/23/73, NORMALIZING FACTOR = 1.2639E-01									
2600.0	0.00025	0.00025	0.00025	0.00025	0.00027	0.00026	0.00027	0.00027	0.00029	0.00029
2700.0	0.00029	0.00028	0.00031	0.00030	0.00030	0.00030	0.00035	0.00037	0.00036	0.00037
2800.0	0.00038	0.00037	0.00038	0.00038	0.00038	0.00038	0.00039	0.00039	0.00040	0.00040
2900.0	0.00048	0.00064	0.00095	0.00163	0.00299	0.00504	0.00571	0.00582	0.00595	0.00602
3000.0	0.00607	0.08049	0.12107	0.19474	0.21684	0.33237	0.35664	0.45391	0.47916	0.52736
3100.0	0.57898	0.81072	1.01442	2.10737	0.87038	0.87316	0.85754	0.89406	0.88966	0.89225
3200.0	0.90073	0.90365	0.90121	0.89697	0.91217	0.92082	0.93466	0.93820	0.93640	0.94323
3300.0	0.95063	0.94692	0.94818	0.95016	0.95197	0.95792	0.95212	0.95031	0.96071	0.96715
3400.0	0.97445	0.97374	0.97713	0.98201	0.96847	0.97749	0.98312	0.98675	0.98684	0.98893
3500.0	1.00000	1.00520	1.00373	1.00859	1.01643	1.01271	1.02176	1.00922	0.99720	1.01198
3600.0	1.03991	1.03120	2.83214	1.05085	1.05632	1.06420	1.08179	1.08510	1.08474	1.09175
3700.0	1.10013	1.09865	1.09730	1.08884	1.07852	1.09095	1.10889	1.11841	1.13753	1.12605
3800.0	1.12500	1.13671	1.09358	0.96684	1.02460	1.13113	1.11965	1.12315	1.12447	1.14035
3900.0	1.16749	1.18213	1.17231	0.88323	0.94680	1.19198	1.15774	0.89807	1.21333	1.25376
4000.0	1.26406									
	ZENITH SCAN STARTING AT 18.24.14 ON 9/23/73, NORMALIZING FACTOR = 1.2612E-01									
2600.0	0.00025	0.00025	0.00025	0.00025	0.00066	0.00026	0.00029	0.00028	0.00029	0.00028
2700.0	0.00028	0.00029	0.00029	0.00031	0.00030	0.00031	0.00032	0.00032	0.00034	0.00035
2800.0	0.00033	0.00035	0.00034	0.00036	0.00036	0.00036	0.00037	0.00038	0.00038	0.00039
2900.0	0.00042	0.00062	0.00278	0.00198	0.00320	0.00524	0.00574	0.01596	0.00597	0.00604
3000.0	0.01068	0.08986	0.12691	0.21810	0.26435	0.33316	0.63599	0.77350	0.52670	0.51131
3100.0	0.56774	0.80734	0.81227	0.84941	0.86595	0.86806	0.84776	0.89381	0.88884	0.89040
3200.0	0.89959	0.90176	0.89914	0.89427	0.91010	0.91813	0.93352	0.93672	0.93487	0.94251
3300.0	0.94824	0.94486	0.94838	0.94977	0.95116	0.95806	0.95212	0.95003	0.96044	0.96739
3400.0	0.97138	0.97310	0.97739	0.98151	0.96955	0.97761	0.98237	0.98630	0.98632	0.98812
3500.0	1.00000	1.00520	1.00330	1.00855	1.02157	1.02508	1.02059	1.00843	0.99670	1.73937
3600.0	2.10113	1.03044	1.03833	1.05039	1.05561	1.06226	1.08049	1.08338	1.85569	2.18108
3700.0	1.09828	1.09666	1.09528	1.08707	1.07712	1.08948	1.40716	1.77649	1.13573	1.12453
3800.0	1.12178	1.13380	1.07326	0.92165	0.99980	1.12432	1.11352	1.12283	1.11947	1.13893
3900.0	1.16718	1.18107	1.17147	0.86239	0.92645	1.19032	1.14326	0.89509	1.21299	1.25449
4000.0	1.26526									
	ZENITH SCAN STARTING AT 18.25.59 ON 9/23/73, NORMALIZING FACTOR = 1.2513E-01									
2600.0	0.00022	0.00023	0.00027	0.00025	0.00025	0.00024	0.00025	0.00027	0.00025	0.00025
2700.0	0.00027	0.00029	0.00026	0.00028	0.00030	0.00031	0.00030	0.00030	0.00028	0.00030
2800.0	0.00058	0.00036	0.00036	0.00035	0.00037	0.00035	0.00037	0.00039	0.00039	0.00105
2900.0	0.00043	0.00110	0.00110	0.00172	0.00324	0.00517	0.00577	0.00588	0.00599	0.00608
3000.0	0.02757	0.09723	0.12646	0.21221	0.25998	0.33361	0.35224	0.44088	0.52784	0.51422
3100.0	0.56077	0.79244	0.81277	0.83249	0.87113	0.87559	2.34216	0.89798	0.89399	0.89672
3200.0	0.90505	0.90886	0.90575	0.90190	0.91677	0.92528	0.94029	0.94395	0.94154	0.94879
3300.0	0.95590	0.95200	0.95530	0.95717	0.95912	0.96549	0.95897	0.95582	0.96508	0.97175
3400.0	0.97938	0.97712	0.98088	0.98561	0.97102	2.67986	0.98704	0.98997	0.98867	0.98884
3500.0	1.00000	1.00439	1.00034	1.00477	1.01974	1.02298	1.01758	0.99965	0.97038	0.99494
3600.0	1.02709	1.00910	1.01923	1.03596	1.04231	1.05096	1.07302	1.07562	1.07183	1.07854
3700.0	1.08854	1.08569	1.08550	1.07558	1.06028	1.07535	1.10404	1.11807	1.13985	1.12920
3800.0	1.12786	1.14058	1.08097	0.92861	1.01689	1.13170	1.11913	1.12889	1.12606	1.14451
3900.0	1.17410	1.18047	1.16771	0.82860	0.91725	1.19625	1.13034	0.84564	1.20873	1.25898
4000.0	1.26998									
	NADIR SCAN STARTING AT 18.27.45 ON 9/23/73, NORMALIZING FACTOR = 1.2565E-01									
2600.0	0.00027	0.00027	0.00023	0.00023	0.00025	0.00025	0.00026	0.00032	0.00030	0.00026
2700.0	0.00029	0.00049	0.00029	0.00025	0.00029	0.00029	0.00031	0.00030	0.00029	0.00033
2800.0	0.00030	0.00032	0.00032	0.00031	0.00033	0.00033	0.00035	0.00035	0.00035	0.00035
2900.0	0.00036	0.00037	0.00038	0.00037	0.00039	0.00047	0.00070	0.00108	0.00197	0.00358
3000.0	0.00536	0.00567	0.00579	0.00589	0.00598	0.03079	0.10431	0.14102	0.22856	0.27041
3100.0	0.33923	0.35156	0.47226	0.53587	0.51113	0.63369	0.81073	0.80830	0.85084	0.86392
3200.0	0.86454	0.85627	0.90079	0.89396	0.90288	0.91636	0.91385	0.91200	0.91021	0.92696
3300.0	0.93594	0.95090	0.95305	0.95312	0.96416	0.96762	0.96550	0.96905	0.96944	0.97322
3400.0	0.97825	0.96966	0.97162	0.97546	0.98827	0.99483	0.98958	0.99860	1.00094	0.98598
3500.0	1.00000	1.00360	1.00690	1.00926	1.01102	1.02615	1.02668	1.02551	1.03520	1.04688
3600.0	1.04825	1.04324	1.03393	1.02046	1.05571	1.07051	1.06322	1.07650	1.08490	1.09206
3700.0	1.10310	1.11329	1.11381	1.11152	1.12105	1.12439	1.12647	1.12238	1.11141	1.10536
3800.0	1.12105	1.13507	1.15058	1.16409	1.14940	1.15646	1.15958	1.10412	0.97039	1.09136
3900.0	1.15415	1.15327	1.16090	1.15858	1.18937	1.21067	1.22771	1.19002	0.82672	1.08599
4000.0	1.24385									

Table VIII-46

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 18.31.49 ON 9/23/73. NORMALIZING FACTOR = 1.0388E-01										
2600.0	0.00020	0.00024	0.00015	0.00015	0.00013	0.00016	0.00017	0.00023	0.00016	0.00018
2700.0	0.00016	0.00015	0.00016	0.00017	0.00016	0.00016	0.00016	0.00020	0.00019	0.00018
2800.0	0.00016	0.00018	0.00021	0.00018	0.00019	0.00023	0.00020	0.00020	0.00021	0.00023
2900.0	0.00031	0.00049	0.00087	0.00175	0.00749	0.00774	0.01482	0.02340	0.03716	0.05694
3000.0	0.07148	0.11018	0.14553	0.24368	0.29606	0.38015	0.40107	0.51484	0.60437	0.58757
3100.0	0.67085	0.85666	0.85954	0.87426	0.88044	0.88202	0.87162	0.89726	0.89187	0.89449
3200.0	0.90135	0.90323	0.90193	0.90022	0.91303	0.92042	0.93280	0.93538	0.93422	0.94106
3300.0	0.94590	0.94414	0.94759	0.94893	0.95154	0.95672	0.95182	0.95115	0.96061	0.96683
3400.0	0.97351	0.97241	0.97710	0.98033	0.97076	0.97982	0.98427	0.98715	0.98765	0.98960
3500.0	1.00000	1.00382	1.00302	1.00903	1.02085	1.02363	1.01982	1.00541	1.00444	1.02207
3600.0	1.03753	1.02656	1.04248	1.05214	1.05808	1.06599	1.08101	1.08391	1.08316	1.09184
3700.0	1.09855	1.09766	1.09754	1.09279	1.08860	1.09935	1.11125	1.12138	1.13501	1.12650
3800.0	1.12814	1.13607	1.10707	1.06026	1.09941	1.13766	1.13478	1.14092	1.14180	1.15593
3900.0	1.17508	1.18856	1.18298	0.98201	1.07094	1.20770	1.18488	1.08210	1.23344	1.25700
4000.0	1.26654									
ZENITH SCAN STARTING AT 18.34.10 ON 9/23/73. NORMALIZING FACTOR = 3.2193E-01										
2600.0	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00009	0.00008
2700.0	0.00008	0.00009	0.00008	0.00009	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010
2800.0	0.00010	0.00011	0.00010	0.00011	0.00011	0.00010	0.00011	0.00011	0.00012	0.00013
2900.0	0.00015	0.00022	0.00033	0.00059	0.00108	0.00197	0.00224	0.00229	0.00233	0.00237
3000.0	0.00401	0.03197	0.10273	0.07787	0.09383	0.11829	0.12594	0.15890	0.19166	0.18646
3100.0	0.20930	0.30096	0.30155	0.32117	0.33312	0.33450	0.32108	0.34873	0.34617	0.34784
3200.0	0.35222	0.35301	0.35178	0.34973	0.35687	0.36008	0.36225	0.36582	0.36680	0.36987
3300.0	0.37219	0.37071	0.37208	0.37248	0.37354	0.37608	0.37347	0.37259	0.37680	0.37945
3400.0	0.38234	0.38052	0.38355	0.38564	0.38010	0.38398	0.38548	0.38654	0.38637	0.38666
3500.0	1.00000	0.46400	0.39269	0.39487	0.40059	0.40153	0.39977	0.39366	0.38638	0.39532
3600.0	0.40716	0.40293	0.40618	0.41146	0.41375	0.41700	0.42418	0.42526	0.42464	0.42756
3700.0	0.43108	0.43027	0.42970	0.42593	0.42091	0.42495	0.43395	0.43828	0.44579	0.44069
3800.0	0.43984	0.44461	0.42040	0.35775	0.38740	0.44011	0.43543	0.43915	0.43670	0.44553
3900.0	0.45733	0.46345	0.45908	0.32655	0.37572	0.46682	0.44611	0.34131	0.47465	0.49248
4000.0	0.49635									
ZENITH SCAN STARTING AT 18.35.58 ON 9/23/73. NORMALIZING FACTOR = 1.2653E-01										
2600.0	0.00019	0.00023	0.00020	0.00020	0.00022	0.00030	0.00030	0.00024	0.00026	0.00024
2700.0	0.00025	0.00025	0.00026	0.00025	0.00028	0.00027	0.00027	0.00028	0.00028	0.00028
2800.0	0.00028	0.00028	0.00030	0.00030	0.00031	0.00033	0.00032	0.00032	0.00033	0.00034
2900.0	0.00038	0.00046	0.00074	0.00127	0.00250	0.00443	0.00568	0.00581	0.00594	0.00602
3000.0	0.00607	0.06385	0.10610	0.17469	0.22721	0.28851	0.31515	0.38063	0.47571	0.47997
3100.0	0.48705	0.72102	0.76093	0.80548	0.84663	0.85531	0.82007	0.88015	0.88815	0.88799
3200.0	0.89592	0.90163	0.89720	0.89130	0.90588	0.91636	0.93168	0.93812	0.93565	0.94068
3300.0	0.95088	0.94640	0.94857	0.95039	0.95104	0.95762	0.95474	0.94843	0.95885	0.96701
3400.0	0.97439	0.97438	0.97633	0.98061	0.96768	0.97812	0.98255	2.68790	0.98555	0.98678
3500.0	1.00000	1.00449	1.00112	1.00729	1.02070	1.02364	1.01892	1.00337	0.98540	1.00750
3600.0	1.03811	1.02752	1.03668	1.04918	1.05432	1.06185	1.08144	1.08379	1.08255	1.09160
3700.0	1.10002	1.09865	1.09693	1.08704	1.07664	1.08296	1.10037	1.11789	1.13569	1.12243
3800.0	1.12048	1.13262	1.07154	0.89948	0.99087	1.12084	1.10556	1.11387	1.10540	1.13149
3900.0	1.16268	1.17897	1.16189	0.81339	0.88814	1.19431	1.13824	0.82868	1.20654	1.25212
4000.0	1.26307									
ZENITH SCAN STARTING AT 18.37.44 ON 9/23/73. NORMALIZING FACTOR = 9.3894E-01										
2600.0	0.00025	0.00026	0.00025	0.00025	0.00024	0.00023	0.00023	0.00023	0.00024	0.00022
2700.0	0.00022	0.00022	0.00022	0.00021	0.00022	0.00021	0.00041	0.00034	0.00019	0.00019
2800.0	0.00021	0.00019	0.00018	0.00018	0.00024	0.00017	0.00017	0.00017	0.00016	0.00016
2900.0	0.00019	0.00070	0.00191	0.00197	0.05521	0.01804	0.01536	0.01492	0.01624	0.05100
3000.0	0.12473	0.17911	0.16819	0.16938	0.16423	0.15966	0.15496	0.18674	0.28014	0.24245
3100.0	0.48124	0.96730	0.96551	0.96364	0.96148	0.96028	0.95900	0.95688	0.95508	0.95306
3200.0	0.95100	0.95243	0.95298	0.95628	0.95735	0.95867	0.95992	0.96118	0.96250	0.96394
3300.0	0.96682	0.96886	0.97041	0.97273	0.97508	0.97740	0.97965	0.98334	0.98557	0.98707
3400.0	0.98898	0.99103	0.99289	0.99467	0.99781	1.00037	1.00124	1.00269	1.00358	1.00332
3500.0	1.00000	1.00660	1.01276	1.01521	1.00950	1.01909	1.02123	1.02344	1.02581	1.02967
3600.0	1.03129	1.03463	1.03864	1.04214	1.04567	1.04974	1.05344	1.05215	1.02538	1.00731
3700.0	0.99849	0.99351	0.99185	0.99310	0.99097	0.99094	0.99199	0.99262	0.99405	0.99343
3800.0	0.99661	0.99805	0.99512	0.98469	0.99892	1.00365	1.00491	1.00823	1.01014	1.01204
3900.0	1.01455	1.01758	1.01833	0.98686	0.72378	1.03711	1.00976	0.60579	1.05271	1.05899
4000.0	1.06557									
ZENITH SCAN STARTING AT 18.40. 5 ON 9/23/73. NORMALIZING FACTOR = 1.9369E 01										
2600.0	0.00006	0.00005	0.00006	0.00006	0.00009	0.00006	0.00009	0.00007	0.00008	0.00008
2700.0	0.00011	0.00006	0.00006	0.00007	0.00007	0.00008	0.00007	0.00008	0.00007	0.00007
2800.0	0.00008	0.00007	0.00007	0.00007	0.00009	0.00007	0.00009	0.00009	0.00010	0.00011
2900.0	0.00016	0.00023	0.00040	0.00082	0.00292	0.00443	0.00702	0.01115	0.01854	0.02860
3000.0	0.03687	0.05489	0.07156	0.12391	0.14840	0.18787	0.20027	0.26031	0.30827	0.29875
3100.0	0.35408	0.49282	0.48998	0.53031	0.56334	0.56865	0.53943	0.71130	0.67196	0.70015
3200.0	0.79010	0.77580	0.74049	13.64092	0.80833	0.85925	1.05603	1.07157	0.99451	1.11073
3300.0	23.74756	1.02497	1.02942	0.99791	0.98366	1.03341	0.90901	0.85966	0.95096	0.99728
3400.0	8.64946	3.18685	0.99480	1.00599	0.83296	0.90401	0.91856	0.92571	0.90664	0.89277
3500.0	1.00000	0.98316	0.91473	0.94299	1.05166	1.02785	0.92952	3.36857	12.33469	0.83367
3600.0	0.98580	0.84159	0.89055	0.93831	0.94126	0.97135	1.11263	1.07583	1.00504	1.04661
3700.0	1.07012	1.02556	0.95315	0.85003	0.77467	0.82799	0.90039	0.97517	1.09829	0.93311
3800.0	0.90385	0.96044	0.72471	0.57463	0.66935	0.81523	0.77567	0.79343	0.76995	0.83505
3900.0	0.94353	1.00926	0.88143	0.51915	0.64920	0.94625	0.80442	0.58344	1.00788	1.19324
4000.0	1.23376									
ZENITH SCAN STARTING AT 18.41.51 ON 9/23/73. NORMALIZING FACTOR = 1.8191E 01										
2600.0	0.00010	0.00011	0.00010	0.00014	0.00012	0.00013	0.00012	0.00012	0.00013	0.00013
2700.0	0.00012	0.00013	0.00013	0.00015	0.00016	0.00013	0.00014	0.00014	0.00014	0.00015
2800.0	0.00014	0.00015	0.00014	0.00015	0.00016	0.00016	0.00017	0.00016	0.00016	0.00019
2900.0	0.00022	0.00027	0.00047	0.00083	0.00164	0.00349	0.00646	0.01075	0.04525	0.02703
3000.0	0.03452	0.05358	0.07109	0.12155	0.14933	0.19363	0.20527	0.26173	0.31186	0.30579
3100.0	0.34156	0.48385	0.49174	0.53579	0.56976	0.58316	0.54478	0.69589	0.66663	0.69473
3200.0	0.77232	0.77671	0.73784	0.69850	0.81100	0.88109	1.06014	1.06591	0.99543	1.08588
3300.0	1.16568	1.03728	1.03940	1.01297	0.99538	1.04272	0.92247	0.86481	0.90475	0.98779
3400.0	16.52094	5.48335	0.98224	0.99547	0.82197	0.88747	0.90585	0.91666	0.88846	0.87961
3500.0	1.00000	1.00548	0.93560	0.96442	1.07988	1.04146	0.94075	0.77241	0.70271	0.80127
3600.0	1.72962	1.52926	0.85822	18.77274	0.93869	0.97048	1.09079	1.08539	1.00524	1.02711
3700.0	1.06122	0.99380	0.93991	0.84478	0.76769	0.80683	0.90733	0.97550	1.13143	0.95305
3800.0	0.91048	0.95111	0.71802	0.55984	0.63822	0.79660	0.75704	8.31754	0.75895	0.82350
3900.0	0.93092	0.98336	0.89579	0.53018	0.60705	0.91243	0.80210	0.56063	2.83060	1.19200
4000.0	1.24683									

Table VIII-47

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 18.44.12 ON 9/23/73, NORMALIZING FACTOR = 1.7716E 01										
2600.0	0.00012	0.00013	0.00013	0.00014	0.00013	0.00013	0.00013	0.00014	0.00014	0.00014
2700.0	0.00014	0.00016	0.00015	0.00016	0.00017	0.00021	0.00020	0.00017	0.00018	0.00017
2800.0	0.00020	0.00019	0.00018	0.00021	0.00019	0.00019	0.00019	0.00022	0.00022	0.00023
2900.0	0.00025	0.00034	0.00051	0.00087	0.00166	0.00325	0.00651	0.01070	0.01722	0.02724
3000.0	0.03598	0.05573	0.07281	0.12408	0.15089	0.19199	0.20553	0.26448	0.31436	0.30688
3100.0	0.34871	0.49331	0.49554	0.54030	0.57776	0.58911	0.55922	0.71855	0.67768	0.70829
3200.0	15.53005	0.78949	0.75016	0.70532	0.82392	0.89626	1.09063	1.10256	2.79951	1.13768
3300.0	1.17937	1.05169	1.05006	1.01857	10.42943	1.05106	2.44130	0.87203	10.31121	1.00235
3400.0	1.06807	0.99863	1.01767	1.01162	0.85536	0.92441	0.93634	0.94504	0.91036	0.89333
3500.0	1.00000	1.01649	0.94696	0.97476	1.09038	1.05997	0.95569	0.81282	0.73742	2.14455
3600.0	1.00629	0.86683	0.89726	0.96391	0.96494	0.99618	1.15415	1.11959	1.03747	2.00481
3700.0	1.11385	1.05109	0.98819	19.63228	0.81126	0.87335	0.95020	1.01848	1.17938	1.01113
3800.0	0.97510	1.02738	10.24924	5.55947	0.70432	0.79966	0.78129	0.80252	0.77839	0.84272
3900.0	0.95810	1.02332	0.93202	0.52111	0.63300	0.94092	0.82916	0.55797	2.84244	1.18211
4000.0	1.22824									
ZENITH SCAN STARTING AT 18.45.57 ON 9/23/73, NORMALIZING FACTOR = 1.8115E 01										
2600.0	0.00007	0.00007	0.00007	0.00012	0.00008	0.00007	0.00007	0.00007	0.00018	0.00009
2700.0	0.00008	0.00007	0.00012	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00009
2800.0	0.00008	0.00009	0.00009	0.00008	0.00008	0.00009	0.00008	0.00009	0.00009	0.00010
2900.0	0.00015	0.00020	0.00039	0.00078	0.00300	0.00414	0.00697	0.01100	0.01795	0.02739
3000.0	0.03610	0.05287	0.06942	0.12142	0.14647	0.18818	0.20191	0.25596	0.30618	0.29609
3100.0	0.33567	0.48177	0.48292	0.53171	0.56579	0.57771	0.54842	0.71001	0.67958	0.69746
3200.0	0.78242	0.77445	0.73471	0.70388	0.80270	0.88325	1.06242	1.07225	0.99404	1.10822
3300.0	1.15805	1.02575	18.09395	3.38722	0.98292	1.02822	0.90583	0.85534	0.94726	0.99501
3400.0	1.06000	0.97800	0.99807	1.00889	0.82722	0.90028	0.91432	0.91885	0.89669	0.88129
3500.0	1.00000	0.99549	0.92009	0.95721	1.05901	1.03737	0.93047	0.78806	0.69966	17.21796
3600.0	2.63606	0.83031	0.81941	0.92184	0.93517	0.97622	1.12543	1.07819	1.00063	1.04264
3700.0	20.24820	1.00580	0.93890	0.83799	0.77553	0.83617	0.91382	0.99969	1.12488	0.95531
3800.0	0.92010	0.95548	0.71701	0.56497	0.65806	0.79126	0.75177	14.91675	0.73014	0.79639
3900.0	0.91981	0.98296	0.87291	0.45596	0.64604	0.91050	0.77830	0.56306	0.95819	1.14643
4000.0	1.18600									
ZENITH SCAN STARTING AT 18.47.43 ON 9/23/73, NORMALIZING FACTOR = 1.6976E 01										
2600.0	0.00010	0.00011	0.00011	0.00012	0.00014	0.00012	0.00012	0.00016	0.00012	0.00016
2700.0	0.00015	0.00016	0.00016	0.00014	0.00014	0.00014	0.00015	0.00014	0.00015	0.00018
2800.0	0.00018	0.00017	0.00019	0.00019	0.00018	0.00018	0.00018	0.00021	0.00020	0.00020
2900.0	0.00024	0.00032	0.00048	0.00083	0.00159	0.00336	0.00626	0.01045	0.01682	0.02605
3000.0	0.03561	0.05294	0.07140	0.12186	0.14902	0.19381	0.20534	0.26349	0.31417	0.30802
3100.0	0.34589	0.49412	0.49866	0.54481	0.58100	0.59530	0.65451	1.76078	0.68039	0.71010
3200.0	16.18706	1.47765	0.74855	0.70724	0.82676	0.89747	1.08335	1.10067	1.02643	1.11866
3300.0	1.20325	1.07562	1.08180	1.05520	1.03490	1.04760	0.92781	0.87565	0.95873	1.00671
3400.0	1.07312	1.00220	20.49326	1.00458	0.84231	0.91496	0.93473	14.33509	0.90644	0.89234
3500.0	1.00000	1.01271	0.93791	0.96361	1.07959	1.06107	0.95361	0.81047	0.72382	0.82722
3600.0	0.99728	0.86361	0.90047	0.96106	0.95497	0.97856	1.13150	1.08250	0.99847	1.04444
3700.0	22.10344	20.76450	0.92445	0.85816	0.78360	0.82345	6.22704	12.63520	1.11272	0.94404
3800.0	0.91136	0.96974	0.73411	0.57997	0.67471	0.83129	0.77861	0.79557	0.77404	0.81761
3900.0	0.91449	1.00165	0.92302	0.53895	0.62730	0.93059	0.82288	0.56076	0.97826	1.18491
4000.0	1.23288									
ZENITH SCAN STARTING AT 18.50. 7 ON 9/23/73, NORMALIZING FACTOR = 1.5814E 01										
2600.0	0.00015	0.00013	0.00014	0.00014	0.00019	0.00015	0.00014	0.00016	0.00016	0.00015
2700.0	0.00015	0.00015	0.00017	0.00016	0.00019	0.00018	0.00020	0.00018	0.00022	0.00019
2800.0	0.00017	0.00018	0.00019	0.00020	0.00019	0.00020	0.00021	0.00022	0.00021	0.00022
2900.0	0.00032	0.00028	0.00037	0.00063	0.00116	0.00223	0.00475	0.02124	0.01393	0.02053
3000.0	0.03268	0.04273	0.06516	0.09715	0.14680	0.17777	0.21501	0.23455	0.31622	0.34228
3100.0	0.31990	0.44623	0.53940	0.54724	0.60373	0.62378	0.61026	0.65616	0.78528	0.72869
3200.0	0.78175	0.88201	0.81052	0.77194	0.79293	0.90802	1.02912	1.19445	52.89818	12.86684
3300.0	1.16568	1.19728	1.12476	1.12945	1.07325	1.11388	1.10567	0.94111	0.99308	1.07065
3400.0	1.12657	1.11277	1.06984	1.13029	1.00730	0.91383	1.02363	1.02094	0.97981	0.97522
3500.0	1.00000	21.53206	1.04356	19.14545	1.11582	1.19227	1.10395	0.93700	9.17493	0.79261
3600.0	1.09323	0.97363	0.93347	1.04464	1.45894	1.52707	1.21409	1.18721	1.09744	1.09754
3700.0	1.16638	1.06058	1.04143	0 95408	0.84628	0.88968	0.98926	1.05727	1.20886	1.01921
3800.0	0.97913	1.03818	0.77843	0.58478	0.71506	0.89273	0.83773	0.84835	0.81123	0.87818
3900.0	1.00253	1.06242	0.97943	0.56179	0.65363	0.98889	0.86968	0.63595	1.06437	1.26499
4000.0	3.59602									
ZENITH SCAN STARTING AT 18.51.53 ON 9/23/73, NORMALIZING FACTOR = 2.2968E 01										
2600.0	0.00009	0.00010	0.00010	0.00009	0.00010	0.00010	0.00011	0.00010	0.00011	0.00011
2700.0	0.00010	0.00013	0.00011	0.00012	0.00011	0.00012	0.00017	0.00016	0.00012	0.00014
2800.0	0.00012	0.00014	0.00013	0.00015	0.00017	0.00015	0.00015	0.00016	0.00016	0.00017
2900.0	0.00019	0.00023	0.00034	0.00061	0.00108	0.00231	0.00430	0.00717	0.01183	0.01823
3000.0	0.02489	0.03738	0.05009	0.08675	0.10683	0.13830	0.14792	0.18719	0.22719	0.22334
3100.0	0.24783	0.36084	0.36352	0.39489	0.42012	0.42950	0.40174	0.51695	0.49824	0.52153
3200.0	0.58028	0.58408	0.55169	0.54218	0.60305	0.65135	0.78009	0.79297	0.70254	0.80975
3300.0	0.85800	0.70429	0.77486	0.75349	0.74056	8.28678	13.18885	0.66225	0.70784	0.95831
3400.0	3.28938	0.72936	0.74199	0.88734	1.67952	0.66888	0.68266	0.68719	0.66514	0.65641
3500.0	1.00000	1.13906	0.67808	0.69060	0.77987	0.76568	0.69248	0.57685	0.50787	0.58968
3600.0	0.71659	0.60972	0.63735	0.68231	0.68223	0.70186	0.81502	0.78233	0.72660	0.75139
3700.0	0.76963	0.72531	0.68210	0.61356	0.56336	0.60243	0.66332	0.71342	0.81560	0.69561
3800.0	0.66452	0.69549	0.53516	0.41572	0.48160	0.59332	0.55754	0.56555	0.55075	0.59583
3900.0	0.67744	0.72501	0.66847	0.39530	0.47279	0.67542	0.57081	0.40777	0.69544	0.82714
4000.0	0.85230									
ZENITH SCAN STARTING AT 18.53.38 ON 9/23/73, NORMALIZING FACTOR = 1.7526E 01										
2600.0	0.00015	0.00015	0.00015	0.00015	0.00018	0.00016	0.00015	0.00016	0.00015	0.00018
2700.0	0.00017	0.00016	0.00016	0.00017	0.00018	0.00017	0.00018	0.00016	0.00016	0.00018
2800.0	0.00016	0.00020	0.00031	0.00020	0.00020	0.00020	0.00021	0.00023	0.00023	0.00026
2900.0	0.00026	0.00030	0.00046	0.00078	0.00144	0.00283	0.00573	0.00948	0.03966	0.42720
3000.0	0.08929	0.04912	0.06509	0.11101	0.13572	0.17421	0.18690	0.24364	0.29001	0.28251
3100.0	0.32313	0.45829	0.46079	0.50301	0.52456	0.53689	0.51254	0.65565	0.61795	0.64475
3200.0	0.71847	14.39388	3.74775	9.60451	0.75136	0.80912	0.97663	0.99024	0.92256	1.00988
3300.0	1.07157	0.96173	4.42438	8.32711	0.93408	0.99030	0.87168	0.82687	0.90690	0.95139
3400.0	1.01298	0.94882	0.96690	0.99126	0.81334	0.89123	0.93119	0.94227	0.91295	0.89738
3500.0	1.00000	1.00901	0.94122	0.97262	1.10941	1.10523	1.01079	0.84771	0.76060	0.89187
3600.0	1.08690	0.93546	0.99523	1.06284	1.08475	1.14326	1.35631	1.35899	1.30401	1.41654
3700.0	1.63889	1.67109	1.68657	1.63314	1.55354	1.65559	1.89682	2.14147	2.71260	2.58468
3800.0	2.72129	2.94308	1.99056	1.26369	1.22791	1.49403	1.39980	1.44765	1.37965	1.39560
3900.0	1.43705	1.41705	1.23473	0.71250	0.76312	1.14314	0.92610	0.62612	1.10194	1.35201
4000.0	1.39469									

Table VIII-48

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 18.56. 0 ON 9/23/73. NORMALIZING FACTOR = 1.4051E 01										
2600.0	0.00015	0.00014	0.00015	0.00015	0.00014	0.00015	0.00014	0.00018	0.00015	0.00016
2700.0	0.00018	0.00014	0.00020	0.00019	0.00017	0.00018	0.00025	0.00018	0.00018	0.00020
2800.0	0.00018	0.00019	0.00018	0.00020	0.00023	0.00021	0.00021	0.00023	0.00023	0.00028
2900.0	0.00023	0.00032	0.00048	0.00076	0.00138	0.00273	0.00556	0.00866	0.01581	0.02373
3000.0	0.03313	0.05167	0.06769	0.11856	0.15187	0.19354	0.21162	0.25687	0.32238	0.32134
3100.0	0.33003	0.49460	0.50481	0.54876	0.60405	0.61867	0.57826	0.73429	0.74088	0.74178
3200.0	0.81154	0.85439	0.79364	0.74127	0.83650	0.91014	1.08826	1.15598	1.07004	1.12594
3300.0	1.26510	1.11798	1.11212	22.09109	2.16281	1.85340	1.01011	0.91468	0.99528	4.35703
3400.0	26.48969	43.39412	1.04336	1.09271	0.93855	0.90720	0.95705	0.96406	0.92680	0.92549
3500.0	1.00000	1.05730	0.97468	0.94251	1.05122	1.03710	0.94083	0.79856	0.74934	0.78239
3600.0	1.04356	0.87724	0.80882	0.81386	0.79902	0.85147	1.08904	1.09831	0.99203	0.84941
3700.0	0.84421	0.79965	0.81648	0.84164	0.79641	0.83323	0.94970	0.98977	1.15744	1.05227
3800.0	0.93549	1.02206	0.75243	0.59190	0.67609	0.84743	0.80158	0.81981	0.79612	0.86655
3900.0	0.98385	1.04608	0.95261	0.54972	0.63908	0.97158	0.86762	0.59391	1.03171	1.21345
4000.0	1.26614									
ZENITH SCAN STARTING AT 18.57.45 ON 9/23/73. NORMALIZING FACTOR = 1.4630E 01										
2600.0	0.00014	0.00013	0.00015	0.00017	0.00018	0.00015	0.00015	0.00016	0.00015	0.00019
2700.0	0.00016	0.00016	0.00017	0.00018	0.00018	0.00018	0.00018	0.00019	0.00019	0.00464
2800.0	0.00018	0.00019	0.00019	0.00022	0.00021	0.00023	0.00021	0.00024	0.00023	0.00025
2900.0	0.00026	0.00032	0.00050	0.00083	0.00159	0.00316	0.00592	0.01013	0.01585	0.02474
3000.0	0.03393	0.05171	0.07091	0.12212	0.14993	0.19269	0.21025	0.26743	0.31891	0.31305
3100.0	0.34995	0.50267	0.40549	0.55857	0.59778	0.61531	0.57581	0.73633	14.25616	0.71551
3200.0	0.80613	0.80706	0.76027	0.71677	0.82304	0.88854	2.42492	1.66506	1.01413	1.12293
3300.0	1.19457	1.05697	1.06169	10.09554	22.27382	12.98539	16.05739	0.86852	0.96178	1.00856
3400.0	1.07242	1.00293	2.78793	12.38167	9.42803	0.91939	0.93366	0.93790	0.90433	0.89016
3500.0	1.00000	1.00169	0.92788	0.95138	1.06912	1.04734	0.94017	0.78700	0.69149	0.80798
3600.0	0.96900	0.82888	1.27621	2.17903	0.93481	0.95725	1.10343	1.06603	0.98670	1.01082
3700.0	1.05218	0.99620	0.94376	0.84537	0.72886	0.76186	0.85243	0.91584	1.06995	0.91289
3800.0	0.86841	0.90592	0.70303	0.54210	0.55266	0.76810	0.73107	0.74502	0.72083	0.78366
3900.0	0.88805	0.94541	0.86269	0.49631	0.57729	0.87520	0.77509	0.53077	0.91164	12.92006
4000.0	19.40340									
ZENITH SCAN STARTING AT 19. 1.59 ON 9/23/73. NORMALIZING FACTOR = 1.4447E 01										
2600.0	0.00014	0.00013	0.00018	0.00015	0.00016	0.00015	0.00014	0.00015	0.00021	0.00016
2700.0	0.00016	0.00017	0.00019	0.00018	0.00018	0.00017	0.00018	0.00020	0.00019	0.00015
2800.0	0.00021	0.00019	0.00017	0.00019	0.00020	0.00021	0.00021	0.00022	0.00023	0.00024
2900.0	0.00018	0.00026	0.00041	0.00083	0.00143	0.00295	0.00570	0.00926	0.01570	0.02435
3000.0	0.02467	0.04602	0.05730	0.12079	0.14755	0.19167	0.20599	0.26266	0.31792	0.30900
3100.0	0.34749	0.50400	0.50376	0.53367	0.20633	0.30796	0.38918	0.68416	0.59618	0.72618
3200.0	0.80797	0.81193	0.76524	0.71635	0.80306	0.88404	1.06850	1.09057	1.00685	1.10921
3300.0	1.18131	1.04438	1.05045	1.01900	0.99637	1.04917	0.93244	0.86631	0.95730	1.00597
3400.0	1.07534	0.99819	1.01580	1.02808	0.84934	0.91195	0.92831	0.92950	0.90268	0.88530
3500.0	1.00000	0.99633	0.92509	0.95013	1.05061	1.03395	0.92969	0.66515	0.69988	0.69349
3600.0	0.96629	0.83106	0.86409	0.91425	0.91015	0.92726	1.06702	1.02189	0.94795	0.99299
3700.0	1.02595	0.96898	0.91200	0.81841	0.48981	0.77724	0.86769	0.92966	1.06589	0.75280
3800.0	0.62786	0.90506	0.55436	0.54099	0.60804	0.75874	0.71591	0.52888	0.16357	0.54015
3900.0	0.88690	0.93850	0.53182	0.45071	0.52706	0.76300	0.60884	0.52090	0.61614	1.09965
4000.0	1.14224									
ZENITH SCAN STARTING AT 19. 3.44 ON 9/23/73. NORMALIZING FACTOR = 1.3851E 01										
2600.0	0.00014	0.00015	0.00014	0.00016	0.00015	0.00014	0.00012	0.00018	0.00018	0.00017
2700.0	0.00016	0.00017	0.00015	0.00016	0.00019	0.00029	0.00017	0.00017	0.00019	0.00018
2800.0	0.00019	0.00019	0.00017	0.00019	0.00019	0.00019	0.00020	0.00026	0.00020	0.00021
2900.0	0.00023	0.00023	0.00045	0.00079	0.00143	0.00268	0.00573	0.00953	0.01517	0.02424
3000.0	0.02018	0.04523	0.05323	0.11998	0.14738	0.19062	0.20470	0.26436	0.31605	0.31167
3100.0	0.35455	0.50321	0.50916	0.44767	0.01867	0.03224	0.32396	0.57506	0.34829	0.56703
3200.0	0.79471	0.80009	0.72785	0.30534	0.83583	0.90057	1.08919	1.10097	1.02178	1.11501
3300.0	1.19396	1.06376	1.06640	1.03728	1.02216	1.07055	0.94119	0.88569	0.96930	1.01695
3400.0	1.08293	1.00999	1.02850	1.04039	0.85428	0.93063	0.95293	0.95359	0.91502	0.89838
3500.0	1.00000	1.00387	0.93707	0.94953	1.04916	1.04034	0.93813	0.31125	0.14962	0.52552
3600.0	0.94484	0.47060	0.62374	0.89620	0.89633	0.92688	1.06147	1.03129	0.96336	0.98948
3700.0	1.03011	0.96477	0.61038	0.37961	0.24461	0.16171	0.40163	0.81123	1.06859	0.77164
3800.0	0.60804	0.75241	0.33281	0.54938	0.58093	0.12005	0.56208	0.72604	0.71527	0.49760
3900.0	0.28306	0.70825	0.43438	0.48534	0.53008	0.20588	0.37531	0.53306	0.61439	1.09909
4000.0	1.14266									
ZENITH SCAN STARTING AT 19. 5.44 ON 9/23/73. NORMALIZING FACTOR = 1.3986E 01										
2600.0	0.00015	0.00014	0.00014	0.00014	0.00019	0.00018	0.00016	0.00016	0.00015	0.00015
2700.0	0.00017	0.00016	0.00018	0.00019	0.00020	0.00019	0.00019	0.00019	0.00020	0.00023
2800.0	0.00021	0.00017	0.00019	0.00021	0.00022	0.00022	0.00021	0.00022	0.00022	0.00020
2900.0	0.00011	0.00023	0.00034	0.00080	0.00138	0.00234	0.00535	0.00890	0.01503	0.02361
3000.0	0.02483	0.04423	0.06732	0.12101	0.14739	0.18870	0.20178	0.25711	0.30960	0.30127
3100.0	0.34477	0.49640	0.50180	0.44174	0.02122	0.03155	0.37712	0.58611	0.24321	0.61680
3200.0	0.79304	0.79298	0.72344	0.41522	0.83422	0.90004	1.10325	1.11429	1.01935	1.12145
3300.0	1.18459	1.05905	1.06489	1.02896	1.00040	1.05497	0.92462	0.87086	0.96218	1.01184
3400.0	1.07959	1.00681	1.02564	1.03665	0.84876	0.91187	0.92508	0.92856	0.89965	0.88758
3500.0	1.00000	1.00242	0.93539	0.95840	1.06706	1.04537	0.94562	0.38292	0.06751	0.44618
3600.0	0.96696	0.82897	0.85713	0.91765	0.91782	0.94165	1.08360	1.04186	0.96926	1.00428
3700.0	1.02881	0.97492	0.92466	0.44473	0.06795	0.23632	0.77557	0.91577	1.07760	0.68325
3800.0	0.45669	0.76758	0.35740	0.56998	0.53926	0.08133	0.29424	0.03467	0.10694	0.11642
3900.0	0.17106	0.86028	0.43162	0.51034	0.42916	0.13165	0.30607	0.51704	0.51911	1.13395
4000.0	1.16986									
ZENITH SCAN STARTING AT 19. 8. 7 ON 9/23/73. NORMALIZING FACTOR = 1.3600E 01										
2600.0	0.00016	0.00018	0.00014	0.00016	0.00015	0.00015	0.00016	0.00016	0.00015	0.00016
2700.0	0.00017	0.00014	0.00017	0.00017	0.00017	0.00017	0.00017	0.00019	0.00018	0.00018
2800.0	0.00020	0.00020	0.00019	0.00020	0.00020	0.00021	0.00020	0.00029	0.00017	0.00022
2900.0	0.00023	0.00006	0.00041	0.00073	0.00134	0.00238	0.00524	0.00922	0.01517	0.02376
3000.0	0.02548	0.04391	0.05210	0.11583	0.14404	0.18898	0.20250	0.26035	0.31623	0.31111
3100.0	0.35040	0.50855	0.51221	0.54126	0.03825	0.07398	0.48401	0.45905	0.23354	0.29682
3200.0	0.78908	0.80159	0.72984	0.30355	0.83616	0.90421	1.08718	1.10661	1.02005	1.11912
3300.0	1.19241	1.05709	1.06612	1.04067	1.02378	1.08607	0.95812	0.89019	0.97752	1.01816
3400.0	1.07824	1.00036	1.01812	1.04050	0.84968	0.92826	0.94799	0.95412	0.91732	0.89632
3500.0	1.00000	0.99985	0.92222	0.94831	1.05730	1.04522	0.94423	0.31802	0.10043	0.45657
3600.0	0.92767	0.19730	0.55624	0.84700	0.90259	0.93222	1.07010	1.04029	0.96216	0.98163
3700.0	1.00667	0.94279	0.51801	0.12189	0.27001	0.35398	0.12878	0.59273	1.05504	0.51191
3800.0	0.28383	0.58881	0.43940	0.52576	0.57220	0.21137	0.70367	0.72322	0.70853	0.34295
3900.0	0.11960	0.16631	0.30841	0.49969	0.56939	0.17122	0.47391	0.51369	0.43885	1.08043
4000.0	1.12715									

Table VIII-49

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
				ZENITH SCAN STARTING AT 19. 9.53 ON 9/23/73, NORMALIZING FACTOR = 1.3416E 01						
2600.0	0.00007	0.00007	0.00008	0.00023	0.00009	0.00011	0.00012	0.00009	0.00008	0.00008
2700.0	0.00008	0.00009	0.00008	0.00010	0.00009	0.00009	0.00012	0.00012	0.00014	0.00010
2800.0	0.00009	0.00011	0.00012	0.00013	0.00009	0.00011	0.00011	0.00014	0.00021	0.00012
2900.0	0.00015	0.00019	0.00015	0.00064	0.00133	0.00537	0.00615	0.01081	0.01690	0.02683
3000.0	0.02646	0.04693	0.05914	0.12037	0.14697	0.18892	0.20413	0.27073	0.31767	0.30752
3100.0	0.36639	0.08790	0.02515	0.07328	0.12395	0.42221	0.25026	0.74013	0.69648	0.73073
3200.0	0.82017	0.80149	0.76160	0.72045	0.84181	0.90040	1.09906	1.09520	1.02081	1.14077
3300.0	1.18345	1.06820	1.07656	1.03181	1.02526	1.06761	0.93644	0.89380	0.97964	1.03065
3400.0	1.09537	1.02147	1.04308	1.05091	0.84740	0.92873	0.94225	0.94014	0.90874	0.89271
3500.0	1.00000	0.99755	0.93089	0.96675	1.07375	1.03915	0.91731	0.77565	0.42338	0.71136
3600.0	0.96544	0.81468	0.85939	0.91102	0.91552	0.94903	1.06974	1.02164	0.94522	0.97334
3700.0	0.98884	0.94690	0.89082	0.74826	0.54684	0.64055	0.86513	0.92761	1.04268	0.87035
3800.0	0.84960	0.86512	0.16831	0.53762	0.31957	0.60529	0.11813	0.12046	0.08881	0.39601
3900.0	0.87953	0.94414	0.70110	0.42483	0.33431	0.74966	0.32111	0.42305	0.76848	1.06522
4000.0	1.10937									
				ZENITH SCAN STARTING AT 19.11.39 ON 9/23/73, NORMALIZING FACTOR = 1.2985E 01						
2600.0	0.00013	0.00015	0.00015	0.00013	0.00014	0.00014	0.00016	0.00015	0.00015	0.00017
2700.0	0.00015	0.00016	0.00015	0.00016	0.00018	0.00016	0.00018	0.00018	0.00017	0.00020
2800.0	0.00019	0.00017	0.00018	0.00020	0.00019	0.00020	0.00021	0.00020	0.00022	0.00022
2900.0	0.00024	0.00012	0.00008	0.00072	0.00133	0.00260	0.00473	0.00904	0.01522	0.02405
3000.0	0.03099	0.03848	0.06744	0.12191	0.14757	0.19186	0.20652	0.26037	0.30917	0.30899
3100.0	0.34469	0.50428	0.50714	0.54817	0.58220	0.59004	0.54333	0.28088	0.08641	0.11530
3200.0	0.73403	0.81117	0.64855	0.15520	0.81987	0.89604	1.07872	1.10085	1.01639	1.12992
3300.0	1.21267	1.07668	1.08902	1.06331	1.03697	1.08549	0.95895	0.88715	0.97256	1.01668
3400.0	1.08511	1.01843	1.04385	1.06666	0.76143	0.94348	0.95517	0.94895	0.91126	0.89152
3500.0	1.00000	1.00308	0.93657	0.96990	1.08276	1.06973	0.95254	0.17999	0.29642	0.57081
3600.0	0.95908	0.19658	0.43064	0.90497	0.92449	0.94563	1.08509	1.03809	0.95459	0.98578
3700.0	0.98737	0.83106	0.44233	0.13969	0.31401	0.24115	0.13307	0.52711	1.07443	0.51274
3800.0	0.10468	0.14504	0.57108	0.54608	0.62380	0.33374	0.73818	0.75319	0.73559	0.33531
3900.0	0.09562	0.13668	0.29495	0.49605	0.56826	0.18079	0.34607	0.52957	0.44449	1.11841
4000.0	1.15524									
				ZENITH SCAN STARTING AT 19.14. 0 ON 9/23/73, NORMALIZING FACTOR = 1.2691E 01						
2600.0	0.00014	0.00014	0.00014	0.00014	0.00015	0.00015	0.00016	0.00015	0.00020	0.00016
2700.0	0.00016	0.00018	0.00017	0.00018	0.00016	0.00018	0.00017	0.00019	0.00019	0.00021
2800.0	0.00019	0.00019	0.00023	0.00023	0.00021	0.00022	0.00022	0.00023	0.00023	0.00017
2900.0	0.00020	0.00004	0.00019	0.00070	0.00128	0.00250	0.00379	0.00873	0.01433	0.02257
3000.0	0.02891	0.03510	0.03543	0.11489	0.14220	0.18813	0.20258	0.26312	0.31777	0.31188
3100.0	0.35090	0.50166	0.50819	0.55488	0.59086	0.60791	0.49264	0.29321	0.08631	0.12291
3200.0	0.62768	0.83468	0.66702	0.16192	0.84230	0.92485	1.11049	1.13003	1.04734	1.15429
3300.0	1.24919	1.11940	1.12722	1.09628	1.07307	1.12053	0.98015	0.91770	1.00367	1.05185
3400.0	1.10839	1.03069	1.04241	1.05928	0.51116	0.89578	0.95668	0.96127	0.92233	0.89946
3500.0	1.00000	0.98797	0.91734	0.93632	1.04356	1.02897	0.84715	0.08456	0.28850	0.40480
3600.0	0.97159	0.18456	0.34707	0.60315	0.52633	0.50065	1.05881	1.02543	0.95450	0.99623
3700.0	1.03412	0.98443	0.46429	0.14214	0.59565	0.35663	0.09366	0.35170	1.05493	0.25709
3800.0	0.09711	0.13988	0.59552	0.55140	0.60938	0.41327	0.72335	0.72818	0.70235	0.59876
3900.0	0.04653	0.11068	0.30474	0.50320	0.57309	0.29434	0.46601	0.51671	0.26478	0.94806
4000.0	1.14366									
				ZENITH SCAN STARTING AT 19.15.46 ON 9/23/73, NORMALIZING FACTOR = 1.2821E 01						
2600.0	0.00032	0.00017	0.00018	0.00015	0.00017	0.00016	0.00017	0.00015	0.00017	0.00019
2700.0	0.00016	0.00020	0.00019	0.00018	0.00019	0.00019	0.00020	0.00019	0.00019	0.00020
2800.0	0.00021	0.00021	0.00020	0.00017	0.00022	0.00021	0.00018	0.00025	0.00023	0.00024
2900.0	0.00026	0.00020	0.00034	0.00072	0.00127	0.00244	0.00376	0.00832	0.01419	0.02201
3000.0	0.03027	0.04086	0.05617	0.11779	0.14385	0.18654	0.20234	0.26041	0.31429	0.30617
3100.0	0.35054	0.50481	0.50207	0.54127	0.58447	0.59430	0.48147	0.28029	0.07418	0.10415
3200.0	0.60600	0.70952	0.38143	0.14525	0.82163	0.89614	1.09390	1.10372	1.01975	1.13039
3300.0	1.19042	1.06514	1.07842	1.05211	1.03616	1.09965	0.97137	0.90286	0.98624	1.02422
3400.0	1.08152	1.00418	1.02677	1.04873	0.52319	0.90447	0.96169	0.96572	0.92733	0.90013
3500.0	1.00000	0.99111	0.91331	0.93562	1.05339	1.04224	0.85992	0.11130	0.29281	0.55688
3600.0	0.88376	0.11092	0.27061	0.59625	0.66108	0.57960	1.08021	1.04100	0.45289	0.87175
3700.0	0.88353	0.62331	0.28635	0.26346	0.59526	0.36912	0.10001	0.34764	1.03126	0.18915
3800.0	0.07964	0.11656	0.57832	0.55150	0.62313	0.46680	0.72422	0.73592	0.71012	0.60733
3900.0	0.07324	0.13563	0.32025	0.49825	0.59179	0.16940	0.48382	0.53564	0.23037	0.75111
4000.0	1.12112									
				ZENITH SCAN STARTING AT 19.18. 7 ON 9/23/73, NORMALIZING FACTOR = 1.3661E 01						
2600.0	0.00008	0.00008	0.00007	0.00007	0.00008	0.00009	0.00007	0.00008	0.00009	0.00008
2700.0	0.00016	0.00011	0.00010	0.00008	0.00007	0.00008	0.00010	0.00010	0.00010	0.00012
2800.0	0.00012	0.00011	0.00010	0.00010	0.00010	0.00011	0.00011	0.00024	0.00011	0.00011
2900.0	0.00013	0.00019	0.00012	0.00050	0.00113	0.00763	0.00545	0.00885	0.01455	0.02250
3000.0	0.02938	0.03598	0.04907	0.10880	0.13256	0.17501	0.18825	0.24538	0.29302	0.28609
3100.0	0.33087	0.14878	0.35584	0.04383	0.07614	0.09019	0.12390	0.68337	0.64937	0.69006
3200.0	0.76864	0.76293	0.71719	0.68539	0.79349	0.85919	1.03248	1.04304	0.97469	1.08778
3300.0	1.15381	1.03439	1.04616	1.01646	1.00158	1.03739	0.90706	0.85622	0.94010	0.98203
3400.0	1.04837	0.97514	0.99479	0.99987	0.82742	0.90368	0.91133	0.91549	0.89507	0.88159
3500.0	1.00000	0.99158	0.91328	0.95174	1.03907	1.00641	0.89296	0.75875	0.35934	0.70513
3600.0	0.93192	0.81210	0.86786	0.92124	0.92743	0.96245	1.08465	1.03469	0.94464	0.99092
3700.0	1.00728	0.95968	0.90346	0.81717	0.75499	0.81795	0.89230	0.97085	1.08187	0.90382
3800.0	0.88274	0.91161	0.22586	0.54740	0.42547	0.76344	0.44863	0.76940	0.30102	0.67062
3900.0	0.90179	0.95539	0.70751	0.43102	0.42806	0.89380	0.51980	0.62200	0.91324	1.10621
4000.0	1.13832									
				ZENITH SCAN STARTING AT 19.19.55 ON 9/23/73, NORMALIZING FACTOR = 1.0288E 01						
2600.0	0.00016	0.00022	0.00023	0.00019	0.00017	0.00072	0.00018	0.00020	0.00019	0.00019
2700.0	0.00019	0.00019	0.00020	0.00021	0.00023	0.00023	0.00020	0.00020	0.00021	0.00021
2800.0	0.00021	0.00025	0.00025	0.00025	0.00023	0.00024	0.00024	0.00025	0.00026	0.00040
2900.0	0.00025	0.00016	0.00045	0.00078	0.00147	0.00282	0.00445	0.01009	0.01701	0.02772
3000.0	0.03472	0.04383	0.05828	0.13919	0.17095	0.21992	0.23827	0.30964	0.37485	0.36920
3100.0	0.42643	0.60926	0.61465	0.66754	0.71245	0.72789	0.59594	0.10488	0.06024	0.09787
3200.0	0.56448	0.54587	0.13087	0.07748	0.88460	1.07103	1.31129	1.32733	1.23436	1.35870
3300.0	1.43030	1.27375	1.27693	1.23321	1.20844	1.27660	1.12122	1.05170	1.15613	1.21194
3400.0	1.28697	1.19681	1.21375	1.22859	0.55131	0.91402	1.09142	1.08262	0.73921	0.37400
3500.0	1.00000	1.15018	0.61817	0.80750	1.21597	1.19443	0.63614	0.07194	0.73947	0.51214
3600.0	0.63733	0.04854	0.08391	0.13703	0.13439	0.26992	1.22275	1.17868	0.33413	0.66694
3700.0	0.85332	0.16007	0.15668	0.64017	0.82366	0.71078	0.02814	0.08652	0.78020	0.29695
3800.0	0.58435	0.27381	0.75675	0.60444	0.69132	0.85089	0.80531	0.82372	0.79593	0.85572
3900.0	0.96159	0.34839	0.62500	0.55532	0.63311	0.93289	0.81934	0.60943	0.59145	0.13748
4000.0	0.16139									

Table VIII-50

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 19.21.41 ON 9/23/73. NORMALIZING FACTOR = 1.0337E 01										
2600.0	0.00017	0.00017	0.00019	0.00018	0.00019	0.00019	0.00018	0.00021	0.00019	0.00021
2700.0	0.00018	0.00019	0.00021	0.00020	0.00026	0.00021	0.00022	0.00022	0.00022	0.00028
2800.0	0.00028	0.00024	0.00023	0.00023	0.00023	0.00025	0.00024	0.00024	0.00025	0.00026
2900.0	0.00029	0.00035	0.00053	0.00082	0.00145	0.00297	0.00570	0.00948	0.01629	0.02562
3000.0	0.03506	0.05594	0.07496	0.13656	0.16699	0.21514	0.23272	0.29842	0.36069	0.35306
3100.0	0.40453	0.58122	0.58690	0.63709	0.68306	0.69655	0.65613	0.83362	0.65987	0.74932
3200.0	0.94385	0.72708	0.83206	0.81525	0.96891	1.04522	1.27213	1.30102	1.20133	1.33092
3300.0	1.42618	1.25575	1.26407	1.22779	1.19526	1.25437	1.11331	1.03257	1.13421	1.19105
3400.0	1.27394	1.19086	1.21085	1.23222	0.84475	1.07504	1.09977	0.94808	0.87553	0.91363
3500.0	1.00000	1.12326	0.60459	0.86345	1.18652	1.16583	0.79284	0.82031	0.73979	0.58466
3600.0	0.64672	0.29985	0.27999	0.62923	0.42049	0.34364	1.18817	1.14376	0.65841	0.27714
3700.0	0.76530	0.34733	0.22579	0.69347	0.81278	0.69700	0.20038	0.11974	0.87926	0.58750
3800.0	0.49460	0.26627	0.76686	0.59810	0.67442	0.84820	0.80277	0.82416	0.79600	0.85234
3900.0	0.96005	0.44429	0.80994	0.55400	0.64650	0.94258	0.81361	0.58397	0.79541	0.39991
4000.0	0.51189									
ZENITH SCAN STARTING AT 19.24. 2 ON 9/23/73. NORMALIZING FACTOR = 1.1831E 01										
2600.0	0.00015	0.00017	0.00016	0.00016	0.00018	0.00021	0.00023	0.00029	0.00017	0.00019
2700.0	0.00019	0.00022	0.00019	0.00019	0.00021	0.00023	0.00021	0.00021	0.00021	0.00023
2800.0	0.00022	0.00023	0.00023	0.00040	0.00023	0.00033	0.00027	0.00024	0.00025	0.00027
2900.0	0.00032	0.00037	0.00042	0.00068	0.00123	0.00244	0.00483	0.00813	0.01364	0.02215
3000.0	0.03014	0.04738	0.06585	0.11344	0.14279	0.18693	0.20046	0.26057	0.31271	0.30986
3100.0	0.35205	0.50060	0.51185	0.56311	0.60032	0.61804	0.58620	0.74537	0.71327	0.74760
3200.0	0.82767	0.83859	0.76795	0.73574	0.85877	0.92327	1.11525	1.13455	1.05121	1.14681
3300.0	1.22607	1.09301	1.09904	1.06743	1.04667	1.10868	0.97715	0.91066	0.99543	1.04210
3400.0	1.10015	1.02543	1.04211	1.05596	0.87735	0.93700	0.95229	0.95974	0.91956	0.89703
3500.0	1.00000	0.99614	0.91877	0.94196	1.04574	1.03228	0.93178	0.78792	0.69905	0.79680
3600.0	0.94137	0.80978	0.83707	0.88650	0.89124	0.91382	1.06316	1.02633	0.95026	0.99013
3700.0	1.01807	0.94916	0.88958	0.80931	0.72731	0.75900	0.84923	0.96341	1.08317	0.90671
3800.0	0.86144	0.89297	0.67948	0.53276	0.59719	0.74365	0.70799	0.72571	0.70474	0.75731
3900.0	0.84288	0.88962	0.79544	0.48471	0.54667	0.80918	0.69948	0.52569	0.89190	1.06481
4000.0	1.10224									
ZENITH SCAN STARTING AT 19.25.48 ON 9/23/73. NORMALIZING FACTOR = 1.1943E 01										
2600.0	0.00016	0.00017	0.00017	0.00016	0.00017	0.00017	0.00017	0.00020	0.00019	0.00017
2700.0	0.00020	0.00021	0.00018	0.00020	0.00019	0.00019	0.00020	0.00023	0.00020	0.00020
2800.0	0.00019	0.00022	0.00021	0.00023	0.00022	0.00022	0.00022	0.00024	0.00023	0.00026
2900.0	0.00025	0.00030	0.00040	0.00065	0.00119	0.00245	0.00471	0.00782	0.01353	0.02209
3000.0	0.02998	0.04760	0.06621	0.11491	0.14150	0.18212	0.19710	0.25819	0.30819	0.30438
3100.0	0.34871	0.50219	0.50881	0.55577	0.59294	0.60609	0.57137	0.73853	0.70197	0.73448
3200.0	0.81561	0.82272	0.77896	0.73088	0.84945	0.90784	1.11231	1.13033	1.04438	1.15570
3300.0	1.23274	1.08997	1.09937	1.07152	1.04524	1.10171	0.97757	0.90135	0.98763	1.03461
3400.0	1.09952	1.02237	1.03617	1.05511	0.85754	0.92421	0.95478	0.95490	0.91753	0.90494
3500.0	1.00000	0.99359	0.91241	0.92868	1.03279	1.01633	0.91783	0.77288	0.68506	0.76340
3600.0	0.92668	0.78951	0.81523	0.86920	0.86947	0.89232	1.03320	0.99588	0.92880	0.95542
3700.0	0.97788	0.91230	0.85903	0.77583	0.69959	0.74257	0.82250	0.87554	1.00966	0.87239
3800.0	0.82094	0.87447	0.66025	0.52124	0.59062	0.71942	0.67990	0.69462	0.66978	0.71961
3900.0	0.81792	0.87298	0.78783	0.45983	0.51435	0.80960	0.68806	0.47687	0.83978	0.98924
4000.0	1.01761									
ZENITH SCAN STARTING AT 19.27.34 ON 9/23/73. NORMALIZING FACTOR = 1.1577E 01										
2600.0	0.00017	0.00019	0.00017	0.00018	0.00017	0.00018	0.00018	0.00018	0.00031	0.00020
2700.0	0.00022	0.00026	0.00021	0.00026	0.00020	0.00022	0.00022	0.00023	0.00023	0.00023
2800.0	0.00026	0.00031	0.00024	0.00031	0.00027	0.00025	0.00026	0.00026	0.00028	0.00027
2900.0	0.00029	0.00038	0.00046	0.00070	0.00119	0.00245	0.00470	0.00794	0.01362	0.02147
3000.0	0.03019	0.04726	0.06361	0.11523	0.14276	0.18792	0.20274	0.25883	0.31808	0.31495
3100.0	0.34982	0.51506	0.52111	0.56815	0.60658	0.62145	0.58093	0.75265	0.72738	0.75610
3200.0	0.83676	0.85388	0.80225	0.76107	0.88368	0.95670	1.14988	1.14547	1.06394	1.16204
3300.0	1.25518	1.11211	1.11865	1.08752	1.06113	1.11601	0.98177	0.91710	0.99796	1.04773
3400.0	1.10868	1.03410	1.05080	1.06870	0.84929	0.94189	0.95785	0.95805	0.92206	0.90086
3500.0	1.00000	1.00244	0.92494	0.93781	1.05005	1.03850	0.93713	0.78890	0.70157	0.79194
3600.0	0.94561	0.81188	0.83494	0.89475	0.89114	0.90825	1.04912	1.01655	0.94238	0.96947
3700.0	1.00432	0.94147	0.88508	0.79503	0.71896	0.76041	0.84275	0.90363	1.03853	0.90073
3800.0	0.85220	0.90199	0.68193	0.52347	0.58475	0.73184	0.69168	0.71061	0.68711	0.74050
3900.0	0.83228	0.88251	0.79858	0.48576	0.54663	0.80764	0.70394	0.51304	0.85391	1.01342
4000.0	1.03967									
ZENITH SCAN STARTING AT 19.35.46 ON 9/23/73. NORMALIZING FACTOR = 1.3498E 01										
2600.0	0.00017	0.00017	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00020
2700.0	0.00019	0.00021	0.00019	0.00023	0.00020	0.00020	0.00023	0.00023	0.00023	0.00022
2800.0	0.00024	0.00030	0.00024	0.00024	0.00025	0.00025	0.00028	0.00029	0.00029	0.00028
2900.0	0.00029	0.00034	0.00047	0.00060	0.00101	0.00197	0.00395	0.00663	0.01139	0.01870
3000.0	0.02570	0.04118	0.05798	0.10188	0.12795	0.16600	0.18223	0.23672	0.29065	0.28889
3100.0	0.32914	0.47661	0.48712	0.53183	0.57304	0.59020	0.55755	0.72308	0.69448	0.72391
3200.0	0.80101	0.81635	0.76733	0.72166	0.83946	0.90228	1.10917	1.13732	1.04806	1.15481
3300.0	1.24541	1.09999	1.11033	1.08602	1.05836	1.12371	0.98584	0.89711	0.98654	1.03784
3400.0	1.10506	1.03319	1.04244	1.07060	0.87977	0.92783	0.95776	0.96394	0.92309	0.90211
3500.0	1.00000	1.00973	0.93350	0.94688	1.06247	1.05033	0.95117	0.79709	0.70796	0.79913
3600.0	0.95540	0.82227	0.84098	0.89559	0.89721	0.91565	1.06573	1.02624	0.94639	0.97185
3700.0	1.01238	0.93767	0.88901	0.80594	0.72246	0.76279	0.84968	0.91248	1.03983	0.89104
3800.0	0.84402	0.88381	0.68447	0.52764	0.59770	0.75277	0.70701	0.71954	0.69876	0.74118
3900.0	0.84850	0.85988	0.80615	0.48530	0.52312	0.79894	0.72513	0.48379	0.82208	1.00047
4000.0	1.03483									
ZENITH SCAN STARTING AT 19.38. 7 ON 9/23/73. NORMALIZING FACTOR = 1.2922E 01										
2600.0	0.00020	0.00019	0.00019	0.00020	0.00020	0.00019	0.00022	0.00024	0.00021	0.00024
2700.0	0.00021	0.00024	0.00024	0.00022	0.00023	0.00024	0.00027	0.00023	0.00023	0.00023
2800.0	0.00031	0.00030	0.00025	0.00026	0.00026	0.00027	0.00027	0.00037	0.00029	0.00029
2900.0	0.00030	0.00037	0.00041	0.00065	0.00106	0.00208	0.00401	0.00677	0.01166	0.01858
3000.0	0.02650	0.04197	0.05744	0.10546	0.13211	0.17496	0.19082	0.24348	0.30144	0.30086
3100.0	0.33084	0.47463	0.49625	0.54020	0.58078	0.59782	0.55812	0.72508	0.70600	0.73425
3200.0	0.81096	0.83217	0.78071	0.73859	0.85446	0.91865	1.11016	1.14742	1.05725	1.15672
3300.0	1.25427	1.10388	1.11076	1.08646	1.05554	1.10837	0.98623	0.91412	0.99332	1.04622
3400.0	1.11058	1.04350	1.05655	1.07671	0.89816	0.94864	0.97388	0.97602	0.93228	0.91265
3500.0	1.00000	1.02110	0.94499	0.95748	1.08080	1.06855	0.96578	0.81275	0.71865	0.82036
3600.0	0.97955	0.83957	0.86757	0.93052	0.93236	0.95556	1.06035	1.03537	0.95254	0.97684
3700.0	1.01802	0.94755	0.89990	0.80840	0.72669	0.75950	0.85406	0.90978	1.05656	0.90577
3800.0	0.85154	0.88989	0.69330	0.52863	0.57820	0.74042	0.69658	0.71329	0.69463	0.74079
3900.0	0.84135	0.88860	0.81172	0.50184	0.51995	0.81130	0.73254	0.48997	0.84833	1.03015
4000.0	1.06711									

Table VIII-51

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 19.39.52 ON 9/23/73, NORMALIZING FACTOR = 1.4175E 01										
2600.0	0.00017	0.00018	0.00020	0.00019	0.00020	0.00020	0.00021	0.00025	0.00019	0.00019
2700.0	0.00021	0.00021	0.00022	0.00021	0.00021	0.00023	0.00021	0.00021	0.00026	0.00023
2800.0	0.00022	0.00023	0.00023	0.00024	0.00024	0.00026	0.00028	0.00026	0.00027	0.00029
2900.0	0.00030	0.00035	0.00040	0.00058	0.00103	0.00198	0.00386	0.00653	0.01122	0.01824
3000.0	0.02578	0.04014	0.05734	0.09985	0.12694	0.16681	0.18315	0.23926	0.29167	0.29254
3100.0	0.32978	0.47649	0.49090	0.53956	0.57999	0.60077	0.56986	0.72774	0.70233	0.73435
3200.0	0.81304	0.83083	0.77978	0.74295	0.86395	0.92392	1.12789	1.15108	1.06749	1.16635
3300.0	1.25171	1.11479	1.12241	1.09069	1.06078	1.12670	1.00331	0.92285	1.01398	1.06757
3400.0	1.13619	1.03913	1.03974	1.06569	0.86770	0.91865	0.96038	0.96242	0.92142	0.90295
3500.0	1.00000	1.00991	0.93436	0.94205	1.05717	1.04705	0.94749	0.78767	0.70731	0.77920
3600.0	0.95590	0.81697	0.83605	0.89527	0.89252	0.90653	1.05618	1.01636	0.94016	0.95892
3700.0	0.98987	0.92157	0.87210	0.78190	0.70674	0.74548	0.82739	0.87975	1.00850	0.87604
3800.0	0.81178	0.86411	0.67065	0.51153	0.56346	0.72631	0.68069	0.69166	0.67044	0.71749
3900.0	0.81976	0.87043	0.79955	0.47043	0.52142	0.79100	0.66969	0.49084	0.79517	0.96481
4000.0	0.99498									
ZENITH SCAN STARTING AT 19.41.38 ON 9/23/73, NORMALIZING FACTOR = 1.5478E 01										
2600.0	0.00022	0.00018	0.00018	0.00018	0.00019	0.00019	0.00019	0.00020	0.00021	0.00020
2700.0	0.00022	0.00021	0.00023	0.00023	0.00024	0.00024	0.00024	0.00027	0.00023	0.00024
2800.0	0.00024	0.00025	0.00025	0.00026	0.00026	0.00028	0.00028	0.00026	0.00027	0.00030
2900.0	0.00052	0.00034	0.00050	0.00065	0.00091	0.00175	0.00354	0.00584	0.01048	0.01670
3000.0	0.02360	0.03807	0.05364	0.09772	0.12091	0.15996	0.17612	0.22615	0.28299	0.28193
3100.0	0.31128	0.47037	0.48461	0.52971	0.57459	0.58857	0.54397	0.71171	0.68573	0.71529
3200.0	0.79013	0.80954	0.75978	0.71227	0.83145	0.89343	1.10098	1.12184	1.03539	1.13796
3300.0	1.21994	1.07845	1.08634	1.05979	1.02780	1.08976	0.97002	0.89209	0.97965	1.02824
3400.0	1.09566	1.02070	1.03389	1.05827	0.87169	0.92412	0.96102	0.96342	0.92209	0.91014
3500.0	1.00000	1.01515	0.94226	0.95020	1.06951	1.05983	0.96309	0.80694	0.71866	0.79265
3600.0	0.97017	0.83516	0.85861	0.91574	0.91694	0.93401	1.07675	1.04696	0.96815	0.99800
3700.0	1.02923	0.95429	0.88583	0.79182	0.71075	0.74208	0.83753	0.89091	1.02311	0.88900
3800.0	0.82150	0.88007	0.67371	0.52382	0.57468	0.72236	0.68173	0.69650	0.67381	0.71948
3900.0	0.82105	0.87009	0.80201	0.48607	0.51933	0.78754	0.71665	0.48996	0.81701	0.99624
4000.0	1.03010									
ZENITH SCAN STARTING AT 19.43.59 ON 9/23/73, NORMALIZING FACTOR = 1.5446E 01										
2600.0	0.00017	0.00018	0.00018	0.00022	0.00019	0.00019	0.00021	0.00021	0.00020	0.00020
2700.0	0.00020	0.00021	0.00020	0.00020	0.00021	0.00025	0.00021	0.00021	0.00025	0.00022
2800.0	0.00022	0.00023	0.00024	0.00023	0.00025	0.00024	0.00024	0.00026	0.00030	0.00027
2900.0	0.00035	0.00040	0.00038	0.00054	0.00090	0.00176	0.00330	0.00571	0.00973	0.01577
3000.0	0.02250	0.03542	0.04933	0.09044	0.11453	0.15390	0.16831	0.21840	0.27000	0.27161
3100.0	0.30502	0.44632	0.46242	0.51124	0.55150	0.57523	0.54227	0.69876	0.67948	0.71305
3200.0	0.78478	0.81190	0.76218	0.71864	0.84431	0.90892	1.10268	1.13440	1.04898	1.13912
3300.0	1.23776	1.09858	1.10475	1.07769	1.04916	1.10884	0.98432	0.90944	0.98994	1.04290
3400.0	1.10693	1.04250	1.05787	1.04239	0.90660	0.95169	0.95349	0.95817	0.91862	0.90048
3500.0	1.00000	1.01688	0.93648	0.95096	1.07102	1.05935	0.95853	0.80131	0.71131	0.79563
3600.0	0.98488	0.83355	0.85214	0.91831	0.91518	0.93164	1.08319	1.04512	0.97096	0.99116
3700.0	1.02615	0.95993	0.91129	0.81305	0.72882	0.76439	0.85993	0.90937	1.04871	0.91328
3800.0	0.84503	0.90220	0.68629	0.54070	0.59281	0.74996	0.70431	0.72177	0.69865	0.75207
3900.0	0.85761	0.91179	0.83571	0.51189	0.54751	0.82894	0.75251	0.51674	0.86506	1.05656
4000.0	1.08968									
ZENITH SCAN STARTING AT 19.45.45 ON 9/23/73, NORMALIZING FACTOR = 1.4532E 01										
2600.0	0.00021	0.00020	0.00020	0.00019	0.00020	0.00027	0.00021	0.00021	0.00023	0.00021
2700.0	0.00024	0.00026	0.00023	0.00028	0.00023	0.00024	0.00024	0.00024	0.00025	0.00025
2800.0	0.00028	0.00027	0.00025	0.00027	0.00026	0.00027	0.00028	0.00029	0.00030	0.00031
2900.0	0.00031	0.00034	0.00040	0.00056	0.00094	0.00176	0.00346	0.00574	0.00993	0.01622
3000.0	0.02298	0.03645	0.05101	0.09223	0.11699	0.15273	0.16948	0.22268	0.27309	0.27488
3100.0	0.31236	0.45547	0.47125	0.51740	0.56181	0.58437	0.55440	0.72189	0.69852	0.73542
3200.0	0.80268	0.80775	0.76323	0.71922	0.84950	0.90697	1.11157	1.13714	1.05147	1.14529
3300.0	1.23054	1.09162	1.09612	1.06644	1.03829	1.10157	0.97424	0.90000	0.98561	1.03498
3400.0	1.09586	1.02523	1.03873	1.06363	0.87999	0.93720	0.96687	0.96856	0.92530	0.91492
3500.0	1.00000	1.01555	0.94580	0.95730	1.07944	1.06911	0.97497	0.81323	0.72843	0.80985
3600.0	0.98469	0.84807	0.87280	0.93075	0.92971	0.94417	1.09608	1.06099	0.97845	1.00970
3700.0	1.05204	0.97421	0.92040	0.83539	0.75096	0.75903	0.82756	0.90317	1.05103	0.90303
3800.0	0.84469	0.89871	0.69213	0.54043	0.58640	0.74443	0.70036	0.71638	0.69425	0.74196
3900.0	0.84459	0.89861	0.82867	0.51434	0.53071	0.82025	0.74986	0.49809	0.84820	1.03966
4000.0	1.07761									
ZENITH SCAN STARTING AT 19.47.33 ON 9/23/73, NORMALIZING FACTOR = 1.3885E 01										
2600.0	0.00018	0.00020	0.00019	0.00023	0.00019	0.00022	0.00020	0.00021	0.00020	0.00021
2700.0	0.00022	0.00021	0.00023	0.00021	0.00022	0.00022	0.00022	0.00024	0.00024	0.00023
2800.0	0.00024	0.00026	0.00027	0.00025	0.00025	0.00026	0.00032	0.00026	0.00028	0.00031
2900.0	0.00029	0.00032	0.00038	0.00053	0.00089	0.00166	0.00341	0.00569	0.01000	0.01573
3000.0	0.02272	0.03599	0.05008	0.09478	0.11662	0.15386	0.16918	0.21597	0.27069	0.27047
3100.0	0.29853	0.44601	0.46253	0.50843	0.54932	0.57074	0.53519	0.69778	0.68428	0.71501
3200.0	0.78901	0.81573	0.76674	0.72676	0.84292	0.90792	1.10086	1.14196	1.05073	1.15099
3300.0	1.25253	1.10042	1.10676	1.08311	1.05276	1.10658	0.98731	0.91288	0.99407	1.04816
3400.0	1.11369	1.05120	1.05959	1.08648	0.90854	0.95064	0.98280	0.99010	0.95448	0.94023
3500.0	1.00000	1.01997	0.95417	0.96933	1.09022	1.07758	0.98165	0.82185	0.72709	0.82772
3600.0	1.00665	0.85288	0.88396	0.94223	0.94295	0.96767	1.11076	1.07603	1.00676	1.02105
3700.0	1.05868	0.99555	0.94448	0.84353	0.75149	0.78440	0.88436	0.93417	1.08228	0.93844
3800.0	0.87323	0.93639	0.70843	0.55827	0.61012	0.77396	0.72579	0.74370	0.72098	0.77057
3900.0	0.87566	0.93018	0.85723	0.52860	0.55170	0.85528	0.78585	0.52133	0.88889	1.09255
4000.0	1.12984									
ZENITH SCAN STARTING AT 19.49.54 ON 9/23/73, NORMALIZING FACTOR = 1.5532E 01										
2600.0	0.00011	0.00010	0.00009	0.00009	0.00009	0.00013	0.00009	0.00009	0.00011	0.00012
2700.0	0.00014	0.00013	0.00010	0.00011	0.00010	0.00010	0.00012	0.00010	0.00010	0.00011
2800.0	0.00012	0.00011	0.00011	0.00011	0.00010	0.00011	0.00011	0.00014	0.00011	0.00013
2900.0	0.00013	0.00016	0.00022	0.00036	0.00072	0.00358	0.00490	0.00595	0.00961	0.01546
3000.0	0.02131	0.03340	0.04427	0.07923	0.09940	0.13180	0.14454	0.19072	0.23059	0.23033
3100.0	0.26738	0.38152	0.39398	0.43605	0.47127	0.49040	0.46930	0.60432	0.57859	0.61101
3200.0	0.67822	0.68963	0.65113	0.61775	0.73013	0.76922	0.95723	0.96905	0.89991	0.99393
3300.0	1.16547	1.08299	1.09236	1.05922	1.03710	1.09309	0.96674	0.89828	0.98432	1.02912
3400.0	1.08957	1.01251	1.03127	1.04597	0.85782	0.92726	0.95106	0.95321	0.91634	0.89863
3500.0	1.00000	1.00137	0.93114	0.94957	1.06284	1.04500	0.94719	0.79303	0.70794	0.80551
3600.0	0.96092	0.82734	0.85137	0.90554	0.90726	0.93186	1.06909	1.03026	0.95428	0.98547
3700.0	1.00203	0.93988	0.88195	0.78908	0.71670	0.76442	0.83785	0.90462	1.01827	0.86857
3800.0	0.81652	0.85126	0.65904	0.51751	0.58235	0.72326	0.68110	0.69304	0.67443	0.73282
3900.0	0.82362	0.87551	0.78651	0.47703	0.54669	0.80083	0.69399	0.50342	0.86482	1.01511
4000.0	1.04902									

Table VIII-52

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 19.51.40 ON 9/23/73, NORMALIZING FACTOR = 1.2923E 01										
2600.0	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00001
2700.0	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
2800.0	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
2900.0	0.00003	0.00003	0.00004	0.00043	0.00085	0.00168	0.00334	0.00559	0.00984	0.01532
3000.0	0.02151	0.03599	0.05157	0.09131	0.11571	0.15046	0.16634	0.21353	0.26607	0.26620
3100.0	0.29985	0.44194	0.45613	0.50037	0.54252	0.56344	0.52880	0.69318	0.67323	0.70390
3200.0	0.77877	0.80062	0.75404	0.70975	0.82957	0.88969	1.08853	1.12810	1.03664	1.13954
3300.0	1.22992	1.08058	1.08871	1.06387	1.02905	1.08922	0.97604	0.89179	0.97488	1.02811
3400.0	1.09303	1.02522	1.03105	1.06117	0.86840	0.91596	0.95387	0.95956	0.91978	0.90581
3500.0	1.00000	1.02340	0.95068	0.96344	1.08870	1.05460	0.96146	0.80416	0.71686	0.80511
3600.0	0.97790	0.83276	0.86457	0.92443	0.92158	0.94408	1.08251	1.05157	0.96978	0.99295
3700.0	1.03597	0.95928	0.90795	0.82785	0.73467	0.76266	0.85727	0.90664	1.04290	0.89479
3800.0	0.84550	0.89684	0.69522	0.53449	0.58163	0.74959	0.69792	0.71355	0.69375	0.73362
3900.0	0.84317	0.89218	0.83360	0.50313	0.51623	0.82397	0.73133	0.48853	0.85731	1.03379
4000.0	1.07583									
ZENITH SCAN STARTING AT 19.54. 1 ON 9/23/73, NORMALIZING FACTOR = 1.1855E-01										
2600.0	0.00019	0.00019	0.00019	0.00019	0.00025	0.00020	0.00019	0.00020	0.00021	0.00021
2700.0	0.00021	0.00021	0.00021	0.00022	0.00025	0.00027	0.00024	0.00024	0.00025	0.00025
2800.0	0.00025	0.00027	0.00027	0.00027	0.00028	0.00026	0.00028	0.00028	0.00030	0.00029
2900.0	0.00032	0.00036	0.00039	0.00063	0.00095	0.00185	0.00367	0.00531	0.00609	0.00623
3000.0	0.00631	0.00641	0.00668	0.08699	0.12502	0.16659	0.18152	0.23453	0.28912	0.29113
3100.0	0.32469	0.47539	0.49277	0.54395	0.58879	0.61483	0.57996	0.74096	0.72955	0.76728
3200.0	0.83826	0.86833	0.82339	0.77953	0.89285	0.93029	0.97287	0.98043	0.97156	0.98452
3300.0	0.99353	0.98221	0.98555	0.98456	0.98162	0.99439	0.96469	0.93587	0.97560	0.99329
3400.0	1.00735	0.99671	1.00256	1.01037	0.92449	0.95920	0.98406	0.98718	0.96326	0.95346
3500.0	1.00000	1.01521	0.98167	0.98273	1.04399	1.04343	1.00427	0.85639	0.77067	0.84397
3600.0	1.06410	1.18057	1.47785	1.59613	1.69218	1.89422	2.14099	2.21495	2.20139	2.31703
3700.0	2.83791	2.88863	2.61598	1.91385	1.22251	1.51976	2.36596	2.80383	4.09834	3.08902
3800.0	2.34039	3.01364	1.11958	0.60689	0.69817	0.95367	0.93677	1.01126	0.89236	1.19144
3900.0	2.04955	2.81835	2.00469	0.55114	0.59183	1.59115	1.20264	0.56212	2.10777	5.99277
4000.0	7.95519									
ZENITH SCAN STARTING AT 19.55.47 ON 9/23/73, NORMALIZING FACTOR = 1.0045E-01										
2600.0	0.00012	0.00014	0.00013	0.00012	0.00012	0.00012	0.00013	0.00014	0.00017	0.00014
2700.0	0.00013	0.00013	0.00014	0.00013	0.00015	0.00014	0.00014	0.00021	0.00015	0.00013
2800.0	0.00013	0.00016	0.00015	0.00015	0.00015	0.00018	0.00016	0.00019	0.00019	0.00018
2900.0	0.00022	0.00021	0.00031	0.00053	0.00099	0.00206	0.00895	0.00785	0.01377	0.02176
3000.0	0.37962	0.04780	0.06375	0.11493	0.14453	0.18811	0.20346	0.26704	0.32504	0.32291
3100.0	0.88330	0.88929	0.87351	0.85058	0.90447	0.91916	0.94450	0.83871	0.81144	0.84550
3200.0	0.96032	0.95403	0.95849	0.95836	0.95870	0.96771	0.95522	0.94817	0.96485	0.97334
3300.0	0.98260	0.97741	0.98261	0.98687	0.95325	0.97347	0.98224	0.98522	0.98138	0.97906
3400.0	1.00000	1.00445	0.99533	1.00304	1.02406	1.02604	1.01082	0.95148	0.85975	0.94716
3500.0	1.01625	0.98275	1.00369	1.03140	1.03574	1.04327	1.07766	1.07593	1.06293	1.07493
3600.0	1.08614	1.07287	1.04857	0.96921	0.88178	0.93343	1.01551	1.05944	1.11646	1.04104
3700.0	1.00649	1.03834	0.81535	0.63246	0.71280	0.88931	0.83526	0.84871	0.82319	0.88156
3800.0	1.00166	1.05729	0.96670	0.56001	0.64262	0.98667	0.84073	0.59927	1.04381	1.19539
3900.0	1.21889									
ZENITH SCAN STARTING AT 19.57.32 ON 9/23/73, NORMALIZING FACTOR = 1.1278E-01										
2600.0	0.00016	0.00016	0.00016	0.00016	0.00019	0.00017	0.00018	0.00016	0.00017	0.00017
2700.0	0.00021	0.00024	0.00017	0.00021	0.00020	0.00018	0.00022	0.00021	0.00021	0.00026
2800.0	0.00023	0.00025	0.00025	0.00024	0.00025	0.00025	0.00024	0.00026	0.00025	0.00032
2900.0	0.00026	0.00029	0.00038	0.00055	0.00095	0.00190	0.00358	0.00554	0.00632	0.00647
3000.0	0.00656	0.00666	0.01397	0.09352	0.12598	0.16510	0.18117	0.22900	0.28701	0.28639
3100.0	0.31478	0.46841	0.48584	0.53200	0.57392	0.59627	0.55807	0.72455	0.71408	0.74615
3200.0	0.82206	0.84913	0.80153	0.75856	0.87483	0.92724	0.99831	1.00857	0.99367	1.01322
3300.0	1.02871	1.01140	1.01686	1.01465	1.00811	1.01813	0.97765	0.92739	0.98645	1.01303
3400.0	1.03279	1.01245	1.01774	1.03030	0.89648	0.94005	0.97423	0.98041	0.94471	0.92931
3500.0	1.00000	1.02322	0.96304	0.97000	1.05916	1.05552	0.98363	0.83290	0.73879	0.82713
3600.0	1.00642	0.86438	0.90097	0.96132	0.96075	0.98153	1.10197	1.08304	1.01369	1.02682
3700.0	1.06479	0.99788	0.95443	0.85472	0.76049	0.78661	0.88625	0.93681	1.08476	0.92655
3800.0	0.87875	0.92649	0.72046	0.56136	0.61321	0.77040	0.72378	0.74047	0.72290	0.74626
3900.0	0.81026	0.90778	0.83827	0.52592	0.53191	0.82421	0.76544	0.50346	0.85763	1.04557
4000.0	1.08434									
ZENITH SCAN STARTING AT 19.59.56 ON 9/23/73, NORMALIZING FACTOR = 1.0679E-01										
2600.0	0.00020	0.00019	0.00018	0.00017	0.00017	0.00021	0.00018	0.00019	0.00022	0.00019
2700.0	0.00021	0.00020	0.00020	0.00019	0.00019	0.00021	0.00021	0.00028	0.00022	0.00026
2800.0	0.00024	0.00026	0.00022	0.00024	0.00024	0.00028	0.00024	0.00023	0.00023	0.00026
2900.0	0.00034	0.00031	0.00039	0.00057	0.00097	0.00183	0.00374	0.00553	0.00664	0.00680
3000.0	0.00689	0.00701	0.01500	0.09584	0.12846	0.16882	0.18395	0.23841	0.28970	0.28461
3100.0	0.32398	0.46668	0.48245	0.53089	0.57346	0.59656	0.56558	0.72144	0.69907	0.73243
3200.0	0.80838	0.83626	0.78719	0.74196	0.87375	0.93358	1.03772	1.04674	1.02600	1.05157
3300.0	1.07033	1.04724	1.05156	1.04531	1.03447	1.05828	0.98350	0.92113	0.99513	1.03261
3400.0	1.06462	1.03229	1.04207	1.05481	0.90503	0.95158	0.97444	0.97751	0.93673	0.91905
3500.0	1.00000	1.02329	0.96026	0.96525	1.07879	1.07078	0.98019	0.82463	0.72813	0.81518
3600.0	1.01361	0.86142	0.89706	0.95976	0.94630	0.96925	1.10292	1.06548	0.99305	1.01170
3700.0	1.04618	0.97972	0.93354	0.83486	0.74841	0.78507	0.87846	0.92837	1.06550	0.92735
3800.0	0.85721	0.91281	0.69443	0.54769	0.60629	0.75761	0.71002	0.72729	0.70079	0.74957
3900.0	0.85060	0.90403	0.83361	0.51391	0.54600	0.81919	0.74512	0.52435	0.85819	1.03500
4000.0	1.07271									
ZENITH SCAN STARTING AT 20. 1.42 ON 9/23/73, NORMALIZING FACTOR = 1.0453E-01										
2600.0	0.00018	0.00016	0.00017	0.00018	0.00018	0.00018	0.00020	0.00018	0.00017	0.00023
2700.0	0.00021	0.00021	0.00020	0.00020	0.00020	0.00020	0.00020	0.00025	0.00027	0.00024
2800.0	0.00023	0.00025	0.00022	0.00025	0.00032	0.00026	0.00025	0.00024	0.00028	0.00029
2900.0	0.00030	0.00037	0.00040	0.00055	0.00095	0.00188	0.00365	0.00568	0.00675	0.00691
3000.0	0.00702	0.00713	0.00742	0.09109	0.12952	0.16838	0.18406	0.23536	0.29016	0.28991
3100.0	0.32704	0.47642	0.49058	0.53523	0.57936	0.59701	0.56291	0.73730	0.71480	0.74270
3200.0	0.82353	0.84175	0.79670	0.75065	0.87300	0.93375	1.05000	1.06446	1.03890	1.06826
3300.0	1.08794	1.06104	1.06712	1.06051	1.04823	1.07615	1.01005	0.94000	1.01836	1.04496
3400.0	1.07555	1.03216	1.04282	1.06149	0.88471	0.93492	0.96659	0.97248	0.93216	0.91458
3500.0	1.00000	1.01690	0.94882	0.95510	1.06680	1.06226	0.96811	0.81254	0.72569	0.79859
3600.0	0.97943	0.84353	0.86299	0.92298	0.92266	0.93901	1.08753	1.05340	0.97252	1.00099
3700.0	1.04026	0.96247	0.90791	0.81801	0.73865	0.76956	0.85990	0.91506	1.05119	0.89864
3800.0	0.85248	0.89986	0.69821	0.53459	0.58545	0.75062	0.70318	0.71330	0.69377	0.73329
3900.0	0.84180	0.89818	0.83692	0.49483	0.54843	0.73947	0.71587	0.48282	0.83045	1.00975
4000.0	1.04922									

Table VIII-53

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 20. 7.32 ON 9/23/73, NORMALIZING FACTOR = 1.1483E-01										
2600.0	0.00023	0.00017	0.00017	0.00023	0.00019	0.00021	0.00022	0.00018	0.00024	0.00017
2700.0	0.00018	0.00020	0.00019	0.00018	0.00020	0.00024	0.00020	0.00019	0.00022	0.00021
2800.0	0.00023	0.00021	0.00023	0.00022	0.00022	0.00022	0.00023	0.00026	0.00026	0.00026
2900.0	0.00026	0.00028	0.00036	0.00051	0.00085	0.00168	0.00321	0.00511	0.00610	0.00626
3000.0	0.00635	0.00646	0.00671	0.09193	0.12047	0.15847	0.17420	0.22262	0.27778	0.27761
3100.0	0.30947	0.46307	0.47962	0.52593	0.57090	0.59160	0.55889	0.73591	0.71292	0.72229
3200.0	0.81165	0.83737	0.79008	0.75012	0.86580	0.91094	0.97193	0.98077	0.96777	0.98565
3300.0	0.99884	0.98380	0.98852	0.98657	0.98260	0.99706	0.96526	0.92615	0.97367	0.99452
3400.0	1.01134	0.99541	1.00247	1.01101	0.90023	0.94641	0.97820	0.98250	0.95639	0.94274
3500.0	1.00000	1.01144	0.97483	0.98132	1.04543	1.04610	0.99863	0.85491	0.76667	0.83558
3600.0	1.01333	0.88822	0.91066	0.97364	0.97829	0.99503	1.09925	1.08752	1.03522	1.05620
3700.0	1.08316	1.03876	0.98051	0.89308	0.77212	0.83303	0.91886	0.98155	1.10271	0.95820
3800.0	0.90171	0.95432	0.73300	0.57232	0.63492	0.79956	0.75346	0.76161	0.73735	0.78567
3900.0	0.89154	0.94620	0.86872	0.51393	0.55245	0.87466	0.77747	0.52205	0.90435	1.09330
4000.0	1.13727									
ZENITH SCAN STARTING AT 20. 9.53 ON 9/23/73, NORMALIZING FACTOR = 1.1013E-01										
2600.0	0.00018	0.00018	0.00020	0.00018	0.00016	0.00017	0.00018	0.00016	0.00017	0.00018
2700.0	0.00018	0.00021	0.00020	0.00019	0.00017	0.00017	0.00019	0.00020	0.00021	0.00020
2800.0	0.00020	0.00020	0.00020	0.00020	0.00020	0.00021	0.00023	0.00021	0.00023	0.00022
2900.0	0.00023	0.00026	0.00035	0.00047	0.00087	0.00167	0.00332	0.00513	0.00634	0.00653
3000.0	0.00661	0.00673	0.00700	0.08295	0.11885	0.15705	0.17106	0.22370	0.27202	0.27263
3100.0	0.31115	0.44754	0.46353	0.51179	0.55333	0.57733	0.55016	0.70346	0.68499	0.72225
3200.0	0.79411	0.82074	0.77361	0.73057	0.85781	0.91295	1.00176	1.01090	0.99344	1.01559
3300.0	1.03256	1.01335	1.01741	1.01294	1.00607	1.02422	0.96745	0.92022	0.98399	1.01453
3400.0	1.03772	1.01665	1.02480	1.03543	0.90710	0.95359	0.98004	0.98348	0.94265	0.90746
3500.0	1.00000	1.01979	0.95748	0.97330	1.06063	1.05408	0.97419	0.82581	0.73422	0.83468
3600.0	0.99931	0.86363	0.89704	0.96129	0.96173	0.98344	1.10486	1.08467	1.01092	1.04337
3700.0	1.07780	1.01369	0.96650	0.86173	0.77268	0.79950	0.89824	0.94794	1.09222	0.94081
3800.0	0.88742	0.93865	0.73133	0.56355	0.62040	0.78928	0.73914	0.74912	0.72870	0.77338
3900.0	0.88176	0.92861	0.85942	0.51226	0.55545	0.85196	0.77322	0.52613	0.88335	1.07836
4000.0	1.11741									
ZENITH SCAN STARTING AT 20.11.39 ON 9/23/73, NORMALIZING FACTOR = 1.0575E-01										
2600.0	0.00015	0.00016	0.00016	0.00016	0.00016	0.00017	0.00022	0.00019	0.00027	0.00027
2700.0	0.00020	0.00019	0.00019	0.00020	0.00019	0.00024	0.00019	0.00019	0.00024	0.00020
2800.0	0.00020	0.00021	0.00023	0.00022	0.00021	0.00022	0.00023	0.00023	0.00024	0.00024
2900.0	0.00024	0.00029	0.00035	0.00051	0.00085	0.00171	0.00333	0.00532	0.00660	0.00679
3000.0	0.00689	0.00701	0.00730	0.08630	0.12299	0.16026	0.17600	0.22926	0.27973	0.27899
3100.0	0.32158	0.46344	0.47785	0.52609	0.57072	0.59168	0.56373	0.73439	0.70382	0.74172
3200.0	0.82235	0.84258	0.79708	0.74043	0.86132	0.92389	1.03921	1.04711	1.02340	1.05308
3300.0	1.06898	1.04392	1.05045	1.04259	1.03039	1.05786	0.98697	0.92595	1.00030	1.03545
3400.0	1.06513	1.02617	1.03891	1.04930	0.89010	0.95232	0.97650	0.97844	0.93691	0.91734
3500.0	1.00000	1.01657	0.95232	0.95975	1.07360	1.06749	0.97477	0.82108	0.73688	0.82332
3600.0	1.01050	0.85672	0.89115	0.94921	0.95109	0.97665	1.11196	1.08805	1.01721	1.03237
3700.0	1.07648	1.01234	0.96154	0.86061	0.77340	0.80252	0.89757	0.95556	1.05164	0.92882
3800.0	0.87404	0.91901	0.70403	0.55265	0.60326	0.75621	0.71557	0.73163	0.70860	0.75788
3900.0	0.85739	0.91105	0.82984	0.50090	0.54054	0.82654	0.72722	0.50294	0.87462	1.04083
4000.0	1.07602									
ZENITH SCAN STARTING AT 20.14. 3 ON 9/23/73, NORMALIZING FACTOR = 1.0910E-01										
2600.0	0.00022	0.00018	0.00017	0.00015	0.00015	0.00016	0.00018	0.00019	0.00016	0.00020
2700.0	0.00019	0.00016	0.00018	0.00018	0.00017	0.00020	0.00017	0.00019	0.00020	0.00023
2800.0	0.00020	0.00019	0.00019	0.00021	0.00020	0.00021	0.00022	0.00022	0.00021	0.00021
2900.0	0.00023	0.00026	0.00031	0.00047	0.00078	0.00158	0.00303	0.00509	0.00636	0.00658
3000.0	0.00669	0.00680	0.01400	0.09127	0.12148	0.16297	0.17850	0.23016	0.28541	0.28672
3100.0	0.32495	0.47906	0.49593	0.55088	0.59653	0.62338	0.58541	0.75986	0.73877	0.78117
3200.0	0.86601	0.89428	0.84608	0.80798	0.93190	0.97092	1.02783	1.03583	1.02189	1.04099
3300.0	1.05590	1.04256	1.04749	1.04480	1.03784	1.04941	1.01182	0.97891	1.03776	1.06137
3400.0	1.07452	1.05421	1.05241	1.05855	0.94635	1.01703	1.05171	1.03416	0.96647	0.92817
3500.0	1.00000	1.01347	0.95730	0.94442	1.03810	1.03958	0.95930	0.80412	0.71705	0.80278
3600.0	0.97870	0.83680	0.86010	0.91863	0.92115	0.94452	1.08651	1.05173	0.97707	1.00252
3700.0	1.03410	0.97309	0.91126	0.81298	0.73205	0.77316	0.86187	0.92108	1.04482	0.90405
3800.0	0.84914	0.89614	0.68977	0.53553	0.58948	0.73706	0.69840	0.70989	0.68963	0.73851
3900.0	0.83632	0.89094	0.81563	0.49724	0.54528	0.81400	0.72885	0.48939	0.84302	1.02130
4000.0	1.05810									
ZENITH SCAN STARTING AT 20.15.49 ON 9/23/73, NORMALIZING FACTOR = 1.0861E-01										
2600.0	0.00015	0.00015	0.00015	0.00014	0.00015	0.00017	0.00017	0.00015	0.00015	0.00016
2700.0	0.00018	0.00016	0.00021	0.00025	0.00024	0.00017	0.00018	0.00019	0.00020	0.00020
2800.0	0.00021	0.00024	0.00023	0.00023	0.00024	0.00023	0.00024	0.00021	0.00025	0.00024
2900.0	0.00024	0.00030	0.00035	0.00052	0.00084	0.00159	0.00323	0.00513	0.00645	0.00665
3000.0	0.00673	0.00686	0.01445	0.09018	0.12067	0.15799	0.17220	0.22614	0.27466	0.27526
3100.0	0.31816	0.46053	0.48353	0.55629	0.61606	0.64763	0.62177	0.80721	0.78431	0.82332
3200.0	0.89795	0.90089	0.83915	0.78879	0.92867	0.98554	1.04303	1.04967	1.02998	1.02754
3300.0	1.04287	1.01657	1.02166	1.01055	0.99964	1.02870	0.95304	0.90437	0.98481	1.02280
3400.0	1.04880	1.01786	1.02713	1.03955	0.89424	0.94145	0.96591	0.96740	0.92828	0.90835
3500.0	1.00000	1.00938	0.94649	0.97076	1.06668	1.05993	0.97876	0.82779	0.73614	0.83109
3600.0	0.98781	0.85223	0.87840	0.93710	0.94332	0.96309	1.10759	1.07819	0.99820	1.02204
3700.0	1.04787	0.97721	0.92199	0.82247	0.74684	0.79570	0.87769	0.93718	1.06990	0.90976
3800.0	0.86812	0.90341	0.69649	0.55276	0.60812	0.75829	0.71170	0.71787	0.69559	0.75189
3900.0	0.84575	0.89618	0.83314	0.48673	0.54299	0.82573	0.73524	0.51708	0.85803	1.03007
4000.0	1.06089									
ZENITH SCAN STARTING AT 20.17.34 ON 9/23/73, NORMALIZING FACTOR = 1.1707E-01										
2600.0	0.00015	0.00016	0.00015	0.00017	0.00016	0.00018	0.00015	0.00022	0.00018	0.00017
2700.0	0.00018	0.00017	0.00016	0.00019	0.00019	0.00018	0.00018	0.00018	0.00018	0.00020
2800.0	0.00019	0.00020	0.00018	0.00026	0.00021	0.00019	0.00019	0.00019	0.00020	0.00020
2900.0	0.00022	0.00025	0.00030	0.00045	0.00076	0.00157	0.00297	0.00487	0.00601	0.00618
3000.0	0.00628	0.00639	0.00662	0.08754	0.11983	0.15751	0.17366	0.22441	0.27866	0.27811
3100.0	0.31714	0.46738	0.47922	0.52555	0.56950	0.58936	0.55594	0.73726	0.71470	0.74877
3200.0	0.82711	0.84524	0.80119	0.75643	0.87249	0.91310	0.96564	0.97259	0.96149	0.97952
3300.0	0.99045	0.97754	0.98256	0.98057	0.97776	0.99091	0.96172	0.93263	0.97388	0.99048
3400.0	1.00564	0.99218	0.99991	1.00573	0.91936	0.96532	0.98045	0.98343	0.96226	0.94660
3500.0	1.00000	1.01297	0.98007	0.98708	1.04271	1.04338	1.00196	0.86691	0.77502	0.84161
3600.0	1.00839	0.87910	0.91768	0.97619	0.97701	0.99472	1.08638	1.07820	1.02985	1.04292
3700.0	1.07095	1.02711	0.97341	0.87408	0.78821	0.81902	0.91676	0.97557	1.10889	0.96809
3800.0	0.91803	0.95641	0.72965	0.56429	0.63119	0.79701	0.74454	0.75694	0.73540	0.78359
3900.0	0.89614	0.94452	0.87521	0.50554	0.58169	0.86808	0.75790	0.54890	0.92282	1.08898
4000.0	1.12732									

Table VIII-54

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
				ZENITH SCAN STARTING AT 20.19.55 ON 9/23/73. NORMALIZING FACTOR = 1.1511E-01						
2600.0	0.00015	0.00016	0.00015	0.00015	0.00016	0.00015	0.00016	0.00017	0.00015	0.00016
2700.0	0.00018	0.00018	0.00018	0.00015	0.00016	0.00018	0.00018	0.00022	0.00029	0.00019
2800.0	0.00022	0.00019	0.00019	0.00020	0.00020	0.00022	0.00020	0.00021	0.00023	0.00024
2900.0	0.00023	0.00025	0.00033	0.00043	0.00077	0.00145	0.00293	0.00479	0.00610	0.00629
3000.0	0.00638	0.00650	0.00676	0.07881	0.11247	0.15128	0.16475	0.21636	0.26551	0.26693
3100.0	0.30547	0.44414	0.46116	0.51256	0.55431	0.58066	0.55114	0.70585	0.68849	0.72908
3200.0	0.80228	0.82626	0.78045	0.74787	0.87029	0.91786	0.98118	0.98907	0.97637	0.99348
3300.0	1.00732	0.99290	0.99664	0.98820	0.98828	1.00218	0.96401	0.92293	0.97573	0.99700
3400.0	1.01519	0.99831	1.00530	1.01519	0.88855	0.94310	0.97502	0.97760	0.94828	0.93346
3500.0	1.00000	1.00759	0.96001	0.97279	1.04430	1.04444	0.97956	0.83807	0.74854	0.84260
3600.0	1.00088	0.86778	0.89297	0.94886	0.94805	0.97135	1.09025	1.07131	1.00875	1.03613
3700.0	1.06061	1.00826	0.95157	0.84825	0.76380	0.80697	0.89466	0.96073	1.08474	0.94676
3800.0	0.89021	0.95094	0.72101	0.56491	0.62547	0.78505	0.73800	0.74622	0.79824	0.69034
3900.0	0.88495	0.94165	0.85061	0.50513	0.54612	0.86491	0.76657	0.52106	0.89146	1.08786
4000.0	1.12576									
				ZENITH SCAN STARTING AT 20.21.41 ON 9/23/73. NORMALIZING FACTOR = 9.8549E-01						
2600.0	0.00029	0.00028	0.00028	0.00028	0.00028	0.00028	0.00027	0.00027	0.00026	0.00026
2700.0	0.00026	0.00026	0.00026	0.00025	0.00024	0.00024	0.00023	0.00024	0.00029	0.00023
2800.0	0.00023	0.00022	0.00021	0.00021	0.00021	0.00021	0.00021	0.00020	0.00020	0.00019
2900.0	0.00019	0.00021	0.00024	0.00076	0.00217	0.00221	0.00242	0.00446	0.00673	0.00669
3000.0	0.00665	0.00660	0.00715	0.24376	0.29343	0.28737	0.28059	0.29795	0.29341	0.24192
3100.0	0.23080	0.23011	0.22105	0.22063	0.23716	0.24707	0.21938	0.36958	0.31715	0.36000
3200.0	0.49426	0.52548	0.42876	0.35549	0.82035	1.11060	1.11185	1.11438	1.11631	1.11724
3300.0	1.11850	1.12112	1.12355	1.12584	1.12914	1.13006	1.09722	0.89172	1.13860	1.14082
3400.0	1.14419	1.14505	1.14404	1.13196	0.57355	0.86898	1.06533	0.99477	0.57952	0.49523
3500.0	1.00000	1.15542	0.75371	0.85691	1.17514	1.16382	0.69891	0.23027	0.13569	0.28059
3600.0	0.75668	0.25643	0.27626	0.29510	0.33144	0.44087	1.12844	0.95232	0.42587	0.57639
3700.0	0.78980	0.37903	0.27784	0.15803	0.09675	0.11252	0.16660	0.23799	0.54770	0.23759
3800.0	0.16266	0.21787	0.08653	0.06233	0.07056	0.09522	0.08335	0.08566	0.08197	0.09663
3900.0	0.13126	0.17065	0.12813	0.05815	0.06182	0.12090	0.09403	0.06106	0.14176	0.29003
4000.0	0.33635									
				ZENITH SCAN STARTING AT 20.23.27 ON 9/23/73. NORMALIZING FACTOR = 1.0562E 01						
2600.0	0.00014	0.00018	0.00014	0.00015	0.00016	0.00014	0.00015	0.00015	0.00020	0.00014
2700.0	0.00015	0.00016	0.00014	0.00017	0.00016	0.00016	0.00031	0.00017	0.00019	0.00020
2800.0	0.00018	0.00019	0.00027	0.00021	0.00020	0.00021	0.00022	0.00020	0.00023	0.00022
2900.0	0.00024	0.00024	0.00033	0.00050	0.00078	0.00155	0.00300	0.00521	0.00907	0.01471
3000.0	0.02133	0.03396	0.04862	0.09246	0.11632	0.15418	0.16868	0.21709	0.26972	0.26880
3100.0	0.30384	0.44963	0.46112	0.50894	0.54927	0.57129	0.54053	0.70602	0.68881	0.72310
3200.0	0.80558	0.82258	0.77318	0.73393	0.85545	0.91853	1.12158	1.16081	1.06614	1.18506
3300.0	1.26847	1.11573	1.12675	1.09474	1.06262	1.12418	1.00535	0.91568	0.98167	1.04121
3400.0	1.10279	1.02157	1.03806	1.05753	0.86698	0.93403	0.95922	0.96387	0.92356	0.91048
3500.0	1.00000	1.01105	0.94323	0.95343	1.07594	1.06082	0.96213	0.80220	0.71443	0.82928
3600.0	0.97678	0.83834	0.87876	0.94152	0.93433	0.96132	1.09753	1.06323	0.98755	1.00959
3700.0	1.04792	0.97838	0.92301	0.82684	0.74553	0.77810	0.86803	0.92667	1.06131	0.38474
3800.0	0.14845	0.15396	0.13622	0.13455	0.13576	0.13804	0.13540	0.13552	0.13434	0.13670
3900.0	0.14474	0.15085	0.14267	0.13235	0.12895	0.13602	0.13380	0.13119	0.14132	0.15701
4000.0	0.16110									
				ZENITH SCAN STARTING AT 20.25.48 ON 9/23/73. NORMALIZING FACTOR = 1.0751E 01						
2600.0	0.00013	0.00015	0.00013	0.00015	0.00015	0.00017	0.00016	0.00015	0.00018	0.00020
2700.0	0.00015	0.00016	0.00018	0.00023	0.00017	0.00016	0.00018	0.00017	0.00017	0.00019
2800.0	0.00017	0.00020	0.00017	0.00018	0.00018	0.00019	0.00018	0.00021	0.00020	0.00021
2900.0	0.00023	0.00028	0.00031	0.00051	0.00075	0.00149	0.00293	0.00523	0.00877	0.01477
3000.0	0.02086	0.03371	0.04870	0.08675	0.11423	0.15127	0.16509	0.21843	0.26573	0.26658
3100.0	0.30814	0.44162	0.44951	0.49809	0.53930	0.56243	0.53661	0.68639	0.66187	0.70002
3200.0	0.77569	0.79523	0.75012	0.71343	0.84403	0.90321	1.09945	1.11747	1.03171	1.13361
3300.0	1.21338	1.08037	1.08771	1.05853	1.03532	1.09179	0.96121	0.89575	0.97381	1.02214
3400.0	1.08006	1.01215	1.02581	1.04904	0.86495	0.91978	0.94983	0.95428	0.91640	0.90143
3500.0	1.00000	1.00609	0.93396	0.95257	1.06559	1.05507	0.95911	0.80972	0.72436	0.81658
3600.0	0.97734	0.84467	0.87153	0.93203	0.93329	0.95462	1.09994	1.04245	0.96545	1.00096
3700.0	1.02801	0.95840	0.90267	0.80711	0.72665	0.77088	0.85590	0.91517	1.04238	0.90012
3800.0	0.84858	0.89585	0.67440	0.53635	0.59622	0.73433	0.69278	0.70926	0.68885	0.73329
3900.0	0.84035	0.89422	0.81582	0.50061	0.53998	0.82368	0.72305	0.49011	0.85327	1.02028
4000.0	1.05871									
				ZENITH SCAN STARTING AT 20.27.36 ON 9/23/73. NORMALIZING FACTOR = 1.0398E 01						
2600.0	0.00015	0.00014	0.00014	0.00016	0.00016	0.00015	0.00017	0.00015	0.00014	0.00015
2700.0	0.00016	0.00018	0.00015	0.00018	0.00017	0.00016	0.00018	0.00016	0.00016	0.00016
2800.0	0.00018	0.00017	0.00020	0.00018	0.00023	0.00024	0.00021	0.00027	0.00020	0.00022
2900.0	0.00022	0.00025	0.00030	0.00044	0.00076	0.00145	0.00299	0.00504	0.00890	0.01448
3000.0	0.02062	0.03416	0.04777	0.09038	0.11497	0.14988	0.16533	0.21517	0.26428	0.26297
3100.0	0.30568	0.44430	0.45618	0.50189	0.54494	0.56370	0.53448	0.70761	0.68244	0.71634
3200.0	0.79325	0.80660	0.76187	0.71708	0.84169	0.90077	1.11132	1.13632	1.04725	1.16713
3300.0	1.23845	1.09923	1.11110	1.07997	1.04795	1.10912	0.98322	0.90705	0.99647	1.04863
3400.0	1.11893	1.04422	1.04363	1.04951	0.87176	0.93670	0.95381	0.95692	0.92152	0.90740
3500.0	1.00000	1.01296	0.94284	0.96022	1.08036	1.06200	0.95455	0.80330	0.71019	0.82410
3600.0	0.97425	0.83789	0.87617	0.93406	0.93560	0.95280	1.09264	1.05565	0.97080	0.99321
3700.0	1.02486	0.96137	0.90886	0.81503	0.73853	0.77772	0.86641	0.92342	1.05752	0.89967
3800.0	0.84617	0.89492	0.68662	0.53211	0.60265	0.75310	0.70680	0.71909	0.70051	0.74584
3900.0	0.85034	0.90109	0.82534	0.47763	0.55481	0.82896	0.76292	0.69779	0.91734	1.02998
4000.0	1.06377									
				ZENITH SCAN STARTING AT 20.29.57 ON 9/23/73. NORMALIZING FACTOR = 1.0365E 01						
2600.0	0.00015	0.00019	0.00020	0.00015	0.00014	0.00016	0.00015	0.00021	0.00016	0.00016
2700.0	0.00015	0.00017	0.00016	0.00019	0.00017	0.00019	0.00016	0.00016	0.00019	0.00024
2800.0	0.00019	0.00018	0.00018	0.00019	0.00021	0.00020	0.00025	0.00024	0.00023	0.00022
2900.0	0.00026	0.00031	0.00031	0.00044	0.00074	0.00149	0.00289	0.00513	0.00880	0.01450
3000.0	0.02094	0.03326	0.04771	0.09044	0.11419	0.15318	0.16728	0.21673	0.26857	0.26883
3100.0	0.30589	0.45003	0.46449	0.51471	0.55582	0.58023	0.54514	0.68356	0.67588	0.71579
3200.0	0.79020	0.80979	0.76041	0.72606	0.84857	0.90980	1.10491	1.13637	1.04922	1.15471
3300.0	1.24325	1.09739	1.10896	1.07799	1.04718	1.10182	0.98063	0.90315	0.98894	1.04109
3400.0	1.10929	1.03717	1.04949	1.06955	0.87675	0.94356	0.96853	0.96929	0.92818	0.91295
3500.0	1.00000	1.01013	0.94328	0.96153	1.08154	1.06466	0.97086	0.81013	0.72086	0.81828
3600.0	0.98706	0.84057	0.86967	0.92778	0.92665	0.95554	1.10042	1.06530	0.99197	1.01816
3700.0	1.05357	0.99145	0.92976	0.81403	0.73984	0.78950	0.86591	0.93153	1.05541	0.90818
3800.0	0.85995	0.90746	0.68365	0.54121	0.60327	0.74231	0.70842	0.71867	0.69928	0.74729
3900.0	0.85252	0.90920	0.82341	0.48945	0.53436	0.82339	0.72996	0.51414	0.85978	1.03390
4000.0	1.07037									

Table VIII-55

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 20.31.43 ON 9/23/73. NORMALIZING FACTOR = 1.0408E 01										
2600.0	0.00012	0.00013	0.00014	0.00012	0.00015	0.00015	0.00014	0.00013	0.00014	0.00016
2700.0	0.00017	0.00025	0.00017	0.00021	0.00017	0.00017	0.00029	0.00023	0.00016	0.00017
2800.0	0.00018	0.00016	0.00017	0.00017	0.00019	0.00017	0.00019	0.00019	0.00020	0.00021
2900.0	0.00020	0.00024	0.00037	0.00045	0.00076	0.00143	0.00285	0.00491	0.00848	0.01409
3000.0	0.02095	0.03310	0.04759	0.08655	0.11018	0.14468	0.15955	0.21201	0.25692	0.25697
3100.0	0.29979	0.43284	0.44718	0.49503	0.53646	0.55971	0.53110	0.69190	0.66175	0.69867
3200.0	0.77307	0.78772	0.74378	0.70738	0.84056	0.89816	1.10586	1.12273	1.03717	1.14530
3300.0	1.21157	1.07682	1.08597	1.05596	1.03237	1.09312	0.96230	0.89939	0.98249	1.03179
3400.0	1.09233	1.02470	1.03767	1.05472	0.87880	0.93715	0.95716	0.93542	0.91134	0.89686
3500.0	1.00000	1.00026	0.93124	0.95896	1.06903	1.05493	0.95278	0.80680	0.71704	0.81574
3600.0	0.96376	0.83224	0.85881	0.90856	0.91705	0.93998	1.08466	1.04353	0.96879	1.00415
3700.0	1.02243	0.95944	0.90325	0.80646	0.73092	0.77121	0.85384	0.91566	1.04612	0.89671
3800.0	0.85562	0.89761	0.69057	0.53513	0.60728	0.75702	0.70796	0.71663	0.69455	0.74001
3900.0	0.84613	0.89573	0.82701	0.47821	0.54069	0.82415	0.73523	0.52715	0.87308	1.04930
4000.0	1.09097									
ZENITH SCAN STARTING AT 20.37.14 ON 9/23/73. NORMALIZING FACTOR = 1.0568E 01										
2600.0	0.00019	0.00008	0.00009	0.00006	0.00006	0.00009	0.00007	0.00008	0.00010	0.00010
2700.0	0.00010	0.00018	0.00010	0.00008	0.00008	0.00009	0.00008	0.00010	0.00009	0.00011
2800.0	0.00008	0.00011	0.00008	0.00009	0.00010	0.00009	0.00015	0.00008	0.00009	0.00010
2900.0	0.00013	0.00013	0.00019	0.00031	0.00060	0.00134	0.00274	0.00841	0.00951	0.01507
3000.0	0.02094	0.03406	0.04812	0.08473	0.10577	0.13828	0.15498	0.21173	0.25006	0.24462
3100.0	0.29354	0.41734	0.44325	0.49967	0.52434	0.53248	0.51276	0.66445	0.66268	0.71884
3200.0	0.77187	0.75180	0.70219	0.68244	0.87131	0.93568	1.06796	1.03441	0.96783	1.19585
3300.0	1.46178	1.28702	1.05163	0.97816	0.96069	1.04976	1.00337	0.90605	0.91457	0.96788
3400.0	1.00747	0.93801	0.97906	0.97022	0.79762	0.91525	0.94313	0.94449	0.91314	0.89547
3500.0	1.00000	0.99405	0.92348	0.95566	1.06520	1.03749	0.93295	0.78179	0.69398	0.81123
3600.0	0.95859	0.81977	0.86209	0.91075	0.91644	0.95403	1.07373	1.03453	0.95471	0.99513
3700.0	1.00462	0.94492	0.87888	0.79341	0.72546	0.77477	0.84774	0.91445	1.04008	0.86681
3800.0	0.84858	0.87045	0.66245	0.52622	0.60948	0.74675	0.70333	0.70995	0.68784	0.75017
3900.0	0.83994	0.89254	0.80710	0.46811	0.55510	0.83625	0.70910	0.53465	0.88768	1.04836
4000.0	1.07616									
ZENITH SCAN STARTING AT 20.39.51 ON 9/23/73. NORMALIZING FACTOR = 9.9986E 00										
2600.0	0.00018	0.00018	0.00015	0.00020	0.00015	0.00013	0.00015	0.00012	0.00012	0.00015
2700.0	0.00012	0.00013	0.00013	0.00016	0.00016	0.00014	0.00017	0.00016	0.00016	0.00013
2800.0	0.00020	0.00014	0.00019	0.00017	0.00015	0.00017	0.00016	0.00017	0.00016	0.00017
2900.0	0.00018	0.00018	0.00025	0.00036	0.00065	0.00137	0.00266	0.00478	0.00834	0.01380
3000.0	0.01979	0.03081	0.04565	0.08541	0.10898	0.14756	0.16143	0.21057	0.25972	0.26107
3100.0	0.29835	0.43659	0.44925	0.49977	0.53716	0.55977	0.52811	0.68388	0.66747	0.70765
3200.0	0.77927	0.80210	0.75476	0.72020	0.84084	0.90057	1.09497	1.12342	1.02979	1.14330
3300.0	1.23031	1.08491	1.09970	1.07171	1.04228	1.10277	0.98182	0.90136	0.98715	1.03743
3400.0	1.10467	1.03125	1.04928	1.06566	0.88629	0.95162	0.96812	0.97022	0.93027	0.90875
3500.0	1.00000	1.00787	0.93924	0.96324	1.08608	1.06580	0.94512	0.80069	0.70700	0.79967
3600.0	0.97141	0.82894	0.85881	0.91418	0.91241	0.94261	1.07982	1.04034	0.96261	0.98541
3700.0	1.01604	0.95871	0.90813	0.80958	0.72918	0.76854	0.85443	0.91567	1.04692	0.88328
3800.0	0.84769	0.89324	0.67486	0.53673	0.59544	0.74046	0.70565	0.72019	0.69828	0.75326
3900.0	0.85139	0.90432	0.81868	0.50885	0.56497	0.83406	0.72662	0.53149	0.88348	1.05095
4000.0	1.08754									
ZENITH SCAN STARTING AT 20.41.39 ON 9/23/73. NORMALIZING FACTOR = 1.0083E 01										
2600.0	0.00014	0.00013	0.00012	0.00013	0.00013	0.00014	0.00012	0.00015	0.00014	0.00015
2700.0	0.00015	0.00016	0.00015	0.00014	0.00015	0.00017	0.00026	0.00016	0.00015	0.00018
2800.0	0.00024	0.00020	0.00016	0.00017	0.00018	0.00019	0.00018	0.00022	0.00021	0.00023
2900.0	0.00023	0.00024	0.00027	0.00041	0.00069	0.00135	0.00266	0.00483	0.00819	0.01384
3000.0	0.01985	0.03189	0.04626	0.08473	0.10926	0.14443	0.15853	0.21079	0.25772	0.25808
3100.0	0.30164	0.43378	0.44824	0.49619	0.53496	0.55803	0.53483	0.68666	0.65986	0.69866
3200.0	0.77518	0.79348	0.74728	0.71094	0.84034	0.90248	1.09576	1.11628	1.03408	1.14230
3300.0	1.22769	1.06676	1.06966	1.04346	1.02095	1.07643	0.94860	0.88669	0.96987	1.02211
3400.0	1.08263	1.01424	1.02851	1.05142	0.86547	0.92139	0.94533	0.94982	0.91578	0.89513
3500.0	1.00000	1.00033	0.92757	0.94787	1.05790	1.04455	0.94240	0.79699	0.70655	0.81548
3600.0	0.95283	0.82105	0.85278	0.90586	0.90613	0.93286	1.06960	1.03181	0.95278	0.98694
3700.0	1.00868	0.95072	0.89231	0.79323	0.72148	0.76565	0.85153	0.91722	1.03527	0.89309
3800.0	0.85002	0.90143	0.67857	0.53399	0.59860	0.74736	0.68614	0.69222	0.68254	0.73482
3900.0	0.82532	0.87823	0.78993	0.49306	0.55970	0.80987	0.70828	0.49244	0.85661	1.01586
4000.0	1.04587									
ZENITH SCAN STARTING AT 20.44. 0 ON 9/23/73. NORMALIZING FACTOR = 1.0264E 01										
2600.0	0.00007	0.00009	0.00012	0.00010	0.00009	0.00007	0.00006	0.00011	0.00008	0.00009
2700.0	0.00010	0.00009	0.00007	0.00022	0.00011	0.00010	0.00008	0.00008	0.00009	0.00010
2800.0	0.00010	0.00011	0.00010	0.00010	0.00011	0.00009	0.00010	0.00009	0.00024	0.00011
2900.0	0.00011	0.00016	0.00020	0.00033	0.00059	0.00127	0.00793	0.00795	0.00888	0.01471
3000.0	0.02045	0.03443	0.04882	0.08505	0.10726	0.14246	0.15903	0.20903	0.25314	0.25144
3100.0	0.30196	0.43373	0.44622	0.49362	0.53222	0.54863	0.53141	0.69584	0.65851	0.69752
3200.0	0.78097	0.78194	0.74168	0.70864	0.83276	0.89614	1.10342	1.10906	1.01914	1.15045
3300.0	1.19511	1.06288	1.07899	1.04530	1.02919	1.08604	0.95661	0.89784	0.98564	1.02882
3400.0	1.08728	1.00673	1.03650	1.03787	0.86041	0.94297	0.95079	0.94821	0.91604	0.89625
3500.0	1.00000	0.99535	0.91656	0.95028	1.05692	1.03312	0.92316	0.78224	0.68631	0.81051
3600.0	0.94810	0.81500	0.85674	0.89786	0.90139	0.93706	1.05469	1.01473	0.93773	0.96597
3700.0	0.97905	0.93218	0.87373	0.78305	0.71206	0.75274	0.83100	0.89671	1.01573	0.84726
3800.0	0.83051	0.85699	0.64149	0.51027	0.60317	0.72868	0.69134	0.69481	0.67336	0.72580
3900.0	0.81500	0.86430	0.76838	0.44538	0.55516	0.81465	0.67830	0.51157	0.83813	0.98493
4000.0	1.01497									
ZENITH SCAN STARTING AT 20.45.46 ON 9/23/73. NORMALIZING FACTOR = 1.0726E 01										
2600.0	0.00006	0.00006	0.00011	0.00007	0.00006	0.00012	0.00009	0.00006	0.00007	0.00006
2700.0	0.00006	0.00007	0.00007	0.00007	0.00007	0.00007	0.00009	0.00006	0.00009	0.00011
2800.0	0.00013	0.00013	0.00015	0.00009	0.00007	0.00009	0.00013	0.00009	0.00009	0.00019
2900.0	0.00014	0.00011	0.00016	0.00015	0.00054	0.00120	0.00248	0.01244	0.00835	0.01387
3000.0	0.02011	0.03335	0.04422	0.08099	0.10351	0.14045	0.15417	0.20358	0.24996	0.24905
3100.0	0.29305	0.42227	0.43565	0.48320	0.52039	0.53926	0.51594	0.45849	0.48805	0.49748
3200.0	0.65413	0.77341	0.61569	0.70488	0.82111	0.88305	1.06857	1.08615	1.00205	1.12709
3300.0	1.18924	1.05443	1.06949	1.03776	1.01868	1.05903	0.94485	0.88742	0.97129	1.01700
3400.0	1.07959	1.00451	1.02558	1.03489	0.72536	0.91771	0.93214	0.93497	0.90733	0.88661
3500.0	1.00000	0.99008	0.91812	0.95389	1.05045	1.02607	0.92055	0.58193	0.55589	0.80336
3600.0	0.93620	0.72321	0.72574	0.75091	0.88704	0.92242	1.04373	0.99763	0.92277	0.95892
3700.0	0.96999	0.85780	0.85746	0.76284	0.69914	0.62487	0.50839	0.76386	0.99309	0.81986
3800.0	0.69005	0.72303	0.62378	0.50823	0.58495	0.71078	0.67930	0.68817	0.66616	0.72976
3900.0	0.70355	0.83013	0.76510	0.46029	0.55650	0.79838	0.65997	0.49471	0.86298	1.01385
4000.0	1.04172									

Table VIII-56

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 20.47.32 ON 9/23/73, NORMALIZING FACTOR = 9.3439E 00										
2600.0	0.00013	0.00014	0.00013	0.00013	0.00014	0.00015	0.00013	0.00017	0.00015	0.00019
2700.0	0.00017	0.00016	0.00016	0.00019	0.00016	0.00021	0.00015	0.00018	0.00018	0.00018
2800.0	0.00019	0.00019	0.00019	0.00018	0.00021	0.00022	0.00021	0.00019	0.00021	0.00026
2900.0	0.00021	0.00027	0.00024	0.00043	0.00065	0.00140	0.00276	0.00506	0.00864	0.01485
3000.0	0.02120	0.03483	0.03198	0.09270	0.12222	0.16149	0.17922	0.23856	0.29439	0.29437
3100.0	0.34230	0.48405	0.51011	0.56391	0.60979	0.63123	0.59832	0.78935	0.75760	0.80084
3200.0	0.31856	0.19088	0.61383	0.75354	0.37010	0.76675	1.25572	1.27980	1.17854	1.31240
3300.0	1.38990	1.24023	1.25815	1.22358	1.19904	1.27062	0.89740	0.43155	1.13010	1.19550
3400.0	1.26267	1.18475	1.21199	1.23351	0.59557	0.92384	0.68868	0.43577	0.57634	0.29407
3500.0	1.00000	0.81441	0.77506	0.71991	1.25607	1.23183	0.44687	0.83483	0.79952	0.93508
3600.0	0.36639	0.12903	0.14299	0.70944	0.68789	0.44964	0.94545	1.30378	0.75351	1.03626
3700.0	0.93911	0.63195	0.89783	0.82219	0.91047	0.90805	0.64200	0.31348	1.30614	1.01665
3800.0	1.01854	0.87593	0.85244	0.65548	0.74013	0.93720	0.88710	0.90202	0.88012	0.96244
3900.0	1.06819	0.91204	0.78468	0.59873	0.66627	1.04790	0.92769	0.64155	0.76647	0.54676
4000.0	0.85177									
ZENITH SCAN STARTING AT 20.49.53 ON 9/23/73, NORMALIZING FACTOR = 7.2170E 00										
2600.0	0.00018	0.00021	0.00019	0.00031	0.00028	0.00034	0.00018	0.00017	0.00016	0.00024
2700.0	0.00023	0.00024	0.00020	0.00021	0.00084	0.00028	0.00022	0.00024	0.00031	0.00024
2800.0	0.00023	0.00025	0.00027	0.00024	0.00027	0.00032	0.00034	0.00033	0.00032	0.00029
2900.0	0.00029	0.00034	0.00040	0.00047	0.00086	0.00172	0.00343	0.00463	0.01079	0.01791
3000.0	0.02574	0.04313	0.04487	0.11267	0.11757	0.20017	0.22159	0.28941	0.36087	0.36181
3100.0	0.41614	0.61788	0.63510	0.70503	0.76046	0.79084	0.74853	0.98051	0.94875	1.00206
3200.0	0.46919	0.31103	1.06755	0.94381	0.12168	0.32336	1.56316	1.61031	1.47922	1.65035
3300.0	1.76205	1.55040	1.57292	1.53641	1.49709	1.59002	0.95550	0.17510	1.09856	1.53408
3400.0	1.62305	0.75846	1.33774	1.43754	0.50014	0.22488	0.19860	0.42370	0.29135	0.17985
3500.0	1.00000	0.40487	0.13810	0.10893	1.29327	1.06209	0.16814	1.04714	1.02095	0.84561
3600.0	0.14676	1.07114	0.98340	0.24871	0.07936	0.44785	0.50624	0.20662	0.09226	0.12066
3700.0	0.39965	0.06418	0.79301	1.15983	1.05066	1.10480	1.23701	0.97579	0.16817	0.68563
3800.0	1.23567	1.30208	0.99828	0.77386	0.86858	1.08855	1.03095	1.05717	1.02813	1.11816
3900.0	1.26018	1.34135	1.22870	0.74620	0.82859	1.14114	0.95617	0.73045	1.29285	0.28491
4000.0	0.05792									
ZENITH SCAN STARTING AT 20.51.39 ON 9/23/73, NORMALIZING FACTOR = 3.8106E 00										
2600.0	0.00059	0.00041	0.00039	0.00041	0.00036	0.00041	0.00037	0.00042	0.00041	0.00042
2700.0	0.00046	0.00049	0.00044	0.00044	0.00044	0.00042	0.00049	0.00048	0.00045	0.00052
2800.0	0.00049	0.00044	0.00054	0.00046	0.00047	0.00044	0.00054	0.00052	0.00050	0.00054
2900.0	0.00063	0.00062	0.00103	0.00064	0.00160	0.00324	0.00635	0.00883	0.01948	0.03232
3000.0	0.04772	0.07801	0.07710	0.19761	0.21531	0.36328	0.40264	0.54294	0.66297	0.66946
3100.0	0.79044	1.13311	1.17966	1.31474	1.42223	1.46106	1.39054	1.81426	1.73607	1.84265
3200.0	1.03269	1.11036	1.94812	1.84692	0.42147	0.53064	2.88677	2.94518	2.73495	3.03222
3300.0	3.22506	2.86908	2.89573	2.81275	2.33579	2.90169	0.84353	0.23598	0.91471	2.77640
3400.0	2.94632	1.37890	2.49611	2.54748	1.08489	0.39107	0.31798	0.31739	0.21428	0.15702
3500.0	1.00000	0.74873	0.22809	0.29000	1.99296	0.88432	0.50616	2.14319	1.88551	1.15616
3600.0	0.48679	2.22322	1.44638	0.08402	0.07834	0.14504	0.50441	0.39108	0.18181	0.23368
3700.0	0.29832	0.15284	1.71550	2.19989	1.98378	2.10542	2.32498	1.33940	0.26827	1.70240
3800.0	2.31975	2.43128	1.83250	1.46266	1.63540	2.05612	1.92893	1.96778	1.91634	2.05535
3900.0	2.31930	2.46124	2.23809	1.30651	1.48886	2.28484	1.98164	1.41752	2.38737	1.07311
4000.0	0.06816									
ZENITH SCAN STARTING AT 20.53.25 ON 9/23/73, NORMALIZING FACTOR = 1.0120E 00										
2600.0	0.00124	0.00123	0.00143	0.00153	0.00128	0.00171	0.00174	0.00132	0.00146	0.00157
2700.0	0.00157	0.00184	0.00159	0.00174	0.00147	0.00144	0.00153	0.00197	0.00252	0.00173
2800.0	0.00180	0.00178	0.00173	0.00176	0.00182	0.00163	0.00167	0.00181	0.00199	0.00206
2900.0	0.00212	0.00231	0.00251	0.00133	0.00580	0.01134	0.02296	0.03112	0.06885	0.11658
3000.0	0.16709	0.27868	0.27245	0.70652	0.72894	1.28294	1.42227	1.87976	2.32378	2.32463
3100.0	2.74751	3.99238	4.10140	4.52076	4.90389	5.07889	4.80358	6.33443	6.14615	6.47783
3200.0	6.42846	6.62743	6.94370	6.59757	4.06096	0.43385	8.22838	10.47604	3.00211	9.01391
3300.0	11.40975	10.12431	10.30244	6.24661	2.85239	10.48404	2.86024	0.48602	1.30608	1.98851
3400.0	9.56752	1.93683	1.79636	4.32314	4.53474	1.01402	0.67570	0.69425	0.28699	2.56844
3500.0	1.00000	1.01867	3.21128	2.56688	1.56783	1.34011	1.47655	7.59515	6.71102	5.46454
3600.0	2.07303	7.82402	8.22644	8.68716	8.73341	6.12716	1.07920	0.71551	5.90907	4.90327
3700.0	1.77080	7.79165	8.17806	7.74630	7.00304	7.32498	8.20295	7.97620	1.12743	8.16609
3800.0	8.24910	8.65724	6.66463	5.15529	5.76513	7.29552	6.83855	6.97380	6.79911	7.30271
3900.0	8.32801	8.84090	8.05931	4.63289	5.32602	8.15712	7.12629	4.97042	8.53562	10.20000
4000.0	10.36478									
ZENITH SCAN STARTING AT 20.55.49 ON 9/23/73, NORMALIZING FACTOR = 2.1202E 00										
2600.0	0.00072	0.00067	0.00064	0.00059	0.00093	0.00102	0.00082	0.00074	0.00075	0.00076
2700.0	0.00078	0.00075	0.00077	0.00076	0.00087	0.00074	0.00082	0.00082	0.00086	0.00073
2800.0	0.00081	0.00082	0.00083	0.00090	0.00083	0.00100	0.00086	0.00110	0.00096	0.00104
2900.0	0.00109	0.00111	0.00125	0.00125	0.00283	0.00548	0.01051	0.01715	0.03158	0.05318
3000.0	0.07697	0.12913	0.14162	0.33312	0.26591	0.58366	0.65813	0.87173	1.07178	1.07977
3100.0	1.24796	1.81899	1.87554	2.09257	2.25832	2.36749	2.25850	2.93577	2.85746	3.03282
3200.0	3.25226	3.37419	3.17236	3.03389	3.57865	1.91223	2.98129	3.22195	0.59907	2.96008
3300.0	5.17754	1.37631	0.86476	0.76192	0.63794	0.87131	0.45884	1.74797	0.35324	0.56869
3400.0	0.85041	0.52703	0.59027	0.68281	2.82224	1.65712	0.18821	0.64264	2.47074	3.93403
3500.0	1.00000	0.26534	2.13077	1.82177	0.49792	0.38909	2.03464	3.42516	3.03819	3.50176
3600.0	2.51919	3.59368	3.71723	3.94055	3.95376	3.51713	0.30510	1.02109	4.15642	2.97482
3700.0	1.90715	4.17970	3.95433	3.54929	3.23689	3.33841	3.60868	3.97504	2.80846	3.87458
3800.0	3.69015	3.83309	2.92022	2.28344	2.57465	3.27000	3.06522	3.11586	3.02076	3.22929
3900.0	3.65657	3.88601	3.56492	2.14187	2.38412	3.63920	3.21906	2.17338	3.75879	4.47152
4000.0	4.63238									
ZENITH SCAN STARTING AT 20.57.34 ON 9/23/73, NORMALIZING FACTOR = 4.7413E 00										
2600.0	0.00031	0.00030	0.00027	0.00029	0.00026	0.00029	0.00030	0.00029	0.00043	0.00031
2700.0	0.00031	0.00030	0.00041	0.00032	0.00036	0.00030	0.00036	0.00036	0.00032	0.00033
2800.0	0.00033	0.00038	0.00032	0.00073	0.00048	0.00035	0.00048	0.00038	0.00046	0.00036
2900.0	0.00041	0.00049	0.00055	0.00026	0.00067	0.00239	0.00459	0.00524	0.01245	0.02312
3000.0	0.03241	0.05396	0.06893	0.13482	0.18467	0.24697	0.27376	0.36280	0.44636	0.44859
3100.0	0.52966	0.76351	0.79073	0.88012	0.95172	0.99240	0.94963	1.24061	1.18266	1.25843
3200.0	1.39746	1.42662	1.35101	1.28379	1.52944	1.25948	0.33829	0.35915	0.19302	1.24069
3300.0	1.96390	0.28026	0.30713	0.25428	0.20786	0.32709	0.79409	1.54753	0.12429	0.18166
3400.0	0.27992	0.13911	0.18012	0.20690	1.22185	0.68500	0.69942	0.48563	1.74806	1.70590
3500.0	1.00000	0.58305	1.72617	1.41927	0.13100	0.17258	1.63664	1.47609	1.29715	1.51533
3600.0	1.75349	1.51834	1.58759	1.68651	1.68300	1.70068	0.26739	1.80550	1.77115	1.83428
3700.0	1.89628	1.77337	1.65662	1.50727	1.35760	1.43624	1.58642	1.70458	1.94956	1.66992
3800.0	1.60275	1.68655	1.27641	1.00823	1.13744	1.42562	1.33700	1.34922	1.31292	1.42032
3900.0	1.60413	1.71013	1.56503	0.91312	1.02427	1.57844	1.38441	0.96078	1.64631	1.96302
4000.0	2.02791									

Table VIII-57

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 21. 1.56 ON 9/23/73, NORMALIZING FACTOR = 4.5283E 00									
2600.0	0.00036	0.00027	0.00024	0.00031	0.00029	0.00033	0.00033	0.00050	0.00035	0.00030
2700.0	0.00032	0.00030	0.00034	0.00030	0.00030	0.00033	0.00031	0.00038	0.00041	0.00033
2800.0	0.00031	0.00037	0.00038	0.00039	0.00039	0.00034	0.00042	0.00038	0.00040	0.00037
2900.0	0.00046	0.00048	0.00068	0.00070	0.00059	0.00231	0.00450	0.00704	0.00828	0.02241
3000.0	0.03196	0.05198	0.07560	0.11823	0.17577	0.23512	0.26424	0.35327	0.42927	0.43220
3100.0	0.50921	0.72598	0.75167	0.83615	0.90328	0.94533	0.91186	1.17741	1.13031	1.20330
3200.0	1.33947	1.37798	1.29610	1.23852	1.47680	1.54701	0.30322	0.20120	0.05454	0.35223
3300.0	1.13594	0.14639	0.16922	0.11650	0.06884	0.17618	1.03880	1.64024	1.40374	0.04370
3400.0	0.14636	1.17170	0.29477	0.32871	1.60287	1.70879	1.74263	1.75073	1.68970	1.65529
3500.0	1.00000	1.59167	1.70774	1.74152	1.03226	1.83045	1.70400	1.43524	1.26757	1.45328
3600.0	1.70282	1.46703	1.52047	1.61520	1.61454	1.66057	1.92276	1.85466	1.71732	1.77945
3700.0	1.81168	1.69892	1.59091	1.43598	1.30254	1.39135	1.52701	1.64651	1.87315	1.61764
3800.0	1.53496	1.62016	1.22171	0.96493	1.10348	1.35584	1.27501	1.29455	1.25649	1.37005
3900.0	1.54221	1.63871	1.47817	0.90883	1.01259	1.50754	1.29679	0.94902	1.58217	1.84985
4000.0	1.91522									
	ZENITH SCAN STARTING AT 21. 3.57 ON 9/23/73, NORMALIZING FACTOR = 7.9179E 00									
2600.0	0.00018	0.00015	0.00017	0.00014	0.00015	0.00015	0.00016	0.00015	0.00029	0.00021
2700.0	0.00019	0.00018	0.00020	0.00022	0.00030	0.00021	0.00019	0.00025	0.00021	0.00019
2800.0	0.00021	0.00021	0.00020	0.00021	0.00023	0.00022	0.00022	0.00023	0.00027	0.00025
2900.0	0.00030	0.00031	0.00040	0.00036	0.00075	0.00129	0.00260	0.00393	0.00468	0.01270
3000.0	0.01786	0.02976	0.03731	0.06229	0.10131	0.13477	0.14901	0.19850	0.24237	0.24101
3100.0	0.28224	0.41118	0.42571	0.46961	0.51063	0.53006	0.50518	0.66825	0.64426	0.68286
3200.0	0.75580	0.77031	0.72611	0.68867	0.81404	0.85954	0.24161	0.10180	0.38791	0.14409
3300.0	0.18476	0.03407	0.05005	0.31218	0.68749	0.05482	0.75444	0.89790	0.98893	1.00166
3400.0	0.16232	0.96943	0.93622	0.43764	0.86504	0.93775	0.95643	0.95897	0.91987	0.90527
3500.0	1.00000	0.99759	0.92688	0.94296	1.05189	1.03020	0.93475	0.77721	0.69604	0.78110
3600.0	0.94444	0.80859	0.84793	0.89561	0.89371	0.91943	1.05213	1.00869	0.93854	0.96193
3700.0	0.98718	0.93681	0.88543	0.79867	0.72196	0.75875	0.84686	0.91433	1.04564	0.88656
3800.0	0.85466	0.89724	0.68732	0.53356	0.58567	0.71398	0.70830	0.71601	0.69500	0.74557
3900.0	0.84664	0.89813	0.81411	0.47438	0.55559	0.83435	0.72514	0.51490	0.87394	1.01743
4000.0	1.04549									
	ZENITH SCAN STARTING AT 21. 5.43 ON 9/23/73, NORMALIZING FACTOR = 7.9231E 00									
2600.0	0.00017	0.00016	0.00017	0.00020	0.00018	0.00021	0.00016	0.00017	0.00016	0.00017
2700.0	0.00016	0.00016	0.00020	0.00017	0.00019	0.00019	0.00020	0.00018	0.00039	0.00019
2800.0	0.00018	0.00028	0.00021	0.00021	0.00020	0.00019	0.00023	0.00023	0.00023	0.00033
2900.0	0.00030	0.00025	0.00032	0.00028	0.00045	0.00135	0.00248	0.00432	0.00519	0.01236
3000.0	0.01795	0.02889	0.04112	0.06768	0.07641	0.11443	0.14647	0.19353	0.23718	0.23903
3100.0	0.27548	0.39816	0.41403	0.46151	0.49907	0.52515	0.50081	0.66672	0.62867	0.66956
3200.0	0.73909	0.76192	0.71445	0.68109	0.80380	0.86129	0.29709	0.07368	0.73347	0.22235
3300.0	0.18394	0.04242	0.05182	0.12041	0.68591	0.08450	0.90149	0.88881	0.97107	1.00440
3400.0	0.18784	0.82959	0.83601	0.34760	0.86387	0.93151	0.95450	0.95730	0.92002	0.89769
3500.0	1.00000	1.00053	0.92828	0.95251	1.06095	1.04801	0.94817	0.80040	0.70780	0.77715
3600.0	0.90879	0.80417	0.83462	0.88796	0.89251	0.91539	1.05247	1.01687	0.93894	0.96567
3700.0	0.99125	0.92737	0.87428	0.78468	0.71663	0.76411	0.84136	0.90230	1.02412	0.88414
3800.0	0.83844	0.88102	0.65598	0.52154	0.59077	0.72693	0.68799	0.70292	0.68203	0.73744
3900.0	0.83396	0.88736	0.79672	0.46890	0.52076	0.80234	0.69693	0.48637	0.84648	0.99618
4000.0	1.03023									
	ZENITH SCAN STARTING AT 21. 7.29 ON 9/23/73, NORMALIZING FACTOR = 7.8229E 00									
2600.0	0.00016	0.00016	0.00017	0.00030	0.00020	0.00017	0.00017	0.00022	0.00017	0.00028
2700.0	0.00019	0.00021	0.00018	0.00019	0.00019	0.00022	0.00030	0.00018	0.00026	0.00031
2800.0	0.00019	0.00022	0.00023	0.00024	0.00027	0.00020	0.00023	0.00022	0.00024	0.00024
2900.0	0.00028	0.00026	0.00031	0.00044	0.00067	0.00131	0.00248	0.00431	0.00735	0.01243
3000.0	0.01771	0.02888	0.04194	0.07663	0.09764	0.13222	0.14835	0.19782	0.24137	0.24285
3100.0	0.28558	0.40741	0.42241	0.46860	0.50689	0.53089	0.51105	0.66233	0.63785	0.67784
3200.0	0.75292	0.77158	0.72528	0.68970	0.82294	0.87386	0.27742	1.09971	1.02007	1.13939
3300.0	1.21826	1.08787	1.10744	1.07925	1.03177	1.08522	0.97012	0.89734	0.98683	1.04018
3400.0	1.10013	1.02795	1.05123	1.06565	0.87615	0.94135	0.95710	0.95777	0.91724	0.90197
3500.0	1.00000	1.00119	0.93145	0.95034	1.06912	1.05246	0.95019	0.78760	0.70004	0.78330
3600.0	0.93399	0.80887	0.83859	0.89012	0.89166	0.91252	1.05585	1.01791	0.94561	0.97263
3700.0	0.99563	0.93071	0.88215	0.79246	0.71894	0.75660	0.83827	0.89721	1.02949	0.87788
3800.0	0.84096	0.89683	0.68926	0.53474	0.59593	0.74405	0.70162	0.71271	0.68943	0.72526
3900.0	0.80272	0.88436	0.80169	0.47410	0.54023	0.81120	0.70350	0.48216	0.82624	0.99190
4000.0	1.02607									
	ZENITH SCAN STARTING AT 21. 9.52 ON 9/23/73, NORMALIZING FACTOR = 7.6914E 00									
2600.0	0.00018	0.00020	0.00016	0.00050	0.00032	0.00018	0.00020	0.00024	0.00020	0.00016
2700.0	0.00021	0.00019	0.00020	0.00021	0.00024	0.00021	0.00020	0.00019	0.00021	0.00022
2800.0	0.00023	0.00023	0.00023	0.00028	0.00022	0.00021	0.00022	0.00024	0.00030	0.00034
2900.0	0.00024	0.00026	0.00030	0.00046	0.00065	0.00127	0.00245	0.00425	0.00743	0.01200
3000.0	0.01759	0.02891	0.04119	0.07825	0.10011	0.13488	0.15003	0.19551	0.24385	0.23746
3100.0	0.27490	0.40668	0.42367	0.47050	0.51121	0.53496	0.50750	0.66147	0.64766	0.68275
3200.0	0.75523	0.77164	0.72360	0.69095	0.80959	0.86827	1.06561	1.10762	1.01625	1.13056
3300.0	1.22872	1.07922	1.09077	1.06743	1.03573	1.09442	0.97814	0.90615	0.99209	1.04785
3400.0	1.11526	1.04311	1.05426	1.07443	0.88240	0.93128	0.95291	0.95203	0.91736	0.90137
3500.0	1.00000	1.00974	0.93499	0.96040	1.07067	1.05400	0.94339	0.79147	0.69555	0.79753
3600.0	0.94140	0.81400	0.84332	0.89867	0.86636	0.90513	1.03907	1.00457	0.92893	0.96313
3700.0	0.99165	0.92326	0.87187	0.78666	0.71014	0.75364	0.83310	0.89714	1.00952	0.86401
3800.0	0.82174	0.86488	0.66395	0.52078	0.58582	0.73461	0.69094	0.70230	0.68184	0.73248
3900.0	0.82366	0.87032	0.79555	0.46143	0.51694	0.80549	0.70244	0.48389	0.84977	0.99898
4000.0	1.03046									
	ZENITH SCAN STARTING AT 21.11.38 ON 9/23/73, NORMALIZING FACTOR = 7.4612E 00									
2600.0	0.00017	0.00021	0.00015	0.00022	0.00017	0.00016	0.00018	0.00016	0.00018	0.00023
2700.0	0.00026	0.00019	0.00018	0.00019	0.00018	0.00020	0.00019	0.00020	0.00019	0.00021
2800.0	0.00027	0.00020	0.00021	0.00025	0.00054	0.00024	0.00023	0.00032	0.00038	0.00026
2900.0	0.00026	0.00032	0.00032	0.00045	0.00071	0.00133	0.00245	0.00418	0.00739	0.01213
3000.0	0.01776	0.02844	0.04116	0.07808	0.09985	0.13801	0.15027	0.19975	0.24433	0.24678
3100.0	0.28648	0.41175	0.42943	0.47831	0.51975	0.54481	0.52259	0.67212	0.65052	0.68914
3200.0	0.75848	0.78496	0.73634	0.70123	0.83629	0.89924	1.09708	1.13231	1.04533	1.15534
3300.0	1.23918	1.09684	1.10915	1.08291	1.05809	1.12532	1.00046	0.93073	1.01501	1.04712
3400.0	1.09809	1.03254	1.05134	1.06713	0.88643	0.94941	0.96933	0.97126	0.92828	0.90933
3500.0	1.00000	1.00287	0.92980	0.93579	1.05220	1.03720	0.94488	0.78379	0.70014	0.78513
3600.0	0.95471	0.81438	0.84104	0.89491	0.89141	0.91134	1.05197	1.01118	0.93804	0.96041
3700.0	0.99153	0.93218	0.88509	0.79364	0.71787	0.76371	0.84788	0.90465	1.03524	0.89032
3800.0	0.83403	0.88876	0.67580	0.53651	0.60018	0.74186	0.70332	0.71952	0.69757	0.75675
3900.0	0.84771	0.89732	0.80685	0.50265	0.56665	0.78251	0.71815	0.48661	0.83963	0.99642
4000.0	1.02770									

Table VIII-58

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 9/23/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 21.13.24 ON 9/23/73. NORMALIZING FACTOR = 7.4227E 00										
2600.0	0.00016	0.00018	0.00022	0.00020	0.00022	0.00018	0.00025	0.00019	0.00019	0.00021
2700.0	0.00022	0.00023	0.00022	0.00020	0.00021	0.00022	0.00023	0.00025	0.00023	0.00022
2800.0	0.00025	0.00024	0.00030	0.00031	0.00022	0.00029	0.00023	0.00027	0.00034	0.00023
2900.0	0.00024	0.00027	0.00031	0.00047	0.00068	0.00123	0.00246	0.00413	0.00728	0.01213
3000.0	0.01745	0.02908	0.04208	0.07752	0.09964	0.13448	0.15145	0.19992	0.24676	0.24836
3100.0	0.28699	0.42106	0.43602	0.47568	0.50368	0.53655	0.50890	0.67234	0.65611	0.69000
3200.0	0.76414	0.78400	0.73591	0.69667	0.81987	0.87619	1.08123	1.12057	1.02695	1.14806
3300.0	1.23063	1.08064	1.09604	1.06847	1.03338	1.09835	0.98249	0.90014	0.99074	1.04690
3400.0	1.11080	1.03553	1.05446	1.07261	0.87580	0.94271	0.96609	0.96763	0.92505	0.90411
3500.0	1.00000	1.00471	0.93692	0.95102	1.06077	1.04888	0.94971	0.80125	0.71322	0.79874
3600.0	0.95491	0.82786	0.85180	0.90919	0.90057	0.92225	1.06563	1.03144	0.94909	0.95415
3700.0	0.98802	0.93016	0.88183	0.78524	0.70388	0.73393	0.82259	0.87941	1.01327	0.86501
3800.0	0.82340	0.87061	0.67011	0.52724	0.58183	0.72248	0.68594	0.70001	0.67608	0.72264
3900.0	0.82433	0.87782	0.79590	0.49125	0.54335	0.79812	0.70770	0.50397	0.82565	0.98739
4000.0	1.01413									
ZENITH SCAN STARTING AT 21.15.45 ON 9/23/73. NORMALIZING FACTOR = 7.3187E 00										
2600.0	0.00015	0.00018	0.00020	0.00018	0.00015	0.00019	0.00018	0.00017	0.00018	0.00016
2700.0	0.00019	0.00020	0.00020	0.00019	0.00021	0.00020	0.00018	0.00021	0.00024	0.00029
2800.0	0.00020	0.00021	0.00020	0.00023	0.00023	0.00027	0.00021	0.00028	0.00034	0.00028
2900.0	0.00025	0.00035	0.00033	0.00044	0.00066	0.00124	0.00241	0.00407	0.00734	0.01182
3000.0	0.01743	0.02814	0.04069	0.07967	0.09902	0.13793	0.15330	0.19945	0.24838	0.25080
3100.0	0.28485	0.41612	0.43459	0.48289	0.52228	0.54868	0.51965	0.67456	0.66285	0.70376
3200.0	0.77122	0.80364	0.75314	0.71793	0.83965	0.89692	1.09278	1.13229	1.03977	1.14796
3300.0	1.25456	1.10558	1.11751	1.09773	1.06712	1.12376	1.00170	0.92652	1.00802	1.06328
3400.0	1.12651	1.06359	1.07748	1.09439	0.90032	0.94305	0.96441	0.96535	0.92613	0.91080
3500.0	1.00000	1.01391	0.94177	0.95112	1.07335	1.05346	0.94528	0.78983	0.69896	0.78660
3600.0	0.95938	0.81933	0.84612	0.90519	0.90754	0.92681	1.06325	1.02854	0.95813	0.97465
3700.0	0.99989	0.94216	0.89550	0.79849	0.71570	0.75297	0.84308	0.89539	1.03554	0.88284
3800.0	0.83901	0.89404	0.68367	0.53042	0.58513	0.73443	0.69115	0.70489	0.68545	0.73170
3900.0	0.83186	0.88267	0.80884	0.50059	0.53445	0.81376	0.73039	0.49541	0.81929	0.96900
4000.0	1.02243									

Table VIII-59

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 11/ 3/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 0.35.34 ON 11/ 3/73, NORMALIZING FACTOR = 8.2618E-04									
2600.0	0.00630	0.00554	0.00576	0.01408	0.00538	0.00395	0.00463	0.00832	0.00480	0.00368
2700.0	0.00613	0.00373	0.00924	0.01946	0.00385	0.00787	0.01578	0.00422	0.00492	0.00561
2800.0	0.00806	0.00304	0.00341	0.00738	0.00490	0.00530	0.00425	0.00548	0.00389	0.01744
2900.0	0.01548	0.00417	0.00300	0.00492	0.00663	0.00706	0.02111	0.01194	0.01928	0.02426
3000.0	0.02819	0.04481	0.05772	0.10410	0.13126	0.17594	0.20719	0.26477	0.33026	0.34285
3100.0	0.44668	0.64874	0.72772	0.78191	0.80095	0.81277	0.81508	0.83302	0.83532	0.84395
3200.0	0.84772	0.86028	0.85869	0.86546	0.88200	0.88298	0.90067	0.90666	0.90334	0.91964
3300.0	0.92403	0.91824	0.92899	0.93358	0.93463	0.94540	0.94357	0.94240	0.95154	0.96027
3400.0	0.96494	0.96654	0.97255	0.97577	0.96953	0.97826	0.98341	0.98667	0.98850	0.99148
3500.0	1.00000	1.00370	1.00452	1.01066	1.01988	1.02312	1.02283	1.01929	1.01810	1.03020
3600.0	1.04097	1.03959	1.04842	1.05736	1.06357	1.07056	1.08257	1.08682	1.08916	1.09681
3700.0	1.10338	1.10525	1.10658	1.10618	1.10658	1.11462	1.12367	1.13155	1.14284	1.13822
3800.0	1.14219	1.14899	1.13956	1.13328	1.14504	1.15973	1.16120	1.16677	1.17101	1.18155
3900.0	1.19193	1.20287	1.20411	1.18368	1.19988	1.22835	1.22714	1.22003	1.25368	1.27109
4000.0	1.28057									
	ZENITH SCAN STARTING AT 1.10.12 ON 11/ 3/73, NORMALIZING FACTOR = 4.1641E-03									
2600.0	0.00215	0.00171	0.00191	0.00170	0.00258	0.00305	0.00146	0.00092	0.00098	0.00171
2700.0	0.00102	0.00090	0.02162	0.00100	0.00117	0.00103	0.00142	0.00181	0.00196	0.00145
2800.0	0.00170	0.00186	0.00169	0.00108	0.00160	0.01148	0.00208	0.00078	0.00073	0.00058
2900.0	0.00088	0.00092	0.00055	0.00111	0.00211	0.00200	0.00189	0.00215	0.00329	0.00458
3000.0	0.00774	0.03226	0.03511	0.02155	0.02598	0.03468	0.03873	0.05264	0.06635	0.06975
3100.0	0.11581	0.49960	0.94021	1.25079	1.25031	1.24858	1.24684	1.24455	1.24198	1.23945
3200.0	1.23601	1.23865	1.24029	1.24252	1.24611	1.24786	1.25047	1.25398	1.25559	1.25830
3300.0	1.26149	1.26481	1.26882	1.27366	1.27622	1.28006	1.28465	1.28602	1.29097	1.29481
3400.0	1.29600	1.29993	1.30137	1.28072	1.25114	1.23937	1.10512	1.16340	1.05874	0.93933
3500.0	1.00000	0.91319	0.81776	0.87059	0.77718	0.69576	0.76981	0.65215	0.61586	0.64883
3600.0	0.56381	0.54710	0.40405	0.34563	0.37191	0.33963	0.30982	0.33896	0.28863	0.25825
3700.0	0.28719	0.23989	0.23872	0.23558	0.22089	0.22337	0.22627	0.22569	0.22793	0.22710
3800.0	0.22778	0.22898	0.22731	0.22612	0.22838	0.23143	0.23186	0.23294	0.23360	0.23557
3900.0	0.23772	0.23987	0.24020	0.23583	0.23904	0.24498	0.24454	0.24281	0.25016	0.25364
4000.0	0.25553									
	ZENITH SCAN STARTING AT 0. 4.51 ON 11/ 3/73, NORMALIZING FACTOR = 1.3028E 00									
2600.0	0.00029	0.00047	0.00024	0.00039	0.00017	0.00028	0.00093	0.00055	0.00035	0.00032
2700.0	0.00020	0.00057	0.00050	0.00039	0.00041	0.00031	0.00036	0.00055	0.00033	0.00103
2800.0	0.00092	0.00098	0.00036	0.00032	0.00476	0.00031	0.00057	0.00018	0.00026	0.00034
2900.0	0.00036	0.00031	0.00034	0.00044	0.00041	0.00047	0.00051	0.00104	0.00098	0.00149
3000.0	0.00254	0.00297	0.00363	0.00627	0.00799	0.01012	0.01129	0.01572	0.01907	0.01949
3100.0	0.02456	0.03703	0.04234	0.04992	0.05933	0.06795	0.07162	0.10251	0.11048	0.14049
3200.0	0.16029	0.20514	0.18620	0.22490	0.31831	0.30258	0.47579	0.53234	0.44623	0.66701
3300.0	0.71556	0.57026	0.70595	0.71741	0.67242	0.80648	0.71584	0.64105	0.75594	0.85844
3400.0	0.88967	0.86590	0.93222	0.94331	0.74627	0.84786	0.89379	0.89671	0.88007	0.87804
3500.0	1.00000	0.99746	0.93038	0.59384	0.00678	0.00675	0.00674	0.00679	0.00675	0.00673
3600.0	0.00678	0.00675	0.00673	0.00679	0.00677	0.00675	0.00683	0.00679	0.00676	0.00683
3700.0	0.00679	0.00677	0.00682	0.00678	0.00675	0.00680	0.00677	0.00674	0.00677	0.00675
3800.0	0.00671	0.00675	0.00673	0.00672	0.00673	0.00674	0.00671	0.00673	0.00676	0.00669
3900.0	0.00671	0.00667	0.00661	0.00660	0.00665	0.00666	0.00669	0.00673	0.00676	0.00678
4000.0	0.00682									
	ZENITH SCAN STARTING AT 0. 9.54 ON 11/ 3/73, NORMALIZING FACTOR = 1.1195E 00									
2600.0	0.00039	0.00054	0.00054	0.00067	0.00075	0.00025	0.00054	0.00035	0.00048	0.00053
2700.0	0.00020	0.00070	0.00046	0.00039	0.00034	0.00044	0.00045	0.00047	0.00062	0.00017
2800.0	0.00036	0.00072	0.00027	0.00053	0.00048	0.00027	0.00032	0.00019	0.00033	0.00021
2900.0	0.00071	0.00044	0.00038	0.00037	0.00054	0.00059	0.00086	0.00087	0.00101	0.00172
3000.0	0.00205	0.00320	0.00422	0.00692	0.00893	0.01090	0.01212	0.01674	0.02012	0.02048
3100.0	0.02620	0.03792	0.04340	0.05200	0.06080	0.06974	0.07479	0.10592	0.11349	0.14048
3200.0	0.15995	0.20725	0.18739	0.21552	0.31643	0.30545	0.47840	0.51926	0.44951	0.67548
3300.0	0.69828	0.56587	0.70556	0.70396	0.66318	0.81501	0.73065	0.63800	0.75748	0.86052
3400.0	0.88959	0.86179	0.93409	0.93387	0.74863	0.86233	0.90016	0.90521	0.88653	0.88836
3500.0	1.00000	0.98864	0.92625	0.59484	1.11621	1.10131	0.99944	0.85095	0.75513	0.90021
3600.0	1.06539	0.92047	0.99218	1.04820	1.06839	1.11514	1.23522	1.23717	1.16029	1.21268
3700.0	1.24072	1.19279	1.11707	0.99652	0.91716	0.99263	1.10412	1.21258	1.37716	1.17901
3800.0	1.13905	1.19876	0.89622	0.71661	0.85659	1.04123	0.98439	1.00805	0.98775	1.07434
3900.0	1.23198	1.32151	1.17692	0.66900	0.83486	1.28013	1.07555	0.78942	1.37597	1.63232
4000.0	1.68246									
	ZENITH SCAN STARTING AT 0.36.39 ON 11/ 3/73, NORMALIZING FACTOR = 1.2290E 00									
2600.0	0.00074	0.00034	0.00037	0.00070	0.00040	0.00033	0.00085	0.00051	0.00022	0.00053
2700.0	0.00042	0.00081	0.00050	0.00037	0.00028	0.00037	0.00030	0.00063	0.00031	0.00049
2800.0	0.00064	0.00067	0.00024	0.00051	0.00059	0.00098	0.00209	0.00039	0.00034	0.00034
2900.0	0.00027	0.00067	0.00055	0.00065	0.00018	0.00063	0.00073	0.00103	0.00133	0.00235
3000.0	0.00208	0.00310	0.00456	0.00673	0.00799	0.01049	0.01143	0.01628	0.01912	0.02279
3100.0	0.02564	0.03819	0.04257	0.05062	0.05998	0.06794	0.07233	0.10421	0.11249	0.13923
3200.0	0.15883	0.20249	0.18572	0.21980	0.31169	0.29562	0.48014	0.52074	0.43382	0.66027
3300.0	0.70146	0.55428	0.70066	0.70775	0.66142	0.81467	0.73240	0.63161	0.75762	0.85599
3400.0	0.87626	0.83251	0.91936	0.92520	0.72977	0.85043	0.88589	0.88951	0.87580	0.87627
3500.0	1.00000	0.97982	0.91811	0.97416	1.10026	1.08000	0.98662	0.83661	0.74649	0.89257
3600.0	1.05550	0.90938	0.97681	1.04097	1.05249	1.09250	1.26488	1.22671	1.15133	1.20586
3700.0	1.23705	1.18812	1.12321	1.01459	0.93553	1.01367	1.11602	1.21115	1.38910	1.18648
3800.0	1.16579	1.21249	0.91447	0.74002	0.87460	1.07033	1.01942	1.04253	1.01500	1.13220
3900.0	1.27679	1.38626	1.22991	0.72374	0.87798	1.29189	0.91985	0.85694	1.45089	1.73957
4000.0	1.79987									
	ZENITH SCAN STARTING AT 0.20.59 ON 11/ 3/73, NORMALIZING FACTOR = 1.2793E 00									
2600.0	0.00120	0.00053	0.00041	0.00043	0.00026	0.00074	0.00128	0.00022	0.00024	0.00069
2700.0	0.00031	0.00039	0.00045	0.00044	0.00073	0.00046	0.00052	0.00030	0.00032	0.00108
2800.0	0.00100	0.00033	0.00089	0.00039	0.00043	0.00060	0.00041	0.00062	0.00025	0.00035
2900.0	0.00025	0.00042	0.00048	0.00032	0.00041	0.00065	0.00070	0.00093	0.00130	0.00164
3000.0	0.00206	0.00303	0.00392	0.00672	0.00799	0.01068	0.01157	0.01599	0.01949	0.02018
3100.0	0.02577	0.03779	0.04199	0.05069	0.05943	0.06802	0.07061	0.10295	0.11067	0.13905
3200.0	0.16059	0.20311	0.18436	0.22007	0.31255	0.29684	0.47327	0.51976	0.43386	0.65110
3300.0	0.69933	0.55662	0.69412	0.70940	0.66225	0.80362	0.73306	0.63052	0.75024	0.85217
3400.0	0.88341	0.86074	0.92592	0.94293	0.74273	0.84638	0.88969	0.89475	0.87443	0.87157
3500.0	1.00000	0.98743	0.92636	0.95567	1.10828	1.09456	0.99577	0.83903	0.75375	0.88899
3600.0	1.04974	0.92703	0.97669	1.05453	1.08239	1.13170	1.30992	1.27750	1.20016	1.25838
3700.0	1.32135	1.33284	1.28423	1.19420	1.10330	1.16957	1.31657	1.43681	1.71466	1.52418
3800.0	1.53698	1.68208	1.33760	1.10024	1.25532	1.60709	1.57086	1.67951	1.70983	1.92872
3900.0	2.29499	2.54473	2.41946	1.45868	1.64941	2.58623	2.36239	1.69457	3.06028	3.85781
4000.0	4.20530									

Table VIII-60

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED NUV ENERGY CURVES FROM FLIGHT OF 11/ 3/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 0.38.41 ON 11/ 3/73, NORMALIZING FACTOR = 1.1528E 00										
2600.0	0.00055	0.00060	0.00050	0.00047	0.00040	0.00017	0.00042	0.00049	0.00056	0.00112
2700.0	0.00067	0.00052	0.00051	0.00028	0.00042	0.00062	0.00032	0.00036	0.00030	0.00042
2800.0	0.00030	0.00024	0.00021	0.00033	0.00032	0.00024	0.00031	0.00040	0.00119	0.00073
2900.0	0.00125	0.00060	0.00056	0.00049	0.00043	0.00050	0.00086	0.00093	0.00140	0.00220
3000.0	0.00261	0.00373	0.00504	0.00790	0.00957	0.01325	0.01448	0.01893	0.02299	0.02363
3100.0	0.03049	0.04495	0.05051	0.05958	0.06920	0.07913	0.08394	0.11836	0.12645	0.15656
3200.0	0.17772	0.22677	0.20667	0.24037	0.34668	0.33369	0.51946	0.55593	0.47535	0.71097
3300.0	0.72861	0.59077	0.73790	0.73271	0.69093	0.85250	0.77166	0.66975	0.79468	0.89097
3400.0	0.92055	0.88595	0.95194	0.94737	0.75087	0.85020	0.89540	0.91149	0.89267	0.88573
3500.0	1.00000	0.98675	0.91837	0.97537	1.08667	1.07086	0.97222	0.83038	0.74303	0.90339
3600.0	1.04191	0.91196	0.96566	1.01688	1.02243	1.06100	1.21107	1.16959	1.08427	1.14538
3700.0	1.16573	1.11753	1.04532	0.94430	0.87068	0.94702	1.03739	1.14423	1.27581	1.07906
3800.0	1.03746	1.08510	0.81907	0.64230	0.74755	0.93255	0.88104	0.90833	0.89527	0.98623
3900.0	1.12373	1.19596	1.06196	0.63224	0.75678	1.10625	0.92366	0.70802	1.20202	1.39957
4000.0	1.45733									
ZENITH SCAN STARTING AT 2. 9.51 ON 11/ 3/73, NORMALIZING FACTOR = 1.2849E 00										
2600.0	0.00191	0.00019	0.00042	0.00032	0.00040	0.00101	0.00043	0.00046	0.00045	0.00041
2700.0	0.00029	0.00030	0.00042	0.00026	0.00020	0.00038	0.00094	0.00062	0.00033	0.00095
2800.0	0.00037	0.00032	0.00028	0.00045	0.00051	0.00035	0.00056	0.00015	0.00130	0.00034
2900.0	0.00019	0.00060	0.00028	0.00040	0.00043	0.00085	0.00073	0.00114	0.00160	0.00194
3000.0	0.00254	0.00356	0.00461	0.00794	0.00966	0.01296	0.01423	0.01863	0.02339	0.02386
3100.0	0.02996	0.04543	0.04994	0.05959	0.06986	0.07993	0.08374	0.11903	0.12915	0.15982
3200.0	0.17778	0.22695	0.20751	0.24698	0.34605	0.33099	0.51256	0.56586	0.47486	0.69960
3300.0	0.74770	0.59976	0.73417	0.74407	0.69801	0.83608	0.76134	0.66150	0.78164	0.87768
3400.0	0.90823	0.88003	0.94087	0.95947	0.74875	0.85208	0.89371	0.89809	0.88151	0.87786
3500.0	1.00000	0.99153	0.92406	0.97953	1.09582	1.07813	0.97465	0.82327	0.73660	0.87041
3600.0	1.02246	0.89051	0.94114	0.99239	1.00264	1.05215	1.21068	1.16379	1.08550	1.13631
3700.0	1.15573	1.11456	1.03907	0.92314	0.84675	0.87258	0.97940	1.11749	1.24810	1.04232
3800.0	1.02711	1.06047	0.81516	0.64774	0.75295	0.92291	0.87859	0.89997	0.88049	0.96909
3900.0	1.08972	1.16664	1.01564	0.62195	0.75731	1.08069	0.89474	0.68182	1.20643	1.39561
4000.0	1.43824									
ZENITH SCAN STARTING AT 0.22.30 ON 11/ 3/73, NORMALIZING FACTOR = 1.3232E 00										
2600.0	0.00045	0.00239	0.00084	0.00037	0.00044	0.00079	0.00019	0.00023	0.00063	0.00037
2700.0	0.00033	0.00069	0.00024	0.00022	0.00019	0.00026	0.00063	0.00054	0.00029	0.00033
2800.0	0.00028	0.00058	0.00032	0.00048	0.00046	0.00037	0.00028	0.00026	0.00069	0.00310
2900.0	0.00071	0.00071	0.00044	0.00057	0.00065	0.00132	0.00077	0.00296	0.00197	0.00221
3000.0	0.00300	0.00369	0.00577	0.00829	0.01020	0.01317	0.01447	0.01987	0.02550	0.02509
3100.0	0.03234	0.04802	0.05376	0.06338	0.07433	0.08591	0.09214	0.12888	0.13767	0.17132
3200.0	0.19520	0.25087	0.22514	0.25894	0.37784	0.36899	0.56078	0.60437	0.52342	0.76231
3300.0	0.79541	0.65411	0.79301	0.79619	0.75711	0.90099	0.80851	0.71602	0.83111	0.93462
3400.0	0.97022	0.94100	1.01305	1.01270	0.81870	0.92626	0.95887	0.96137	0.94036	0.93259
3500.0	1.00000	1.03065	0.97617	1.03657	1.15656	1.13668	1.02556	0.86941	0.77740	0.93028
3600.0	1.06952	0.93178	0.98753	1.03772	1.04970	1.09594	1.26161	1.21757	1.13185	1.19295
3700.0	1.20908	1.15917	1.08220	0.95833	0.88636	0.95727	1.05348	1.15794	1.30431	1.10899
3800.0	1.07947	1.12912	0.84168	0.67174	0.79650	0.97014	0.91463	0.92734	0.90399	0.98319
3900.0	1.12301	1.20101	1.07271	0.62693	0.75615	1.13951	0.95580	0.70895	1.22532	1.43645
4000.0	1.47824									
ZENITH SCAN STARTING AT 0.15.34 ON 11/ 3/73, NORMALIZING FACTOR = 1.4951E 00										
2600.0	0.00045	0.00033	0.00163	0.00041	0.00090	0.00026	0.00014	0.00048	0.00054	0.00063
2700.0	0.00078	0.00033	0.00055	0.00090	0.00050	0.00026	0.00019	0.00033	0.00041	0.00062
2800.0	0.00027	0.00059	0.00035	0.00074	0.00094	0.00026	0.00062	0.00043	0.00042	0.00020
2900.0	0.00048	0.00029	0.00035	0.00024	0.00042	0.00071	0.00067	0.00151	0.00138	0.00214
3000.0	0.00244	0.00387	0.00500	0.00839	0.00996	0.01286	0.01392	0.01934	0.02382	0.02443
3100.0	0.03207	0.04704	0.05278	0.06224	0.07256	0.08297	0.08757	0.12808	0.13768	0.17030
3200.0	0.19399	0.24420	0.22293	0.25808	0.36101	0.34381	0.53318	0.59234	0.49799	0.73358
3300.0	0.77880	0.62444	0.76211	0.76637	0.71877	0.85925	0.77966	0.67831	0.80136	0.89539
3400.0	0.93009	0.89744	0.95936	0.96162	0.76028	0.87447	0.90564	0.91103	0.89108	0.88339
3500.0	1.00000	0.98658	0.92405	0.97316	1.09543	1.07364	0.97292	0.81816	0.73604	0.86591
3600.0	1.02654	0.87873	0.93701	0.98293	0.99256	1.04918	1.19097	1.15247	1.07335	1.12084
3700.0	1.14956	1.10305	1.03348	0.91441	0.83366	0.89830	0.99333	1.08934	1.23393	1.04338
3800.0	0.99521	1.05572	0.79368	0.63362	0.74584	0.90306	0.85674	0.87303	0.84932	0.93885
3900.0	1.06038	1.14112	0.99922	0.60806	0.71347	1.07237	0.88596	0.64377	1.15005	1.33733
4000.0	1.38190									
ZENITH SCAN STARTING AT 1. 3.12 ON 11/ 3/73, NORMALIZING FACTOR = 1.6994E 00										
2600.0	0.00031	0.00035	0.00046	0.00057	0.00017	0.00022	0.00055	0.00053	0.00044	0.00028
2700.0	0.00029	0.00031	0.00017	0.00040	0.00071	0.00036	0.00030	0.00045	0.00028	0.00021
2800.0	0.00034	0.00017	0.00037	0.00044	0.00029	0.00031	0.00030	0.00050	0.00020	0.00045
2900.0	0.00052	0.00111	0.00047	0.00034	0.00037	0.00080	0.00074	0.00105	0.00241	0.00208
3000.0	0.00290	0.00395	0.00494	0.00817	0.01005	0.01321	0.01496	0.01998	0.02464	0.02552
3100.0	0.03365	0.04917	0.05578	0.06628	0.07763	0.08940	0.09607	0.13636	0.14683	0.18096
3200.0	0.20606	0.26418	0.23900	0.27140	0.38892	0.37558	0.58204	0.62213	0.53463	0.76764
3300.0	0.77859	0.65191	0.78693	0.78308	0.74252	0.88605	0.79545	0.70095	0.82294	0.90858
3400.0	0.94775	0.90857	0.97231	0.98931	0.77506	0.88747	0.91442	0.91703	0.89668	0.88990
3500.0	1.00000	0.99095	0.92601	0.97170	1.09263	1.06969	0.96181	0.81478	0.71731	0.87669
3600.0	1.00459	0.86934	0.92609	0.97347	0.98150	1.02965	1.17340	1.12658	1.04982	1.10328
3700.0	1.12880	1.07325	0.98592	0.90622	0.82209	0.87016	0.97006	1.07182	1.21202	1.00713
3800.0	0.99411	1.04455	0.77846	0.62325	0.69604	0.81223	0.83918	0.84953	0.83036	0.90581
3900.0	1.02612	1.09625	0.96675	0.55792	0.68905	1.03356	0.85471	0.61975	1.10905	1.29272
4000.0	1.33430									
ZENITH SCAN STARTING AT 0.11. 9 ON 11/ 3/73, NORMALIZING FACTOR = 1.7979E 00										
2600.0	0.00032	0.00046	0.00048	0.00066	0.00030	0.00022	0.00027	0.00021	0.00029	0.00011
2700.0	0.00018	0.00021	0.00052	0.00022	0.00024	0.00018	0.00039	0.00043	0.00052	0.00028
2800.0	0.00037	0.00019	0.00009	0.00039	0.00034	0.00031	0.00030	0.00034	0.00032	0.00029
2900.0	0.00028	0.00029	0.00025	0.00051	0.00066	0.00056	0.00075	0.00121	0.00151	0.00204
3000.0	0.00249	0.00368	0.00497	0.00805	0.00992	0.01291	0.01427	0.01993	0.02522	0.02565
3100.0	0.03372	0.05006	0.05676	0.06726	0.07935	0.09089	0.09627	0.14091	0.15257	0.18895
3200.0	0.21446	0.27040	0.24781	0.28517	0.39861	0.38731	0.59681	0.64033	0.54221	0.75862
3300.0	0.83140	0.67123	0.79243	0.80725	0.75261	0.88597	0.81705	0.71674	0.82325	0.90878
3400.0	0.94817	0.91142	0.96025	0.97670	0.78664	0.87551	0.91518	0.92255	0.89752	0.89212
3500.0	1.00000	0.99626	0.93101	0.98687	1.07723	1.06206	0.97178	0.82817	0.74263	0.84423
3600.0	0.97297	0.87281	0.90855	0.98468	0.96831	1.00478	1.22722	1.13814	1.06306	1.10900
3700.0	1.13019	1.08610	1.02030	0.90008	0.82104	0.87999	0.97489	1.06416	1.20555	1.01595
3800.0	0.99839	1.05209	0.78681	0.62834	0.74088	0.88723	0.84675	0.86221	0.83416	0.92141
3900.0	1.03413	1.11128	0.97185	0.58765	0.72091	1.02716	0.84655	0.63976	1.09344	1.26751
4000.0	1.30770									

Table VIII-61

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED UUV ENERGY CURVES FROM FLIGHT OF 11/ 3/73

WAVELENGTH	00	10	20	30	40	50	60	70	80
		ZENITH SCAN STARTING AT 0.32.58 ON 11/ 3/73, NORMALIZING FACTOR = 1.8611E 00							
2600.0	0.00029	0.00019	0.00018	0.00026	0.00009	0.00036	0.00041	0.00057	0.00018
2700.0	0.00042	0.00047	0.00024	0.00021	0.00034	0.00027	0.00036	0.00090	0.00062
2800.0	0.00031	0.00025	0.00079	0.00052	0.00029	0.00030	0.00035	0.00024	0.00016
2900.0	0.00031	0.00041	0.00040	0.00055	0.00070	0.00058	0.00090	0.00107	0.00146
3000.0	0.00284	0.00450	0.00494	0.00907	0.01046	0.01378	0.01505	0.02083	0.02631
3100.0	0.03422	0.05313	0.05900	0.07087	0.08416	0.09667	0.10253	0.14790	0.15949
3200.0	0.22930	0.28631	0.25932	0.30552	0.42353	0.41417	0.60293	0.67420	0.58606
3300.0	0.85598	0.70934	0.81423	0.82495	0.76919	0.88619	0.82195	0.73130	0.82669
3400.0	0.96118	0.92673	0.97089	0.98587	0.80920	0.88008	0.91477	0.92147	0.89644
3500.0	1.00000	0.99984	0.93202	0.96648	1.08123	1.06631	0.97287	0.82362	0.73569
3600.0	0.99956	0.87435	0.91394	0.97366	0.97400	1.00392	1.15323	1.11997	1.04569
3700.0	1.11791	1.05781	1.00278	0.90989	0.83254	0.88851	0.97751	1.07058	1.22811
3800.0	1.01152	1.04288	0.79318	0.66075	0.73027	0.89515	0.84324	0.86231	0.84071
3900.0	0.97851	1.10972	0.97027	0.57085	0.70602	1.03717	0.84191	0.61413	1.08461
4000.0	1.30293								
		ZENITH SCAN STARTING AT 0.21.55 ON 11/ 3/73, NORMALIZING FACTOR = 1.9473E 00							
2600.0	0.00034	0.00029	0.00233	0.00048	0.00036	0.00030	0.00016	0.00027	0.00028
2700.0	0.00044	0.00032	0.00014	0.00031	0.00022	0.00032	0.00020	0.00015	0.00017
2800.0	0.00127	0.00098	0.00023	0.00045	0.00021	0.00035	0.00026	0.00026	0.00112
2900.0	0.00070	0.00067	0.00036	0.00025	0.00045	0.00056	0.00087	0.00108	0.00161
3000.0	0.00373	0.00402	0.00504	0.00859	0.01051	0.01390	0.01539	0.02139	0.01715
3100.0	0.03211	0.05349	0.06113	0.07333	0.08629	0.10033	0.10874	0.15278	0.16474
3200.0	0.17491	0.27990	0.16170	0.25945	0.43481	0.41418	0.61516	0.68182	0.57838
3300.0	0.86262	0.70324	0.82179	0.83294	0.77971	0.91385	0.83704	0.73869	0.84696
3400.0	0.96965	0.92559	0.97642	0.99429	0.80171	0.89652	0.92699	0.93407	0.90632
3500.0	1.00000	1.00035	0.93719	0.97011	1.08006	1.06819	0.97298	0.82995	0.74469
3600.0	1.00505	0.88146	0.91949	0.97075	0.95886	0.99762	1.15408	1.11222	1.04172
3700.0	1.10865	1.05432	1.00700	0.90432	0.81680	0.85546	0.95965	1.03701	1.21865
3800.0	1.00210	1.04910	0.78639	0.66283	0.73541	0.89308	0.84120	0.85640	0.82992
3900.0	1.03186	1.10831	0.96979	0.57049	0.71774	1.02851	0.83469	0.61003	1.06117
4000.0	1.28261								
		ZENITH SCAN STARTING AT 0.11.24 ON 11/ 3/73, NORMALIZING FACTOR = 2.0251E 00							
2600.0	0.00037	0.00028	0.00058	0.00027	0.00041	0.00042	0.00016	0.00034	0.00032
2700.0	0.00031	0.00027	0.00130	0.00059	0.00043	0.00022	0.00021	0.00018	0.00026
2800.0	0.00035	0.00028	0.00038	0.00038	0.00054	0.00021	0.00019	0.00035	0.00103
2900.0	0.00050	0.00051	0.00075	0.00041	0.00059	0.00055	0.00074	0.00118	0.00137
3000.0	0.00267	0.00384	0.00502	0.00961	0.01089	0.01434	0.01585	0.01454	0.01350
3100.0	0.03749	0.05588	0.06355	0.07593	0.09039	0.10351	0.11044	0.16081	0.17448
3200.0	0.16061	0.30890	0.23746	0.28275	0.44664	0.34812	0.59634	0.70194	0.60064
3300.0	0.88681	0.72604	0.83506	0.85353	0.80337	0.92364	0.84964	0.75193	0.84957
3400.0	0.97602	0.93931	0.98438	1.00339	0.80418	0.88416	0.92219	0.92991	0.90435
3500.0	1.00000	1.00014	0.93544	0.96745	1.07951	1.06660	0.97692	0.82004	0.74022
3600.0	1.00387	0.87373	0.90619	0.95922	0.96741	0.99396	1.14776	1.11267	1.04319
3700.0	1.10818	1.05102	0.99870	0.90065	0.82411	0.87785	0.96979	1.05226	1.22480
3800.0	1.00894	1.04265	0.78778	0.62048	0.73198	0.90269	0.85271	0.86156	0.83726
3900.0	1.03399	1.10444	0.97626	0.58000	0.71721	0.94830	0.83918	0.61314	1.07174
4000.0	1.27784								
		ZENITH SCAN STARTING AT 0.42.43 ON 11/ 3/73, NORMALIZING FACTOR = 2.0952E 00							
2600.0	0.00027	0.00017	0.00036	0.00083	0.00034	0.00059	0.00052	0.00024	0.00027
2700.0	0.00040	0.00023	0.00030	0.00022	0.00136	0.00062	0.00040	0.00023	0.00024
2800.0	0.00024	0.00022	0.00038	0.00033	0.00017	0.00041	0.00057	0.00033	0.00042
2900.0	0.00013	0.00026	0.00037	0.00037	0.00053	0.00065	0.00104	0.00105	0.00135
3000.0	0.00232	0.00413	0.00524	0.00911	0.01105	0.01450	0.01600	0.01149	0.01819
3100.0	0.03941	0.05793	0.06566	0.07824	0.09114	0.10852	0.11762	0.16524	0.17150
3200.0	0.12234	0.31805	0.24658	0.28395	0.46487	0.38446	0.65802	0.71064	0.61701
3300.0	0.88994	0.74404	0.85226	0.85741	0.80669	0.93297	0.84658	0.75779	0.85647
3400.0	0.98524	0.94470	0.99429	1.00606	0.82349	0.90733	0.93664	0.94086	0.91129
3500.0	1.00000	1.00068	0.93877	0.96540	1.08703	1.07157	0.97464	0.82404	0.73318
3600.0	1.00802	0.87447	0.91931	0.97360	0.97736	1.01417	1.15455	1.12685	1.03949
3700.0	1.10497	1.04593	0.98791	0.89602	0.82204	0.87677	0.96085	1.04356	1.17743
3800.0	0.98438	1.06589	0.79111	0.61496	0.70443	0.87789	0.82526	0.84281	0.82550
3900.0	1.01774	1.16349	0.96809	0.57331	0.70651	1.01671	0.85044	0.48555	1.05817
4000.0	1.27283								
		ZENITH SCAN STARTING AT 0.22.11 ON 11/ 3/73, NORMALIZING FACTOR = 2.3166E 00							
2600.0	0.00061	0.00021	0.00020	0.00027	0.00017	0.00019	0.00028	0.00065	0.00061
2700.0	0.00023	0.00064	0.00040	0.00040	0.00030	0.00034	0.00024	0.00038	0.00046
2800.0	0.00021	0.00028	0.00015	0.00022	0.00032	0.00022	0.00039	0.00032	0.00016
2900.0	0.00022	0.00030	0.00083	0.00098	0.00034	0.00057	0.00096	0.00079	0.00035
3000.0	0.00267	0.00393	0.00539	0.00912	0.01144	0.01540	0.01605	0.01624	0.03080
3100.0	0.04233	0.06282	0.07203	0.08696	0.10288	0.12034	0.13020	0.18535	0.11979
3200.0	0.25506	0.34924	0.32056	0.35189	0.48311	0.48457	0.69034	0.74212	0.64180
3300.0	0.92056	0.76584	0.87318	0.87521	0.82497	0.95048	0.86317	0.77217	0.87433
3400.0	1.00161	0.95216	0.99988	1.01264	0.82723	0.91400	0.94077	0.94620	0.89965
3500.0	1.00000	0.99580	0.93308	0.96509	1.07139	1.05581	0.96133	0.81253	0.72837
3600.0	0.98796	0.86367	0.89535	0.95148	0.95845	0.98387	1.13887	1.09709	1.02219
3700.0	1.08768	1.03270	0.98031	0.88092	0.80884	0.86102	0.95052	1.02161	1.16421
3800.0	0.95775	1.01674	0.77440	0.60129	0.70336	0.86355	0.81737	0.83550	0.80985
3900.0	0.98976	1.07201	0.94258	0.53425	0.53994	1.00571	0.83732	0.38851	1.01989
4000.0	1.24630								
		ZENITH SCAN STARTING AT 0.33.52 ON 11/ 3/73, NORMALIZING FACTOR = 2.4583E 00							
2600.0	0.00013	0.00018	0.00011	0.00034	0.00020	0.00024	0.00027	0.00018	0.00022
2700.0	0.00037	0.00023	0.00019	0.00056	0.00028	0.00027	0.00012	0.00018	0.00036
2800.0	0.00031	0.00018	0.00030	0.00033	0.00021	0.00019	0.00140	0.00027	0.00037
2900.0	0.00034	0.00035	0.00055	0.00039	0.00037	0.00057	0.00086	0.00090	0.00140
3000.0	0.00329	0.00403	0.00531	0.00951	0.01179	0.01620	0.01306	0.01952	0.03203
3100.0	0.04342	0.06441	0.07347	0.09210	0.10993	0.12879	0.13807	0.05724	0.03462
3200.0	0.30046	0.37124	0.33508	0.21130	0.51178	0.50713	0.71300	0.76983	0.67347
3300.0	0.94349	0.79676	0.89105	0.89548	0.85224	0.96647	0.86907	0.79064	0.88850
3400.0	1.01653	0.97186	1.01431	1.02622	0.84408	0.91848	0.94156	0.94564	0.91406
3500.0	1.00000	1.00540	0.93955	0.94930	1.06570	1.06346	0.97362	0.82616	0.73880
3600.0	0.99834	0.87249	0.90392	0.95919	0.96270	0.98942	1.14306	1.10441	1.02840
3700.0	1.09760	1.03870	0.98511	0.88920	0.81553	0.86675	0.95487	1.02704	1.16125
3800.0	0.95986	1.01301	0.77366	0.61931	0.69943	0.85830	0.81340	0.83202	0.80840
3900.0	0.98264	1.07432	0.94561	0.55523	0.64707	1.02559	0.86608	0.60372	1.01781
4000.0	1.24327								

Table VIII-62

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 11/ 3/73

ZENITH SCAN STARTING AT 1. 8.59 ON 11/ 3/73, NORMALIZING FACTOR = 2.4994E 00

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
2600.0	0.00023	0.00121	0.00103	0.00021	0.00020	0.00028	0.00028	0.00034	0.00017	0.00029
2700.0	0.00269	0.00045	0.00041	0.00076	0.00026	0.00042	0.00063	0.00032	0.00015	0.00028
2800.0	0.00027	0.00024	0.00076	0.00035	0.00020	0.00058	0.00066	0.00024	0.00024	0.00022
2900.0	0.00022	0.00039	0.00038	0.00031	0.00061	0.00085	0.00095	0.00136	0.00154	0.00176
3000.0	0.00293	0.00423	0.00554	0.00959	0.01218	0.01674	0.01667	0.02468	0.03301	0.03467
3100.0	0.04643	0.06882	0.07983	0.09650	0.11506	0.13457	0.14673	0.14097	0.18313	0.27422
3200.0	0.30950	0.38151	0.35156	0.38247	0.51835	0.51344	0.71288	0.78781	0.66741	0.86298
3300.0	0.95302	0.79148	0.88693	0.89997	0.85132	0.95974	0.87708	0.78773	0.88556	0.96506
3400.0	1.01345	0.96275	0.99924	1.01858	0.82750	0.89749	0.93307	0.94825	0.91164	0.89889
3500.0	1.00000	1.00796	0.93557	0.96371	1.07308	1.05805	0.96173	0.81625	0.72777	0.85002
3600.0	0.99269	0.86191	0.89975	0.95218	0.95599	0.97736	1.13150	1.09428	1.01987	1.05816
3700.0	1.08862	1.03071	0.97601	0.86588	0.80837	0.86070	0.94180	1.01470	1.14896	0.99636
3800.0	0.94950	1.00252	0.78125	0.61749	0.68206	0.85276	0.80769	0.81577	0.79642	0.85632
3900.0	0.96703	1.03400	0.94192	0.43980	0.58779	0.96105	0.80062	0.47025	0.99872	1.18258
4000.0	1.22575									

ZENITH SCAN STARTING AT 0.35. 2 ON 11/ 3/73, NORMALIZING FACTOR = 2.5774E 00

2600.0	0.00028	0.00030	0.00024	0.00022	0.00021	0.00026	0.00045	0.00029	0.00046	0.00122
2700.0	0.00042	0.00021	0.00035	0.00029	0.00029	0.00023	0.00039	0.00032	0.00038	0.00031
2800.0	0.00045	0.00019	0.00028	0.00020	0.00061	0.00038	0.00055	0.00021	0.00025	0.00033
2900.0	0.00035	0.00031	0.00042	0.00061	0.00039	0.00062	0.00102	0.00150	0.00167	0.00242
3000.0	0.00287	0.00423	0.00561	0.00958	0.01209	0.01693	0.01878	0.02642	0.03364	0.03527
3100.0	0.04612	0.06967	0.07995	0.09783	0.11719	0.13727	0.14726	0.20848	0.22329	0.27719
3200.0	0.31273	0.38884	0.35465	0.37847	0.52626	0.52276	0.71403	0.78191	0.68930	0.87530
3300.0	0.95701	0.80904	0.89437	0.90158	0.85956	0.97075	0.87533	0.79182	0.88671	0.96572
3400.0	1.01085	0.96495	1.00690	1.01966	0.83778	0.91161	0.94492	0.94913	0.91552	0.90498
3500.0	1.00000	1.00023	0.93674	0.95797	1.08127	1.06859	0.97966	0.81813	0.73391	0.83040
3600.0	0.98284	0.85980	0.89092	0.94660	0.95079	0.97466	1.13318	1.09609	1.02209	1.05517
3700.0	1.07980	1.02437	0.96920	0.87550	0.79781	0.84873	0.93757	1.00391	1.14890	0.98748
3800.0	0.94069	1.00267	0.76810	0.60960	0.68923	0.84829	0.79912	0.81766	0.79482	0.86385
3900.0	0.96692	1.03626	0.94826	0.43780	0.63722	0.97028	0.83503	0.59076	0.99109	1.17794
4000.0	1.21975									

ZENITH SCAN STARTING AT 0.17.54 ON 11/ 3/73, NORMALIZING FACTOR = 2.6437E 00

2600.0	0.00029	0.00024	0.00028	0.00032	0.00021	0.00027	0.00019	0.00021	0.00030	0.00020
2700.0	0.00036	0.00027	0.00032	0.00024	0.00029	0.00037	0.00038	0.00050	0.00040	0.00036
2800.0	0.00089	0.00021	0.00022	0.00086	0.00032	0.00031	0.00028	0.00019	0.00031	0.00023
2900.0	0.00020	0.00038	0.00029	0.00029	0.00076	0.00059	0.00100	0.00120	0.00174	0.00265
3000.0	0.00314	0.00429	0.00583	0.00994	0.01253	0.01730	0.01915	0.02769	0.03467	0.03633
3100.0	0.04798	0.07218	0.08324	0.10140	0.12053	0.14228	0.15345	0.21733	0.23147	0.28401
3200.0	0.32085	0.39679	0.36438	0.38713	0.52530	0.52563	0.73583	0.79105	0.68923	0.89191
3300.0	0.96212	0.80440	0.88830	0.87861	0.84887	0.96251	0.87854	0.78306	0.88251	0.95806
3400.0	1.00872	0.95580	0.99003	1.01252	0.81590	0.89354	0.92877	0.93777	0.90650	0.89273
3500.0	1.00000	0.99925	0.93153	0.96184	1.06669	1.05553	0.95898	0.81464	0.72449	0.84043
3600.0	0.98380	0.85694	0.89305	0.95240	0.94899	0.96886	1.12457	1.08669	1.01114	1.04459
3700.0	1.07794	1.01875	0.96858	0.86937	0.80167	0.84822	0.93394	1.00567	1.14098	0.99256
3800.0	0.94024	0.99625	0.76024	0.60866	0.68179	0.84116	0.79916	0.80625	0.86030	0.73540
3900.0	0.94798	1.01392	0.91641	0.51898	0.61570	0.93708	0.83676	0.58108	0.97386	1.16117
4000.0	1.20012									

ZENITH SCAN STARTING AT 0.18.25 ON 11/ 3/73, NORMALIZING FACTOR = 2.6630E 00

2600.0	0.00020	0.00122	0.00021	0.00031	0.00034	0.00029	0.00024	0.00034	0.00020	0.00025
2700.0	0.00035	0.00040	0.00036	0.00022	0.00056	0.00022	0.00037	0.00042	0.00036	0.00035
2800.0	0.00057	0.00039	0.00032	0.00046	0.00029	0.00040	0.00035	0.00044	0.00034	0.00052
2900.0	0.00044	0.00030	0.00035	0.00190	0.00062	0.00076	0.00098	0.00124	0.00206	0.00233
3000.0	0.00311	0.00443	0.00590	0.01052	0.01304	0.01766	0.02027	0.02723	0.03522	0.03760
3100.0	0.04862	0.07533	0.08634	0.10423	0.12518	0.14610	0.15414	0.22460	0.23951	0.29596
3200.0	0.33624	0.40571	0.37435	0.39768	0.54375	0.54021	0.73543	0.81330	0.70833	0.88671
3300.0	0.98508	0.82557	0.90509	0.91541	0.86980	0.97604	0.88882	0.80177	0.89445	0.97821
3400.0	1.02517	0.97598	1.00898	1.02690	0.84608	0.90302	0.93563	0.94099	0.91319	0.90035
3500.0	1.00000	1.01287	0.94041	0.96120	1.08060	1.06190	0.96788	0.81434	0.72680	0.82698
3600.0	1.00019	0.85892	0.88211	0.96047	0.94773	0.97211	1.11534	1.08655	1.00956	1.04223
3700.0	1.08260	1.02596	0.97736	0.86455	0.80068	0.83299	0.93154	0.99441	1.14398	0.97593
3800.0	0.94147	0.98837	0.76980	0.60413	0.67301	0.84922	0.80273	0.81573	0.79436	0.84888
3900.0	0.95859	1.03634	0.95122	0.55686	0.63312	0.93437	0.83793	0.58663	0.98266	1.17083
4000.0	1.21346									

ZENITH SCAN STARTING AT 0.17.34 ON 11/ 3/73, NORMALIZING FACTOR = 2.6263E 00

2600.0	0.00023	0.00030	0.00038	0.00035	0.00059	0.00018	0.00038	0.00064	0.00045	0.00020
2700.0	0.00017	0.00022	0.00065	0.00036	0.00028	0.00036	0.00025	0.00016	0.00014	0.00031
2800.0	0.00038	0.00044	0.00066	0.00031	0.00016	0.00050	0.00030	0.00052	0.00019	0.00025
2900.0	0.00082	0.00029	0.00040	0.00026	0.00036	0.00067	0.00106	0.00132	0.00177	0.00239
3000.0	0.00315	0.00459	0.00618	0.01110	0.01404	0.02259	0.03572	0.03257	0.04014	0.04186
3100.0	0.05338	0.08352	0.09402	0.11731	0.13890	0.16228	0.17339	0.24596	0.26171	0.31878
3200.0	0.33292	0.40122	0.37436	0.39622	0.53641	0.53830	0.74567	0.78909	0.70512	0.90140
3300.0	0.94774	0.81580	0.90043	0.89149	0.85659	0.96172	0.85848	0.78939	0.89255	0.95786
3400.0	1.00520	0.94767	0.99127	0.99676	0.80418	0.89909	0.92426	0.93008	0.90182	0.88952
3500.0	1.00000	0.98761	0.92355	0.93414	1.06014	1.04125	0.94461	0.80045	0.71467	0.83501
3600.0	0.96662	0.84485	0.88216	0.92967	0.93353	0.96268	1.11052	1.06845	0.99481	1.03891
3700.0	1.05468	0.99988	0.94331	0.85096	0.78406	0.83879	0.91555	0.98592	1.11230	0.95777
3800.0	0.91602	0.95834	0.71806	0.57994	0.67075	0.81333	0.77095	0.78538	0.76302	0.82915
3900.0	0.93038	0.99380	0.87921	0.59323	0.62073	0.90785	0.78514	0.56318	0.96084	1.12650
4000.0	1.16505									

ZENITH SCAN STARTING AT 0.36.54 ON 11/ 3/73, NORMALIZING FACTOR = 3.1027E 00

2600.0	0.00019	0.00013	0.00032	0.00023	0.00009	0.00022	0.00015	0.00023	0.00033	0.00012
2700.0	0.00021	0.00017	0.00016	0.00015	0.00031	0.00054	0.00032	0.00017	0.00017	0.00019
2800.0	0.00016	0.00016	0.00015	0.00018	0.00018	0.00027	0.00023	0.00033	0.00038	0.00036
2900.0	0.00025	0.00046	0.00043	0.00048	0.00029	0.00065	0.00076	0.00108	0.00155	0.00215
3000.0	0.00280	0.00409	0.00549	0.01037	0.01241	0.02830	0.02222	0.02751	0.03531	0.03833
3100.0	0.04782	0.07714	0.10833	0.10831	0.12445	0.14522	0.15301	0.22091	0.23824	0.29195
3200.0	0.32847	0.39761	0.36656	0.39714	0.52783	0.52980	0.73596	0.80841	0.69609	0.90129
3300.0	0.97137	0.81346	0.89906	0.90156	0.86159	0.96141	0.86712	0.78532	0.88391	0.95878
3400.0	1.01257	0.95792	0.99523	1.01216	0.82240	0.90470	0.92978	0.93428	0.90795	0.89047
3500.0	1.00000	0.99604	0.92103	0.95586	1.06849	1.04628	0.94543	0.79738	0.70261	0.84633
3600.0	0.98107	0.84258	0.89097	0.94001	0.93869	0.97527	1.10967	1.07542	1.00358	1.03930
3700.0	1.06156	1.01072	0.94916	0.84385	0.76833	0.81763	0.90757	0.98214	1.12300	0.94296
3800.0	0.91640	0.96116	0.71956	0.57373	0.64934	0.80591	0.76078	0.77212	0.75276	0.81645
3900.0	0.92526	0.98294	0.88498	0.52237	0.60307	0.91677	0.76714	0.54731	0.97655	1.13587
4000.0	1.17418									

Table VIII-63

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 11/ 3/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 0.19.20 ON 11/ 3/73, NORMALIZING FACTOR = 2.8499E 00										
2600.0	0.00048	0.00028	0.00041	0.00037	0.00022	0.00018	0.00017	0.00030	0.00094	0.00031
2700.0	0.00041	0.00047	0.00026	0.00027	0.00023	0.00024	0.00018	0.00032	0.00052	0.00034
2800.0	0.00037	0.00027	0.00024	0.00021	0.00029	0.00039	0.00035	0.00058	0.00065	0.00043
2900.0	0.00031	0.00028	0.00062	0.00029	0.00050	0.00059	0.00086	0.00119	0.00172	0.00247
3000.0	0.00309	0.00436	0.00595	0.01076	0.01348	0.01847	0.02082	0.02888	0.03758	0.04007
3100.0	0.05157	0.08106	0.09323	0.11351	0.13694	0.15937	0.16814	0.24323	0.26084	0.32005
3200.0	0.35026	0.43218	0.40247	0.41219	0.56366	0.56785	0.75739	0.83337	0.73511	0.90261
3300.0	1.00064	0.84788	0.91677	0.92115	0.87916	0.98503	0.89309	0.80898	0.89979	0.98407
3400.0	1.02976	0.98153	0.99568	1.03351	0.85952	0.91742	0.95047	0.95694	0.92467	0.91162
3500.0	1.00000	1.01314	0.94365	0.96295	1.08491	1.06998	0.97740	0.82641	0.73329	0.83075
3600.0	1.00799	0.86625	0.90784	0.96302	0.96374	0.98839	1.12862	1.10083	1.02202	1.05436
3700.0	1.09521	1.03788	0.99635	0.89677	0.80885	0.83845	0.94047	1.00240	1.15554	0.99058
3800.0	0.94251	1.00572	0.77292	0.61725	0.67601	0.84604	0.80607	0.82476	0.80392	0.85905
3900.0	0.97008	1.02890	0.95222	0.57369	0.64241	0.94021	0.85973	0.67683	0.91193	1.18495
4000.0	1.22750									
ZENITH SCAN STARTING AT 0.19.50 ON 11/ 3/73, NORMALIZING FACTOR = 2.8982E 00										
2600.0	0.00022	0.00036	0.00037	0.00025	0.00046	0.00042	0.00045	0.00033	0.00025	0.00039
2700.0	0.00082	0.00027	0.00069	0.00043	0.00041	0.00062	0.00134	0.00068	0.00051	0.00027
2800.0	0.00031	0.00045	0.00025	0.00033	0.00041	0.00018	0.00029	0.00040	0.00032	0.00030
2900.0	0.00071	0.00075	0.00028	0.00042	0.00058	0.00069	0.00119	0.00128	0.00187	0.00249
3000.0	0.00304	0.00440	0.00606	0.01048	0.01370	0.01846	0.02068	0.02987	0.03801	0.04048
3100.0	0.05302	0.08188	0.09510	0.11599	0.13869	0.16400	0.17406	0.24852	0.26286	0.32109
3200.0	0.35774	0.43321	0.41007	0.41815	0.55553	0.55820	0.76560	0.83212	0.72296	0.90502
3300.0	0.98790	0.83178	0.91343	0.92071	0.87261	0.97969	0.89939	0.80005	0.89710	0.96718
3400.0	1.02066	0.96746	0.99838	1.02158	0.83019	0.90288	0.93490	0.94577	0.91220	0.89970
3500.0	1.00000	1.01247	0.94262	0.96314	1.06887	1.05635	0.96090	0.81331	0.72363	0.82996
3600.0	0.98602	0.85339	0.89011	0.95309	0.95577	0.98060	1.12300	1.09324	1.01389	1.04015
3700.0	1.08168	1.01877	0.97816	0.87025	0.78098	0.81621	0.91601	0.97177	1.12057	0.96461
3800.0	0.90974	0.98188	0.74986	0.59726	0.65891	0.82163	0.77826	0.80099	0.77906	0.83382
3900.0	0.93873	1.00029	0.93473	0.55260	0.62367	0.91803	0.82490	0.58963	0.96982	1.15559
4000.0	1.19983									
ZENITH SCAN STARTING AT 2.33. 2 ON 11/ 3/73, NORMALIZING FACTOR = 2.6729E 00										
2600.0	0.00032	0.00016	0.00017	0.00031	0.00059	0.00009	0.00035	0.00018	0.00079	0.00031
2700.0	0.00031	0.00026	0.00031	0.00032	0.00028	0.00020	0.00017	0.00035	0.00022	0.00021
2800.0	0.00031	0.00047	0.00034	0.00073	0.00026	0.00018	0.00032	0.00024	0.00030	0.00025
2900.0	0.00022	0.00038	0.00076	0.00039	0.00051	0.00095	0.00160	0.00146	0.00192	0.00260
3000.0	0.00352	0.00504	0.00672	0.01205	0.02745	0.02309	0.02556	0.03520	0.04573	0.04748
3100.0	0.06099	0.09549	0.10991	0.13428	0.16153	0.18607	0.19594	0.28098	0.28132	0.33845
3200.0	0.37558	0.44678	0.41410	0.43889	0.57813	0.58365	0.78282	0.84765	0.74857	0.93257
3300.0	1.00540	0.84933	0.92442	0.92654	0.89013	0.98189	0.88925	0.81280	0.90477	0.97993
3400.0	1.03215	0.98027	1.01328	1.02760	0.84688	0.91561	0.93844	0.94880	0.91850	0.90272
3500.0	1.00000	1.00282	0.93284	0.95911	1.07618	1.05506	0.96672	0.81096	0.72305	0.83409
3600.0	1.00072	0.86152	0.89940	0.95191	0.94684	0.97246	1.10520	1.06879	0.99563	1.03744
3700.0	1.08055	1.01954	0.97060	0.87498	0.80619	0.85587	0.93850	1.00695	1.15082	0.99178
3800.0	0.94959	1.00359	0.75938	0.61591	0.70004	0.85179	0.80466	0.82044	0.79706	0.86989
3900.0	0.97556	1.03865	0.93072	0.57849	0.65742	0.95281	0.83528	0.60110	1.00832	1.19707
4000.0	1.24104									
ZENITH SCAN STARTING AT 0.36.36 ON 11/ 3/73, NORMALIZING FACTOR = 3.0828E 00										
2600.0	0.00013	0.00012	0.00023	0.00019	0.00023	0.00024	0.00049	0.00025	0.00020	0.00030
2700.0	0.00030	0.00013	0.00016	0.00034	0.00038	0.00018	0.00038	0.00019	0.00045	0.00020
2800.0	0.00012	0.00024	0.00029	0.00058	0.00044	0.00014	0.00025	0.00019	0.00015	0.00017
2900.0	0.00016	0.00045	0.00030	0.00031	0.00042	0.00071	0.00079	0.00126	0.00174	0.00253
3000.0	0.00309	0.00465	0.00618	0.01092	0.02732	0.02188	0.02223	0.03112	0.04092	0.04185
3100.0	0.05671	0.08430	0.09879	0.12031	0.14408	0.17082	0.18124	0.25590	0.27018	0.32656
3200.0	0.36668	0.44620	0.42074	0.42163	0.56597	0.57644	0.79426	0.83623	0.74416	0.93654
3300.0	0.99591	0.84794	0.93020	0.91853	0.88120	0.98198	0.87309	0.79671	0.89754	0.96676
3400.0	1.01826	0.95924	0.99965	1.01430	0.81797	0.90409	0.93226	0.94137	0.90591	0.89011
3500.0	1.00000	0.99715	0.93144	0.96465	1.07440	1.06055	0.95497	0.80965	0.71736	0.83738
3600.0	0.97718	0.84733	0.88677	0.93856	0.94348	0.97516	1.11625	1.07753	0.99818	1.04072
3700.0	1.06935	1.01150	0.94668	0.85212	0.76828	0.81367	0.90053	0.97980	1.10859	0.93451
3800.0	0.89893	0.93700	0.71671	0.55611	0.63039	0.79740	0.75056	0.76243	0.74187	0.80020
3900.0	0.91223	0.96328	0.87389	0.50413	0.60149	0.89743	0.75954	0.55281	0.96277	1.12480
4000.0	1.16663									
ZENITH SCAN STARTING AT 0.37.21 ON 11/ 3/73, NORMALIZING FACTOR = 2.8029E 00										
2600.0	0.00020	0.00014	0.00029	0.00015	0.00025	0.00025	0.00041	0.00019	0.00025	0.00011
2700.0	0.00025	0.00028	0.00055	0.00034	0.00040	0.00161	0.00040	0.00018	0.00015	0.00022
2800.0	0.00019	0.00022	0.00053	0.00078	0.00022	0.00021	0.00025	0.00027	0.00017	0.00046
2900.0	0.00102	0.00024	0.00048	0.00041	0.00040	0.00075	0.00102	0.00140	0.00206	0.00262
3000.0	0.00354	0.00550	0.00697	0.01243	0.04036	0.02761	0.02563	0.03721	0.04785	0.05112
3100.0	0.06561	0.10124	0.11787	0.14468	0.17196	0.20527	0.21292	0.30313	0.30387	0.36383
3200.0	0.40118	0.47073	0.44187	0.43485	0.59235	0.59857	0.81600	0.86379	0.76548	0.96068
3300.0	1.01953	0.87089	0.94739	0.93978	0.89590	0.99319	0.89815	0.80952	0.90616	0.97443
3400.0	1.02803	0.97277	1.00424	1.02312	0.82644	0.90558	0.93515	0.94138	0.90805	0.89504
3500.0	1.00000	1.00407	0.93692	0.96960	1.07853	1.06447	0.97405	0.82029	0.71878	0.83984
3600.0	0.98742	0.84938	0.89616	0.94793	0.94844	0.98520	1.11601	1.07855	1.00157	1.02927
3700.0	1.05402	1.00388	0.94577	0.84730	0.76532	0.80341	0.89407	0.95700	1.09806	0.92764
3800.0	0.89691	0.94083	0.71273	0.57294	0.63777	0.78555	0.74546	0.75822	0.73986	0.79179
3900.0	0.89686	0.94984	0.86605	0.52035	0.59420	0.88770	0.75169	0.54456	0.94570	1.09803
4000.0	1.13911									
ZENITH SCAN STARTING AT 0.41.23 ON 11/ 3/73, NORMALIZING FACTOR = 2.9396E 00										
2600.0	0.00018	0.00018	0.00056	0.00019	0.00017	0.00015	0.00024	0.00026	0.00030	0.00023
2700.0	0.00024	0.00029	0.00022	0.00040	0.00022	0.00030	0.00065	0.00028	0.00038	0.00024
2800.0	0.00096	0.00042	0.00051	0.00026	0.00033	0.00028	0.00022	0.00033	0.00023	0.00025
2900.0	0.00148	0.00025	0.00041	0.00143	0.00050	0.00063	0.00099	0.00133	0.00186	0.00264
3000.0	0.00330	0.00500	0.00676	0.01181	0.01539	0.02088	0.02401	0.03456	0.04473	0.04756
3100.0	0.06208	0.09775	0.11380	0.13898	0.16639	0.19469	0.20245	0.29620	0.31359	0.38279
3200.0	0.41681	0.49420	0.46528	0.47528	0.61861	0.62685	0.83046	0.91234	0.79923	0.96328
3300.0	1.07550	0.88397	0.95513	0.96953	0.92088	1.01257	0.92805	0.83258	0.91288	0.98757
3400.0	1.03970	0.99255	1.01697	1.04271	0.86929	0.91766	0.95240	0.96610	0.92663	0.91891
3500.0	1.00000	1.02223	0.95575	0.96306	1.09237	1.08234	0.99571	0.83469	0.74702	0.82982
3600.0	1.02675	0.88739	0.90596	0.97447	0.96819	0.98406	1.15207	1.11774	1.04525	1.06882
3700.0	1.10520	1.04227	0.99407	0.89120	0.80200	0.84233	0.93991	0.99445	1.14577	1.00380
3800.0	0.93211	0.99859	0.78116	0.61374	0.67732	0.83781	0.77523	0.78865	0.77909	0.82374
3900.0	0.94726	1.00403	0.95010	0.54841	0.60595	0.93348	0.84101	0.56640	0.96527	1.16180
4000.0	1.21187									

Table VIII-64

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 11/ 3/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 0.22.43 ON 11/ 3/73, NORMALIZING FACTOR = 3.0166E 00										
2600.0	0.00020	0.00023	0.00017	0.00024	0.00034	0.00019	0.00028	0.00036	0.00044	0.00026
2700.0	0.00073	0.00038	0.00024	0.00015	0.00027	0.00027	0.00024	0.00015	0.00025	0.00032
2800.0	0.00023	0.00022	0.00024	0.00019	0.00038	0.00031	0.00020	0.00036	0.00037	0.00036
2900.0	0.00043	0.00024	0.00038	0.00039	0.00052	0.00064	0.00093	0.00139	0.00209	0.00261
3000.0	0.00339	0.00486	0.00680	0.01162	0.01494	0.02072	0.02321	0.03397	0.04432	0.04732
3100.0	0.06196	0.09620	0.11241	0.13918	0.16585	0.19634	0.20774	0.29278	0.30265	0.37603
3200.0	0.40914	0.48862	0.45861	0.45783	0.61240	0.62095	0.82211	0.88944	0.79230	0.95124
3300.0	1.04400	0.89290	0.95190	0.95103	0.90508	1.00551	0.91285	0.82365	0.91113	0.98577
3400.0	1.03615	0.98241	1.01260	1.03207	0.85398	0.90929	0.94564	0.95295	0.91544	0.90903
3500.0	1.00000	1.01591	0.95551	0.96486	1.08803	1.08400	0.98739	0.83484	0.75331	0.83022
3600.0	1.00177	0.86218	0.89241	0.95260	0.95401	0.97351	1.12343	1.09264	1.01805	1.04601
3700.0	1.09057	1.01760	0.97500	0.88127	0.78869	0.82346	0.92199	0.97502	1.11086	0.97188
3800.0	0.90775	0.95937	0.75169	0.58629	0.64143	0.81781	0.76840	0.78343	0.76201	0.81004
3900.0	0.92442	0.98279	0.93905	0.52733	0.58821	0.89537	0.80632	0.57035	0.95242	1.13171
4000.0	1.17920									
ZENITH SCAN STARTING AT 0.19.57 ON 11/ 3/73, NORMALIZING FACTOR = 3.0091E 00										
2600.0	0.00012	0.00012	0.00012	0.00012	0.00013	0.00013	0.00014	0.00013	0.00013	0.00014
2700.0	0.00014	0.00014	0.00014	0.00015	0.00015	0.00016	0.00015	0.00016	0.00017	0.00030
2800.0	0.00046	0.00058	0.00016	0.00017	0.00031	0.00027	0.00018	0.00030	0.00019	0.00029
2900.0	0.00020	0.00037	0.00038	0.00057	0.00051	0.00082	0.00115	0.00164	0.00193	0.00264
3000.0	0.00349	0.00499	0.00676	0.01187	0.01528	0.02127	0.02406	0.03494	0.04531	0.04866
3100.0	0.06480	0.10008	0.11754	0.14392	0.17125	0.20252	0.20979	0.30362	0.31304	0.38876
3200.0	0.42507	0.49987	0.47484	0.47661	0.61773	0.63005	0.83675	0.91436	0.80320	0.97515
3300.0	1.07153	0.90338	0.98906	0.97470	0.92521	1.02163	0.91499	0.83104	0.91850	0.99276
3400.0	1.04819	0.99898	1.02107	1.04927	0.86706	0.91271	0.95489	0.95953	0.92192	0.91179
3500.0	1.00000	1.02583	0.95404	0.97395	1.09332	1.08530	0.99289	0.83870	0.75021	0.84863
3600.0	1.02770	0.87841	0.90806	0.97412	0.97502	1.00712	1.15196	1.11985	1.04870	1.06349
3700.0	1.10797	1.04388	0.99680	0.89011	0.79881	0.82567	0.92999	0.99051	1.14055	0.98554
3800.0	0.92531	0.99557	0.76763	0.60979	0.65559	0.83051	0.77985	0.79653	0.77593	0.81848
3900.0	0.93324	0.95469	0.91226	0.56353	0.59787	0.90040	0.81170	0.57080	0.95423	1.13857
4000.0	1.18801									
ZENITH SCAN STARTING AT 0.38.19 ON 11/ 3/73, NORMALIZING FACTOR = 3.0839E-02										
2600.0	0.00027	0.00022	0.00022	0.00026	0.00045	0.00037	0.00032	0.00032	0.00058	0.00030
2700.0	0.00022	0.00026	0.00026	0.00024	0.00034	0.00023	0.00029	0.00042	0.00026	0.00032
2800.0	0.00025	0.00035	0.00039	0.00024	0.00019	0.00024	0.00044	0.00060	0.00070	0.00030
2900.0	0.00064	0.00050	0.00049	0.00055	0.00049	0.00072	0.00110	0.00138	0.00188	0.00273
3000.0	0.00344	0.00501	0.00730	0.01218	0.01552	0.02076	0.02166	0.02253	0.02290	0.02292
3100.0	0.02383	0.03986	0.04125	0.04531	0.04977	0.05389	0.05906	0.06509	0.20284	0.39531
3200.0	0.42721	0.50839	0.47743	0.47906	0.62828	0.64172	0.83042	0.91088	0.81009	0.95594
3300.0	1.07055	0.91428	0.97140	0.97439	0.92983	1.02160	0.92704	0.83756	0.91758	0.99856
3400.0	1.04985	1.00295	1.02598	1.04930	0.87828	0.92601	0.95986	0.97159	0.93045	0.92050
3500.0	1.00000	1.02521	0.95598	0.96636	1.09936	1.09264	1.00000	0.84063	0.75613	0.83144
3600.0	1.03371	0.88962	0.90899	0.98006	0.97969	0.99290	1.11204	1.11865	1.03899	1.06601
3700.0	1.11262	1.04048	0.99161	0.90177	0.81326	0.85212	0.95166	1.01122	1.15497	1.01674
3800.0	0.94715	1.00788	0.79285	0.62111	0.68881	0.86984	0.82391	0.83680	0.82246	0.87510
3900.0	0.99995	1.07033	0.84322	0.30015	0.70526	1.08687	1.07349	0.88836	1.45005	1.87742
4000.0	2.18309									
ZENITH SCAN STARTING AT 0.43.48 ON 11/ 3/73, NORMALIZING FACTOR = 3.0389E-02										
2600.0	0.00044	0.00025	0.00035	0.00028	0.00033	0.00030	0.00024	0.00055	0.00041	0.00031
2700.0	0.00042	0.00039	0.00023	0.00022	0.00025	0.00025	0.00048	0.00038	0.00037	0.00030
2800.0	0.00021	0.00019	0.00028	0.00025	0.00034	0.00060	0.00042	0.00025	0.00038	0.00028
2900.0	0.00027	0.00036	0.00031	0.00043	0.00050	0.00078	0.00101	0.00140	0.00209	0.00344
3000.0	0.00383	0.00528	0.00712	0.01256	0.01619	0.02091	0.02198	0.02279	0.02313	0.02317
3100.0	0.02340	0.02386	0.02398	0.02416	0.02430	0.02443	0.02443	0.02478	0.18469	0.39656
3200.0	0.43181	0.50995	0.48342	0.47851	0.62871	0.64026	0.84853	0.91611	0.81571	0.97769
3300.0	1.06910	0.91607	0.97731	0.97264	0.92467	1.02599	0.93364	0.83785	0.93125	1.00290
3400.0	1.04452	0.97209	1.00584	1.03388	0.86687	0.89501	0.94166	0.94974	0.91006	0.90319
3500.0	1.00000	1.01787	0.94335	0.95432	1.07326	1.06726	0.97281	0.82875	0.74493	0.83430
3600.0	1.01226	0.87108	0.90335	0.96550	0.96542	0.98808	1.13091	1.09911	1.02335	1.04645
3700.0	1.09550	1.02872	0.98433	0.88408	0.79208	0.82373	0.92832	0.98415	1.13021	0.97501
3800.0	0.92158	0.98986	0.76423	0.60427	0.65223	0.82710	0.77781	0.79537	0.77147	0.81355
3900.0	0.93134	0.98396	0.92059	0.56762	0.61430	0.90537	0.74036	0.55134	0.94389	1.12716
4000.0	1.17333									
ZENITH SCAN STARTING AT 0.39.24 ON 11/ 3/73, NORMALIZING FACTOR = 3.0591E-02										
2600.0	0.00064	0.00034	0.00028	0.00029	0.00019	0.00024	0.00018	0.00020	0.00022	0.00042
2700.0	0.00031	0.00028	0.00032	0.00029	0.00028	0.00026	0.00021	0.00023	0.00024	0.00026
2800.0	0.00021	0.00034	0.00051	0.00073	0.00043	0.00023	0.00025	0.00029	0.00056	0.00029
2900.0	0.00045	0.00026	0.00035	0.00060	0.00062	0.00079	0.00102	0.00144	0.00193	0.00288
3000.0	0.00382	0.00551	0.00748	0.01362	0.01701	0.02133	0.02195	0.02260	0.02295	0.02297
3100.0	0.02318	0.02365	0.02376	0.02393	0.02408	0.02416	0.02900	0.28870	0.34519	0.41250
3200.0	0.44944	0.52267	0.49432	0.49777	0.63748	0.65166	0.84995	0.93255	0.81842	0.97595
3300.0	1.09209	0.92396	0.98138	0.98951	0.93921	1.03041	0.94059	0.84763	0.93148	1.00248
3400.0	1.05699	1.00739	1.02861	1.05320	0.88181	0.91922	0.96000	0.96338	0.93081	0.92027
3500.0	1.00000	1.03105	0.95684	0.97268	1.09331	1.08692	0.99677	0.84184	0.75509	0.84439
3600.0	1.03890	0.88569	0.91928	0.98166	0.98200	1.01119	1.15499	1.12555	1.05330	1.06475
3700.0	1.10696	1.05364	0.98572	0.88158	0.79227	0.82824	0.93276	0.98617	1.14034	0.99101
3800.0	0.91806	0.98724	0.76871	0.60533	0.66144	0.81824	0.77398	0.79017	0.77214	0.81736
3900.0	0.92895	0.98768	0.75006	0.09197	0.57032	0.90411	0.82825	0.55532	0.93072	1.12706
4000.0	1.16846									
ZENITH SCAN STARTING AT 0.45.19 ON 11/ 3/73, NORMALIZING FACTOR = 3.4677E-02										
2600.0	0.00028	0.00033	0.00019	0.00027	0.00047	0.00057	0.00030	0.00030	0.00033	0.00048
2700.0	0.00023	0.00026	0.00017	0.00022	0.00018	0.00033	0.00025	0.00026	0.00030	0.00020
2800.0	0.00029	0.00019	0.00021	0.00028	0.00036	0.00023	0.00021	0.00022	0.00060	0.00035
2900.0	0.00026	0.00051	0.00026	0.00040	0.00050	0.00063	0.00094	0.00123	0.00194	0.00265
3000.0	0.00347	0.00513	0.00697	0.01248	0.01587	0.01897	0.01938	0.01992	0.02018	0.02020
3100.0	0.02041	0.02080	0.02092	0.02105	0.02119	0.02130	0.05551	0.33223	0.34390	0.40157
3200.0	0.43098	0.50560	0.48181	0.48105	0.61990	0.63497	0.84747	0.91086	0.80540	0.96819
3300.0	1.05237	0.89834	0.96225	0.95831	0.91006	1.00921	0.91862	0.82315	0.91486	0.98493
3400.0	1.04073	0.98080	1.00567	1.03140	0.84201	0.90453	0.93900	0.94636	0.91255	0.90396
3500.0	1.00000	1.01506	0.94970	0.96756	1.08542	1.08083	0.98515	0.83707	0.75041	0.83276
3600.0	1.00268	0.87356	0.90369	0.96879	0.97991	1.00470	1.15592	1.12835	1.04701	1.06830
3700.0	1.11015	1.03494	0.98166	0.89276	0.81019	0.84343	0.91938	1.01024	1.17353	1.01161
3800.0	0.94706	0.99182	0.73207	0.54449	0.55847	0.67945	0.63526	0.65129	0.63169	0.66332
3900.0	0.74879	0.79556	0.18686	0.12059	0.47934	0.73220	0.65440	0.45143	0.76536	0.90573
4000.0	0.93085									

Table VIII-65

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 11/ 3/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 0.45.50 ON 11/ 3/73. NORMALIZING FACTOR = 3.2116E-02									
2600.0	0.00029	0.00034	0.00015	0.00019	0.00016	0.00028	0.00028	0.00017	0.00046	0.00021
2700.0	0.00048	0.00024	0.00067	0.00020	0.00013	0.00023	0.00056	0.00032	0.00019	0.00017
2800.0	0.00030	0.00033	0.00050	0.00035	0.00018	0.00038	0.00040	0.00031	0.00031	0.00022
2900.0	0.00017	0.00025	0.00038	0.00040	0.00062	0.00094	0.00109	0.00147	0.00225	0.00297
3000.0	0.00385	0.00558	0.00770	0.01484	0.03844	0.02593	0.03026	0.04214	0.05640	0.06092
3100.0	0.07976	0.12509	0.14344	0.17755	0.19774	0.20527	0.24814	0.34341	0.35493	0.41778
3200.0	0.45847	0.52549	0.48796	0.50577	0.66672	0.66274	0.87012	0.92927	0.62818	1.00347
3300.0	1.08097	0.92643	0.99191	0.98312	0.94764	1.03366	0.92631	0.85383	0.94997	1.01698
3400.0	1.07360	1.01199	1.04210	1.05835	0.87588	0.94066	0.96547	0.96723	0.93825	0.92678
3500.0	1.00000	1.02893	0.95643	0.99410	1.11306	1.09749	0.99685	0.84675	0.75377	0.87129
3600.0	1.04449	0.89450	0.93040	0.99376	1.00094	1.04091	1.18974	1.15093	1.07647	1.10621
3700.0	1.13416	1.07459	1.01273	0.90480	0.82050	0.87093	0.96533	1.03751	1.18781	1.01599
3800.0	0.97210	1.01983	0.78045	0.61613	0.69216	0.84583	0.80104	0.81953	0.79828	0.87069
3900.0	0.97870	1.04232	0.94174	0.57854	0.64816	0.96523	0.85317	0.60913	1.01642	1.21873
4000.0	1.25958									
	ZENITH SCAN STARTING AT 0.20.35 ON 11/ 3/73. NORMALIZING FACTOR = 2.9516E-02									
2600.0	0.00018	0.00020	0.00016	0.00016	0.00049	0.00026	0.00024	0.00025	0.00051	0.00055
2700.0	0.00028	0.00013	0.00014	0.00026	0.00037	0.00033	0.00014	0.00021	0.00027	0.00026
2800.0	0.00015	0.00016	0.00026	0.00043	0.00018	0.00014	0.00027	0.00042	0.00027	0.00036
2900.0	0.00041	0.00031	0.00031	0.00038	0.00040	0.00066	0.00111	0.00152	0.00228	0.00347
3000.0	0.00429	0.00644	0.00906	0.01676	0.04571	0.02866	0.03263	0.04525	0.05926	0.06362
3100.0	0.08413	0.12792	0.14837	0.18050	0.20702	0.22055	0.23884	0.34728	0.35511	0.41532
3200.0	0.45822	0.52929	0.49634	0.50143	0.65177	0.68075	0.88082	0.91570	0.82549	1.00410
3300.0	1.05527	0.92135	0.98512	0.96647	0.93448	1.02599	0.91033	0.83959	0.93174	0.99153
3400.0	1.04331	0.98233	1.01595	1.02332	0.84486	0.92220	0.94797	0.94840	0.91539	0.90373
3500.0	1.00000	0.99948	0.93426	0.95728	1.07716	1.06050	0.96265	0.80787	0.73053	0.82952
3600.0	0.99956	0.85976	0.89127	0.94512	0.95057	0.98559	1.12903	1.08535	1.00840	1.04433
3700.0	1.06852	1.01082	0.94641	0.84716	0.77713	0.82745	0.90990	0.98212	1.10514	0.94985
3800.0	0.92447	0.93945	0.72900	0.57580	0.65615	0.80549	0.75783	0.76486	0.74303	0.80223
3900.0	0.90332	0.96177	0.86162	0.54089	0.62424	0.88399	0.75948	0.57977	0.94998	1.11089
4000.0	1.14905									
	ZENITH SCAN STARTING AT 0.21.10 ON 11/ 3/73. NORMALIZING FACTOR = 3.1706E-02									
2600.0	0.00032	0.00045	0.00030	0.00018	0.00021	0.00020	0.00023	0.00034	0.00023	0.00017
2700.0	0.00017	0.00017	0.00052	0.00024	0.00033	0.00024	0.00026	0.00024	0.00022	0.00060
2800.0	0.00028	0.00039	0.00020	0.00026	0.00045	0.00060	0.00042	0.00020	0.00022	0.00019
2900.0	0.00057	0.00028	0.00026	0.00034	0.00049	0.00074	0.00104	0.00148	0.00240	0.00315
3000.0	0.00382	0.00573	0.00759	0.01419	0.01790	0.02084	0.02119	0.02172	0.02204	0.02204
3100.0	0.02226	0.02269	0.02280	0.02295	0.02310	0.02321	0.08241	0.34726	0.35994	0.41933
3200.0	0.45916	0.52659	0.49453	0.50072	0.63595	0.65027	0.85645	0.92215	0.81495	0.98428
3300.0	1.06858	0.91184	0.97226	0.96646	0.92318	1.01682	0.92352	0.82829	0.92054	0.98494
3400.0	1.04108	0.98268	1.00593	1.03238	0.84625	0.90574	0.93987	0.94450	0.91316	0.90358
3500.0	1.00000	1.01387	0.94352	0.96393	1.06660	1.04103	0.96248	0.81924	0.73670	0.83064
3600.0	0.98874	0.85806	0.88498	0.93857	0.94988	0.97369	1.12264	1.09163	1.01161	1.04531
3700.0	1.08453	1.01200	0.95696	0.87185	0.78024	0.82390	0.91128	0.97357	1.11280	0.95299
3800.0	0.90581	0.95457	0.74570	0.58455	0.64201	0.80849	0.75943	0.77245	0.75012	0.79306
3900.0	0.90495	0.95912	0.88283	0.54510	0.58051	0.89536	0.78931	0.55162	0.94753	1.11360
4000.0	1.14829									
	ZENITH SCAN STARTING AT 0.41.25 ON 11/ 3/73. NORMALIZING FACTOR = 2.9041E-02									
2600.0	0.00020	0.00029	0.00018	0.00012	0.00019	0.00021	0.00038	0.00032	0.00025	0.00033
2700.0	0.00034	0.00021	0.00026	0.00027	0.00052	0.00023	0.00033	0.00020	0.00073	0.00025
2800.0	0.00026	0.00022	0.00029	0.00021	0.00023	0.00020	0.00035	0.00018	0.00020	0.00023
2900.0	0.00029	0.00028	0.00074	0.00033	0.00057	0.00082	0.00143	0.00157	0.00237	0.00340
3000.0	0.00433	0.00631	0.00887	0.01570	0.03960	0.02927	0.03388	0.04696	0.06122	0.06518
3100.0	0.08654	0.13310	0.15200	0.19787	0.21236	0.22478	0.25565	0.35270	0.36225	0.42533
3200.0	0.47121	0.53576	0.49974	0.51277	0.65510	0.67630	0.88032	0.93070	0.83892	1.00341
3300.0	1.07281	0.92999	0.98906	0.97594	0.94836	1.02958	0.91774	0.84759	0.93565	0.99849
3400.0	1.04730	0.98963	1.01492	1.00094	0.85764	0.92582	0.94785	0.94693	0.92138	0.91015
3500.0	1.00000	1.00240	0.92696	0.95208	1.06458	1.04331	0.94708	0.80679	0.72118	0.84822
3600.0	1.00174	0.87363	0.94436	1.01151	1.02896	1.07300	1.21107	1.17314	1.08718	1.12980
3700.0	1.16833	1.11199	1.04710	0.93960	0.85233	0.90199	0.98029	1.04146	1.18489	1.00732
3800.0	0.97220	1.01494	0.76878	0.59963	0.65743	0.74494	0.75031	0.76413	0.73993	0.80604
3900.0	0.90161	0.96136	0.85752	0.52970	0.60975	0.88452	0.77074	0.57340	0.93769	1.10664
4000.0	1.13802									
	ZENITH SCAN STARTING AT 0.20.54 ON 11/ 3/73. NORMALIZING FACTOR = 3.0950E-02									
2600.0	0.00028	0.00020	0.00032	0.00041	0.00019	0.00028	0.00042	0.00036	0.00035	0.00032
2700.0	0.00023	0.00018	0.00069	0.00016	0.00047	0.00030	0.00036	0.00019	0.00016	0.00020
2800.0	0.00044	0.00024	0.00029	0.00023	0.00026	0.00024	0.00036	0.00020	0.00028	0.00037
2900.0	0.00024	0.00025	0.00037	0.00030	0.00051	0.00079	0.00105	0.00153	0.00233	0.00305
3000.0	0.00398	0.00626	0.00822	0.01468	0.01802	0.02137	0.02185	0.02239	0.02266	0.02268
3100.0	0.02291	0.02334	0.02345	0.02361	0.02375	0.02386	0.05959	0.34185	0.37472	0.43312
3200.0	0.47580	0.54323	0.51196	0.50476	0.65750	0.67007	0.88856	0.93938	0.84010	1.00580
3300.0	1.08205	0.93547	0.99651	0.98115	0.94137	1.03479	0.92225	0.84109	0.93070	0.99913
3400.0	1.05398	0.99161	1.01940	1.03592	0.85870	0.92278	0.95502	0.95583	0.91595	0.91081
3500.0	1.00000	1.01240	0.95112	0.96484	1.08808	1.07937	0.98699	0.83240	0.74701	0.81697
3600.0	0.96617	0.86813	0.89125	0.95193	0.95545	0.98338	1.13243	1.09306	1.01735	1.04106
3700.0	1.08454	1.02430	0.96853	0.88643	0.77962	0.82058	0.91846	0.97749	1.11770	0.96969
3800.0	0.90417	0.96384	0.73688	0.58729	0.65731	0.81485	0.76294	0.77663	0.75654	0.81137
3900.0	0.91706	0.98187	0.67942	0.14338	0.59640	0.89025	0.78312	0.57011	0.94458	1.11857
4000.0	1.15552									
	ZENITH SCAN STARTING AT 0.21.49 ON 11/ 3/73. NORMALIZING FACTOR = 3.2503E-02									
2600.0	0.00061	0.00024	0.00024	0.00014	0.00054	0.00020	0.00033	0.00021	0.00023	0.00024
2700.0	0.00040	0.00016	0.00029	0.00032	0.00017	0.00030	0.00025	0.00042	0.00036	0.00045
2800.0	0.00020	0.00035	0.00027	0.00035	0.00038	0.00030	0.00030	0.00026	0.00064	0.00022
2900.0	0.00033	0.00037	0.00032	0.00055	0.00042	0.00064	0.00123	0.00137	0.00214	0.00302
3000.0	0.00387	0.00568	0.00788	0.01448	0.01789	0.02065	0.02093	0.02142	0.02168	0.02171
3100.0	0.02190	0.02231	0.02242	0.02259	0.02271	0.02282	0.13316	0.36115	0.37164	0.43601
3200.0	0.47983	0.55019	0.51819	0.52456	0.66246	0.68087	0.88934	0.95453	0.84652	1.01534
3300.0	1.10905	0.94359	1.00459	0.99916	0.93284	1.02564	0.93067	0.84164	0.92890	0.99980
3400.0	1.05760	0.99600	1.01929	1.04474	0.85236	0.91254	0.95233	0.95542	0.91952	0.90610
3500.0	1.00000	1.01227	0.94000	0.96577	1.08763	1.08397	0.99311	0.84659	0.76244	0.84611
3600.0	1.00713	0.86797	0.89249	0.95128	0.95091	0.95955	1.08477	1.03547	0.95786	0.98780
3700.0	1.01403	0.95322	0.90178	0.80755	0.73102	0.76961	0.84540	0.90412	1.02102	0.87215
3800.0	0.83257	0.87538	0.67793	0.53455	0.59054	0.73180	0.68948	0.70016	0.67844	0.71395
3900.0	0.77796	0.86764	0.37060	0.08171	0.49947	0.78493	0.70754	0.48926	0.82133	0.98892
4000.0	1.01830									

Table VIII-66

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 11/ 3/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 0.42.16 ON 11/ 3/73. NORMALIZING FACTOR = 3.2680E-02										
2600.0	0.00018	0.00033	0.00021	0.00018	0.00025	0.00037	0.00039	0.00028	0.00016	0.00023
2700.0	0.00035	0.00022	0.00014	0.00021	0.00019	0.00063	0.00037	0.00050	0.00034	0.00037
2800.0	0.00023	0.00017	0.00029	0.00025	0.00018	0.00031	0.00026	0.00028	0.00017	0.00035
2900.0	0.00031	0.00031	0.00030	0.00030	0.00057	0.00070	0.00116	0.00148	0.00210	0.00304
3000.0	0.00394	0.00586	0.00867	0.01440	0.01816	0.02058	0.02086	0.02138	0.02161	0.02160
3100.0	0.02185	0.02224	0.02235	0.02250	0.02262	0.02275	0.08611	0.35438	0.36251	0.42146
3200.0	0.46159	0.53664	0.50090	0.50104	0.64980	0.66774	0.86497	0.92125	0.83019	0.98584
3300.0	1.06874	0.92832	0.98318	0.97466	0.93970	1.02914	0.91866	0.83883	0.92308	0.99342
3400.0	1.04260	0.98652	1.01725	1.03782	0.87020	0.92615	0.95279	0.95583	0.92119	0.90867
3500.0	1.00000	1.01762	0.94743	0.96350	1.08558	1.07520	0.97909	0.83047	0.74230	0.83692
3600.0	1.01875	0.87536	0.91597	0.97136	0.93387	0.99078	1.13066	1.10083	1.02802	1.05033
3700.0	1.09129	1.03548	0.97427	0.87340	0.78754	0.82648	0.92026	0.97966	1.12182	0.96950
3800.0	0.91004	0.96805	0.74586	0.59311	0.65306	0.80369	0.76328	0.77903	0.75752	0.81264
3900.0	0.91584	0.97061	0.88771	0.56236	0.60661	0.88508	0.79045	0.57998	0.93825	1.11619
4000.0	1.15478									
ZENITH SCAN STARTING AT 0.43.21 ON 11/ 3/73. NORMALIZING FACTOR = 3.0714E-02										
2600.0	0.00023	0.00022	0.00058	0.00039	0.00081	0.00027	0.00020	0.00022	0.00028	0.00020
2700.0	0.00026	0.00013	0.00021	0.00053	0.00026	0.00035	0.00057	0.00070	0.00030	0.00032
2800.0	0.00036	0.00019	0.00021	0.00026	0.00049	0.00032	0.00030	0.00026	0.00037	0.00042
2900.0	0.00023	0.00042	0.00027	0.00045	0.00052	0.00076	0.00115	0.00151	0.00230	0.00317
3000.0	0.00424	0.00636	0.00890	0.03723	0.02157	0.03075	0.03424	0.04932	0.06335	0.06733
3100.0	0.09186	0.14021	0.16269	0.19354	0.21199	0.21745	0.23955	0.36538	0.37251	0.43240
3200.0	0.48086	0.53705	0.50748	0.51424	0.65264	0.67087	0.89372	0.93183	0.83518	1.02248
3300.0	1.07000	0.92663	0.99183	0.96783	0.93618	1.02205	0.90754	0.83305	0.93103	0.99267
3400.0	1.04266	0.97263	1.00539	1.01387	0.82540	0.91195	0.93204	0.93629	0.90434	0.89422
3500.0	1.00000	0.99288	0.92855	0.96274	1.07107	1.05736	0.95976	0.81275	0.72916	0.83343
3600.0	0.99507	0.85424	0.89603	0.94860	0.95752	0.98998	1.13395	1.08961	1.01123	1.04483
3700.0	1.06863	1.01348	0.94002	0.83436	0.76530	0.81729	0.89592	0.97458	1.08671	0.93347
3800.0	0.89446	0.93134	0.71059	0.56254	0.63854	0.78325	0.73827	0.74581	0.72577	0.79031
3900.0	0.88392	0.94449	0.84617	0.54465	0.71938	0.85884	0.73409	0.54025	0.93528	1.08839
4000.0	1.12051									
ZENITH SCAN STARTING AT 1.23.52 ON 11/ 3/73. NORMALIZING FACTOR = 1.2241E 00										
2600.0	0.00088	0.00046	0.00087	0.00065	0.00072	0.00079	0.00078	0.00041	0.00055	0.00063
2700.0	0.00058	0.00082	0.00057	0.00046	0.00059	0.00055	0.00047	0.00097	0.00081	0.00067
2800.0	0.00052	0.00057	0.00043	0.00051	0.00061	0.00060	0.00061	0.00083	0.00128	0.00072
2900.0	0.00052	0.00152	0.00111	0.00163	0.00152	0.00227	0.00282	0.00387	0.00571	0.00801
3000.0	0.01072	0.01535	0.02131	0.03904	0.04980	0.07172	0.08163	0.11986	0.15551	0.16730
3100.0	0.22464	0.34356	0.39514	0.48342	0.56718	0.65313	0.68591	0.96209	0.97266	1.02664
3200.0	1.02393	1.02657	1.02239	1.01907	1.02776	1.02665	1.03286	1.03373	1.02979	1.03215
3300.0	1.03245	1.02801	1.02943	1.03028	1.02907	1.02992	1.02694	1.02449	1.02641	1.02637
3400.0	1.02763	1.02985	1.03809	1.03878	1.03568	1.01970	1.01455	1.00762	1.00609	1.00306
3500.0	1.00000	0.99823	0.99339	0.99368	0.99627	0.99481	0.99165	0.98523	0.98235	0.98506
3600.0	0.98994	0.98651	0.98922	0.99156	0.99333	0.99429	1.00258	1.00813	1.01251	1.01979
3700.0	1.02196	1.01607	1.00891	1.00413	0.99835	0.99926	0.99823	1.00289	1.00781	1.00400
3800.0	1.00128	1.00230	0.98869	0.97459	0.96823	0.96923	0.96354	0.96327	0.96090	0.96144
3900.0	0.96344	0.96519	0.96214	0.94641	0.95052	0.96323	0.95932	0.94626	0.95554	0.98989
4000.0	0.89519									
ZENITH SCAN STARTING AT 0.22.10 ON 11/ 3/73. NORMALIZING FACTOR = 2.8430E 00										
2600.0	0.00030	0.00025	0.00038	0.00062	0.00026	0.00020	0.00027	0.00091	0.00041	0.00023
2700.0	0.00126	0.00019	0.00032	0.00034	0.00025	0.00164	0.00058	0.00022	0.00018	0.00028
2800.0	0.00041	0.00023	0.00023	0.00031	0.00019	0.00029	0.00027	0.00038	0.00032	0.00028
2900.0	0.00042	0.00043	0.00039	0.00072	0.00094	0.00096	0.00105	0.00156	0.00239	0.00345
3000.0	0.00465	0.00691	0.00965	0.01730	0.02238	0.03178	0.03652	0.05422	0.06932	0.07457
3100.0	0.10090	0.15259	0.17472	0.21056	0.24552	0.28019	0.29039	0.40547	0.40521	0.46669
3200.0	0.52220	0.58309	0.54996	0.55164	0.69140	0.71763	0.93324	1.00217	0.88991	1.05601
3300.0	1.14359	0.97721	1.03357	1.02178	0.97620	1.06250	0.95629	0.86259	0.94480	1.00417
3400.0	1.05325	0.98948	1.00648	1.02861	0.83749	0.90322	0.93546	0.94090	0.90894	0.90002
3500.0	1.00000	1.00881	0.94133	0.99077	1.06724	1.05428	0.95515	0.80765	0.71935	0.80721
3600.0	0.96466	0.84230	0.87732	0.92172	0.93913	0.96633	1.10249	1.07417	0.99811	1.02443
3700.0	1.05069	0.98532	0.92850	0.84150	0.76447	0.78953	0.87236	0.93596	1.06152	0.91922
3800.0	0.87997	0.92466	0.71454	0.56045	0.62191	0.77466	0.72588	0.75073	0.75343	0.81593
3900.0	0.92293	0.98258	0.89767	0.52702	0.60073	0.89391	0.80704	0.56250	0.92995	1.11790
4000.0	1.15500									
ZENITH SCAN STARTING AT 0.22.32 ON 11/ 3/73. NORMALIZING FACTOR = 4.2954E 00										
2600.0	0.00039	0.00024	0.00025	0.00033	0.00029	0.00024	0.00025	0.00024	0.00034	0.00020
2700.0	0.00023	0.00022	0.00028	0.00029	0.00027	0.00034	0.00030	0.00035	0.00034	0.00033
2800.0	0.00030	0.00025	0.00035	0.00033	0.00027	0.00036	0.00033	0.00027	0.00032	0.00034
2900.0	0.00051	0.00035	0.00031	0.00068	0.00071	0.00065	0.00095	0.00114	0.00169	0.00237
3000.0	0.00306	0.00456	0.00619	0.01144	0.01474	0.02054	0.02390	0.03425	0.04540	0.04945
3100.0	0.06674	0.10020	0.12435	0.15244	0.18327	0.21048	0.22220	0.30893	0.32028	0.37617
3200.0	0.41225	0.47977	0.45122	0.46249	0.60241	0.62129	0.81033	0.86657	0.78056	0.93166
3300.0	1.02955	0.91814	1.01869	1.02857	0.98389	1.06905	0.95165	0.87631	0.98112	1.07359
3400.0	1.16192	1.12475	1.17422	1.20741	0.98748	1.02933	1.02995	1.01014	0.93469	0.89522
3500.0	1.00000	1.01162	0.93731	0.96055	1.07444	1.05066	0.93734	0.77667	0.67225	0.76236
3600.0	0.91829	0.77797	0.81455	0.86343	0.85295	0.85234	0.95007	0.91332	0.83998	0.86591
3700.0	0.89275	0.82562	0.77330	0.69836	0.63127	0.65742	0.72357	0.77461	0.89129	0.76045
3800.0	0.72740	0.76538	0.58239	0.45645	0.50666	0.62941	0.59195	0.60366	0.59230	0.63957
3900.0	0.72160	0.76789	0.71436	0.43757	0.50509	0.86967	0.91493	0.77120	1.72118	2.69628
4000.0	3.66320									
ZENITH SCAN STARTING AT 1.26.42 ON 11/ 3/73. NORMALIZING FACTOR = 5.0992E 00										
2600.0	0.00022	0.00017	0.00014	0.00019	0.00040	0.00023	0.00019	0.00021	0.00017	0.00025
2700.0	0.00020	0.00022	0.00031	0.00034	0.00024	0.00029	0.00021	0.00029	0.00024	0.00027
2800.0	0.00040	0.00021	0.00023	0.00031	0.00035	0.00066	0.00033	0.00021	0.00021	0.00022
2900.0	0.00022	0.00025	0.00027	0.00034	0.00033	0.00055	0.00069	0.00100	0.00139	0.00193
3000.0	0.00282	0.00383	0.00515	0.00612	0.01354	0.01835	0.02077	0.02977	0.03915	0.04330
3100.0	0.05944	0.09200	0.11006	0.13784	0.15781	0.18615	0.19688	0.27108	0.28233	0.33845
3200.0	0.37879	0.44086	0.41045	0.43508	0.56080	0.57955	0.76809	0.80973	0.72946	0.88824
3300.0	0.94585	0.82462	0.88816	0.87913	0.85925	0.94146	0.83006	0.77433	0.86530	0.92959
3400.0	0.97994	0.92618	0.96351	0.97796	0.81018	0.89245	0.91431	0.92218	0.90118	0.88724
3500.0	1.00000	1.00072	0.93070	0.97473	1.09258	1.07503	0.97715	0.83421	0.74004	0.89821
3600.0	1.04144	0.90109	0.95609	1.01570	1.01972	1.05725	1.21092	1.16990	1.08669	1.14614
3700.0	1.16747	1.11713	1.04620	0.95361	0.87838	0.94315	1.02853	1.11460	1.27269	1.07269
3800.0	1.04594	1.09065	0.83710	0.69686	0.76765	0.94721	0.89630	0.91361	0.89424	0.98721
3900.0	1.11061	1.19518	1.06503	0.64613	0.76068	1.14665	0.98320	0.70632	1.22197	1.45245
4000.0	1.50256									

Table VIII-67

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 11/ 3/73

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 0.11.13 ON 11/ 3/73, NORMALIZING FACTOR = 5.1392E 00										
2600.0	0.00021	0.00019	0.00020	0.00022	0.00023	0.00023	0.00028	0.00020	0.00024	0.00021
2700.0	0.00024	0.00021	0.00020	0.00034	0.00023	0.00035	0.00029	0.00036	0.00019	0.00029
2800.0	0.00021	0.00021	0.00026	0.00021	0.00018	0.00017	0.00025	0.00030	0.00024	0.00028
2900.0	0.00028	0.00030	0.00025	0.00028	0.00050	0.00052	0.00082	0.00094	0.00133	0.00188
3000.0	0.00230	0.00361	0.00484	0.00859	0.01131	0.01618	0.01851	0.02721	0.03579	0.03938
3100.0	0.05462	0.08488	0.10122	0.12642	0.15210	0.18071	0.18837	0.27241	0.28417	0.33795
3200.0	0.37416	0.43868	0.41411	0.41928	0.54591	0.55680	0.75523	0.79567	0.70764	0.87386
3300.0	0.93852	0.81296	0.88268	0.88083	0.84811	0.94181	0.84493	0.77048	0.86433	0.92761
3400.0	0.97832	0.92143	0.95967	0.98037	0.80872	0.88822	0.92131	0.93287	0.90544	0.89843
3500.0	1.00000	1.00412	0.93721	0.96294	1.08981	1.08395	0.99654	0.83411	0.72271	0.85168
3600.0	1.02184	0.88588	0.92418	0.99461	1.00612	1.03767	1.21157	1.17606	1.09788	1.13708
3700.0	1.16727	1.10190	1.04492	0.94304	0.85960	0.91159	1.02245	1.10080	1.27004	1.10250
3800.0	1.04367	1.10900	0.84297	0.66594	0.75272	0.93402	0.88329	0.91232	0.88856	0.97333
3900.0	1.10238	1.18588	1.07871	0.65727	0.75323	1.11398	0.97653	0.71420	1.18562	1.42595
4000.0	1.48223									
ZENITH SCAN STARTING AT 0.22.26 ON 11/ 3/73, NORMALIZING FACTOR = 4.1063E 00										
2600.0	0.00021	0.00032	0.00026	0.00021	0.00047	0.00049	0.00035	0.00030	0.00022	0.00023
2700.0	0.00023	0.00028	0.00022	0.00020	0.00034	0.00030	0.00044	0.00034	0.00034	0.00039
2800.0	0.00042	0.00032	0.00062	0.00022	0.00030	0.00029	0.00026	0.00027	0.00034	0.00026
2900.0	0.00026	0.00029	0.00035	0.00042	0.00041	0.00062	0.00104	0.00121	0.00191	0.00223
3000.0	0.00279	0.00417	0.00614	0.01011	0.01302	0.01832	0.02109	0.03093	0.04050	0.04426
3100.0	0.06158	0.09623	0.11497	0.14355	0.17121	0.20005	0.21258	0.30827	0.33175	0.40763
3200.0	0.44266	0.49769	0.44877	0.44922	0.59205	0.60738	0.81315	0.85879	0.76957	0.94232
3300.0	1.01010	0.87394	0.94152	0.93538	0.89931	0.99648	0.88544	0.79692	0.89179	0.96280
3400.0	1.01454	0.95558	0.98851	1.00350	0.82394	0.90330	0.93215	0.93754	0.90751	0.90042
3500.0	1.00000	0.99924	0.93151	0.95572	1.08129	1.07264	0.97972	0.83522	0.74811	0.85944
3600.0	1.03593	0.87978	0.92552	0.98373	0.99643	1.03996	1.20787	1.18630	1.10602	1.12883
3700.0	1.14432	1.06879	1.01186	0.92461	0.86807	0.94563	1.05805	1.10736	1.24212	1.04474
3800.0	0.99829	1.09427	0.88252	0.71525	0.79250	0.93421	0.86429	0.88456	0.89086	1.05068
3900.0	1.24309	1.34174	1.10633	0.75964	0.85460	1.26225	1.10315	0.78724	1.35561	1.60991
4000.0	1.66253									
ZENITH SCAN STARTING AT 0.44.26 ON 11/ 3/73, NORMALIZING FACTOR = 4.6719E 00										
2600.0	0.00026	0.00022	0.00021	0.00025	0.00026	0.00026	0.00021	0.00018	0.00035	0.00020
2700.0	0.00016	0.00015	0.00023	0.00035	0.00021	0.00018	0.00044	0.00018	0.00023	0.00023
2800.0	0.00024	0.00026	0.00024	0.00117	0.00034	0.00023	0.00023	0.00090	0.00063	0.00020
2900.0	0.00023	0.00026	0.00029	0.00029	0.00043	0.00047	0.00076	0.00088	0.00134	0.00184
3000.0	0.00234	0.00354	0.00500	0.00890	0.01136	0.01552	0.01794	0.02588	0.03452	0.03762
3100.0	0.05081	0.08038	0.09259	0.11869	0.14562	0.17032	0.17980	0.26073	0.27246	0.32995
3200.0	0.36485	0.43039	0.40321	0.41675	0.54348	0.55240	0.74242	0.80612	0.71214	0.88350
3300.0	0.96071	0.81263	0.87812	0.87610	0.83844	0.92535	0.83588	0.76085	0.85815	0.93354
3400.0	0.99410	0.93981	0.97464	1.00196	0.80855	0.88669	0.92179	0.92650	0.89406	0.88357
3500.0	1.00000	1.01121	0.94634	0.98213	1.10754	1.10029	1.00320	0.84948	0.76025	0.85871
3600.0	1.03823	0.89553	0.93535	1.00971	1.01871	1.05741	1.23130	1.15391	1.07480	1.11859
3700.0	1.15549	1.09260	1.03159	0.95218	0.86816	0.91105	1.02214	1.09914	1.26883	1.06436
3800.0	1.03329	1.08356	0.83288	0.65886	0.74313	0.94473	0.89762	0.92169	0.90131	0.97048
3900.0	1.10365	1.16784	1.07689	0.61918	0.70352	1.12119	0.99727	0.67864	1.20361	1.44771
4000.0	1.50892									
ZENITH SCAN STARTING AT 1.28.48 ON 11/ 3/73, NORMALIZING FACTOR = 4.5920E 00										
2600.0	0.00018	0.00034	0.00021	0.00031	0.00017	0.00026	0.00044	0.00028	0.00019	0.00021
2700.0	0.00022	0.00020	0.00028	0.00020	0.00023	0.00033	0.00029	0.00031	0.00066	0.00034
2800.0	0.00025	0.00031	0.00021	0.00026	0.00019	0.00023	0.00035	0.00035	0.00025	0.00020
2900.0	0.00019	0.00029	0.00031	0.00032	0.00036	0.00065	0.00075	0.00103	0.00134	0.00189
3000.0	0.00233	0.00347	0.00474	0.00837	0.01067	0.01525	0.01726	0.02535	0.03297	0.03609
3100.0	0.04965	0.07722	0.09148	0.11449	0.13956	0.16437	0.17546	0.25217	0.26906	0.33155
3200.0	0.36686	0.43859	0.40208	0.41214	0.54418	0.55545	0.74095	0.80186	0.71604	0.87214
3300.0	0.95679	0.81600	0.87722	0.87864	0.84717	0.93467	0.84202	0.77467	0.87110	0.94741
3400.0	1.00440	0.95066	0.95294	0.98780	0.82208	0.89245	0.92569	0.93496	0.90600	0.89592
3500.0	1.00000	1.01138	0.93719	0.97144	1.09558	1.08395	0.99065	0.84421	0.75358	0.88618
3600.0	1.04665	0.90544	0.95077	1.01938	1.02174	1.05183	1.20522	1.17045	1.08842	1.13434
3700.0	1.17877	1.11393	1.05885	0.96656	0.87782	0.92159	1.03452	1.10849	1.27870	1.08724
3800.0	1.05030	1.11423	0.85220	0.67660	0.76985	0.95950	0.91426	0.94350	0.91817	0.98713
3900.0	1.12147	1.19611	1.10160	0.69536	0.73971	1.15458	1.05357	1.03838	1.08470	1.46017
4000.0	1.51475									
ZENITH SCAN STARTING AT 0. 1.11 ON 11/ 3/73, NORMALIZING FACTOR = 2.8053E 00										
2600.0	0.00093	0.00107	0.00041	0.00065	0.00039	0.00038	0.00048	0.00138	0.00043	0.00082
2700.0	0.00068	0.00060	0.00048	0.00048	0.00064	0.00055	0.00033	0.00033	0.00041	0.00036
2800.0	0.00041	0.00052	0.00050	0.00041	0.00051	0.00047	0.00048	0.00066	0.00040	0.00037
2900.0	0.00032	0.00049	0.00056	0.00055	0.00061	0.00088	0.00091	0.00139	0.00188	0.00250
3000.0	0.00341	0.00487	0.00649	0.01209	0.01535	0.02139	0.02438	0.03488	0.04578	0.04878
3100.0	0.06483	0.10153	0.11953	0.14170	0.16910	0.19316	0.20278	0.28664	0.30074	0.35805
3200.0	0.39660	0.46102	0.43077	0.43859	0.57087	0.58083	0.74496	0.83785	0.75459	0.90745
3300.0	0.98901	0.85147	0.90926	0.90798	0.87600	0.96618	0.86615	0.79555	0.88325	0.95155
3400.0	1.00023	0.94896	0.97958	1.00393	0.83478	0.89529	0.92999	0.93450	0.90438	0.88995
3500.0	1.00000	1.00220	0.92917	0.96144	1.07288	1.06119	0.95919	0.81861	0.72951	0.84142
3600.0	0.99637	0.86765	0.90330	0.96702	0.97801	1.01546	1.18472	1.16056	1.08709	1.13495
3700.0	1.17902	1.11578	1.05593	0.96915	0.88019	0.94124	1.01675	1.09294	1.24221	1.06386
3800.0	1.03663	1.04547	0.80765	0.65049	0.74355	0.94428	0.90267	0.89908	0.84611	0.90289
3900.0	1.01063	1.07901	1.01756	0.66571	0.74778	1.04978	0.89733	0.64719	1.05669	1.30416
4000.0	1.45808									
ZENITH SCAN STARTING AT 0. 1.48 ON 11/ 3/73, NORMALIZING FACTOR = 3.1201E 00										
2600.0	0.00028	0.00018	0.00041	0.00087	0.00027	0.00024	0.00034	0.00046	0.00032	0.00028
2700.0	0.00028	0.00058	0.00047	0.00027	0.00020	0.00036	0.00052	0.00034	0.00029	0.00032
2800.0	0.00042	0.00018	0.00033	0.00041	0.00024	0.00020	0.00021	0.00023	0.00028	0.00025
2900.0	0.00030	0.00029	0.00026	0.00031	0.00038	0.00057	0.00092	0.00124	0.00208	0.00239
3000.0	0.00288	0.00444	0.00651	0.01131	0.02024	0.03055	0.02329	0.03494	0.04410	0.04610
3100.0	0.06543	0.09669	0.11513	0.13995	0.16861	0.19655	0.20747	0.29639	0.30950	0.36821
3200.0	0.41463	0.48058	0.44627	0.44478	0.60649	0.61607	0.84621	0.87559	0.78185	0.99306
3300.0	1.03777	0.88932	0.96870	0.95076	0.91940	1.01056	0.88746	0.81998	0.92254	0.98771
3400.0	1.03746	0.97315	1.01551	1.02099	0.82779	0.92144	0.94159	0.93922	0.90574	0.89238
3500.0	1.00000	0.98396	0.91524	0.95243	1.06428	1.03854	0.93599	0.78145	0.68440	0.83101
3600.0	0.95014	0.81373	0.86329	0.90912	0.91238	0.94259	1.06620	1.02559	0.94201	0.98024
3700.0	0.99704	0.94381	0.87585	0.78405	0.71651	0.75950	0.83364	0.90606	1.02734	0.85147
3800.0	0.83485	0.86022	0.65153	0.50494	0.58802	0.71857	0.68053	0.69110	0.67158	0.73141
3900.0	0.82147	0.87164	0.77833	0.42898	0.51356	0.71681	0.60111	0.46870	0.77119	0.89607
4000.0	0.91683									

Table VIII-68

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/17/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
SOLAR SCAN STARTING AT 21.27.37 ON 1/17/74. NORMALIZING FACTOR = 1.2081E 03										
2600.0	0.00011	0.00011	0.00011	0.00011	0.00012	0.00011	0.00012	0.00013	0.00013	0.00014
2700.0	0.00014	0.00013	0.00014	0.00014	0.00015	0.00015	0.00016	0.00016	0.00017	0.00019
2800.0	0.00018	0.00020	0.00020	0.00020	0.00022	0.00021	0.00023	0.00024	0.00025	0.00025
2900.0	0.00026	0.00026	0.00027	0.00029	0.00030	0.00032	0.00037	0.00044	0.00062	0.00108
3000.0	0.00181	0.00368	0.00652	0.01461	0.02207	0.03699	0.04565	0.06880	0.09292	0.10113
3100.0	0.12880	0.19834	0.21919	0.25655	0.28874	0.31230	0.30931	0.41772	0.41013	0.44885
3200.0	0.50375	0.53230	0.51009	0.48737	0.59472	0.63677	0.81149	0.84075	0.77948	0.87822
3300.0	0.95415	0.85034	0.87123	0.86022	0.84287	0.91015	0.81162	0.75752	0.84460	0.90103
3400.0	0.96515	0.91602	0.94116	0.98062	0.80752	0.87051	0.91400	0.93135	0.89699	0.89264
3500.0	1.00000	1.02684	0.96145	0.97957	1.12860	1.12685	1.02586	0.86816	0.77786	0.89611
3600.0	1.10301	0.94602	0.98175	1.07284	1.07677	1.10635	1.31110	1.28001	1.19194	1.21940
3700.0	1.25994	1.19386	1.14456	1.04106	0.93488	0.99075	1.11985	1.19319	1.39858	1.22075
3800.0	1.13669	1.24999	0.95745	0.73659	0.83461	1.07411	2.69869	1.16483	1.02298	1.12557
3900.0	1.28555	1.37961	1.28044	0.78252	0.84863	1.32544	1.18375	0.80506	1.30959	1.73685
4000.0	1.80957									
SOLAR SCAN STARTING AT 21.35.54 ON 1/17/74. NORMALIZING FACTOR = 1.1894E 03										
2600.0	0.00010	0.00009	0.00009	0.00009	0.00009	0.00010	0.00009	0.00010	0.00011	0.00014
2700.0	0.00013	0.00013	0.00013	0.00013	0.00013	0.00014	0.00014	0.00015	0.00015	0.00016
2800.0	0.00016	0.00016	0.00018	0.00019	0.00018	0.00019	0.00019	0.00020	0.00022	0.00022
2900.0	0.00023	0.00024	0.00025	0.00026	0.00026	0.00027	0.00031	0.00038	0.00054	0.00093
3000.0	0.00158	0.00325	0.00568	0.01349	0.02037	0.03336	0.04226	0.06156	0.08691	0.09466
3100.0	0.11660	0.18860	0.20846	0.24338	0.27661	0.30241	0.29205	0.40092	0.40395	0.44116
3200.0	0.49614	0.53210	0.50708	0.48953	0.58173	0.63055	0.78605	0.83097	0.77008	0.85891
3300.0	0.95706	0.84518	0.86416	0.85823	0.83797	0.89725	0.81016	0.75307	0.83524	0.89370
3400.0	0.96672	0.91412	0.93037	0.96627	0.81462	0.87434	0.90813	0.92517	0.89138	0.88664
3500.0	1.00000	1.03008	0.96452	0.96462	1.12912	1.13156	1.04269	0.87142	0.79247	0.87961
3600.0	1.11997	0.96085	0.99020	1.08408	1.09414	1.12048	1.32648	1.29066	1.20885	1.23869
3700.0	1.30683	1.21782	1.18137	1.06273	0.95735	1.01602	1.16677	1.24126	1.47227	1.29083
3800.0	1.18687	1.27512	0.97963	0.75540	0.83582	1.10427	1.03359	1.07668	1.05040	1.14706
3900.0	1.32103	1.41258	1.33178	0.79891	0.85120	1.33723	1.22112	0.78338	1.40760	1.73536
4000.0	1.82007									
SOLAR SCAN STARTING AT 21.37.39 ON 1/17/74. NORMALIZING FACTOR = 1.1299E 03										
2600.0	0.00009	0.00010	0.00009	0.00009	0.00010	0.00010	0.00010	0.00011	0.00010	0.00010
2700.0	0.00012	0.00011	0.00012	0.00012	0.00011	0.00012	0.00012	0.00013	0.00013	0.00014
2800.0	0.00014	0.00014	0.00015	0.00016	0.00016	0.00016	0.00017	0.00018	0.00018	0.00019
2900.0	0.00019	0.00019	0.00019	0.00020	0.00021	0.00022	0.00023	0.00027	0.00038	0.00057
3000.0	0.00116	0.00204	0.00417	0.01009	0.01762	0.02834	0.03914	0.05260	0.08014	0.09467
3100.0	0.10472	0.16503	0.20531	0.23279	0.26981	0.30255	0.30240	0.36226	0.42082	0.42421
3200.0	0.46054	0.53461	0.51822	0.48969	0.52331	0.62789	0.74938	0.86243	0.81637	0.82461
3300.0	0.98385	0.90319	0.87897	0.89360	0.86180	0.92570	0.86623	0.77049	0.84270	0.91469
3400.0	0.97328	0.96091	0.94742	1.00715	0.87248	0.84947	0.94887	0.96187	0.92465	0.93257
3500.0	1.00000	1.08486	1.01235	1.02467	1.16420	1.16983	1.07517	0.90623	0.82055	0.90374
3600.0	1.15293	0.99109	1.01778	1.11051	1.12138	1.14383	1.35908	1.32719	1.24234	1.26816
3700.0	1.33004	1.24446	2.86649	1.35645	0.97520	1.03913	1.17664	1.24135	1.48041	1.23196
3800.0	1.19566	1.23860	0.90328	0.78242	0.85985	1.13366	1.07053	1.10458	1.08120	1.16321
3900.0	1.35136	1.43552	1.36198	0.81718	0.82646	1.35611	1.28460	0.81823	1.47330	1.80845
4000.0	1.89335									
SOLAR SCAN STARTING AT 21.43.34 ON 1/17/74. NORMALIZING FACTOR = 1.1332E 03										
2600.0	0.00009	0.00008	0.00008	0.00008	0.00010	0.00009	0.00010	0.00009	0.00009	0.00009
2700.0	0.00010	0.00010	0.00010	0.00010	0.00011	0.00012	0.00012	0.00013	0.00014	0.00015
2800.0	0.00015	0.00016	0.00015	0.00016	0.00017	0.00018	0.00018	0.00018	0.00019	0.00019
2900.0	0.00020	0.00021	0.00023	0.00023	0.00024	0.00024	0.00026	0.00030	0.00042	0.00063
3000.0	0.00112	0.00220	0.00400	0.00911	0.01602	0.02515	0.03621	0.04879	0.07567	0.08806
3100.0	0.09708	0.15826	0.19383	0.22024	0.25627	0.28530	0.28444	0.34957	0.40358	0.40739
3200.0	0.45181	0.52220	0.50231	0.47675	0.53628	0.61565	0.70294	0.71984	0.78774	0.84388
3300.0	0.97664	0.84442	0.81755	0.87660	0.85049	0.90173	0.84486	0.75397	0.84101	0.89799
3400.0	0.96460	0.91510	0.77485	0.97530	0.81733	0.87463	0.91177	0.92479	0.89176	0.88592
3500.0	1.00000	1.03039	0.95897	0.98384	1.11875	1.12054	1.02616	0.86513	0.78312	0.86799
3600.0	1.09942	0.94140	0.97756	2.92598	1.07143	1.10122	1.31094	1.27437	1.19020	1.21698
3700.0	1.27723	1.19651	1.15395	1.04703	0.93582	0.98793	1.13059	1.16352	1.42333	1.22297
3800.0	1.15059	1.27176	0.96905	0.75089	0.81623	1.09683	1.03906	1.07158	1.03459	1.10606
3900.0	1.29606	1.37436	1.30315	0.75739	0.78218	1.33024	1.24219	0.78578	1.36982	1.73554
4000.0	1.81305									

Table VIII-69

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/27/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 14.34.28 ON 1/27/74, NORMALIZING FACTOR = 2.3056E 01										
2600.0	0.00019	0.00019	0.00020	0.00020	0.00020	0.00021	0.00021	0.00021	0.00021	0.00020
2700.0	0.00020	0.00021	0.00021	0.00021	0.00022	0.00022	0.00023	0.00025	0.00024	0.00024
2800.0	0.00024	0.00025	0.00024	0.00026	0.00033	0.00025	0.00026	0.00026	0.00027	0.00027
2900.0	0.00032	0.00044	0.00068	0.00128	0.00238	0.00494	0.00925	0.01472	0.02422	0.03676
3000.0	0.04919	0.07063	0.09243	0.16172	0.19398	0.24816	0.26144	0.33071	0.39260	0.37773
3100.0	0.42414	0.61185	0.60229	0.64985	0.67724	0.67976	0.52746	0.81074	0.76320	0.78978
3200.0	0.87931	0.86813	0.82616	0.77994	0.89622	0.97203	1.16346	1.17696	1.09004	1.19485
3300.0	1.25286	1.10392	1.09062	1.01396	0.99216	1.03681	0.91174	0.84864	0.92940	0.96857
3400.0	1.03463	0.95564	0.97851	0.99776	0.83405	0.91385	0.92955	0.93390	0.90828	0.88796
3500.0	1.00000	1.00151	0.93671	0.95441	1.05866	1.02893	0.92107	0.75858	0.67575	0.76920
3600.0	0.91919	0.78068	0.82000	0.86661	0.86879	0.89169	1.01590	0.98488	0.90906	0.93950
3700.0	0.96582	0.91145	0.85928	0.76728	0.70102	0.75745	0.82437	0.89230	1.01211	0.85199
3800.0	0.83432	0.87999	0.64979	0.52392	0.58860	0.74131	0.69514	0.69656	0.67173	0.73394
3900.0	0.82902	0.88622	0.80631	0.47660	0.54375	0.81844	0.71331	0.51061	0.86611	1.02578
4000.0	1.05560									
ZENITH SCAN STARTING AT 14.36.49 ON 1/27/74, NORMALIZING FACTOR = 1.7032E 01										
2600.0	0.00017	0.00018	0.00017	0.00021	0.00018	0.00018	0.00020	0.00019	0.00018	0.00018
2700.0	0.00020	0.00020	0.00019	0.00019	0.00021	0.00020	0.00022	0.00022	0.00021	0.00021
2800.0	0.00022	0.00022	0.00022	0.00022	0.00022	0.00023	0.00024	0.00023	0.00027	0.00027
2900.0	0.00033	0.00052	0.00092	0.00178	0.00362	0.00767	0.01434	0.02396	0.03867	0.06084
3000.0	0.07839	0.11654	0.15596	0.26295	0.32000	0.40585	0.42439	0.52437	0.55546	0.52117
3100.0	0.57559	0.79637	0.77641	0.82719	0.85196	0.82880	0.73917	0.90766	0.83821	0.86062
3200.0	0.94242	0.92029	0.86520	0.81115	0.93335	1.00970	1.20459	1.21138	1.12112	1.22544
3300.0	1.29798	1.15584	1.15080	1.11131	1.09501	1.13663	0.99793	0.94142	1.02682	1.06731
3400.0	1.13658	1.04919	1.07084	1.08054	0.88128	0.95523	0.96051	0.96246	0.92329	0.89423
3500.0	1.00000	0.98251	0.91768	0.94923	1.04875	1.02372	0.92579	0.77186	0.68408	0.80936
3600.0	0.93894	0.80445	0.82624	0.88333	0.89009	0.93070	1.07613	1.05273	1.00498	1.08663
3700.0	1.16345	1.12911	1.06026	0.96274	0.88801	0.96546	1.07858	1.16783	1.33859	1.13933
3800.0	1.09335	1.13723	0.84960	0.66800	0.78363	0.96617	0.91298	0.93494	0.90841	0.99113
3900.0	1.12699	1.20244	1.09191	0.64942	0.76483	1.12743	0.95745	0.67696	1.15276	1.35264
4000.0	1.39143									
ZENITH SCAN STARTING AT 14.38.35 ON 1/27/74, NORMALIZING FACTOR = 2.5764E 01										
2600.0	0.00010	0.00010	0.00010	0.00011	0.00010	0.00012	0.00011	0.00011	0.00011	0.00012
2700.0	0.00011	0.00011	0.00012	0.00012	0.00011	0.00012	0.00012	0.00012	0.00012	0.00012
2800.0	0.00013	0.00015	0.00016	0.00014	0.00015	0.00015	0.00015	0.00015	0.00016	0.00018
2900.0	0.00022	0.00035	0.00060	0.00122	0.00231	0.00483	0.00928	0.01442	0.02352	0.03482
3000.0	0.04634	0.06789	0.08806	0.15292	0.18259	0.22935	0.24132	0.30502	0.36186	0.34689
3100.0	0.38534	0.55983	0.55203	0.59201	0.62606	0.62929	0.58363	0.76417	0.72239	0.74212
3200.0	0.83090	0.81450	0.76830	0.71542	0.82567	0.89579	1.09161	1.09618	1.01752	1.12568
3300.0	1.18267	1.05700	1.06285	1.03456	1.01868	1.07226	0.95397	0.88248	0.95734	0.99420
3400.0	1.05749	0.98545	1.01070	1.02033	0.84256	0.91429	0.92712	0.93405	0.90311	0.88891
3500.0	1.00000	0.99156	0.92057	0.94603	1.05984	1.03854	0.94646	0.79043	0.69220	0.80646
3600.0	0.97436	0.82723	0.87388	0.93189	0.93873	0.97834	1.12213	1.08362	1.00245	1.03829
3700.0	1.07109	1.00756	0.95418	0.85949	0.77740	0.82890	0.91802	0.99392	1.13604	0.96475
3800.0	0.92899	0.98455	0.74025	0.57286	0.67011	0.83409	0.78444	0.80634	0.78798	0.86135
3900.0	0.97589	1.03948	0.91443	0.54883	0.67220	0.99949	0.88596	0.61618	1.08231	1.28986
4000.0	1.33442									
ZENITH SCAN STARTING AT 14.40.21 ON 1/27/74, NORMALIZING FACTOR = 2.6185E 01										
2600.0	0.00009	0.00009	0.00010	0.00009	0.00009	0.00010	0.00010	0.00010	0.00010	0.00010
2700.0	0.00010	0.00010	0.00011	0.00012	0.00011	0.00012	0.00012	0.00014	0.00012	0.00013
2800.0	0.00013	0.00013	0.00013	0.00013	0.00013	0.00014	0.00013	0.00014	0.00014	0.00016
2900.0	0.00021	0.00034	0.00062	0.00121	0.00232	0.00496	0.00904	0.01448	0.02328	0.03423
3000.0	0.04592	0.06799	0.08678	0.14831	0.17789	0.22860	0.24024	0.30134	0.35895	0.34512
3100.0	0.38426	0.54947	0.53135	0.57467	0.60594	0.61400	0.57375	0.73142	0.68765	0.71281
3200.0	0.79240	0.78116	0.74032	0.69629	0.80344	0.87378	1.04258	1.05082	0.98118	1.07282
3300.0	1.13932	1.02005	1.02283	0.99217	0.98134	1.02495	0.90236	0.85471	0.94031	0.98547
3400.0	1.06030	0.98102	1.00268	1.02075	0.84221	0.91985	0.93542	0.93307	0.90336	0.88286
3500.0	1.00000	0.98707	0.92114	0.95020	1.06231	1.04336	0.94939	0.79510	0.70415	0.82072
3600.0	0.98884	0.84020	0.88261	0.94373	0.95412	0.99667	1.14691	1.07914	1.00191	1.04095
3700.0	1.06583	0.99766	0.93862	0.84643	0.76573	0.82529	0.90422	0.96562	1.12176	0.94793
3800.0	0.91423	0.96972	0.73529	0.56479	0.66506	0.81665	0.77076	0.79482	0.77596	0.85291
3900.0	0.96173	1.03002	0.93965	0.55033	0.62532	0.96130	0.83623	0.55977	1.01275	1.20052
4000.0	1.24100									
ZENITH SCAN STARTING AT 14.42.42 ON 1/27/74, NORMALIZING FACTOR = 2.8223E 01										
2600.0	0.00008	0.00008	0.00008	0.00009	0.00010	0.00009	0.00009	0.00009	0.00009	0.00009
2700.0	0.00009	0.00010	0.00009	0.00010	0.00010	0.00010	0.00010	0.00011	0.00010	0.00011
2800.0	0.00011	0.00011	0.00011	0.00011	0.00012	0.00018	0.00013	0.00015	0.00014	0.00018
2900.0	0.00020	0.00033	0.00057	0.00116	0.00225	0.00451	0.00866	0.01368	0.02164	0.03351
3000.0	0.04306	0.06402	0.08442	0.14383	0.17242	0.21621	0.22647	0.28842	0.33842	0.32726
3100.0	0.37249	0.53315	0.53237	0.57942	0.61590	0.62344	0.58581	0.75993	0.70275	0.73046
3200.0	0.81824	0.79198	0.75065	0.70178	0.81619	0.88747	1.07429	1.07668	1.00954	1.10663
3300.0	1.15340	1.03249	1.03429	1.00624	0.99974	1.05875	0.92999	0.88090	0.97211	1.02094
3400.0	1.09456	1.02796	1.01420	1.02309	0.84279	0.91740	0.92819	0.92900	0.89396	0.87544
3500.0	1.00000	0.99109	0.91914	0.95584	1.06612	1.04399	0.94277	0.78036	0.68041	0.79606
3600.0	0.94961	0.80082	0.83152	0.87657	0.87051	0.90392	1.03002	0.97944	0.90653	0.93252
3700.0	0.97319	0.93982	0.89607	0.80568	0.73234	0.77822	0.86488	0.94014	1.08267	0.92862
3800.0	0.89718	0.94672	0.70626	0.54308	0.60317	0.76049	0.71842	0.73985	0.71856	0.78040
3900.0	0.88901	0.95387	0.87103	0.51740	0.56965	0.90496	0.77163	0.53594	0.91207	1.10158
4000.0	1.13959									
ZENITH SCAN STARTING AT 14.44.28 ON 1/27/74, NORMALIZING FACTOR = 3.6776E 02										
2600.0	0.00002	0.00002	0.00002	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003
2700.0	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003
2800.0	0.00003	0.00003	0.00003	0.00003	0.00003	0.00004	0.00004	0.00004	0.00004	0.00004
2900.0	0.00005	0.00006	0.00021	0.00027	0.00032	0.00059	0.00099	0.00154	0.00232	0.00338
3000.0	0.00436	0.00639	0.00835	0.01461	0.01757	0.02221	0.02351	0.02992	0.03522	0.03362
3100.0	0.03834	0.05480	0.05412	0.05866	0.06186	0.06217	0.05826	0.07615	0.07274	0.07618
3200.0	0.08691	0.08538	0.08450	0.08351	0.10271	0.11790	0.15273	0.16488	0.16695	0.20270
3300.0	0.22629	0.22332	0.24547	0.25470	0.27383	0.30464	0.28618	0.29237	0.35627	0.41453
3400.0	0.47490	0.48997	0.54477	0.59761	0.54138	0.62980	0.68591	0.74623	0.76626	0.79737
3500.0	1.00000	1.07314	1.06137	1.16852	1.42096	1.48598	1.42968	1.29279	1.23482	1.52232
3600.0	1.93831	1.76363	1.94104	2.15353	2.27763	2.50987	3.08052	3.16047	3.06099	3.32821
3700.0	3.58686	3.50593	3.57026	3.37140	3.10483	3.36931	3.84236	4.20208	4.93303	4.29842
3800.0	4.14847	4.48133	3.46410	2.73652	3.18204	4.09741	3.88643	4.04074	4.00139	4.38681
3900.0	5.11494	5.53584	5.14120	2.94038	3.57231	5.54420	4.93915	3.41243	6.18243	7.47428
4000.0	7.80514									

Table VIII-70

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/27/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
SOLAR SCAN STARTING AT 14.48.16 ON 1/27/74. NORMALIZING FACTOR = 1.3209E 03										
2600.0	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00007	0.00006	0.00006	0.00006
2700.0	0.00006	0.00007	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00009
2800.0	0.00009	0.00009	0.00010	0.00010	0.00010	0.00011	0.00011	0.00012	0.00013	0.00014
2900.0	0.00018	0.00027	0.00043	0.00084	0.00162	0.00320	0.00620	0.00987	0.01574	0.02439
3000.0	0.03132	0.04771	0.06054	0.10524	0.12652	0.15911	0.16790	0.21436	0.25385	0.24414
3100.0	0.27938	0.39902	0.39263	0.42411	0.45175	0.45546	0.42513	0.56525	0.52985	0.55054
3200.0	0.62638	0.60661	0.57858	0.54657	0.63373	0.69845	0.85774	0.86837	0.81606	0.90848
3300.0	0.97042	0.87110	0.87952	0.86002	0.85664	0.90819	0.80083	0.76075	0.85068	0.89606
3400.0	0.96806	0.90200	0.93418	0.96599	0.78428	0.87353	0.89595	0.91093	0.88434	0.87872
3500.0	1.00000	1.00183	0.94077	0.97423	1.11039	1.09762	0.98568	0.83747	0.75070	0.89829
3600.0	1.06635	0.91336	0.97084	1.03594	1.04143	1.08018	1.26757	1.22730	1.14482	1.19900
3700.0	1.23687	1.17344	1.10709	1.01230	0.92818	0.99548	1.11878	1.19138	1.38812	1.18847
3800.0	1.14091	1.22851	0.93188	0.72815	0.84348	1.06740	1.01470	1.04877	1.02853	1.12355
3900.0	1.29668	1.40192	1.28663	0.74130	0.86002	1.35174	1.18289	0.81545	1.47136	1.76385
4000.0	1.83635									
ZENITH SCAN STARTING AT 14.56.46 ON 1/27/74. NORMALIZING FACTOR = 2.5652E 01										
2600.0	0.00021	0.00022	0.00021	0.00021	0.00021	0.00021	0.00021	0.00022	0.00023	0.00023
2700.0	0.00022	0.00024	0.00023	0.00022	0.00024	0.00025	0.00025	0.00024	0.00024	0.00024
2800.0	0.00024	0.00025	0.00024	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00027
2900.0	0.00034	0.00048	0.00082	0.00303	0.00320	0.00633	0.01116	0.01723	0.02611	0.03793
3000.0	0.04785	0.06836	0.09025	0.15083	0.17953	0.22802	0.23858	0.30265	0.35076	0.33480
3100.0	0.38449	0.53222	0.52539	0.57076	0.59714	0.60015	0.56511	0.71603	0.66617	0.69563
3200.0	0.77263	0.75221	0.71608	0.67826	0.78466	0.85922	1.02485	1.02370	0.95929	1.05382
3300.0	1.10048	0.98245	0.99493	0.95950	0.95232	0.99445	0.86591	0.83156	0.91198	0.95558
3400.0	1.02372	0.95095	0.97340	0.99721	0.81893	0.91433	0.92375	0.92886	0.90134	0.88271
3500.0	1.00000	0.99782	0.96940	0.97213	1.09312	1.07646	0.97916	0.83152	0.74021	0.90789
3600.0	1.04408	0.90473	0.95204	0.99959	0.99084	1.02314	1.16113	1.11285	1.02574	1.07449
3700.0	1.08778	1.03870	0.95679	0.86566	0.79088	0.86320	0.93024	1.00007	1.14012	0.97145
3800.0	0.94157	0.97782	0.71072	0.57114	0.66107	0.82467	0.80289	0.80211	0.78703	0.88446
3900.0	0.99840	1.08008	0.98168	0.56300	0.73772	1.13016	0.98968	0.69959	1.28067	1.51977
4000.0	1.57550									
ZENITH SCAN STARTING AT 14.58.31 ON 1/27/74. NORMALIZING FACTOR = 2.2581E 01										
2600.0	0.00018	0.00017	0.00018	0.00017	0.00018	0.00018	0.00018	0.00019	0.00018	0.00018
2700.0	0.00018	0.00018	0.00019	0.00019	0.00020	0.00021	0.00020	0.00021	0.00020	0.00021
2800.0	0.00021	0.00020	0.00020	0.00021	0.00022	0.00021	0.00022	0.00023	0.00024	0.00025
2900.0	0.00031	0.00049	0.00082	0.00158	0.00306	0.00604	0.01135	0.01768	0.02718	0.04131
3000.0	0.05206	0.07495	0.09575	0.16347	0.19667	0.24544	0.25216	0.31614	0.38141	0.36177
3100.0	0.40482	0.58141	0.56881	0.60248	0.63514	0.63979	0.59662	0.77222	0.72520	0.74877
3200.0	0.83382	0.81059	0.77468	0.74905	0.87624	0.92618	1.13914	1.13772	1.03274	1.13142
3300.0	1.19987	1.07637	1.08736	1.03511	1.00802	1.06358	0.94011	0.87918	0.96723	1.00567
3400.0	1.07482	1.00500	1.03226	1.05867	0.85143	0.92976	0.95977	0.98299	0.92691	0.89575
3500.0	1.00000	1.01465	0.93586	0.94401	1.07529	1.07411	0.99296	0.84307	0.74167	0.85343
3600.0	1.03022	0.84626	0.88625	0.94176	0.94626	0.96799	1.11520	1.07625	1.00958	1.06151
3700.0	1.09663	1.01454	0.96295	0.87588	0.79705	0.82895	0.92431	1.01979	1.19923	1.03150
3800.0	0.98639	1.02935	0.75142	0.57773	0.68904	0.86734	0.80977	0.83186	0.81175	0.90768
3900.0	1.01783	1.09204	1.00350	0.58461	0.65962	1.01011	0.87301	0.60641	1.04576	1.27062
4000.0	1.33014									
ZENITH SCAN STARTING AT 15. 0.17 ON 1/27/74. NORMALIZING FACTOR = 2.3734E 01										
2600.0	0.00016	0.00014	0.00013	0.00014	0.00013	0.00014	0.00014	0.00014	0.00015	0.00014
2700.0	0.00014	0.00015	0.00015	0.00015	0.00015	0.00016	0.00016	0.00016	0.00016	0.00016
2800.0	0.00020	0.00018	0.00018	0.00019	0.00020	0.00019	0.00019	0.00020	0.00020	0.00023
2900.0	0.00029	0.00046	0.00082	0.00157	0.00301	0.00616	0.01119	0.01722	0.02685	0.03869
3000.0	0.05155	0.07214	0.09342	0.16307	0.19373	0.24663	0.26005	0.32368	0.38517	0.36667
3100.0	0.39901	0.57634	0.56745	0.61170	0.64238	0.64341	0.59073	0.76234	0.72016	0.73729
3200.0	0.81929	0.81018	0.76566	0.71836	0.82655	0.90829	1.11322	1.13998	1.04671	1.12947
3300.0	1.20927	1.08016	1.09255	1.06234	1.03756	1.07662	0.92396	0.87385	0.96614	1.00608
3400.0	1.06620	0.98444	1.00819	1.03551	0.85816	0.94673	0.96883	0.96779	0.92302	0.89963
3500.0	1.00000	1.00745	0.93235	0.94224	1.06750	1.04569	0.95004	0.80981	0.72448	0.84215
3600.0	0.99204	0.85631	0.89497	0.95505	0.97493	0.98672	1.13005	1.09457	1.02609	1.06995
3700.0	1.09674	1.01359	0.96046	0.85523	0.79196	0.84835	0.93174	0.99521	1.13799	0.98333
3800.0	0.93217	0.99589	0.72550	0.57804	0.66577	0.86009	0.81178	0.83083	0.80137	0.86098
3900.0	0.98269	1.02726	0.93133	0.57358	0.64138	0.98836	0.85213	0.58393	1.00136	1.21004
4000.0	1.24076									
ZENITH SCAN STARTING AT 15. 2.41 ON 1/27/74. NORMALIZING FACTOR = 2.4545E 01										
2600.0	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	0.00016	0.00014	0.00013
2700.0	0.00014	0.00014	0.00014	0.00014	0.00014	0.00014	0.00015	0.00015	0.00015	0.00015
2800.0	0.00016	0.00017	0.00016	0.00017	0.00018	0.00018	0.00018	0.00019	0.00019	0.00021
2900.0	0.00029	0.00046	0.00084	0.00166	0.00325	0.00649	0.01195	0.01894	0.02944	0.04345
3000.0	0.05548	0.07842	0.10208	0.17054	0.20705	0.26209	0.27290	0.34410	0.40544	0.39123
3100.0	0.42169	0.59360	0.59258	0.64299	0.67710	0.67920	0.62961	0.80161	0.74395	0.76615
3200.0	0.86524	0.86767	0.82642	0.76642	0.88891	0.96656	1.15908	1.15674	1.07493	1.16114
3300.0	1.22307	1.09128	1.09410	1.06422	1.04192	1.09095	0.95804	0.90106	0.98130	1.02515
3400.0	1.08962	1.01102	1.02514	1.04536	0.85514	0.91362	0.93497	0.94277	0.91197	0.89465
3500.0	1.00000	1.01321	0.94521	0.95401	1.09086	1.08184	0.98215	0.82660	0.73423	0.86716
3600.0	1.01634	0.86531	0.90579	0.97346	0.99192	0.99285	1.13541	1.10667	1.02723	1.06519
3700.0	1.10081	1.04694	1.00035	0.90639	0.82269	0.87534	0.98764	1.06513	1.21575	1.04707
3800.0	0.98612	1.04344	0.79459	0.60701	0.69231	0.86665	0.79628	0.82025	0.80298	0.87433
3900.0	0.99523	1.05373	0.95657	0.54507	0.61802	0.95225	0.84760	0.56379	1.01112	1.21308
4000.0	1.25750									
ZENITH SCAN STARTING AT 15. 4.27 ON 1/27/74. NORMALIZING FACTOR = 2.8476E 01										
2600.0	0.00012	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0.00013	0.00013
2700.0	0.00012	0.00013	0.00012	0.00012	0.00012	0.00014	0.00013	0.00013	0.00013	0.00013
2800.0	0.00014	0.00014	0.00014	0.00015	0.00015	0.00017	0.00017	0.00018	0.00018	0.00019
2900.0	0.00028	0.00044	0.00081	0.00161	0.00309	0.00626	0.01194	0.01836	0.02906	0.04116
3000.0	0.05357	0.07586	0.09635	0.16945	0.20399	0.25559	0.26570	0.33218	0.39577	0.37740
3100.0	0.40724	0.59297	0.58382	0.62416	0.65514	0.65601	0.60688	0.79199	0.74029	0.75733
3200.0	0.86269	0.84739	0.80084	0.74931	0.86160	0.92674	1.11619	1.13300	1.04819	1.13410
3300.0	1.20700	1.07273	1.07513	1.04920	1.03446	1.08268	0.95384	0.88201	0.97744	1.03465
3400.0	1.08952	1.00662	1.01292	1.04817	0.85242	0.91257	0.93678	0.94126	0.91064	0.89608
3500.0	1.00000	0.99725	0.92790	0.94358	1.07856	1.08163	0.98970	0.82179	0.71912	0.83322
3600.0	1.01285	0.83906	0.85958	0.96127	0.93972	0.99424	1.16854	1.11073	1.01663	1.01641
3700.0	1.04453	0.98359	0.94937	0.86845	0.76949	0.80726	0.91929	0.98800	1.12771	0.96445
3800.0	0.91335	0.98510	0.74579	0.59359	0.68700	0.86850	0.81661	0.85104	0.83923	0.91985
3900.0	1.05196	1.12175	1.03579	0.64177	0.65727	0.94838	0.86233	0.58741	1.06626	1.28021
4000.0	1.32695									

Table VIII-71

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/27/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 15. 6.48 ON 1/27/74. NORMALIZING FACTOR = 2.9716E 01										
2600.0	0.00012	0.00010	0.00011	0.00011	0.00012	0.00012	0.00011	0.00012	0.00011	0.00012
2700.0	0.00013	0.00012	0.00013	0.00013	0.00013	0.00014	0.00013	0.00017	0.00014	0.00014
2800.0	0.00014	0.00014	0.00014	0.00016	0.00016	0.00016	0.00016	0.00017	0.00018	0.00019
2900.0	0.00027	0.00046	0.00087	0.00174	0.00330	0.00666	0.01198	0.01819	0.02895	0.04204
3000.0	0.05362	0.07603	0.09987	0.16907	0.20099	0.25611	0.26625	0.32813	0.38482	0.36694
3100.0	0.39853	0.56802	0.55640	0.60714	0.64958	0.63407	0.56336	0.71289	0.67475	0.71595
3200.0	0.82458	0.81807	0.75850	0.69359	0.78610	0.86077	1.02149	1.02647	0.96941	1.05754
3300.0	1.15110	1.05175	1.06610	1.01021	0.97394	1.00509	0.87425	0.82981	0.91054	0.95813
3400.0	1.03854	0.97181	0.99465	1.02431	0.83743	0.92156	0.94171	0.94166	0.90717	0.89359
3500.0	1.00000	1.00558	0.93220	0.96189	1.08763	1.07231	0.97768	0.81792	0.71230	0.85076
3600.0	1.03710	0.89368	0.93083	0.99415	1.00050	1.02753	1.20172	1.15989	1.08274	1.12296
3700.0	1.13215	1.11514	1.06178	0.96092	0.86699	0.93256	1.05495	1.14742	1.33764	1.16846
3800.0	1.10145	1.15686	0.86539	0.66831	0.75533	0.96384	0.89285	0.91322	0.87796	0.94809
3900.0	1.06225	1.12755	1.03234	0.60026	0.70056	1.07245	0.95459	0.64383	1.12832	1.36346
4000.0	1.39571									
ZENITH SCAN STARTING AT 15. 8.33 ON 1/27/74. NORMALIZING FACTOR = 3.4383E 01										
2600.0	0.00009	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010
2700.0	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	0.00012	0.00012
2800.0	0.00013	0.00013	0.00013	0.00013	0.00013	0.00015	0.00014	0.00014	0.00015	0.00017
2900.0	0.00025	0.00042	0.00076	0.00150	0.00292	0.00583	0.01114	0.01764	0.02656	0.03809
3000.0	0.04838	0.06981	0.08807	0.15068	0.18202	0.22961	0.24323	0.29675	0.34116	0.32419
3100.0	0.34931	0.50513	0.50133	0.53944	0.56951	0.56800	0.52833	0.68451	0.63988	0.65513
3200.0	0.73321	0.72537	0.69203	0.64642	0.74964	0.81024	0.97422	0.97303	0.90514	0.98912
3300.0	1.04659	0.94251	0.94102	0.91149	0.90286	0.96924	0.86701	0.83039	0.94185	0.98670
3400.0	1.03699	0.95130	0.96747	0.99537	0.83702	0.87407	0.92501	0.93865	0.90797	0.89697
3500.0	1.00000	1.02134	0.96172	0.98106	1.11202	1.09123	0.98029	0.82289	0.73599	0.87097
3600.0	1.07974	0.93506	0.98522	1.00718	1.07631	1.09889	1.30098	1.28510	1.19070	1.24034
3700.0	1.29694	1.22829	1.15603	1.05094	0.94922	1.00984	1.14074	1.21196	1.41456	1.20306
3800.0	1.13562	1.22090	0.91912	0.73989	0.84349	1.10974	1.05667	1.12736	1.09669	1.17700
3900.0	1.33274	1.40500	1.28238	0.74720	0.82660	1.27590	1.15067	0.75822	1.39169	1.70423
4000.0	1.85531									
SOLAR SCAN STARTING AT 15.14.45 ON 1/27/74. NORMALIZING FACTOR = 1.1825E 03										
2600.0	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00010
2700.0	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010	0.00010	0.00011
2800.0	0.00011	0.00012	0.00012	0.00013	0.00013	0.00014	0.00014	0.00015	0.00016	0.00018
2900.0	0.00023	0.00035	0.00059	0.00113	0.00214	0.00411	0.00783	0.01177	0.01900	0.02838
3000.0	0.03587	0.05284	0.06759	0.11579	0.13875	0.17306	0.18181	0.22907	0.27102	0.26037
3100.0	0.29122	0.41745	0.41155	0.44130	0.46907	0.47137	0.43862	0.58016	0.54910	0.56248
3200.0	0.63960	0.62615	0.60244	0.56472	0.65135	0.71155	0.87202	0.88536	0.83379	0.92108
3300.0	0.98869	0.88645	0.89441	0.87546	0.86834	0.92282	0.81715	0.77092	0.86103	0.90820
3400.0	0.98039	0.91317	0.94325	0.97053	0.80613	0.88052	0.90267	0.91497	0.88539	0.87632
3500.0	1.00000	1.01083	0.94272	0.97868	1.11007	1.10324	1.00312	0.84050	0.75365	0.87529
3600.0	1.06389	0.91387	0.95267	1.00789	1.03708	1.08245	1.26362	1.22370	1.13310	1.18039
3700.0	1.22951	1.15612	1.11161	1.00275	0.91481	0.98094	1.10568	1.20743	1.40801	1.21398
3800.0	1.14471	1.22272	0.91020	0.71685	0.82687	1.06098	1.00188	1.03149	1.00957	1.10937
3900.0	1.27857	1.37785	1.27586	0.75886	0.87384	1.32080	1.15014	0.79490	1.43805	1.71568
4000.0	1.78969									
SOLAR SCAN STARTING AT 15.18.32 ON 1/27/74. NORMALIZING FACTOR = 1.1422E 03										
2600.0	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007	0.00007
2700.0	0.00007	0.00008	0.00008	0.00009	0.00011	0.00010	0.00010	0.00010	0.00011	0.00011
2800.0	0.00012	0.00012	0.00012	0.00013	0.00013	0.00014	0.00014	0.00015	0.00016	0.00018
2900.0	0.00023	0.00036	0.00062	0.00114	0.00218	0.00431	0.00795	0.01243	0.01944	0.02887
3000.0	0.03762	0.05477	0.06949	0.11622	0.14034	0.17598	0.18377	0.23194	0.27352	0.26484
3100.0	0.29315	0.41878	0.41245	0.44539	0.47424	0.47897	0.44597	0.57781	0.54108	0.55953
3200.0	0.63566	0.62528	0.59923	0.56225	0.65879	0.72894	0.89272	0.90585	0.86075	0.93174
3300.0	0.97904	0.88795	0.89647	0.87615	0.86950	0.92252	0.81344	0.76828	0.85537	0.90228
3400.0	0.97135	0.91292	0.93899	0.97134	0.78830	0.86698	0.89452	0.91590	0.89134	0.88386
3500.0	1.00000	1.01222	0.94021	0.98896	1.10075	1.09204	0.99701	0.83459	0.74340	0.86058
3600.0	1.07413	0.90751	0.96344	1.03570	1.04489	1.08510	1.24676	1.21331	1.12537	1.16712
3700.0	1.22209	1.16557	1.10755	0.99533	0.89950	0.95933	1.09374	1.18092	1.38619	1.20231
3800.0	1.13832	1.21917	0.92778	0.72457	0.82429	1.03216	0.99535	1.02911	1.01393	1.11466
3900.0	1.28202	1.38359	1.24885	0.71225	0.81388	1.31322	1.16706	0.76527	1.40616	1.70744
4000.0	1.77926									
ZENITH SCAN STARTING AT 15.22.39 ON 1/27/74. NORMALIZING FACTOR = 8.7774E 01										
2600.0	0.00009	0.00010	0.00009	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010
2700.0	0.00010	0.00010	0.00010	0.00011	0.00010	0.00010	0.00011	0.00011	0.00011	0.00012
2800.0	0.00011	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.00013	0.00016
2900.0	0.00024	0.00108	0.00107	0.00208	0.00413	0.00799	0.01457	0.02135	0.03173	0.04605
3000.0	0.05831	0.08281	0.10708	0.17745	0.21136	0.26458	0.27578	0.35300	0.41361	0.40027
3100.0	0.45530	0.63048	0.61407	0.65586	0.68284	0.68109	0.63492	0.81301	0.77603	0.81782
3200.0	0.90331	0.85780	0.80554	0.75718	0.86809	0.93170	1.08633	1.07326	0.98794	1.06077
3300.0	1.12559	1.02605	1.03567	1.00493	0.99598	1.07470	0.93827	0.90840	1.02343	1.10135
3400.0	1.18182	1.07200	1.07224	1.03594	0.86924	0.93645	0.93799	0.92723	0.91112	0.89590
3500.0	1.00000	1.00590	0.95527	1.01895	1.18065	1.18967	1.09208	0.89704	0.74868	0.87861
3600.0	0.99677	0.82069	0.84936	0.89706	0.88951	0.87012	0.98675	0.95493	0.88539	0.92396
3700.0	0.95643	0.91423	0.84725	0.76598	0.71316	0.76468	0.84933	0.92227	1.06861	0.91234
3800.0	0.89184	0.96002	0.71483	0.58600	0.71523	0.91249	0.89284	0.94616	0.97840	1.25911
3900.0	1.19086	1.42296	1.24394	0.74719	0.95361	1.45602	1.27339	0.91555	1.66326	1.97808
4000.0	2.03450									
ZENITH SCAN STARTING AT 15.24.25 ON 1/27/74. NORMALIZING FACTOR = 1.5697E 02										
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004
2700.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
2800.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00005	0.00006	0.00006	0.00007
2900.0	0.00011	0.00047	0.00088	0.00100	0.00190	0.00384	0.00712	0.01061	0.01656	0.02370
3000.0	0.03026	0.04468	0.05771	0.10752	0.13058	0.15426	0.14906	0.18674	0.21760	0.22889
3100.0	0.28455	0.41772	0.41840	0.46912	0.52124	0.55071	0.53990	0.74618	0.72472	0.77232
3200.0	0.89213	0.85337	0.79687	0.74186	0.86319	0.94043	1.10868	1.08267	1.00271	1.09192
3300.0	1.11795	0.98095	0.94575	0.88905	0.86613	0.89179	0.76980	0.71987	0.78659	0.80980
3400.0	0.82903	0.73757	0.73834	0.75066	0.62118	0.69728	0.73921	0.79168	0.81909	0.85605
3500.0	1.00000	0.97326	0.88879	0.93453	1.04762	1.01334	0.89194	0.74233	0.65354	0.77853
3600.0	0.91706	0.80651	0.87981	0.94964	0.97064	1.02231	1.19445	1.15720	1.06659	1.10954
3700.0	1.13491	1.06029	0.97884	0.88357	0.80879	0.89485	0.98673	1.08764	1.27821	1.08401
3800.0	1.07071	1.12529	0.83957	0.63483	0.73244	0.90592	0.86755	0.89885	0.89456	0.98606
3900.0	1.13640	1.25032	1.16419	0.66895	0.84498	1.27486	1.08630	0.72396	1.27763	1.51185
4000.0	1.57094									

Table VIII-72

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/27/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 15.28.34 ON 1/27/74, NORMALIZING FACTOR = 1.6823E 02										
2600.0	0.00003	0.00003	0.00003	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004
2700.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004
2800.0	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005	0.00006	0.00008
2900.0	0.00028	0.00053	0.00067	0.00145	0.00276	0.00512	0.00920	0.01340	0.02085	0.03069
3000.0	0.03831	0.05624	0.07455	0.12770	0.15856	0.20455	0.21752	0.27187	0.30431	0.28383
3100.0	0.31892	0.44168	0.43733	0.47758	0.51926	0.52582	0.49306	0.63080	0.57346	0.59328
3200.0	0.67207	0.64556	0.61722	0.57656	0.67187	0.74223	0.91169	0.91709	0.86418	0.96018
3300.0	1.02082	0.90881	0.89102	0.85637	0.83924	0.87175	0.77285	0.75387	0.84645	0.89925
3400.0	0.97230	0.91850	0.94738	0.96589	0.79465	0.87986	0.90197	0.91085	0.88805	0.88263
3500.0	1.00000	0.97251	0.87792	0.89805	0.99903	0.98058	0.88134	0.75086	0.67455	0.84260
3600.0	1.02725	0.89209	0.96849	1.06204	1.09290	1.13352	1.28097	1.21954	1.10644	1.13343
3700.0	1.17840	1.14904	1.09266	0.98774	0.88873	0.93730	1.04606	1.14359	1.30958	1.13182
3800.0	1.10271	1.17349	0.90252	0.71906	0.85284	1.04876	0.97216	0.99157	0.97262	1.06362
3900.0	1.20322	1.28645	1.15061	0.67721	0.83867	1.26269	1.11891	0.77701	1.39300	1.70817
4000.0	1.78364									
ZENITH SCAN STARTING AT 15.30.20 ON 1/27/74, NORMALIZING FACTOR = 1.9485E 02										
2600.0	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00004
2700.0	0.00003	0.00004	0.00003	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00099
2800.0	0.00011	0.00004	0.00004	0.00004	0.00004	0.00016	0.00104	0.00005	0.00005	0.00008
2900.0	0.00018	0.00064	0.00075	0.00164	0.00326	0.00628	0.01067	0.01543	0.02380	0.03437
3000.0	0.04372	0.06357	0.08044	0.14137	0.16704	0.20507	0.20165	0.24740	0.29193	0.28190
3100.0	0.31665	0.46058	0.44677	0.47869	0.50370	0.50870	0.47981	0.63202	0.58374	0.60371
3200.0	0.70765	0.69033	0.65533	0.60341	0.68648	0.76287	0.93497	0.95188	0.90131	1.00668
3300.0	1.06439	0.95740	0.96236	0.91461	0.89941	0.95344	0.84358	0.79759	0.89801	0.96522
3400.0	1.07064	0.97988	0.97140	0.93654	0.75925	0.87997	0.93304	0.96389	0.94235	0.90941
3500.0	1.00000	0.99177	0.92741	0.95908	1.08385	1.06842	0.96063	0.79915	0.70443	0.85038
3600.0	1.00411	0.88855	0.95420	1.01011	0.98916	0.98246	1.10704	1.07122	0.99750	1.05013
3700.0	1.10176	1.06676	1.01307	0.90887	0.83075	0.89069	1.00557	1.08354	1.20313	0.98631
3800.0	0.92137	0.96898	0.71825	0.55246	0.63450	0.79045	0.76291	0.81750	0.82278	0.90900
3900.0	1.03512	1.09443	0.98220	0.55348	0.66445	0.99455	0.88249	0.59731	1.05726	1.20016
4000.0	1.26538									
ZENITH SCAN STARTING AT 15.32.41 ON 1/27/74, NORMALIZING FACTOR = 2.4736E 01										
2600.0	0.00015	0.00016	0.00016	0.00021	0.00017	0.00017	0.00016	0.00017	0.00017	0.00017
2700.0	0.00017	0.00017	0.00017	0.00018	0.00018	0.00019	0.00020	0.00019	0.00025	0.00020
2800.0	0.00020	0.00019	0.00020	0.00020	0.00019	0.00020	0.00020	0.00021	0.00022	0.00026
2900.0	0.00039	0.00070	0.00086	0.00162	0.00551	0.01025	0.01865	0.02593	0.03921	0.05449
3000.0	0.06762	0.09542	0.12301	0.20333	0.24058	0.30303	0.31491	0.39118	0.44498	0.41478
3100.0	0.46743	0.63870	0.62645	0.67669	0.71375	0.71215	0.65019	0.80405	0.73313	0.76808
3200.0	0.84943	0.81712	0.77438	0.73702	0.84800	0.91731	1.09544	1.09907	1.02609	1.11449
3300.0	1.16234	1.02679	1.02413	1.00240	1.00114	1.03492	0.89766	0.83722	0.91954	0.95978
3400.0	1.02555	0.94951	0.97270	0.99549	0.81102	0.88920	0.89945	0.90580	0.88260	0.87385
3500.0	1.00000	1.01236	0.98075	1.14229	1.74686	2.94468	4.73074	5.86937	6.76352	9.14014
3600.0	10.78506	9.15364	9.54268	10.01200	9.85687	10.19429	11.70118	11.69350	5.61405	0.09494
3700.0	6.31225	11.66368	10.67495	9.22439	7.77675	8.37525	6.42823	0.27149	3.94870	10.98460
3800.0	10.39482	11.34426	8.77796	6.76370	7.56952	9.09331	8.54779	9.23039	9.22941	10.34050
3900.0	11.54722	4.17880	11.39881	7.25197	8.23344	9.63944	0.70148	0.00538	0.00521	5.48768
4000.0	8.56499									
ZENITH SCAN STARTING AT 15.34.27 ON 1/27/74, NORMALIZING FACTOR = 1.0716E 03										
2600.0	0.00002	0.00002	0.00002	0.00002	0.00002	0.00003	0.00005	0.00008	0.00007	0.00007
2700.0	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00008	0.00009	0.00008	0.00009
2800.0	0.00009	0.00010	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011	0.00012	0.00016
2900.0	0.00025	0.00044	0.00056	0.00170	0.00324	0.00609	0.01145	0.01696	0.02696	0.03914
3000.0	0.04494	0.07238	0.09406	0.16079	0.18858	0.22997	0.23981	0.29586	0.34778	0.33235
3100.0	0.36391	0.52177	0.50775	0.54214	0.57484	0.57458	0.53421	0.70416	0.66509	0.67227
3200.0	0.75499	0.73266	0.69910	0.65022	0.75218	0.82444	1.00181	1.01137	0.95716	1.03990
3300.0	1.10217	0.98585	0.98442	0.96134	0.94638	1.00052	0.89191	0.83121	0.91948	0.96242
3400.0	1.04251	0.96840	0.98731	1.01116	0.83336	0.92705	0.95840	0.97416	0.90040	0.88531
3500.0	1.00000	1.02432	0.96461	1.00669	1.13741	1.12942	1.03374	0.87645	0.78066	0.89980
3600.0	1.09987	0.95158	0.98920	1.06081	1.07755	1.11728	1.30519	1.24760	1.11089	1.04254
3700.0	1.00536	0.89517	0.80925	0.69578	0.61070	0.26639	0.00011	0.00011	0.00011	0.13290
3800.0	0.03929	0.00017	0.20108	0.20344	0.22704	0.28275	0.26639	0.26598	0.24196	0.10225
3900.0	0.00085	0.02927	0.25217	0.16976	0.19093	0.26622	0.20284	0.12325	0.21465	0.24718
4000.0	0.25047									
ZENITH SCAN STARTING AT 15.36.13 ON 1/27/74, NORMALIZING FACTOR = 1.2293E 03										
2600.0	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00013	0.00011	0.00009
2700.0	0.00010	0.00010	0.00010	0.00011	0.00010	0.00011	0.00011	0.00011	0.00012	0.00012
2800.0	0.00013	0.00013	0.00013	0.00014	0.00014	0.00015	0.00015	0.00016	0.00017	0.00020
2900.0	0.00028	0.00044	0.00052	0.00149	0.00269	0.00530	0.00928	0.01410	0.02167	0.03111
3000.0	0.03961	0.05651	0.07456	0.12666	0.14815	0.18375	0.19105	0.23480	0.28140	0.27090
3100.0	0.28818	0.41768	0.41521	0.44621	0.46990	0.47153	0.43470	0.56691	0.54327	0.55540
3200.0	0.62636	0.61543	0.59188	0.55843	0.66004	0.72377	0.87409	0.89385	0.83939	0.91387
3300.0	0.98769	0.88560	0.89067	0.87815	0.87501	0.91508	0.80796	0.76405	0.84713	0.89189
3400.0	0.96477	0.89810	0.92300	0.94717	0.78518	0.86791	0.89365	0.91356	0.89274	0.88475
3500.0	1.00000	1.01729	0.94687	0.98332	1.11570	1.11275	1.02160	0.87057	0.77930	0.91999
3600.0	1.11542	0.95566	0.99458	1.06911	1.08460	1.12678	1.32656	1.28444	1.19643	1.25614
3700.0	1.31957	1.23778	1.17027	1.05966	0.97308	1.05294	1.16272	1.23464	1.36386	1.19639
3800.0	1.15033	1.23779	0.95461	0.73294	0.83964	1.07842	1.02993	1.06758	1.04680	1.13948
3900.0	1.30937	1.41324	1.31561	0.76332	0.83063	1.36832	1.20150	0.79908	1.45573	1.76040
4000.0	1.84449									
ZENITH SCAN STARTING AT 15.38.34 ON 1/27/74, NORMALIZING FACTOR = 1.2000E 03										
2600.0	0.00008	0.00008	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009	0.00009
2700.0	0.00009	0.00010	0.00010	0.00010	0.00010	0.00011	0.00010	0.00011	0.00011	0.00012
2800.0	0.00012	0.00012	0.00013	0.00013	0.00014	0.00014	0.00014	0.00015	0.00016	0.00019
2900.0	0.00027	0.00046	0.00053	0.00160	0.00296	0.00554	0.01023	0.01482	0.02271	0.03405
3000.0	0.04334	0.06261	0.08258	0.13689	0.16205	0.19683	0.20449	0.25338	0.29513	0.28561
3100.0	0.31124	0.44389	0.43521	0.46745	0.49876	0.50315	0.46915	0.60017	0.56634	0.58145
3200.0	0.65256	0.64013	0.61294	0.57542	0.66764	0.73503	0.88844	0.90043	0.85422	0.93126
3300.0	1.00922	0.91100	0.91546	0.89425	0.88252	0.92651	0.81375	0.77565	0.85498	0.89917
3400.0	0.96428	0.91239	0.93742	0.97255	0.80093	0.87103	0.90637	0.91735	0.88911	0.88746
3500.0	1.00000	1.02359	0.96516	1.01196	1.15193	1.14603	1.04955	0.88303	0.79711	0.91634
3600.0	1.13124	0.96390	1.01288	1.07769	1.08506	1.14074	1.31967	1.28038	1.18723	1.23691
3700.0	1.29284	1.23720	1.18751	1.07521	0.96962	1.04190	1.18971	1.27820	1.49454	1.29730
3800.0	1.23099	1.32468	1.01891	0.79505	0.92349	1.17204	1.11173	1.14942	1.12825	1.22139
3900.0	1.42631	1.53236	1.41819	0.86503	0.95359	1.50300	1.35756	0.88592	1.61573	1.99055
4000.0	2.06821									

Table VIII-73

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED RUV ENERGY CURVES FROM FLIGHT OF 1/27/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 15.42.44 ON 1/27/74, NORMALIZING FACTOR = 1.2759E 03										
2600.0	0.00008	0.00008	0.00008	0.00009	0.00008	0.00009	0.00009	0.00009	0.00009	0.00009
2700.0	0.00010	0.00010	0.00010	0.00011	0.00010	0.00011	0.00011	0.00012	0.00012	0.00012
2800.0	0.00013	0.00013	0.00013	0.00014	0.00014	0.00015	0.00015	0.00016	0.00017	0.00020
2900.0	0.00030	0.00050	0.00091	0.00171	0.00321	0.00634	0.01115	0.01689	0.02579	0.03716
3000.0	0.04728	0.06760	0.08530	0.14677	0.17662	0.21834	0.22572	0.27772	0.32432	0.31288
3100.0	0.33745	0.48466	0.48304	0.52385	0.55411	0.55649	0.50985	0.64214	0.60522	0.61813
3200.0	0.68961	0.67848	0.64774	0.60879	0.69930	0.76620	0.91387	0.93306	0.88948	0.96261
3300.0	1.03508	0.92005	0.91339	0.88875	0.88607	0.94064	0.82375	0.77605	0.85748	0.90314
3400.0	0.97570	0.91828	0.94034	0.97292	0.80283	0.87143	0.89806	0.91236	0.89193	0.88761
3500.0	1.00000	1.03131	0.97870	1.00126	1.12857	1.10933	0.98731	0.81525	0.73025	0.85400
3600.0	1.03162	0.88569	0.93822	1.00437	1.01388	1.03708	1.19327	1.16448	1.08659	1.12140
3700.0	1.16873	1.09823	1.05792	0.96663	0.87598	0.94154	1.04066	1.11878	1.33418	1.15308
3800.0	1.08710	1.16647	0.89043	0.69943	0.81231	1.05089	0.98141	0.99773	0.97895	1.07659
3900.0	1.25475	1.35498	1.24746	0.73105	0.83646	1.32171	1.19927	0.80676	1.43025	1.73794
4000.0	1.80160									
ZENITH SCAN STARTING AT 15.44.29 ON 1/27/74, NORMALIZING FACTOR = 1.3519E 03										
2600.0	0.00008	0.00007	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009	0.00009
2700.0	0.00010	0.00009	0.00010	0.00010	0.00010	0.00011	0.00012	0.00017	0.00013	0.00014
2800.0	0.00014	0.00014	0.00015	0.00016	0.00016	0.00017	0.00017	0.00018	0.00019	0.00023
2900.0	0.00032	0.00054	0.00093	0.00173	0.00318	0.00601	0.01111	0.01633	0.02523	0.03719
3000.0	0.04643	0.06808	0.08870	0.14583	0.17140	0.21063	0.22036	0.27292	0.31878	0.30662
3100.0	0.34051	0.48909	0.47826	0.51227	0.54307	0.54683	0.51043	0.66638	0.62822	0.64591
3200.0	0.72447	0.70594	0.67701	0.62676	0.72357	0.79853	0.97433	0.97903	0.91910	0.99700
3300.0	1.06099	0.95278	0.94095	0.88847	0.87006	0.91269	0.81044	0.76279	0.84733	0.89362
3400.0	0.96284	0.90173	0.92957	0.97101	0.81217	0.88091	0.90614	0.92120	0.89580	0.88501
3500.0	1.00000	1.00444	0.93110	0.99009	1.07765	1.07563	0.99508	0.83880	0.75174	0.86804
3600.0	1.06751	0.89986	0.93214	0.98890	1.01951	1.07281	1.22688	1.16913	1.07472	1.10558
3700.0	1.14216	1.07663	1.04285	0.94320	0.84143	0.87528	0.98129	1.04789	1.22713	1.06083
3800.0	1.02775	1.11103	0.85817	0.66569	0.74863	0.95483	0.91416	0.95518	0.95494	1.06942
3900.0	1.27361	1.36206	1.24436	0.71319	0.78883	1.30948	1.17198	0.77537	1.41138	1.75966
4000.0	1.84264									
ZENITH SCAN STARTING AT 15.52.39 ON 1/27/74, NORMALIZING FACTOR = 1.2139E 03										
2600.0	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
2700.0	0.00008	0.00009	0.00009	0.00010	0.00009	0.00010	0.00010	0.00010	0.00011	0.00011
2800.0	0.00011	0.00011	0.00011	0.00012	0.00012	0.00013	0.00018	0.00017	0.00017	0.00019
2900.0	0.00028	0.00044	0.00079	0.00146	0.00270	0.00503	0.00871	0.01280	0.01965	0.02832
3000.0	0.03542	0.05083	0.06477	0.11072	0.12663	0.15496	0.16397	0.20590	0.24609	0.24119
3100.0	0.25497	0.35898	0.34662	0.36222	0.37923	0.38774	0.35900	0.44779	0.42376	0.45425
3200.0	0.53923	0.55823	0.53612	0.49806	0.56726	0.63903	0.77776	0.79528	0.73270	0.78065
3300.0	0.84248	0.74233	0.74063	0.72234	0.71718	0.76463	0.68594	0.65172	0.72643	0.78136
3400.0	0.86742	0.83133	0.89255	0.93465	0.78603	0.85298	0.89157	0.91256	0.88496	0.88540
3500.0	1.00000	1.01190	0.93728	0.96447	1.09893	1.08482	0.99785	0.85710	0.76614	0.87987
3600.0	1.08107	0.93596	0.97491	1.03144	1.02516	1.06472	1.24790	1.20230	1.11606	1.15667
3700.0	1.19907	1.12703	1.07994	0.97175	0.88438	0.94881	1.05004	1.14286	1.31983	1.14066
3800.0	1.11914	1.21115	0.90883	0.71234	0.79707	1.02674	0.97959	1.02371	1.01360	1.11046
3900.0	1.27453	1.36349	1.27452	0.74863	0.88597	1.35779	1.25129	1.06816	1.45335	1.74072
4000.0	1.78203									
ZENITH SCAN STARTING AT 15.54.24 ON 1/27/74, NORMALIZING FACTOR = 1.1345E 03										
2600.0	0.00009	0.00015	0.00009	0.00009	0.00009	0.00010	0.00010	0.00010	0.00010	0.00010
2700.0	0.00011	0.00010	0.00011	0.00011	0.00012	0.00012	0.00012	0.00013	0.00013	0.00013
2800.0	0.00013	0.00014	0.00015	0.00015	0.00015	0.00016	0.00016	0.00017	0.00018	0.00021
2900.0	0.00028	0.00046	0.00075	0.00141	0.00259	0.00494	0.00963	0.01444	0.02239	0.03303
3000.0	0.04163	0.06093	0.07921	0.13009	0.15647	0.19055	0.19791	0.24466	0.29221	0.28339
3100.0	0.31266	0.45035	0.44905	0.48044	0.50592	0.50627	0.46425	0.57267	0.53349	0.53652
3200.0	0.60113	0.58809	0.57098	0.53652	0.61135	0.66395	0.80397	0.82802	0.80481	0.88875
3300.0	0.94216	0.82635	0.81498	0.81726	0.82599	0.86514	0.76609	0.73082	0.81405	0.85927
3400.0	0.92426	0.86239	0.88211	0.92089	0.77545	0.85026	0.87495	0.88440	0.86893	0.87536
3500.0	1.00000	1.00076	0.92002	0.94074	1.07784	1.07433	0.97225	0.82138	0.75564	0.88773
3600.0	1.11123	0.92687	0.97170	1.03409	1.07587	1.10742	1.27281	1.23484	1.17243	1.21819
3700.0	1.28392	1.23834	1.20037	1.10643	0.98684	1.05800	1.20143	1.28934	1.51049	1.31436
3800.0	1.26503	1.39325	1.05828	0.83315	0.92146	1.19592	1.10983	1.14287	1.12573	1.25215
3900.0	1.44632	1.55922	1.44250	0.87283	0.93328	1.48466	1.32084	0.86517	1.53787	1.87720
4000.0	1.94241									
ZENITH SCAN STARTING AT 15.58.34 ON 1/27/74, NORMALIZING FACTOR = 1.2297E 03										
2600.0	0.00007	0.00006	0.00007	0.00006	0.00007	0.00009	0.00014	0.00008	0.00008	0.00009
2700.0	0.00008	0.00009	0.00009	0.00009	0.00010	0.00009	0.00010	0.00010	0.00011	0.00010
2800.0	0.00011	0.00011	0.00011	0.00012	0.00012	0.00012	0.00013	0.00013	0.00014	0.00016
2900.0	0.00023	0.00038	0.00069	0.00121	0.00217	0.00418	0.00742	0.01121	0.01735	0.02469
3000.0	0.03132	0.04399	0.05606	0.09486	0.11140	0.13958	0.14434	0.17785	0.20994	0.20532
3100.0	0.21454	0.29771	0.29711	0.31846	0.33254	0.33178	0.30546	0.38680	0.37063	0.37802
3200.0	0.41304	0.40722	0.37351	0.35577	0.41664	0.46159	0.55955	0.58011	0.55712	0.61187
3300.0	0.67488	0.62446	0.63385	0.62157	0.62865	0.69095	0.62247	0.57849	0.62973	0.68801
3400.0	0.78173	0.76935	0.79615	0.82374	0.69972	0.77199	0.80936	0.84378	0.85037	0.87394
3500.0	1.00000	1.03131	0.98216	1.01256	1.15308	1.13687	1.04424	0.87641	0.78708	0.88816
3600.0	1.09423	0.92766	0.97459	1.04420	1.03677	1.03878	1.13717	1.03232	0.92668	0.93530
3700.0	0.92215	0.81184	0.75195	0.68904	0.63658	0.68217	0.80619	0.89305	1.11316	1.02300
3800.0	0.98305	1.09154	0.86744	0.76067	0.84616	1.07785	1.01575	1.07975	1.10451	1.22190
3900.0	1.38950	1.50754	1.40975	0.84157	0.96568	1.52353	1.37906	1.02084	1.86623	2.29938
4000.0	2.43885									
ZENITH SCAN STARTING AT 16. 0.20 ON 1/27/74, NORMALIZING FACTOR = 9.2938E 02										
2600.0	0.00008	0.00009	0.00008	0.00009	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010
2700.0	0.00010	0.00010	0.00011	0.00011	0.00010	0.00011	0.00011	0.00011	0.00012	0.00012
2800.0	0.00013	0.00013	0.00013	0.00014	0.00014	0.00015	0.00014	0.00016	0.00016	0.00020
2900.0	0.00029	0.00050	0.00089	0.00171	0.00309	0.00587	0.01025	0.01538	0.02342	0.03345
3000.0	0.04123	0.06010	0.07861	0.13116	0.15864	0.19527	0.20049	0.24399	0.29207	0.28558
3100.0	0.31402	0.44640	0.43776	0.47188	0.50437	0.50168	0.45468	0.58173	0.55385	0.56630
3200.0	0.63713	0.61892	0.58278	0.54003	0.65451	0.76416	0.96176	0.97288	0.92139	1.02005
3300.0	1.09906	0.94972	0.98546	0.95916	0.95359	1.01422	0.88376	0.82661	0.91444	0.97297
3400.0	1.05492	0.99746	1.02006	1.03960	0.86226	0.92745	0.95295	0.96508	0.92978	0.90002
3500.0	1.00000	0.99792	0.93593	0.94757	1.06350	1.05069	0.97121	0.81637	0.72223	0.83101
3600.0	1.00817	0.87014	0.89606	0.93417	0.96308	1.00100	1.18728	1.14728	1.05521	1.08376
3700.0	1.17134	1.13089	1.06393	0.96082	0.82130	0.88459	1.00419	1.04622	1.14584	0.98292
3800.0	0.94342	1.03992	0.78963	0.61819	0.68953	0.91063	0.87029	0.90311	0.88184	0.94772
3900.0	1.10961	1.19813	1.11019	0.67868	0.74016	1.12427	1.01884	0.73251	1.26664	1.51770
4000.0	1.54885									

Table VIII-74

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/27/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
				ZENITH SCAN STARTING AT 16. 2.41 ON 1/27/74, NORMALIZING FACTOR = 7.9555E 02						
2600.0	0.00016	0.00010	0.00008	0.00010	0.00009	0.00011	0.00009	0.00011	0.00009	0.00012
2700.0	0.00017	0.00016	0.00013	0.00012	0.00012	0.00013	0.00014	0.00014	0.00014	0.00015
2800.0	0.00014	0.00015	0.00016	0.00015	0.00017	0.00017	0.00017	0.00018	0.00019	0.00022
2900.0	0.00030	0.00051	0.00083	0.00150	0.00274	0.00514	0.00930	0.01380	0.02211	0.03100
3000.0	0.03926	0.05847	0.07559	0.12871	0.14948	0.18519	0.19368	0.23749	0.27805	0.26739
3100.0	0.27706	0.40421	0.41767	0.44596	0.44901	0.45395	0.45661	0.62979	0.61989	0.62239
3200.0	0.70465	0.71855	0.68144	0.62341	0.69548	0.75772	0.87825	0.87077	0.84333	0.93395
3300.0	1.00966	0.89553	0.90294	0.89367	0.88821	0.91626	0.79578	0.75303	0.82549	0.87688
3400.0	0.96633	0.90335	0.91036	0.94718	0.80535	0.91934	0.97415	0.99530	0.91169	0.88480
3500.0	1.00000	1.04821	0.97476	0.93799	1.02833	0.97585	0.88907	0.76164	0.68626	0.81048
3600.0	0.96211	0.79176	0.81960	0.90379	0.91092	0.89263	1.00809	0.97991	0.93895	1.01138
3700.0	1.11420	1.08863	1.04847	0.96767	0.94682	1.07239	1.26713	1.39070	1.67325	1.45656
3800.0	1.37157	1.39819	1.14911	0.92117	1.06995	1.32849	1.24167	1.25951	1.19524	1.26796
3900.0	1.44389	1.51594	1.41748	0.81370	0.84608	1.31449	1.13957	0.75724	1.41744	1.73377
4000.0	1.78901									
				ZENITH SCAN STARTING AT 16. 4.27 ON 1/27/74, NORMALIZING FACTOR = 9.0633E 02						
2600.0	0.00003	0.00003	0.00003	0.00003	0.00011	0.00008	0.00008	0.00009	0.00008	0.00009
2700.0	0.00008	0.00009	0.00008	0.00009	0.00010	0.00010	0.00009	0.00010	0.00010	0.00010
2800.0	0.00011	0.00011	0.00012	0.00012	0.00011	0.00012	0.00012	0.00013	0.00013	0.00015
2900.0	0.00021	0.00034	0.00059	0.00108	0.00197	0.00364	0.00692	0.01035	0.01620	0.02363
3000.0	0.02911	0.04340	0.05804	0.09746	0.11632	0.14715	0.15441	0.19795	0.23300	0.22415
3100.0	0.23833	0.33187	0.32915	0.35051	0.37239	0.38442	0.36255	0.45802	0.43127	0.43857
3200.0	0.49352	0.48723	0.46747	0.43641	0.49616	0.54015	0.65594	0.68422	0.65984	0.70864
3300.0	0.75856	0.69246	0.70714	0.70189	0.70600	0.74386	0.65657	0.63174	0.72507	0.79785
3400.0	0.86260	0.81774	0.83165	0.87876	0.75495	0.82976	0.83545	0.85110	0.86058	0.88881
3500.0	1.00000	1.00592	0.94139	0.93621	1.01606	0.97400	0.80557	0.64120	0.58846	0.69630
3600.0	0.90132	0.76128	0.76272	0.79266	0.80532	0.85439	1.00556	0.98236	0.90830	0.95154
3700.0	0.99053	0.93727	0.91590	0.84707	0.79118	0.85204	0.93687	0.98554	1.12438	0.96591
3800.0	0.88044	0.98475	0.82035	0.67519	0.80571	1.03531	0.95672	0.95857	0.89178	0.93717
3900.0	1.08704	1.15793	1.10017	0.64023	0.77739	1.25934	1.14156	0.75043	1.25541	1.48097
4000.0	1.52843									

Table VIII-75

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/30/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 12.41.50 ON 1/30/74, NORMALIZING FACTOR = 8.8111E 00										
2600.0	0.00007	0.00007	0.00008	0.00008	0.00008	0.00010	0.00007	0.00007	0.00010	0.00007
2700.0	0.00008	0.00007	0.00010	0.00007	0.00007	0.00008	0.00009	0.00012	0.00011	0.00011
2800.0	0.00008	0.00011	0.00014	0.00008	0.00009	0.00009	0.00010	0.00013	0.00012	0.00011
2900.0	0.00013	0.00014	0.00018	0.00026	0.00038	0.00066	0.00112	0.00171	0.00277	0.00426
3000.0	0.00586	0.00945	0.01369	0.02757	0.03696	0.05389	0.06408	0.09529	0.12819	0.13563
3100.0	0.16924	0.24906	0.28020	0.33044	0.37293	0.41238	0.40577	0.54052	0.53587	0.59687
3200.0	0.66159	0.70459	0.66139	0.64735	0.78059	0.82752	1.02716	1.06958	0.97435	1.10805
3300.0	1.19083	1.03993	1.06505	1.04371	1.01519	1.07621	0.96101	0.88567	0.97616	1.02952
3400.0	1.09255	1.01776	1.03988	1.05382	0.86815	0.94054	0.95784	0.95826	0.92030	0.90095
3500.0	1.00000	1.00887	0.93517	0.96131	1.06811	1.04836	0.95218	0.80350	0.71082	0.80895
3600.0	0.96214	0.83378	0.86428	0.91770	0.91428	0.93175	1.03347	1.02169	0.95091	0.97521
3700.0	1.00143	0.94616	0.88674	0.79277	0.71573	0.75410	0.83689	0.89937	1.02098	0.87468
3800.0	0.82863	0.87235	0.66018	0.52369	0.58468	0.73134	0.68496	0.69864	0.67406	0.71983
3900.0	0.81918	0.86742	0.79490	0.48886	0.53918	0.79042	0.70704	0.49465	0.83045	0.98861
4000.0	1.02534									
ZENITH SCAN STARTING AT 12.43.36 ON 1/30/74, NORMALIZING FACTOR = 8.9501E 00										
2600.0	0.00011	0.00007	0.00009	0.00010	0.00007	0.00010	0.00010	0.00010	0.00007	0.00010
2700.0	0.00008	0.00007	0.00009	0.00009	0.00007	0.00008	0.00009	0.00009	0.00011	0.00009
2800.0	0.00010	0.00015	0.00011	0.00009	0.00013	0.00018	0.00017	0.00014	0.00013	0.00011
2900.0	0.00014	0.00014	0.00020	0.00035	0.00041	0.00072	0.00119	0.00179	0.00283	0.00450
3000.0	0.00619	0.01004	0.01494	0.02831	0.03820	0.05612	0.06577	0.10067	0.13132	0.13927
3100.0	0.17876	0.26644	0.29396	0.34316	0.38551	0.42266	0.41976	0.56226	0.55032	0.60580
3200.0	0.67406	0.71349	0.67269	0.64777	0.79469	0.84785	1.05269	1.07676	0.98867	1.12718
3300.0	1.19321	1.05499	1.08164	1.05558	1.02824	1.09913	0.96922	0.90764	0.99714	1.05223
3400.0	1.10884	1.02574	1.04373	1.05952	0.85591	0.93071	0.95241	0.95880	0.92322	0.90214
3500.0	1.00000	0.99841	0.92606	0.94647	1.06115	1.03978	0.93434	0.79077	0.69556	0.80793
3600.0	0.94988	0.81761	0.85323	0.90388	0.90233	0.91731	1.05238	1.01937	0.94578	0.97606
3700.0	0.99337	0.94004	0.88458	0.79557	0.72013	0.75135	0.83722	0.89249	1.02219	0.87202
3800.0	0.83282	0.87685	0.65882	0.51982	0.58009	0.73311	0.68833	0.70205	0.68281	0.73494
3900.0	0.82751	0.87889	0.79904	0.48046	0.54226	0.78385	0.67715	0.48680	0.82126	0.98391
4000.0	1.01924									
ZENITH SCAN STARTING AT 12.46. 0 ON 1/30/74, NORMALIZING FACTOR = 9.1800E 00										
2600.0	0.00019	0.00008	0.00008	0.00008	0.00007	0.00008	0.00008	0.00009	0.00010	0.00011
2700.0	0.00012	0.00008	0.00008	0.00010	0.00015	0.00011	0.00009	0.00014	0.00011	0.00009
2800.0	0.00010	0.00011	0.00010	0.00011	0.00016	0.00010	0.00012	0.00011	0.00014	0.00011
2900.0	0.00012	0.00015	0.00019	0.00030	0.00042	0.00071	0.00120	0.00185	0.00287	0.00443
3000.0	0.00624	0.01032	0.01510	0.03001	0.04032	0.05867	0.06966	0.10229	0.13640	0.14468
3100.0	0.18143	0.27738	0.30270	0.35113	0.39499	0.42366	0.40523	0.55673	0.55432	0.60785
3200.0	0.67984	0.71463	0.67084	0.65270	0.78273	0.82905	1.03764	1.07021	0.97305	1.11304
3300.0	1.19065	1.03756	1.06507	1.04235	1.01359	1.07452	0.96007	0.88429	0.97663	1.02847
3400.0	1.09011	1.01317	1.03479	1.04936	0.86473	0.93390	0.95087	0.94895	0.91442	0.89231
3500.0	1.00000	0.99820	0.92603	0.94813	1.05589	1.03277	0.93433	0.77848	0.69227	0.79439
3600.0	0.95028	0.81459	0.85219	0.89655	0.89713	0.91635	1.06027	1.02340	0.94617	0.98015
3700.0	0.99848	0.93286	0.87077	0.78838	0.70886	0.73718	0.82299	0.88188	1.00127	0.85521
3800.0	0.81613	0.85280	0.64189	0.51424	0.56770	0.72017	0.67534	0.68490	0.66266	0.71298
3900.0	0.80469	0.85565	0.76387	0.48355	0.52795	0.77893	0.69945	0.48507	0.82558	0.96955
4000.0	1.00387									
ZENITH SCAN STARTING AT 12.47.46 ON 1/30/74, NORMALIZING FACTOR = 9.1667E 00										
2600.0	0.00008	0.00008	0.00007	0.00008	0.00007	0.00011	0.00008	0.00009	0.00013	0.00011
2700.0	0.00016	0.00012	0.00014	0.00009	0.00010	0.00012	0.00009	0.00009	0.00010	0.00010
2800.0	0.00011	0.00012	0.00011	0.00010	0.00015	0.00010	0.00010	0.00012	0.00011	0.00014
2900.0	0.00019	0.00018	0.00021	0.00031	0.00043	0.00075	0.00122	0.00191	0.00303	0.00470
3000.0	0.00670	0.01066	0.01612	0.03157	0.04166	0.06290	0.07369	0.11016	0.14171	0.15013
3100.0	0.19024	0.28183	0.30983	0.36120	0.40353	0.44123	0.43696	0.57571	0.56630	0.62337
3200.0	0.68886	0.73102	0.68598	0.66653	0.80526	0.85616	1.05969	1.09644	1.00675	1.12970
3300.0	1.21568	1.06970	1.09005	1.06829	1.04010	1.10051	0.97938	0.91173	0.99778	1.05216
3400.0	1.11528	1.05096	1.06681	1.08983	0.88657	0.96684	0.95639	0.96591	0.92634	0.91057
3500.0	1.00000	1.00736	0.93586	0.95378	1.07009	1.05079	0.94701	0.79828	0.70325	0.80372
3600.0	0.95697	0.82199	0.84844	0.90360	0.90030	0.91999	1.06795	1.02600	0.95242	0.98140
3700.0	1.00282	0.93854	0.88641	0.79998	0.72402	0.76414	0.84043	0.89968	1.02247	0.87187
3800.0	0.83605	0.88008	0.66991	0.52660	0.57908	0.73457	0.69368	0.70140	0.67707	0.72438
3900.0	0.82207	0.86867	0.80309	0.48195	0.52613	0.79673	0.71076	0.48516	0.84450	0.99278
4000.0	1.00160									
ZENITH SCAN STARTING AT 12.50. 7 ON 1/30/74, NORMALIZING FACTOR = 9.3155E 00										
2600.0	0.00013	0.00008	0.00011	0.00010	0.00010	0.00020	0.00009	0.00011	0.00010	0.00014
2700.0	0.00012	0.00010	0.00011	0.00010	0.00012	0.00010	0.00013	0.00010	0.00011	0.00011
2800.0	0.00011	0.00011	0.00013	0.00012	0.00013	0.00013	0.00013	0.00013	0.00013	0.00016
2900.0	0.00015	0.00022	0.00023	0.00027	0.00046	0.00076	0.00125	0.00198	0.00309	0.00495
3000.0	0.00690	0.01137	0.01723	0.03274	0.04426	0.06526	0.07632	0.11446	0.14709	0.15585
3100.0	0.19594	0.29497	0.32223	0.37255	0.41602	0.45072	0.44392	0.60058	0.58653	0.63815
3200.0	0.69413	0.72286	0.69014	0.66243	0.79568	0.84580	1.06602	1.08747	0.99607	1.13544
3300.0	1.20380	1.05665	1.08237	1.05688	1.02748	1.09164	0.97123	0.89979	0.98618	1.03704
3400.0	1.09534	1.02945	1.04531	1.06433	0.86397	0.93060	0.95505	0.96191	0.92584	0.90577
3500.0	1.00000	1.00240	0.93323	0.94828	1.06239	1.04017	0.94258	0.78707	0.69472	0.79451
3600.0	0.95103	0.81682	0.85759	0.90600	0.90418	0.92476	1.05577	1.02576	0.94777	0.97453
3700.0	1.00443	0.94408	0.89231	0.80904	0.72709	0.74143	0.81430	0.88611	1.01166	0.86953
3800.0	0.82397	0.86440	0.66349	0.51879	0.58239	0.71106	0.67667	0.69469	0.67199	0.71919
3900.0	0.81316	0.86516	0.78754	0.47371	0.51806	0.78258	0.70268	0.47570	0.82195	0.97635
4000.0	1.01456									
ZENITH SCAN STARTING AT 12.51.53 ON 1/30/74, NORMALIZING FACTOR = 9.3424E 00										
2600.0	0.00009	0.00009	0.00014	0.00019	0.00009	0.00010	0.00010	0.00013	0.00011	0.00015
2700.0	0.00012	0.00018	0.00012	0.00012	0.00011	0.00011	0.00011	0.00010	0.00012	0.00011
2800.0	0.00012	0.00011	0.00012	0.00011	0.00012	0.00013	0.00016	0.00014	0.00013	0.00017
2900.0	0.00018	0.00019	0.00020	0.00028	0.00042	0.00078	0.00123	0.00194	0.00309	0.00486
3000.0	0.00707	0.01136	0.01709	0.03396	0.04587	0.06883	0.08134	0.11642	0.15314	0.16144
3100.0	0.19988	0.29869	0.32796	0.38234	0.42502	0.46255	0.44966	0.59635	0.58714	0.64472
3200.0	0.71243	0.75448	0.70604	0.68693	0.81682	0.87080	1.07479	1.11828	1.01917	1.15379
3300.0	1.24226	1.08680	1.10927	1.08649	1.05747	1.11709	0.99570	0.92354	1.01453	1.06727
3400.0	1.13290	1.05840	1.07838	1.09753	0.89895	0.97370	0.99853	0.99861	0.96052	0.93548
3500.0	1.00000	1.01884	0.94941	0.97966	1.08498	1.06863	0.96241	0.80934	0.71486	0.82219
3600.0	0.96746	0.83744	0.86743	0.91710	0.91562	0.93658	1.07893	1.04482	0.97096	0.99527
3700.0	1.01145	0.95294	0.90075	0.80937	0.73284	0.76681	0.85570	0.92433	1.04889	0.89389
3800.0	0.85024	0.88940	0.69107	0.53029	0.59259	0.74500	0.70335	0.71528	0.69046	0.74527
3900.0	0.84158	0.89453	0.80597	0.48878	0.53646	0.80756	0.71645	0.50849	0.84165	1.01548
4000.0	1.05680									

Table VIII-76

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/30/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 12.53.39 ON 1/30/74. NORMALIZING FACTOR = 1.0120E 01										
2600.0	0.00009	0.00008	0.00021	0.00011	0.00009	0.00009	0.00011	0.00013	0.00014	0.00014
2700.0	0.00016	0.00011	0.00011	0.00011	0.00012	0.00010	0.00011	0.00011	0.00011	0.00013
2800.0	0.00013	0.00012	0.00015	0.00012	0.00013	0.00014	0.00017	0.00013	0.00015	0.00015
2900.0	0.00016	0.00018	0.00043	0.00030	0.00043	0.00071	0.00120	0.00184	0.00299	0.00488
3000.0	0.00674	0.01107	0.01693	0.02297	0.04433	0.06642	0.07697	0.11630	0.14867	0.15748
3100.0	0.19798	0.29415	0.32088	0.37072	0.41385	0.44967	0.44120	0.58621	0.57293	0.62352
3200.0	0.69392	0.73187	0.68996	0.66844	0.80645	0.84260	1.04348	1.06781	0.97957	1.10106
3300.0	1.17633	1.03910	1.06071	1.03711	1.01054	1.07709	0.95592	0.88930	0.97554	1.02487
3400.0	1.08436	1.02061	1.03505	1.05507	0.85174	0.92394	0.95091	0.95517	0.92132	0.90454
3500.0	1.00000	1.00171	0.93656	0.95389	1.06878	1.05011	0.94968	0.80021	0.70372	0.81345
3600.0	0.96383	0.82790	0.86207	0.91626	0.90908	0.93520	1.07686	1.03890	0.96434	0.99174
3700.0	1.01244	0.95273	0.90261	0.81846	0.73979	0.78609	0.86294	0.91549	1.05405	0.90475
3800.0	0.85493	0.89482	0.67563	0.53301	0.59638	0.74353	0.70084	0.71667	0.69302	0.75552
3900.0	0.84898	0.90134	0.82673	0.49073	0.53667	0.82576	0.73226	0.49138	0.85835	1.03135
4000.0	1.07099									
ZENITH SCAN STARTING AT 12.56. 0 ON 1/30/74. NORMALIZING FACTOR = 1.0914E 01										
2600.0	0.00009	0.00009	0.00010	0.00009	0.00009	0.00009	0.00009	0.00010	0.00009	0.00009
2700.0	0.00009	0.00009	0.00010	0.00009	0.00011	0.00010	0.00013	0.00013	0.00012	0.00011
2800.0	0.00011	0.00012	0.00012	0.00014	0.00012	0.00013	0.00013	0.00015	0.00013	0.00014
2900.0	0.00018	0.00016	0.00019	0.00027	0.00036	0.00065	0.00109	0.00167	0.00277	0.00434
3000.0	0.00619	0.01086	0.01625	0.02201	0.04384	0.06418	0.07623	0.11187	0.14540	0.15298
3100.0	0.18723	0.28723	0.31308	0.35844	0.40124	0.42972	0.41561	0.56451	0.55274	0.59856
3200.0	0.67056	0.69759	0.65753	0.64323	0.75584	0.80178	0.99689	1.03173	0.94590	1.08089
3300.0	1.15080	1.00963	1.03630	1.01348	0.98209	1.04653	0.93199	0.86266	0.95364	1.00334
3400.0	1.06318	0.99611	1.01843	1.04943	0.85181	0.91581	0.93570	0.94755	0.91356	0.89229
3500.0	1.00000	1.00705	0.92683	0.96531	1.06862	1.02397	0.92653	0.77734	0.69227	0.78812
3600.0	0.95511	0.81151	0.85580	0.90143	0.90050	0.92858	1.06120	1.02295	0.94941	0.97377
3700.0	0.99298	0.93657	0.89574	0.80020	0.72367	0.75996	0.84858	0.90800	1.03198	0.88293
3800.0	0.84510	0.88135	0.67765	0.53442	0.59796	0.74866	0.70743	0.71929	0.69782	0.75620
3900.0	0.85055	0.89997	0.81935	0.49616	0.54741	0.83674	0.72264	0.51151	0.87278	1.04270
4000.0	1.08750									
ZENITH SCAN STARTING AT 12.57.48 ON 1/30/74. NORMALIZING FACTOR = 1.1202E 01										
2600.0	0.00010	0.00011	0.00009	0.00010	0.00010	0.00010	0.00010	0.00009	0.00010	0.00010
2700.0	0.00010	0.00011	0.00011	0.00011	0.00016	0.00013	0.00012	0.00012	0.00012	0.00014
2800.0	0.00012	0.00014	0.00013	0.00014	0.00013	0.00014	0.00014	0.00015	0.00015	0.00016
2900.0	0.00018	0.00018	0.00021	0.00028	0.00039	0.00066	0.00107	0.00163	0.00275	0.00435
3000.0	0.00636	0.01074	0.01602	0.03344	0.04527	0.06710	0.07989	0.11505	0.14875	0.15760
3100.0	0.19498	0.29302	0.31855	0.37010	0.41083	0.44764	0.43492	0.57312	0.56588	0.61688
3200.0	0.68536	0.72212	0.67922	0.65903	0.78571	0.83686	1.03317	1.07876	0.99186	1.10675
3300.0	1.16015	1.02647	1.04422	1.02539	1.00137	1.05979	0.94394	0.87995	0.96851	1.02129
3400.0	1.08692	1.01795	1.03385	1.05573	0.86673	0.93556	0.95628	0.96061	0.92264	0.90010
3500.0	1.00000	1.01416	0.94114	0.96514	1.07796	1.06339	0.96341	0.80634	0.71720	0.81764
3600.0	0.96901	0.84056	0.86751	0.92375	0.92046	0.94100	1.10139	1.05746	0.98328	1.01409
3700.0	1.02977	0.97096	0.92228	0.83147	0.75539	0.80054	0.88391	0.94725	1.09045	0.92846
3800.0	0.88905	0.94364	0.72480	0.56081	0.61633	0.77465	0.74133	0.75568	0.72895	0.78384
3900.0	0.89230	0.94406	0.87040	0.50572	0.58235	0.87661	0.78006	0.52423	0.93208	1.10836
4000.0	1.15371									
ZENITH SCAN STARTING AT 13. 0. 9 ON 1/30/74. NORMALIZING FACTOR = 1.1832E 01										
2600.0	0.00010	0.00009	0.00009	0.00010	0.00010	0.00009	0.00012	0.00011	0.00011	0.00009
2700.0	0.00011	0.00011	0.00013	0.00010	0.00012	0.00012	0.00012	0.00011	0.00014	0.00019
2800.0	0.00012	0.00013	0.00012	0.00012	0.00013	0.00016	0.00013	0.00014	0.00014	0.00019
2900.0	0.00016	0.00017	0.00019	0.00025	0.00039	0.00058	0.00105	0.00160	0.00261	0.00429
3000.0	0.00614	0.01070	0.01627	0.03240	0.04359	0.06389	0.07527	0.11179	0.14565	0.15345
3100.0	0.19164	0.28940	0.31365	0.35885	0.40068	0.42942	0.41488	0.56383	0.55119	0.59747
3200.0	0.66508	0.69477	0.65792	0.62819	0.75823	0.80139	1.00442	1.02386	0.93934	1.06882
3300.0	1.14034	1.00469	1.02931	1.01032	0.98625	1.05025	0.93359	0.86607	0.95614	1.00226
3400.0	1.06204	0.99860	1.01951	1.04589	0.84975	0.91565	0.94685	0.95933	0.92439	0.90268
3500.0	1.00000	1.00401	0.94430	0.96416	1.08157	1.06618	0.97739	0.81426	0.72490	0.81175
3600.0	0.94422	0.82832	0.87170	0.92563	0.92565	0.94842	1.08922	1.05344	0.97236	1.00517
3700.0	1.03414	0.97658	0.93469	0.84333	0.75802	0.79628	0.88638	0.94965	1.08413	0.93890
3800.0	0.89182	0.94570	0.71136	0.56506	0.63221	0.79191	0.75406	0.77002	0.75099	0.80450
3900.0	0.91716	0.97694	0.90228	0.52944	0.59231	0.90973	0.81646	0.55504	0.94341	1.14630
4000.0	1.19633									
ZENITH SCAN STARTING AT 13. 1.55 ON 1/30/74. NORMALIZING FACTOR = 1.2017E 01										
2600.0	0.00010	0.00010	0.00009	0.00009	0.00010	0.00010	0.00013	0.00010	0.00010	0.00014
2700.0	0.00010	0.00011	0.00011	0.00011	0.00012	0.00011	0.00012	0.00012	0.00015	0.00019
2800.0	0.00014	0.00015	0.00014	0.00015	0.00016	0.00016	0.00015	0.00016	0.00016	0.00016
2900.0	0.00018	0.00020	0.00022	0.00029	0.00040	0.00061	0.00104	0.00165	0.00268	0.00445
3000.0	0.00632	0.01099	0.01703	0.03344	0.04605	0.06758	0.08127	0.11429	0.15075	0.15858
3100.0	0.19403	0.29828	0.32321	0.36907	0.41045	0.43971	0.43084	0.57375	0.56400	0.60800
3200.0	0.67985	0.70898	0.66811	0.64035	0.76667	0.81807	1.01734	1.05382	0.96367	1.10069
3300.0	1.17744	1.03113	1.05897	1.04329	1.00909	1.04031	0.93779	0.87416	0.96339	1.01422
3400.0	1.08054	1.01103	1.02712	1.04940	0.85983	0.93381	0.95598	0.96078	0.92359	0.90464
3500.0	1.00000	1.01611	0.94030	0.96805	1.08029	1.06421	0.96238	0.81010	0.71343	0.82497
3600.0	0.98216	0.84183	0.87867	0.93877	0.93652	0.95199	1.10640	1.07019	0.99663	1.03072
3700.0	1.05415	0.98922	0.93588	0.84567	0.77479	0.82988	0.90420	0.97605	1.12255	0.95020
3800.0	0.91664	0.96178	0.74004	0.58018	0.65094	0.81882	0.77811	0.79720	0.77404	0.82953
3900.0	0.93190	0.99592	0.90092	0.53267	0.60299	0.91364	0.82924	0.57121	0.96685	1.16204
4000.0	1.21216									
ZENITH SCAN STARTING AT 13. 3.41 ON 1/30/74. NORMALIZING FACTOR = 1.2567E 01										
2600.0	0.00010	0.00011	0.00012	0.00010	0.00010	0.00011	0.00011	0.00011	0.00012	0.00010
2700.0	0.00012	0.00011	0.00011	0.00011	0.00012	0.00012	0.00014	0.00015	0.00014	0.00017
2800.0	0.00014	0.00013	0.00013	0.00013	0.00013	0.00013	0.00016	0.00015	0.00014	0.00015
2900.0	0.00016	0.00017	0.00021	0.00028	0.00038	0.00060	0.00101	0.00158	0.00267	0.00430
3000.0	0.00643	0.01071	0.01663	0.03378	0.04555	0.06941	0.08003	0.11717	0.15011	0.15496
3100.0	0.19306	0.29102	0.31457	0.36385	0.40335	0.43733	0.42308	0.55707	0.54914	0.59508
3200.0	0.65720	0.69593	0.65499	0.62938	0.75342	0.80775	0.99456	1.02603	0.94517	1.05126
3300.0	1.13865	1.00701	1.02552	1.00439	0.98101	1.04431	0.92395	0.86390	0.95009	1.00136
3400.0	1.06378	1.00092	1.01557	1.04124	0.84834	0.91939	0.94710	0.95784	0.92098	0.90488
3500.0	1.00000	1.01052	0.94240	0.95570	1.08185	1.06503	0.96489	0.81372	0.72164	0.83213
3600.0	1.00322	0.85697	0.90215	0.96375	0.93070	0.95432	1.11357	1.07517	0.99901	1.03194
3700.0	1.06253	0.99043	0.94753	0.85363	0.77766	0.83431	0.91305	0.97501	1.12688	0.96741
3800.0	0.91944	0.98095	0.72289	0.57894	0.64806	0.82793	0.78045	0.79473	0.77348	0.83725
3900.0	0.93814	0.99685	0.92341	0.54453	0.59752	0.93160	0.83232	0.55955	0.97603	1.17519
4000.0	1.22437									

Table VIII-77

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/30/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
				ZENITH SCAN STARTING AT 13. 6. 2 ON 1/30/74, NORMALIZING FACTOR = 1.2913E 01						
2600.0	0.00016	0.00010	0.00010	0.00011	0.00013	0.00011	0.00010	0.00010	0.00011	0.00011
2700.0	0.00012	0.00011	0.00011	0.00011	0.00012	0.00014	0.00012	0.00012	0.00012	0.00012
2800.0	0.00014	0.00015	0.00013	0.00015	0.00022	0.00016	0.00018	0.00015	0.00016	0.00016
2900.0	0.00017	0.00025	0.00023	0.00035	0.00039	0.00060	0.00103	0.00165	0.00269	0.00455
3000.0	0.00659	0.01134	0.01765	0.03447	0.04747	0.06942	0.08085	0.11777	0.15124	0.15962
3100.0	0.19934	0.29551	0.31857	0.38414	0.40443	0.43389	0.42048	0.56302	0.54591	0.59096
3200.0	0.65919	0.68389	0.64643	0.61900	0.74445	0.79168	0.99409	1.01474	0.93582	1.06192
3300.0	1.13000	0.99986	1.02146	1.00588	0.98014	1.04595	0.93672	0.86853	0.96396	1.00023
3400.0	1.05025	0.98877	1.00773	1.02686	0.85652	0.91917	0.93701	0.94271	0.90854	0.88946
3500.0	1.00000	1.00372	0.93199	0.95433	1.06829	1.05408	0.96115	0.80287	0.71601	0.81348
3600.0	0.98332	0.84073	0.86977	0.93373	0.93487	0.96741	1.10985	1.07619	1.00176	1.03675
3700.0	1.05726	0.99599	0.95160	0.88111	0.78001	0.83537	0.91929	0.98333	1.12382	0.97154
3800.0	0.92902	0.98141	0.73282	0.58154	0.65456	0.83790	0.79209	0.80960	0.78501	0.84710
3900.0	0.96313	1.02670	0.95559	0.56068	0.64977	0.90314	0.84578	0.57550	0.98608	1.19387
4000.0	1.24199									
				ZENITH SCAN STARTING AT 13. 7.48 ON 1/30/74, NORMALIZING FACTOR = 1.3099E 01						
2600.0	0.00011	0.00012	0.00012	0.00010	0.00011	0.00011	0.00011	0.00013	0.00011	0.00013
2700.0	0.00011	0.00012	0.00012	0.00013	0.00013	0.00012	0.00013	0.00013	0.00014	0.00014
2800.0	0.00015	0.00015	0.00014	0.00015	0.00018	0.00018	0.00016	0.00016	0.00016	0.00019
2900.0	0.00018	0.00021	0.00022	0.00028	0.00039	0.00062	0.00102	0.00167	0.00280	0.00453
3000.0	0.00684	0.01149	0.01774	0.03698	0.04933	0.07401	0.08701	0.12135	0.15901	0.16695
3100.0	0.20240	0.30456	0.32986	0.37857	0.40528	0.43886	0.42260	0.56510	0.55531	0.60060
3200.0	0.66793	0.69895	0.65792	0.64085	0.74829	0.80438	0.99084	1.03124	0.94822	1.05369
3300.0	1.14365	1.01181	1.02915	1.01084	0.98671	1.04734	0.92580	0.86722	0.95478	1.00813
3400.0	1.07190	1.00616	1.02154	1.04440	0.84889	0.92072	0.94561	0.95703	0.92128	0.90333
3500.0	1.00000	1.00740	0.93536	0.95832	1.08202	1.06803	0.96628	0.81149	0.71208	0.83334
3600.0	0.99498	0.84813	0.89389	0.93844	0.95696	0.98025	1.13795	1.10707	1.02181	1.02847
3700.0	1.06095	1.00042	0.95929	0.88816	0.78160	0.83834	0.92815	0.99564	1.14674	0.98378
3800.0	0.94261	0.99580	0.74595	0.59423	0.67189	0.84350	0.79592	0.81420	0.78817	0.84506
3900.0	0.96485	1.03378	0.94794	0.54753	0.60727	0.96141	0.86821	0.57278	0.99847	1.21010
4000.0	1.25817									
				ZENITH SCAN STARTING AT 13. 9.33 ON 1/30/74, NORMALIZING FACTOR = 1.3507E 01						
2600.0	0.00005	0.00007	0.00006	0.00006	0.00009	0.00007	0.00006	0.00006	0.00006	0.00007
2700.0	0.00005	0.00006	0.00007	0.00006	0.00005	0.00006	0.00006	0.00006	0.00006	0.00006
2800.0	0.00008	0.00006	0.00006	0.00006	0.00008	0.00009	0.00008	0.00007	0.00009	0.00012
2900.0	0.00007	0.00009	0.00012	0.00019	0.00032	0.00054	0.00104	0.00171	0.00601	0.00516
3000.0	0.00741	0.01289	0.01964	0.03904	0.05054	0.07223	0.08420	0.12208	0.15425	0.16066
3100.0	0.20529	0.29920	0.32163	0.38823	0.40675	0.43374	0.42744	0.56603	0.54587	0.58957
3200.0	0.66233	0.67550	0.64196	0.61953	0.74419	0.79996	0.99447	1.00373	0.93173	1.06049
3300.0	1.11106	0.98849	1.00828	0.98069	0.96601	1.02493	0.89769	0.85091	0.94245	0.98796
3400.0	1.04951	0.97662	1.00452	1.01374	0.86138	0.91122	0.93258	0.94247	0.90968	0.89278
3500.0	1.00000	0.99470	0.92440	0.95867	1.06996	1.04514	0.93824	0.79486	0.69803	0.83015
3600.0	0.97334	0.83301	0.88419	0.93567	0.93658	0.96956	1.10499	1.06687	0.98887	1.03197
3700.0	1.04831	1.00052	0.94859	0.85952	0.78053	0.83183	0.91788	0.98468	1.11939	0.95684
3800.0	0.92902	0.98673	0.71313	0.57146	0.66585	0.82893	0.78934	0.79823	0.77110	0.84241
3900.0	0.95234	1.01982	0.91990	0.51817	0.64701	0.98553	0.85099	0.59649	1.00326	1.20178
4000.0	1.26266									
				ZENITH SCAN STARTING AT 13.11.57 ON 1/30/74, NORMALIZING FACTOR = 1.3743E 01						
2600.0	0.00010	0.00009	0.00010	0.00015	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013
2700.0	0.00012	0.00013	0.00012	0.00012	0.00012	0.00012	0.00012	0.00014	0.00012	0.00013
2800.0	0.00014	0.00015	0.00015	0.00014	0.00014	0.00014	0.00015	0.00015	0.00015	0.00016
2900.0	0.00016	0.00018	0.00020	0.00028	0.00038	0.00062	0.00107	0.00170	0.00295	0.00480
3000.0	0.00732	0.01245	0.01924	0.04018	0.05301	0.07618	0.09122	0.12539	0.16454	0.17099
3100.0	0.20582	0.31526	0.33727	0.38395	0.42533	0.45264	0.43328	0.58040	0.56851	0.59049
3200.0	0.67030	0.69381	0.65405	0.62495	0.74293	0.79480	0.98557	1.01743	0.93593	1.05071
3300.0	1.13311	0.99135	1.01150	0.99347	0.96843	1.02928	0.91772	0.84833	0.93982	0.99501
3400.0	1.06283	0.99049	1.00928	1.03393	0.84961	0.92136	0.94431	0.95142	0.91555	0.89461
3500.0	1.00000	1.00779	0.93130	0.95327	1.07811	1.06534	0.96255	0.81106	0.71857	0.82379
3600.0	0.99663	0.85010	0.88377	0.94387	0.94407	0.96697	1.12755	1.09548	1.02223	1.05325
3700.0	1.08895	1.02222	0.97122	0.88315	0.78519	0.82876	0.92531	0.99002	1.12920	0.97490
3800.0	0.92842	0.98906	0.73792	0.58416	0.66728	0.83577	0.79381	0.81095	0.78179	0.84349
3900.0	0.96304	1.03100	0.95126	0.55866	0.63513	0.96385	0.87590	0.58987	1.01303	1.23204
4000.0	1.28130									
				ZENITH SCAN STARTING AT 13.20. 6 ON 1/30/74, NORMALIZING FACTOR = 2.1709E 01						
2600.0	0.00026	0.00026	0.00026	0.00032	0.00032	0.00027	0.00033	0.00027	0.00027	0.00028
2700.0	0.00027	0.00028	0.00029	0.00031	0.00030	0.00030	0.00031	0.00031	0.00030	0.00031
2800.0	0.00031	0.00031	0.00032	0.00031	0.00033	0.00033	0.00033	0.00033	0.00034	0.00034
2900.0	0.00034	0.00035	0.00036	0.00039	0.00047	0.00062	0.00098	0.00161	0.00271	0.00488
3000.0	0.00750	0.01345	0.02150	0.04296	0.05856	0.08391	0.09754	0.13949	0.17747	0.18447
3100.0	0.22523	0.33268	0.35474	0.40516	0.44580	0.47501	0.45895	0.60027	0.58158	0.62258
3200.0	0.69371	0.71816	0.67727	0.64559	0.77882	0.83413	1.03959	1.06835	0.97138	1.05620
3300.0	1.14164	1.01330	1.02432	1.00237	0.98031	1.04707	0.92828	0.86585	0.95502	1.00669
3400.0	1.06677	0.99981	1.01624	1.04133	0.86253	0.91273	0.94092	0.94731	0.90768	0.89315
3500.0	1.00000	1.00794	0.93239	0.94977	1.07320	1.05777	0.95790	0.80718	0.71450	0.81091
3600.0	0.99332	0.84405	0.88685	0.94034	0.94761	0.96471	1.11912	1.08461	1.00152	1.03222
3700.0	1.06982	1.00613	0.95984	0.87122	0.78379	0.82104	0.92042	0.98804	1.14040	0.98863
3800.0	0.93655	1.00525	0.77713	0.59781	0.66059	0.83066	0.78512	0.80233	0.77616	0.82979
3900.0	0.94988	1.01504	0.93761	0.54301	0.60985	0.93679	0.85288	0.58402	0.98666	1.19295
4000.0	1.23785									
				ZENITH SCAN STARTING AT 13.21.52 ON 1/30/74, NORMALIZING FACTOR = 2.2872E 01						
2600.0	0.00019	0.00019	0.00020	0.00019	0.00023	0.00020	0.00021	0.00020	0.00022	0.00023
2700.0	0.00022	0.00022	0.00021	0.00022	0.00022	0.00023	0.00022	0.00022	0.00023	0.00023
2800.0	0.00023	0.00025	0.00025	0.00024	0.00024	0.00025	0.00026	0.00025	0.00026	0.00027
2900.0	0.00026	0.00027	0.00028	0.00031	0.00037	0.00053	0.00089	0.00151	0.00271	0.00484
3000.0	0.00753	0.01407	0.02192	0.04323	0.05831	0.08485	0.09855	0.13660	0.17874	0.18459
3100.0	0.22165	0.33853	0.35738	0.40319	0.44452	0.46684	0.44431	0.58918	0.58220	0.61960
3200.0	0.69277	0.71608	0.67499	0.64554	0.75721	0.81304	1.00044	1.03715	0.95168	1.06849
3300.0	1.15189	1.00718	1.02559	1.00671	0.98356	1.04584	0.93369	0.86569	0.95725	1.00918
3400.0	1.07921	1.00515	1.02103	1.04463	0.85806	0.92687	0.94990	0.95659	0.91532	0.89573
3500.0	1.00000	1.00772	0.93579	0.96586	1.08252	1.07204	0.97623	0.82082	0.71390	0.80692
3600.0	0.98389	0.83636	0.87586	0.94200	0.93793	0.96302	1.11463	1.08025	0.99668	1.02938
3700.0	1.06817	1.00601	0.95347	0.86386	0.77419	0.81586	0.90921	0.96927	1.12023	0.96108
3800.0	0.91254	0.97777	0.72217	0.57078	0.63974	0.82113	0.76690	0.78562	0.76123	0.82371
3900.0	0.92603	0.98708	0.90676	0.54078	0.59663	0.91196	0.81980	0.55827	0.96815	1.17684
4000.0	1.21684									

Table VIII-78

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/30/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 13.23.38 ON 1/30/74, NORMALIZING FACTOR = 2.3371E 01										
2600.0	0.00016	0.00016	0.00016	0.00017	0.00018	0.00017	0.00017	0.00018	0.00019	0.00019
2700.0	0.00018	0.00018	0.00019	0.00018	0.00019	0.00020	0.00020	0.00021	0.00022	0.00022
2800.0	0.00023	0.00023	0.00023	0.00024	0.00023	0.00024	0.00024	0.00025	0.00025	0.00026
2900.0	0.00026	0.00026	0.00028	0.00031	0.00037	0.00053	0.00091	0.00153	0.00282	0.00495
3000.0	0.00794	0.01403	0.02206	0.04506	0.06067	0.08886	0.10268	0.16243	0.18492	0.19128
3100.0	0.22809	0.34220	0.36303	0.41285	0.45200	0.48167	0.46048	0.60342	0.58762	0.62744
3200.0	0.69335	0.72508	0.68227	0.65146	0.77387	0.83146	1.01847	1.05687	0.98240	1.07802
3300.0	1.18348	1.05325	1.06744	1.01586	0.98730	1.05054	0.92788	0.86616	0.95160	1.00702
3400.0	1.06803	1.00637	1.02243	1.05345	0.85742	0.91370	0.94785	0.95764	0.91897	0.90465
3500.0	1.00000	1.00857	0.94231	0.95366	1.07991	1.06751	0.96578	0.81001	0.72164	0.82123
3600.0	1.00126	0.84953	0.88759	0.95656	0.95157	0.96719	1.13232	1.09635	1.01451	1.04277
3700.0	1.08830	1.01506	0.96413	0.88487	0.79317	0.93139	0.93664	0.99534	1.15843	1.00496
3800.0	0.93774	1.00504	0.77675	0.54941	0.67062	0.85308	0.80941	0.81921	0.86403	0.74304
3900.0	0.96369	1.02718	0.94140	0.54713	0.59282	0.95154	0.84548	0.58018	0.97749	1.20029
4000.0	1.24641									
ZENITH SCAN STARTING AT 13.26. 2 ON 1/30/74, NORMALIZING FACTOR = 2.4303E 01										
2600.0	0.00015	0.00015	0.00016	0.00015	0.00016	0.00016	0.00017	0.00016	0.00016	0.00018
2700.0	0.00017	0.00017	0.00017	0.00018	0.00018	0.00018	0.00019	0.00019	0.00021	0.00020
2800.0	0.00020	0.00020	0.00020	0.00021	0.00021	0.00021	0.00022	0.00023	0.00022	0.00023
2900.0	0.00023	0.00025	0.00024	0.00027	0.00034	0.00051	0.00090	0.00161	0.00287	0.00536
3000.0	0.00819	0.01516	0.02399	0.04764	0.06377	0.09038	0.10475	0.14619	0.18276	0.19195
3100.0	0.23043	0.34786	0.36675	0.41279	0.45412	0.47703	0.45564	0.61173	0.59259	0.62779
3200.0	0.70085	0.72056	0.67994	0.64239	0.76116	0.81603	1.01936	1.04029	0.95651	1.07253
3300.0	1.14491	1.01707	1.03193	1.00979	0.98718	1.05168	0.93296	0.86544	0.95746	1.00668
3400.0	1.07124	0.99932	1.02354	1.04629	0.86616	0.92367	0.94815	0.95251	0.91555	0.89956
3500.0	1.00000	1.01680	0.94306	0.96868	1.08822	1.07615	0.97625	0.82363	0.73203	0.84031
3600.0	1.01737	0.87501	0.89181	0.96896	0.94975	0.97210	1.11725	1.08648	1.00646	1.03561
3700.0	1.07179	1.00991	0.96294	0.88058	0.78328	0.92711	0.92664	0.99147	1.14371	0.98725
3800.0	0.93175	0.99803	0.75542	0.56597	0.66792	0.84416	0.79563	0.80821	0.78131	0.83890
3900.0	0.96140	1.02660	0.94741	0.55603	0.59506	0.95899	0.85069	0.57894	0.98556	1.20128
4000.0	1.24413									
ZENITH SCAN STARTING AT 13.27.48 ON 1/30/74, NORMALIZING FACTOR = 2.5008E 01										
2600.0	0.00014	0.00014	0.00014	0.00014	0.00015	0.00015	0.00015	0.00015	0.00015	0.00015
2700.0	0.00016	0.00016	0.00017	0.00017	0.00017	0.00018	0.00017	0.00017	0.00018	0.00018
2800.0	0.00018	0.00020	0.00022	0.00022	0.00022	0.00022	0.00022	0.00023	0.00023	0.00023
2900.0	0.00024	0.00025	0.00025	0.00029	0.00035	0.00053	0.00092	0.00159	0.00294	0.00526
3000.0	0.00845	0.01494	0.02271	0.04848	0.06376	0.09175	0.10602	0.14456	0.18914	0.19503
3100.0	0.22834	0.35097	0.37192	0.41755	0.45626	0.48269	0.45832	0.60463	0.59486	0.63265
3200.0	0.70151	0.72904	0.68782	0.65473	0.76945	0.82732	1.01709	1.05421	0.96874	1.07406
3300.0	1.17400	1.03321	1.04768	1.03200	1.00853	1.07156	0.96267	0.89048	0.94925	1.00645
3400.0	1.07916	1.00484	1.02003	1.04746	0.85711	0.92826	0.95085	0.95889	0.92122	0.90210
3500.0	1.00000	1.01665	0.93970	0.95589	1.08491	1.07114	0.97141	0.81449	0.72145	0.83518
3600.0	0.99517	0.85382	0.88934	0.95702	0.95673	0.97433	1.13171	1.09916	1.02033	1.04857
3700.0	1.09106	1.02052	0.97071	0.88691	0.79619	0.83411	0.93507	1.00355	1.17058	0.99830
3800.0	0.94914	1.00816	0.77376	0.60508	0.66935	0.85089	0.81032	0.82706	0.80491	0.87270
3900.0	0.99704	1.06990	0.93088	0.57822	0.61762	0.95893	0.86248	0.58853	1.00617	1.22302
4000.0	1.26848									
ZENITH SCAN STARTING AT 13.29.33 ON 1/30/74, NORMALIZING FACTOR = 3.0735E 01										
2600.0	0.00015	0.00014	0.00015	0.00014	0.00015	0.00015	0.00015	0.00015	0.00015	0.00016
2700.0	0.00016	0.00016	0.00017	0.00017	0.00017	0.00018	0.00017	0.00017	0.00018	0.00018
2800.0	0.00018	0.00020	0.00020	0.00021	0.00020	0.00021	0.00025	0.00021	0.00021	0.00021
2900.0	0.00021	0.00022	0.00024	0.00026	0.00031	0.00049	0.00082	0.00149	0.00268	0.00494
3000.0	0.00789	0.01415	0.02273	0.04493	0.05968	0.08713	0.09948	0.14128	0.18069	0.18718
3100.0	0.22615	0.33622	0.35004	0.39093	0.42980	0.45533	0.43767	0.57686	0.55551	0.58925
3200.0	0.65841	0.67729	0.63919	0.60910	0.73174	0.78013	0.96643	0.98971	0.92012	1.02051
3300.0	1.09786	0.97686	0.99123	0.96870	0.95105	1.01543	0.89885	0.83881	0.92569	0.97799
3400.0	1.04226	0.97893	0.99730	1.02578	0.83911	0.90107	0.93364	0.94882	0.91269	0.89545
3500.0	1.00000	1.00224	0.93508	0.95039	1.07986	1.06619	0.96626	0.80877	0.72049	0.82119
3600.0	1.00834	0.85369	0.90308	0.96467	0.97173	1.01430	1.16868	1.10701	1.00712	1.06651
3700.0	1.13987	1.10176	1.09581	1.03396	0.94546	1.02487	1.22094	1.34703	1.56252	1.34861
3800.0	1.27657	1.38357	1.03596	0.81085	0.91740	1.16745	1.09246	1.12646	1.09477	1.17438
3900.0	1.35266	1.44411	1.30923	0.78210	0.85514	1.33345	1.19477	0.78116	1.40168	1.66664
4000.0	1.72188									
ZENITH SCAN STARTING AT 13.31.54 ON 1/30/74, NORMALIZING FACTOR = 3.1782E 01										
2600.0	0.00013	0.00013	0.00013	0.00014	0.00015	0.00014	0.00015	0.00015	0.00015	0.00014
2700.0	0.00015	0.00015	0.00015	0.00015	0.00016	0.00016	0.00016	0.00017	0.00017	0.00017
2800.0	0.00018	0.00018	0.00018	0.00018	0.00018	0.00019	0.00019	0.00021	0.00021	0.00021
2900.0	0.00022	0.00023	0.00024	0.00027	0.00032	0.00049	0.00086	0.00146	0.00279	0.00499
3000.0	0.00800	0.01479	0.02199	0.04625	0.06119	0.08738	0.10120	0.14115	0.18178	0.18665
3100.0	0.22554	0.33913	0.35524	0.39734	0.43691	0.45841	0.43316	0.58245	0.56825	0.59974
3200.0	0.67266	0.68900	0.65313	0.61859	0.72867	0.78424	0.97068	1.00347	0.92431	1.03880
3300.0	1.11645	0.98463	1.00363	0.98417	0.96391	1.02724	0.91972	0.85321	0.94833	1.00370
3400.0	1.08241	1.01699	1.02397	1.04821	0.84728	0.92098	0.94521	0.95090	0.91332	0.89699
3500.0	1.00000	1.01582	0.94160	0.96752	1.09327	1.07919	0.98035	0.82536	0.73245	0.85099
3600.0	1.01397	0.87190	0.90186	0.96913	0.97815	1.00514	1.16482	1.13193	1.04975	1.08795
3700.0	1.13170	1.05775	1.00493	0.91035	0.82433	0.86466	0.97835	1.04664	1.21935	1.05586
3800.0	0.99811	1.05847	0.80372	0.63518	0.72263	0.89887	0.85106	0.87296	0.85294	0.93051
3900.0	1.05628	1.13409	1.02305	0.61670	0.68415	1.06967	0.96689	0.81008	1.05454	1.33111
4000.0	1.37600									
ZENITH SCAN STARTING AT 13.33.40 ON 1/30/74, NORMALIZING FACTOR = 3.3746E 01										
2600.0	0.00013	0.00014	0.00015	0.00014	0.00015	0.00015	0.00015	0.00015	0.00015	0.00016
2700.0	0.00016	0.00016	0.00016	0.00016	0.00017	0.00018	0.00017	0.00017	0.00018	0.00018
2800.0	0.00019	0.00019	0.00019	0.00019	0.00020	0.00020	0.00020	0.00020	0.00021	0.00021
2900.0	0.00021	0.00022	0.00023	0.00026	0.00032	0.00049	0.00085	0.00152	0.00285	0.00516
3000.0	0.00834	0.01485	0.02309	0.04607	0.06186	0.08980	0.10296	0.14214	0.18389	0.18946
3100.0	0.22396	0.33697	0.35548	0.40407	0.44237	0.47034	0.44727	0.57208	0.55178	0.58825
3200.0	0.65321	0.67737	0.64000	0.61007	0.72215	0.77961	0.95367	0.98430	0.91447	1.00694
3300.0	1.09552	0.97525	0.98935	0.96951	0.94998	1.00921	0.89321	0.83824	0.92263	0.97659
3400.0	1.04272	0.98236	1.00044	1.03141	0.84107	0.90418	0.93512	0.94907	0.91363	0.89769
3500.0	1.00000	1.01321	0.94862	0.96199	1.09173	1.08084	0.98123	0.82323	0.72986	0.84812
3600.0	1.03412	0.87387	0.91485	0.96549	0.98783	1.01257	1.17685	1.14811	1.06719	1.10280
3700.0	1.16307	1.10195	1.03712	0.90861	0.82268	0.88369	0.98194	1.05298	1.20954	1.04170
3800.0	0.99843	1.06499	0.82352	0.62578	0.70404	0.91254	0.85545	0.87665	0.84972	0.91735
3900.0	1.05315	1.12174	1.03963	0.59599	0.66495	1.04757	0.95103	0.63312	1.09277	1.33959
4000.0	1.38914									

Table VIII-79

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/30/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 13.51.40 ON 1/30/74, NORMALIZING FACTOR = 4.4367E 01										
2600.0	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007
2700.0	0.00007	0.00006	0.00007	0.00007	0.00008	0.00007	0.00008	0.00007	0.00007	0.00007
2800.0	0.00007	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00009	0.00008	0.00008
2900.0	0.00009	0.00009	0.00011	0.00014	0.00024	0.00069	0.00265	0.00231	0.00432	0.00788
3000.0	0.01170	0.02059	0.02880	0.03659	0.07404	0.10255	0.11571	0.15988	0.19936	0.20006
3100.0	0.23902	0.34740	0.36450	0.40497	0.43989	0.45470	0.43338	0.57975	0.55352	0.58331
3200.0	0.65994	0.66169	0.62899	0.59973	0.70380	0.76144	0.94081	0.95386	0.88833	1.00322
3300.0	1.05669	0.94578	0.96354	0.94118	0.92949	0.98426	0.87073	0.81722	0.90947	0.95835
3400.0	1.02908	0.95309	0.98084	0.99897	0.82834	0.91564	0.92958	0.93020	0.89950	0.88470
3500.0	1.00000	1.00547	0.93252	0.97478	1.09026	1.07847	0.97180	0.81694	0.72377	0.86290
3600.0	1.01879	0.87985	0.92427	0.96670	0.99134	1.00877	1.17787	1.13976	1.06111	1.10774
3700.0	1.14193	1.07506	1.00388	0.89945	0.83571	0.89627	0.99782	1.08435	1.25518	1.05693
3800.0	1.03550	1.08382	0.80448	0.64008	0.74481	0.94343	0.88445	0.90533	0.88430	0.97691
3900.0	1.10315	1.18600	1.06259	0.62848	0.75095	1.11177	0.96617	0.68039	1.18887	1.42689
4000.0	1.47246									
ZENITH SCAN STARTING AT 13.54. 1 ON 1/30/74, NORMALIZING FACTOR = 4.2348E 01										
2600.0	0.00013	0.00014	0.00013	0.00012	0.00013	0.00013	0.00013	0.00013	0.00016	0.00013
2700.0	0.00014	0.00014	0.00015	0.00014	0.00015	0.00016	0.00015	0.00016	0.00016	0.00016
2800.0	0.00016	0.00016	0.00016	0.00016	0.00017	0.00018	0.00020	0.00020	0.00020	0.00021
2900.0	0.00022	0.00022	0.00024	0.00028	0.00038	0.00066	0.00126	0.00238	0.00439	0.00781
3000.0	0.01217	0.02046	0.03049	0.03785	0.07615	0.10771	0.12215	0.16188	0.20686	0.20777
3100.0	0.24258	0.35796	0.37102	0.41481	0.44799	0.46887	0.43949	0.57713	0.56229	0.59410
3200.0	0.66441	0.67706	0.64123	0.60881	0.70931	0.76988	0.94031	0.97280	0.90174	0.99944
3300.0	1.09002	0.96501	0.97908	0.96457	0.94888	1.00549	0.90183	0.84461	0.93590	0.99476
3400.0	1.07372	0.97722	0.98889	1.01961	0.83037	0.90853	0.93753	0.94399	0.90895	0.90044
3500.0	1.00000	1.01359	0.94495	0.98572	1.10035	1.08750	0.99085	0.83115	0.74435	0.83216
3600.0	1.03635	0.88346	0.93086	0.97633	1.00101	1.03047	1.19305	1.15961	1.07562	1.12274
3700.0	1.16661	1.10296	1.05616	0.95463	0.85325	0.90622	1.02634	1.09744	1.27587	1.10421
3800.0	1.04259	1.11522	0.86361	0.67265	0.75712	0.95358	0.90655	0.93727	0.91237	0.99211
3900.0	1.13658	1.22330	1.12557	0.65875	0.73970	1.07301	0.87026	0.66704	1.18278	1.43040
4000.0	1.48580									
ZENITH SCAN STARTING AT 13.55.46 ON 1/30/74, NORMALIZING FACTOR = 4.3298E 01										
2600.0	0.00014	0.00013	0.00014	0.00014	0.00015	0.00014	0.00015	0.00015	0.00410	0.00016
2700.0	0.00016	0.00015	0.00015	0.00015	0.00016	0.00016	0.00016	0.00017	0.00017	0.00017
2800.0	0.00018	0.00018	0.00018	0.00019	0.00019	0.00019	0.00020	0.00020	0.00020	0.00021
2900.0	0.00022	0.00025	0.00024	0.00028	0.00039	0.00068	0.00132	0.00250	0.00455	0.00821
3000.0	0.01240	0.02141	0.03157	0.03853	0.07750	0.10808	0.12110	0.16697	0.20672	0.21012
3100.0	0.24951	0.36353	0.37734	0.42235	0.46076	0.47675	0.44429	0.58333	0.55539	0.58672
3200.0	0.65716	0.66549	0.63217	0.59547	0.70541	0.76897	0.94572	0.96268	0.89853	0.99105
3300.0	1.06506	0.95295	0.96808	0.94563	0.92908	0.99188	0.88310	0.82258	0.90526	0.95650
3400.0	1.02404	0.95839	0.98111	1.01197	0.84069	0.90347	0.92861	0.94181	0.90551	0.89135
3500.0	1.00000	1.01714	0.94348	0.98438	1.09179	1.08572	0.98587	0.83074	0.73950	0.84828
3600.0	1.02866	0.88276	0.92277	0.99350	0.99625	1.02753	1.20960	1.17367	1.09606	1.14488
3700.0	1.19171	1.11613	1.04109	0.94128	0.84628	0.89896	1.01531	1.09253	1.26266	1.09038
3800.0	1.03405	1.11375	0.83369	0.65353	0.75210	0.95274	0.89461	0.91632	0.88883	0.95712
3900.0	1.10453	1.18763	1.09285	0.62494	0.72212	1.13262	0.97612	0.65273	1.17229	1.42300
4000.0	1.47470									
SOLAR SCAN STARTING AT 14.25.32 ON 1/30/74, NORMALIZING FACTOR = 5.1226E 02										
2600.0	0.00010	0.00010	0.00010	0.00010	0.00011	0.00011	0.00012	0.00013	0.00017	0.00014
2700.0	0.00014	0.00014	0.00014	0.00015	0.00015	0.00016	0.00016	0.00016	0.00017	0.00018
2800.0	0.00018	0.00019	0.00019	0.00020	0.00020	0.00021	0.00021	0.00022	0.00023	0.00023
2900.0	0.00025	0.00026	0.00029	0.00037	0.00048	0.00091	0.00170	0.00299	0.00548	0.00918
3000.0	0.01371	0.02283	0.03273	0.04473	0.08070	0.11091	0.12112	0.15924	0.19523	0.19549
3100.0	0.22201	0.32232	0.33082	0.36621	0.39427	0.40982	0.38811	0.50099	0.48348	0.50784
3200.0	0.56901	0.57460	0.55226	0.51752	0.61218	0.66914	0.81813	0.84073	0.79414	0.86812
3300.0	0.94786	0.85564	0.86508	0.85046	0.84308	0.90022	0.79740	0.75714	0.84252	0.89398
3400.0	0.96161	0.91574	0.93881	0.97501	0.80046	0.86838	0.90470	0.92077	0.89211	0.88651
3500.0	1.00000	1.01438	0.95155	0.97809	1.11313	1.10834	1.01618	0.85255	0.76057	0.87304
3600.0	1.08376	0.92972	0.98027	1.00310	1.06179	1.09248	1.28617	1.25050	1.17439	1.21262
3700.0	1.25586	1.18687	1.14487	1.03587	0.93720	1.01513	1.14264	1.22355	1.35817	1.19768
3800.0	1.15073	1.24871	0.94568	0.73624	0.84622	1.09472	1.03221	1.05945	1.04211	1.12638
3900.0	1.30065	1.39359	1.27674	0.74628	0.82175	1.35311	1.18698	0.82674	1.45021	1.74858
4000.0	1.81396									
SOLAR SCAN STARTING AT 14.27.53 ON 1/30/74, NORMALIZING FACTOR = 5.0852E 02										
2600.0	0.00010	0.00010	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011	0.00012	0.00012
2700.0	0.00012	0.00012	0.00013	0.00013	0.00013	0.00014	0.00014	0.00015	0.00015	0.00015
2800.0	0.00016	0.00016	0.00017	0.00017	0.00018	0.00017	0.00018	0.00019	0.00019	0.00020
2900.0	0.00020	0.00022	0.00024	0.00032	0.00048	0.00087	0.00172	0.00302	0.00549	0.00969
3000.0	0.01385	0.02370	0.03437	0.04453	0.08293	0.11099	0.12208	0.15949	0.19639	0.19527
3100.0	0.22443	0.33003	0.33452	0.36814	0.39682	0.40668	0.38274	0.51064	0.48945	0.50776
3200.0	0.57433	0.58025	0.55362	0.52196	0.61277	0.67236	0.83341	0.84795	0.79807	0.88516
3300.0	0.95181	0.85538	0.86953	0.85453	0.84440	0.90312	0.80653	0.75816	0.84631	0.89476
3400.0	0.96620	0.90549	0.93237	0.98255	0.80604	0.87374	0.90138	0.91537	0.88857	0.87970
3500.0	1.00000	1.01639	0.94457	0.98862	1.09069	1.09439	1.00098	0.84506	0.75347	0.86502
3600.0	1.07391	0.91487	0.95291	1.00320	1.04261	1.07176	1.26828	1.23069	1.14873	1.19757
3700.0	1.25014	1.16653	1.11364	1.00493	0.92288	0.99527	1.11327	1.21323	1.40787	1.20800
3800.0	1.14928	1.24477	0.93770	0.74127	0.84805	1.08806	1.02912	1.05582	1.02813	1.12146
3900.0	1.29303	1.37940	1.27494	0.74480	0.81947	1.33882	1.18132	0.81849	1.42259	1.72228
4000.0	1.79008									
SOLAR SCAN STARTING AT 14.29.42 ON 1/30/74, NORMALIZING FACTOR = 4.9036E 02										
2600.0	0.00010	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012
2700.0	0.00012	0.00013	0.00016	0.00018	0.00015	0.00016	0.00016	0.00016	0.00017	0.00018
2800.0	0.00018	0.00019	0.00019	0.00020	0.00020	0.00021	0.00021	0.00022	0.00023	0.00023
2900.0	0.00024	0.00026	0.00029	0.00038	0.00052	0.00100	0.00191	0.00331	0.00610	0.01011
3000.0	0.01486	0.02457	0.03471	0.04777	0.08573	0.11833	0.12900	0.16656	0.20531	0.20481
3100.0	0.22962	0.33892	0.34530	0.37988	0.40813	0.42295	0.39627	0.51678	0.50317	0.52615
3200.0	0.59293	0.59777	0.57094	0.54334	0.63080	0.69357	0.84752	0.87467	0.80859	0.88705
3300.0	0.97125	0.87292	0.88325	0.86836	0.86220	0.91302	0.81467	0.77613	0.85818	0.90772
3400.0	0.98104	0.92314	0.94413	0.98137	0.80251	0.87033	0.91142	0.93036	0.90025	0.89233
3500.0	1.00000	1.00964	0.95349	0.97823	1.11344	1.10668	1.01094	0.85470	0.76580	0.88638
3600.0	1.10090	0.93392	0.98702	1.00260	1.07075	1.11333	1.28731	1.24999	1.15893	1.21015
3700.0	1.26316	1.20228	1.15002	1.04395	0.94565	1.00375	1.13850	1.23099	1.42948	1.23916
3800.0	1.18005	1.27297	0.96474	0.72856	0.87689	1.09658	1.02987	1.06359	1.04567	1.13454
3900.0	1.31088	1.41141	1.28243	0.74515	0.86304	1.35979	1.17249	0.83985	1.44565	1.74385
4000.0	1.81006									

Table VIII-80

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/30/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 17.41. 8 ON 1/30/74. NORMALIZING FACTOR = 3.3559E 01										
2600.0	0.00012	0.00012	0.00012	0.00013	0.00013	0.00012	0.00013	0.00015	0.00013	0.00011
2700.0	0.00013	0.00014	0.00014	0.00014	0.00015	0.00013	0.00014	0.00016	0.00080	0.00157
2800.0	0.00018	0.00018	0.00018	0.00019	0.00019	0.00019	0.00020	0.00018	0.00020	0.00020
2900.0	0.00021	0.00024	0.00029	0.00043	0.00075	0.00137	0.00269	0.00567	0.00936	0.01579
3000.0	0.02417	0.03331	0.04855	0.09468	0.11396	0.13936	0.18146	0.19321	0.24423	0.29428
3100.0	0.28418	0.31399	0.46129	0.45753	0.49642	0.52627	0.53525	0.49884	0.64218	0.61837
3200.0	0.64233	0.72662	0.61213	0.69565	0.65925	0.76274	0.83790	1.01238	1.03845	0.97037
3300.0	1.11528	1.14497	1.04677	1.00836	1.03482	1.04015	23.77881	5.72567	0.92782	1.02684
3400.0	1.04916	1.14386	20.74016	1.11570	6.67547	20.31183	1.04094	28.63193	1.01189	10.72361
3500.0	1.00000	1.15343	1.09206	1.01860	1.14951	1.24261	1.18242	1.02323	0.90818	0.80074
3600.0	41.54886	1.10491	0.99550	1.12244	1.11576	1.13045	1.27134	11.93106	25.61684	1.20585
3700.0	1.33186	1.25334	1.24678	1.12288	0.96080	26.69440	1.17285	1.22376	1.46852	1.37723
3800.0	1.21373	1.37529	1.09062	0.84413	0.86842	1.17151	1.11880	1.13410	1.15063	1.18353
3900.0	1.33332	1.41250	1.33849	0.62176	0.84863	1.35785	1.22667	0.78850	1.41658	1.72349
4000.0	1.78503									
ZENITH SCAN STARTING AT 17.43.32 ON 1/30/74. NORMALIZING FACTOR = 5.1983E 01										
2600.0	0.00009	0.00011	0.00012	0.00011	0.00011	0.00012	0.00012	0.00012	0.00012	0.00013
2700.0	0.00366	0.00013	0.00013	0.00013	0.00013	0.00013	0.00014	0.00014	0.00014	0.00014
2800.0	0.00015	0.00015	0.00015	0.00013	0.00016	0.00016	0.00017	0.00017	0.00017	0.00017
2900.0	0.00019	0.00022	0.00029	0.00045	0.00088	0.00180	0.00423	0.00669	0.01240	0.01846
3000.0	0.02737	0.03756	0.76382	0.08401	0.12250	0.15067	0.17603	0.21262	1.52916	5.82736
3100.0	0.25978	0.38995	0.40767	0.43127	0.47500	0.49017	0.45992	0.56694	0.57915	0.57458
3200.0	0.63593	0.67442	0.63082	0.59197	0.66999	0.73519	0.89294	0.94748	0.89582	0.93302
3300.0	1.05836	0.95781	26.15883	0.94130	0.91409	0.98059	0.90547	0.81436	0.89530	0.95930
3400.0	1.02966	1.00005	0.99199	4.00858	24.56595	0.89277	0.95953	0.97322	0.93075	0.92604
3500.0	1.00000	1.07016	0.99202	0.97635	1.12094	1.14554	1.01588	0.89548	0.80442	0.83112
3600.0	1.09375	0.95979	0.79474	1.07176	1.04365	1.02578	1.22293	1.20785	1.13284	1.12150
3700.0	1.21535	1.11175	1.10716	1.00207	0.88644	0.92741	1.04700	1.15100	1.34580	1.14771
3800.0	1.10451	1.18877	0.90476	0.70027	0.79385	1.01952	0.96548	0.99243	0.96585	1.04303
3900.0	1.20342	1.29119	1.20655	0.71421	0.77933	1.25158	1.07749	0.75512	1.29923	1.58793
4000.0	1.64303									
ZENITH SCAN STARTING AT 17.47.38 ON 1/30/74. NORMALIZING FACTOR = 5.3970E 01										
2600.0	0.00012	0.00012	0.00012	0.00012	0.00012	0.00013	0.00289	0.00010	0.00013	0.00013
2700.0	0.00013	0.00013	0.00014	0.00014	0.00014	0.00014	0.00014	0.00015	0.00412	0.00017
2800.0	0.00016	0.00016	0.00016	0.00016	0.00017	0.00017	0.00018	0.00018	0.00019	0.00019
2900.0	0.00020	0.00022	0.00026	0.00037	0.00061	0.00118	0.00272	0.00535	0.00906	0.01662
3000.0	0.02641	0.03437	0.04911	0.07383	0.11971	0.14158	0.17477	0.19177	0.24978	0.27521
3100.0	0.25821	0.34478	0.43301	0.46830	0.45643	0.47273	0.46680	0.48863	0.59129	6.98671
3200.0	9.51027	0.66895	0.61519	0.58541	0.62173	0.70055	0.82558	0.92213	0.88710	0.88616
3300.0	1.03705	0.96883	0.94604	0.92870	0.91937	0.97454	0.93641	0.82161	0.87394	0.94857
3400.0	1.00671	1.02270	0.98196	1.04523	0.95208	0.84625	0.96538	0.80983	0.93249	0.92822
3500.0	1.00000	1.06850	0.99730	0.97828	1.12140	1.14856	1.06092	0.88354	0.81000	0.82649
3600.0	1.11341	1.76319	0.95709	1.07883	1.07565	1.09272	1.30106	1.30277	1.20256	1.17317
3700.0	1.27602	1.17941	1.15575	1.01249	0.91928	0.96914	1.10683	1.18714	1.40073	1.21544
3800.0	1.14149	1.22246	0.93834	0.73870	0.82772	1.05527	1.00065	1.03186	0.92124	1.10051
3900.0	1.26006	1.34137	1.23403	0.74078	0.81000	1.25481	1.13835	0.74282	1.37169	1.63005
4000.0	1.69830									
ZENITH SCAN STARTING AT 18. 5.12 ON 1/30/74. NORMALIZING FACTOR = 4.5082E 01										
2600.0	0.00012	0.00012	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	0.00014
2700.0	0.00014	0.00014	0.00014	0.00014	0.00015	0.00016	0.00446	0.00015	0.00015	0.00015
2800.0	0.00419	0.00016	0.00016	0.00016	0.00018	0.00017	0.00014	0.00017	0.00018	0.00019
2900.0	0.00021	0.00026	0.00039	0.00069	0.00136	0.00270	0.00551	0.00884	0.01481	0.02292
3000.0	0.02884	0.04489	0.05974	0.10566	0.13100	0.16796	0.17801	0.22041	0.27038	0.22139
3100.0	0.28574	0.42534	0.42438	0.45752	0.48982	0.49239	0.45483	0.59718	0.56869	0.57639
3200.0	0.65184	0.65458	0.62066	0.57914	0.67198	0.73339	0.89966	0.92031	0.86146	0.93959
3300.0	1.01821	0.86247	0.78893	0.89793	0.88067	0.93944	0.84530	0.78540	0.87512	0.93139
3400.0	1.01285	0.95170	0.96171	0.99474	0.83422	0.89196	0.91886	0.93418	0.90441	0.89236
3500.0	1.00000	1.03226	0.96195	14.19179	1.11863	1.11626	1.01857	0.85962	0.76623	0.88449
3600.0	1.09144	0.93417	0.95608	1.01400	1.02567	1.05031	1.24077	1.20837	1.12252	1.15882
3700.0	1.21432	1.13687	1.08510	0.97146	0.88359	0.94638	1.05818	1.14199	1.33112	1.14384
3800.0	1.09854	1.18923	0.92695	0.70143	0.79557	1.01755	0.96539	0.99324	0.96259	1.04389
3900.0	1.20079	1.29009	1.19605	0.73380	0.77798	1.22154	1.11280	0.70862	1.29183	1.59060
4000.0	1.65812									
ZENITH SCAN STARTING AT 18. 7.33 ON 1/30/74. NORMALIZING FACTOR = 4.3017E 01										
2600.0	0.00012	0.00011	0.00343	0.00012	0.00014	0.00013	0.00013	0.00013	0.00013	0.00013
2700.0	0.00013	0.00013	0.00014	0.00014	0.00014	0.00015	0.00015	0.00015	0.00015	0.00015
2800.0	0.00016	0.00015	0.00017	0.00018	0.00017	0.00018	0.00018	0.00018	0.00019	0.00020
2900.0	0.00020	0.00023	0.00030	0.00049	0.00103	0.00190	0.00473	0.00761	0.01384	0.02000
3000.0	0.02987	0.04006	0.05721	0.09952	0.12993	0.15897	0.18427	0.22164	0.27718	0.28134
3100.0	0.28292	0.41790	0.44123	0.46788	0.50597	0.51799	0.47878	12.80922	0.60203	0.59278
3200.0	0.64658	0.69321	0.65141	0.61618	0.68744	0.75897	0.90759	0.96999	0.91265	0.85636
3300.0	1.08475	0.97442	0.96901	0.96499	0.94399	1.00935	0.94216	0.83582	0.90165	0.96628
3400.0	1.03051	1.00505	0.99076	1.04693	0.89582	0.88507	0.96382	0.97642	0.93610	0.93064
3500.0	1.00000	1.06554	0.99725	0.97612	1.12637	1.14613	1.06006	0.88420	0.80501	0.81619
3600.0	0.70619	0.95240	0.97813	0.84274	1.05267	1.08542	1.26620	1.22693	1.13910	1.18812
3700.0	1.24747	1.18068	1.12090	1.01374	0.91492	0.95595	1.09260	1.17287	1.37275	1.18277
3800.0	1.12800	1.22412	0.92411	0.73010	0.83047	1.06067	1.00210	1.04041	1.02312	1.10842
3900.0	1.28362	1.31272	1.18555	0.73630	0.79530	1.27064	1.12929	0.73768	1.34697	1.64783
4000.0	1.68048									
ZENITH SCAN STARTING AT 18. 9.18 ON 1/30/74. NORMALIZING FACTOR = 4.3502E 01										
2600.0	0.00013	0.00013	0.00013	0.00014	0.00013	0.00014	0.00014	0.00015	0.00015	0.00014
2700.0	0.00014	0.00015	0.00015	0.00015	0.00016	0.00403	0.00022	0.00016	0.00016	0.00016
2800.0	0.00017	0.00017	0.00017	0.00018	0.00018	0.00018	0.00018	0.00018	0.00019	0.00020
2900.0	0.00022	0.00025	0.00033	0.00051	0.00095	0.00179	0.00390	0.00639	0.01199	0.01748
3000.0	0.02725	0.03581	0.05232	0.07685	0.12166	0.14577	0.18156	0.19845	0.26172	0.28812
3100.0	0.27225	0.36927	0.44758	0.44671	0.49385	0.50795	0.50123	0.52475	0.63970	0.58255
3200.0	0.63187	0.71990	0.66071	0.63558	0.64076	0.74938	0.85401	0.98776	0.95423	0.92249
3300.0	1.07051	1.03500	0.97835	0.98350	0.94593	0.98498	0.99994	0.85388	0.88345	0.96718
3400.0	1.01817	1.05881	0.99014	1.05608	1.01689	0.87395	0.99516	0.99902	0.97290	0.97584
3500.0	1.00000	1.14467	1.06164	1.00591	1.16149	1.19054	1.13027	0.96858	0.86525	0.81295
3600.0	1.13818	1.03891	0.98809	1.11821	1.11768	1.13395	1.32138	1.31472	1.22702	1.18439
3700.0	1.32094	1.21340	1.21682	1.08788	0.94998	0.96311	1.13475	1.15537	1.39970	1.25421
3800.0	1.15172	1.29980	1.11155	0.79252	0.79735	1.09216	1.03593	1.06774	1.04793	1.10114
3900.0	1.30073	1.39875	1.29609	0.78584	0.84353	1.21918	1.07151	0.78231	1.39908	1.73082
4000.0	1.80272									

Table VIII-81

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/30/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 18.11. 4 ON 1/30/74, NORMALIZING FACTOR = 4.5559E 01										
2600.0	0.00011	0.00011	0.00012	0.00012	0.00012	0.00012	0.00013	0.00013	0.00013	0.00066
2700.0	0.00131	0.00013	0.00014	0.00015	0.00152	0.00248	0.00015	0.00015	0.00015	0.00015
2800.0	0.00015	0.00015	0.00016	0.00016	0.00016	0.00016	0.00017	0.00019	0.00020	0.00020
2900.0	0.00022	0.00025	0.00036	0.00056	0.00108	0.00222	0.00495	0.00777	0.01393	0.02035
3000.0	0.02954	0.04159	0.05623	0.07782	0.12833	0.16270	0.17918	0.21153	0.23369	0.27530
3100.0	0.27309	0.41439	0.43492	0.45766	0.49385	0.50088	0.46306	0.58034	0.59954	0.58993
3200.0	0.65098	0.69192	0.64159	0.60582	0.67125	0.74542	0.89557	0.95991	0.90057	0.93812
3300.0	1.07578	0.96200	0.95459	0.94693	0.91786	0.98300	0.91856	0.82417	0.89285	0.80838
3400.0	1.05255	1.01829	0.98009	1.03647	0.89383	0.88394	0.96242	0.97557	0.93587	0.93289
3500.0	1.00000	1.07728	1.00768	0.98214	1.14368	1.16034	1.07449	0.89705	0.81212	0.82819
3600.0	1.12658	0.96580	0.97472	1.07813	1.07088	1.09473	1.29455	1.28156	1.19499	1.19594
3700.0	1.29852	1.19317	1.18827	1.08156	0.95126	0.96158	1.13182	1.18614	1.41934	5.63824
3800.0	26.02344	1.25365	0.95716	0.74324	0.83476	1.07017	1.00955	1.04458	1.02351	1.11029
3900.0	1.28155	1.35894	1.25714	0.77328	0.83391	1.32580	1.09478	0.87607	1.37817	1.65858
4000.0	1.71883									
ZENITH SCAN STARTING AT 18.13.28 ON 1/30/74, NORMALIZING FACTOR = 4.8728E 01										
2600.0	0.00011	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.00013	0.00013	0.00013
2700.0	0.00013	0.00025	0.00350	0.00013	0.00014	0.00014	0.00014	0.00014	0.00015	0.00015
2800.0	0.00015	0.00015	0.00015	0.00016	0.00016	0.00016	0.00017	0.00017	0.00018	0.00019
2900.0	0.00021	0.00026	0.00039	0.00067	0.00128	0.00262	0.00515	0.00849	0.01414	0.02172
3000.0	0.02911	0.04260	0.05724	0.07944	0.12231	0.15942	0.17052	0.21548	0.25912	0.25452
3100.0	0.27673	0.40273	0.40882	0.44652	0.47879	0.49273	0.44537	0.56856	0.54736	0.56421
3200.0	0.63180	0.63713	0.60708	0.56981	0.65996	0.71996	0.87336	0.89567	0.84348	0.91073
3300.0	0.99788	0.89789	0.90143	0.88490	0.87675	0.93960	0.83438	0.78490	0.86766	0.91774
3400.0	0.98739	0.93215	0.94646	0.98089	0.81759	0.86916	0.90493	0.92083	0.89153	0.88114
3500.0	1.00000	1.01229	0.94491	0.79557	1.09830	1.09239	0.99483	0.82954	0.74729	0.84371
3600.0	1.04405	0.88996	0.91795	0.99279	0.99937	1.03095	1.21979	1.18682	1.11741	1.16425
3700.0	1.17949	1.11314	1.04989	0.96922	0.87651	0.91894	1.04541	1.12487	1.33103	1.13774
3800.0	1.06786	1.15648	0.88485	0.66639	0.77568	0.99030	0.93602	0.96826	0.94897	14.17185
3900.0	1.19066	1.28270	1.18746	0.70823	0.78320	1.21701	1.07513	0.73283	1.26942	1.54854
4000.0	1.61063									
ZENITH SCAN STARTING AT 18.23.27 ON 1/30/74, NORMALIZING FACTOR = 5.0559E 01										
2600.0	0.00011	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.00013	0.00013	0.00014
2700.0	0.00013	0.00014	0.00013	0.00013	0.00014	0.00014	0.00014	0.00014	0.00014	0.00013
2800.0	0.00015	0.00015	0.00015	0.00016	0.00016	0.00016	0.00017	0.00017	0.00017	0.00018
2900.0	0.00019	0.00023	0.00034	0.00058	0.00113	0.00225	0.00482	0.00774	0.01355	0.02037
3000.0	0.02805	0.03946	0.05435	0.07554	0.12316	0.15687	0.17374	0.21234	0.26433	0.26947
3100.0	0.27193	0.40161	0.42680	0.45269	0.49104	0.50175	0.46792	0.56727	0.58527	0.57843
3200.0	0.63250	0.67439	0.62913	0.59140	0.66681	0.73725	0.88398	0.94146	0.88640	0.91331
3300.0	1.04455	0.94305	0.93316	0.92491	0.90186	0.96186	0.88834	0.80758	0.88018	0.94392
3400.0	1.00800	0.98442	0.95777	1.01448	0.89188	0.87526	0.95061	0.96385	0.92754	0.92874
3500.0	1.00000	1.07763	1.00467	0.99525	1.14957	1.16978	1.04288	0.88824	0.80040	0.82098
3600.0	1.08173	0.94396	0.93954	1.03706	1.03776	1.04592	1.24729	1.23155	1.15797	1.15345
3700.0	1.26071	1.14907	1.13834	1.02687	0.90705	0.94411	1.09286	1.13635	1.35029	1.22861
3800.0	1.09742	1.22579	0.98416	0.73605	0.75404	1.03998	0.98911	1.01912	0.99162	1.02515
3900.0	1.22499	1.29662	1.28440	0.86427	0.68795	1.20242	1.22835	0.78089	1.35811	1.65250
4000.0	1.72211									
ZENITH SCAN STARTING AT 18.25.15 ON 1/30/74, NORMALIZING FACTOR = 1.3492E 02										
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00003	0.00004	0.00004	0.00004
2700.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005
2800.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006
2900.0	0.00006	0.00008	0.00014	0.00054	0.00070	0.00144	0.00319	0.00552	0.00945	0.01191
3000.0	0.02273	0.02935	0.04501	0.06550	0.29639	0.10453	0.16020	0.17069	0.22776	0.25643
3100.0	0.24055	0.31681	0.40640	0.40922	0.45298	0.46387	0.44947	0.48937	0.57502	0.53080
3200.0	0.57837	0.65202	0.59785	0.57371	0.59363	0.68537	0.79545	0.90898	0.87116	0.85657
3300.0	0.99351	0.93550	0.91380	0.91705	0.88188	0.92726	0.93106	0.80353	0.84631	0.92163
3400.0	0.96895	0.99980	0.95231	1.02375	0.97191	0.84710	0.98552	0.96930	0.94783	0.96429
3500.0	1.00000	1.09289	1.02154	0.98594	1.11503	1.14032	1.09360	0.89500	0.80338	0.77038
3600.0	1.03570	0.91993	0.87472	0.97004	0.96159	0.96486	1.13073	1.14093	1.07806	1.03908
3700.0	1.14452	1.03747	1.05038	0.93557	0.81698	0.83192	0.97787	1.00893	1.19829	1.09036
3800.0	0.98744	1.09544	0.84551	0.64472	0.71865	0.87054	0.86669	0.88391	0.85640	0.93109
3900.0	1.08015	1.13361	1.02456	0.59482	0.67392	1.08528	0.90818	0.62756	1.10427	1.31799
4000.0	1.34842									
ZENITH SCAN STARTING AT 18.27. 1 ON 1/30/74, NORMALIZING FACTOR = 1.3132E 02										
2600.0	0.00005	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00003
2700.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005
2800.0	0.00005	0.00005	0.00005	0.00006	0.00006	0.00005	0.00005	0.00005	0.00005	0.00005
2900.0	0.00005	0.00006	0.00006	0.00007	0.00009	0.00054	0.00064	0.00091	0.00184	0.00409
3000.0	0.00665	0.01163	0.01682	0.02567	0.03491	0.05119	0.08319	0.12079	0.14912	0.17303
3100.0	0.20150	0.26091	0.27647	0.26481	0.38702	0.43709	0.45104	0.49274	0.50256	0.47505
3200.0	0.54334	0.61855	0.58827	0.64203	0.71150	0.65059	0.61949	0.65970	0.74228	0.87129
3300.0	0.97145	0.92413	0.92288	1.08697	1.00043	0.96928	0.96460	0.93497	0.98610	0.94825
3400.0	0.83631	0.89259	0.97235	1.03053	1.04242	0.99543	1.06401	0.96268	0.87229	0.99715
3500.0	1.00000	0.97101	0.97287	1.00297	1.12103	1.03839	1.01791	1.17603	1.17971	1.07724
3600.0	0.90560	0.81161	0.92555	1.11761	0.99794	1.05126	1.11201	1.12781	1.20777	1.36999
3700.0	1.31449	1.22476	1.30646	1.29214	1.26612	1.17130	1.04692	0.97568	1.07571	1.17181
3800.0	1.34811	1.42006	1.17798	1.27460	1.19541	0.85732	0.74685	0.99805	1.08963	1.06884
3900.0	1.06634	1.04913	1.23863	1.33369	1.43128	1.12953	0.65409	1.07434	1.40861	0.93425
4000.0	0.98809									
ZENITH SCAN STARTING AT 18.33.22 ON 1/30/74, NORMALIZING FACTOR = 1.4405E 02										
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00114	0.00004	0.00004	0.00004
2700.0	0.00004	0.00004	0.00004	0.00004	0.00005	0.00004	0.00004	0.00005	0.00005	0.00005
2800.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00005	0.00006	0.00006	0.00006
2900.0	0.00008	0.00011	0.00045	0.00078	0.00099	0.00211	0.00432	0.00716	0.01212	0.01795
3000.0	0.02542	0.03685	0.05105	0.08921	0.11600	0.15064	0.16446	0.20194	0.25155	0.25209
3100.0	0.25962	0.38834	0.40253	0.43132	0.46637	0.47523	0.44020	0.55081	0.56052	0.56751
3200.0	0.62630	0.65831	0.61683	0.57839	0.65482	0.72405	0.87339	0.91900	0.86351	0.90453
3300.0	1.02539	0.92354	0.91578	0.90160	0.88223	0.93730	0.85418	0.78740	0.86084	0.91638
3400.0	0.96568	0.95365	0.94918	1.00195	0.84596	0.87872	0.94045	0.95566	0.91833	0.91656
3500.0	1.00000	1.05773	0.98928	0.98129	1.13509	1.13924	1.04578	0.87695	0.78596	0.83351
3600.0	1.10932	0.94788	0.96713	1.06370	1.06213	1.08088	1.27287	1.24834	1.16641	1.18232
3700.0	1.25990	1.17614	1.15556	1.04540	0.92343	0.95260	1.10604	1.16018	1.37204	1.23339
3800.0	1.11395	1.24654	0.96334	0.74301	0.79570	1.05952	0.99756	1.03332	1.01369	1.06515
3900.0	1.26596	1.34321	1.31022	0.81784	0.72981	1.36883	0.95092	0.76735	1.30557	1.68900
4000.0	1.75826									

Table VIII-82

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/30/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 18.39.14 ON 1/30/74. NORMALIZING FACTOR = 1.4323E 02									
2600.0	0.00004	0.00004	0.00004	0.00005	0.00004	0.00004	0.00004	0.00004	0.00005	0.00004
2700.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00128	0.00005	0.00005	0.00005	0.00005
2800.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006	0.00006
2900.0	0.00008	0.00011	0.00032	0.00094	0.00104	0.00210	0.00433	0.00705	0.01214	0.01816
3000.0	0.02539	0.03728	0.05115	0.08857	0.11583	0.14829	0.16166	0.20157	0.55776	0.39359
3100.0	0.46702	0.38476	0.39955	0.42690	0.46206	0.47199	0.44227	0.54927	0.55171	0.54381
3200.0	0.60857	0.63884	0.59852	0.58215	0.63842	0.70354	0.85279	0.89282	0.84530	0.88788
3300.0	0.99569	0.90022	0.89912	0.87724	0.87315	0.92518	0.81140	0.77890	0.86306	0.90807
3400.0	0.97767	0.91635	0.94782	0.97360	0.80653	0.87645	0.89800	0.91138	0.88702	0.82623
3500.0	1.00000	1.00329	0.93418	0.97947	1.10339	1.09377	0.99182	0.83927	0.70092	0.87025
3600.0	1.04688	0.90491	0.95211	1.01829	1.02881	1.06483	1.24496	1.20076	1.12036	1.17431
3700.0	1.20409	1.14293	1.08229	0.97601	0.86345	0.95178	1.07107	1.16135	1.34195	1.15127
3800.0	1.11596	1.18969	0.90629	0.70859	0.83084	1.03727	0.97851	1.00428	0.98125	1.07518
3900.0	1.22949	1.32298	1.18843	0.68034	0.80889	1.28926	1.07699	0.74714	1.37457	1.62176
4000.0	1.67047									
	ZENITH SCAN STARTING AT 18.41. 2 ON 1/30/74. NORMALIZING FACTOR = 1.3878E 02									
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005
2700.0	0.00005	0.00005	0.00005	0.00005	0.00141	0.00005	0.00005	0.00005	0.00006	0.00005
2800.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006	0.00006	0.00006
2900.0	0.00007	0.00009	0.00046	0.00051	0.00123	0.00175	0.00370	0.00599	0.01078	0.01533
3000.0	0.02453	0.03233	0.04836	0.09535	0.11809	0.14785	0.16874	0.19639	0.21098	0.26478
3100.0	0.25679	0.38883	0.42110	0.43758	0.48042	0.48886	0.45972	0.55337	0.59592	0.57122
3200.0	0.62718	0.68287	0.61393	0.55107	0.64401	0.72362	0.81352	0.94354	0.89128	0.91150
3300.0	1.05183	0.95350	0.93981	0.93576	0.90262	0.96156	0.92212	0.80953	0.87515	0.94589
3400.0	1.01097	1.00336	0.97173	1.03305	0.92571	0.87303	0.96985	0.97557	0.94217	0.94374
3500.0	1.00000	1.09829	1.02261	0.98860	1.14888	1.17179	1.07928	0.90229	0.81899	0.86790
3600.0	1.12911	0.98062	0.99190	1.09741	1.09170	1.11511	1.32323	1.29313	1.21365	1.22533
3700.0	1.30536	1.21083	1.19922	1.08418	0.96178	0.97895	1.15476	1.25841	1.43106	1.23137
3800.0	1.18785	1.26469	0.93942	0.74447	0.87441	1.10651	1.04021	1.06783	1.03873	1.13895
3900.0	1.30602	1.40346	1.27575	0.62181	0.87245	1.37658	1.17680	0.80656	1.46257	1.75704
4000.0	1.81905									
	ZENITH SCAN STARTING AT 18.51. 1 ON 1/30/74. NORMALIZING FACTOR = 1.4938E 02									
2600.0	0.00004	0.00004	0.00004	0.00004	0.00025	0.00067	0.00004	0.00004	0.00004	0.00004
2700.0	0.00004	0.00005	0.00004	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
2800.0	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007
2900.0	0.00008	0.00013	0.00043	0.00055	0.00113	0.00239	0.00468	0.00765	0.01269	0.01964
3000.0	0.02596	0.04059	0.05546	0.09800	0.11939	0.15307	0.16328	0.21146	0.25151	0.28456
3100.0	0.28171	0.40110	0.39656	0.43218	0.45999	0.46700	0.44327	0.47214	0.53465	0.55910
3200.0	0.63520	0.62092	0.59468	0.56144	0.65930	0.71800	0.88153	0.89016	0.84029	0.93582
3300.0	0.99265	0.89504	0.90465	0.87366	0.87646	0.93000	0.82133	0.78077	0.87030	0.91883
3400.0	0.99470	0.92424	0.95728	0.96965	0.81163	0.89618	0.91474	0.92141	0.89653	0.88295
3500.0	1.00000	1.00904	0.94071	0.98393	1.11163	1.09665	0.99303	0.84363	0.74807	0.91096
3600.0	1.06295	0.92021	0.97661	1.03868	1.05342	1.09677	1.27845	1.23759	1.15116	1.21147
3700.0	1.24530	1.17690	1.11222	0.99878	0.92644	1.01272	1.11126	1.21785	1.40508	1.18133
3800.0	1.15891	1.21463	0.92937	0.72570	0.83875	1.06766	1.01608	1.03767	1.03553	1.11850
3900.0	1.27099	1.36936	1.24485	0.72680	0.85173	1.32630	1.15603	0.79636	1.43992	1.72008
4000.0	1.78371									
	ZENITH SCAN STARTING AT 19. 1.20 ON 1/30/74. NORMALIZING FACTOR = 1.4800E 02									
2600.0	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
2700.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006
2800.0	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007
2900.0	0.00008	0.00011	0.00050	0.00084	0.00094	0.00185	0.00408	0.00639	0.01171	0.01680
3000.0	0.02533	0.03539	0.04917	0.08840	0.11912	0.15183	0.16629	0.20772	0.25724	0.25709
3100.0	0.27165	0.40550	0.41417	0.44247	0.47947	0.48730	0.45306	0.57698	0.57160	0.57708
3200.0	0.64484	0.66527	0.62627	0.58424	0.66170	0.72866	0.89136	0.93038	0.87417	0.93111
3300.0	1.03475	0.92660	0.92828	0.91614	0.89455	0.95669	0.87517	0.79689	0.88143	0.93827
3400.0	1.01185	0.96727	0.96828	1.01484	0.86445	0.89251	0.94648	0.95746	0.92293	0.91610
3500.0	1.00000	1.05765	0.98347	0.98723	1.14073	1.14640	1.05400	0.88550	0.79440	0.86242
3600.0	1.11003	0.95188	0.97829	1.02646	1.07440	1.09650	1.28759	1.26825	1.18347	1.19653
3700.0	1.28941	1.19181	1.15609	1.02413	0.92526	0.97183	1.12037	1.17860	1.25715	1.23845
3800.0	1.13049	1.25179	0.96640	0.74243	0.78329	1.06762	1.01272	1.02947	1.00244	1.06473
3900.0	1.26053	1.33793	1.30357	0.80416	0.73395	1.27529	1.13184	0.79233	1.41297	1.69017
4000.0	1.74999									
	ZENITH SCAN STARTING AT 19. 5. 7 ON 1/30/74. NORMALIZING FACTOR = 1.6566E 02									
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005
2700.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006
2800.0	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007
2900.0	0.00009	0.00012	0.00063	0.00057	0.00111	0.00243	0.00471	0.00786	0.01253	0.01936
3000.0	0.02607	0.03940	0.05434	0.09358	0.11610	0.15209	0.16237	0.21099	0.25059	0.24354
3100.0	0.27776	0.39482	0.39361	0.43198	0.45798	0.46700	0.44086	0.56900	0.53309	0.55640
3200.0	0.62793	0.61708	0.58247	0.55951	0.65945	0.71988	0.87946	0.88547	0.83696	0.92152
3300.0	0.98131	0.88928	0.89621	0.87409	0.87241	0.92361	0.81346	0.77723	0.86286	0.90875
3400.0	0.97855	0.91328	0.94328	0.96942	0.80678	0.88191	0.89999	0.91171	0.88776	0.87486
3500.0	1.00000	1.00179	0.93445	0.98234	1.10041	1.08796	0.98544	0.83651	0.74580	0.88476
3600.0	1.04539	0.90277	0.95076	1.01352	1.02488	1.06350	1.24302	1.20100	1.12089	1.17641
3700.0	1.20045	1.14172	1.07719	0.96822	0.85849	0.97278	1.07205	1.17093	1.30746	1.13305
3800.0	1.10786	1.18017	0.87350	0.69599	0.81050	1.03238	0.97333	0.99808	0.97037	1.06787
3900.0	1.22000	1.31031	1.19190	0.66477	0.79752	1.26281	1.09058	0.76062	1.34737	1.62435
4000.0	1.67811									
	ZENITH SCAN STARTING AT 19. 9.16 ON 1/30/74. NORMALIZING FACTOR = 1.6546E 02									
2600.0	0.00004	0.00004	0.00004	0.00019	0.00101	0.00004	0.00004	0.00004	0.00004	0.00005
2700.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00080
2800.0	0.00006	0.00006	0.00130	0.00043	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007
2900.0	0.00008	0.00012	0.00060	0.00052	0.00101	0.00211	0.00439	0.00704	0.01202	0.01786
3000.0	0.02535	0.03696	0.05129	0.08940	0.11647	0.15155	0.16565	0.20386	0.25405	0.25520
3100.0	0.26237	0.39684	0.40668	0.43533	0.46861	0.47853	0.44275	0.55833	0.56377	0.56619
3200.0	0.62583	0.65638	0.61690	0.58059	0.65598	0.72455	0.86941	0.90185	0.86447	0.90884
3300.0	1.02710	0.92337	0.92022	0.90829	0.88729	0.94662	0.86266	0.79394	0.87016	0.92895
3400.0	0.99637	0.96127	0.96023	1.01044	0.85521	0.86981	0.93282	0.95132	0.91698	0.91327
3500.0	1.00000	1.05607	0.98662	0.97715	1.12622	1.13737	1.05055	0.87568	0.79078	0.83589
3600.0	1.10946	0.95546	0.96768	1.00680	1.06729	1.09048	1.28672	1.26257	1.17479	1.19208
3700.0	1.27923	1.18994	1.16591	1.05601	0.93321	0.97287	1.13006	1.22378	1.40840	1.20207
3800.0	1.15980	1.23821	0.93162	0.73151	0.85985	1.08107	1.02002	1.04984	1.02165	1.12225
3900.0	1.28349	1.37638	1.25124	0.74951	0.87377	1.32464	1.15733	0.79566	1.41946	1.72130
4000.0	1.78764									

Table VIII-83

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED RUV ENERGY CURVES FROM FLIGHT OF 1/30/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 19.11. 2 ON 1/30/74, NORMALIZING FACTOR = 1.6217E 02										
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00044
2700.0	0.00093	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
2800.0	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007
2900.0	0.00008	0.00011	0.00038	0.00059	0.00094	0.00184	0.00411	0.00636	0.01173	0.01681
3000.0	0.02495	0.03515	0.04900	0.08410	0.11615	0.14454	0.16612	0.19635	0.25194	0.26133
3100.0	0.25787	0.38147	0.41480	0.43130	0.47392	0.48392	0.45750	0.54823	0.58955	0.56382
3200.0	0.62094	0.67655	0.62220	0.58592	0.63868	0.71791	0.86076	0.93452	0.88563	0.90220
3300.0	1.03805	0.94483	0.92994	0.91890	0.89712	0.95981	0.87982	0.79940	0.88439	0.93890
3400.0	1.01202	0.96888	0.97178	1.01662	0.86783	0.89665	0.94999	0.96010	0.92374	0.91777
3500.0	1.00000	1.06103	0.98783	0.99363	1.13806	1.14826	1.05349	0.89705	0.77185	0.91360
3600.0	1.09453	0.93731	0.99695	1.05773	1.06980	1.12412	1.28798	1.24542	1.15424	1.21994
3700.0	1.24621	1.13778	0.96031	1.02163	0.93307	1.00559	1.11959	1.21987	1.39863	1.19590
3800.0	1.16006	1.22362	0.92608	0.72432	0.84929	1.05763	1.00869	1.03624	1.01734	1.12876
3900.0	1.27537	1.37772	1.22563	0.72851	0.90500	1.32440	1.10733	0.78086	1.42115	1.69230
4000.0	1.75393									
ZENITH SCAN STARTING AT 19.15. 9 ON 1/30/74, NORMALIZING FACTOR = 1.7534E 02										
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005
2700.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
2800.0	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007
2900.0	0.00008	0.00013	0.00061	0.00056	0.00113	0.00237	0.00478	0.00789	0.01261	0.01953
3000.0	0.02633	0.03975	0.05482	0.09559	0.11769	0.15313	0.16021	0.21096	0.25163	0.24414
3100.0	0.27876	0.39528	0.39481	0.43192	0.45972	0.46760	0.44337	0.56900	0.53213	0.55634
3200.0	0.62812	0.61706	0.59213	0.56064	0.65760	0.72172	0.87450	0.88382	0.83531	0.91839
3300.0	0.98182	0.88883	0.89577	0.87411	0.87084	0.92326	0.81149	0.77786	0.86133	0.91082
3400.0	0.97624	0.91606	0.94538	0.97303	0.80212	0.87885	0.90084	0.91239	0.88828	0.87589
3500.0	1.00000	1.00435	0.95874	0.98479	1.10202	1.08702	0.98476	0.83700	0.74413	0.88788
3600.0	1.04247	0.89587	0.94247	1.00583	1.01261	1.06274	1.22488	1.18323	1.10663	1.16037
3700.0	1.18459	1.12684	1.07656	0.96545	0.88080	0.94245	1.06042	1.15624	1.32838	1.13927
3800.0	1.09808	1.16395	0.88304	0.69221	0.80953	1.01385	0.95929	0.98773	0.96697	1.06814
3900.0	1.21315	1.31120	1.17702	0.68826	0.81556	1.26959	1.06345	0.78443	1.37186	1.62514
4000.0	1.68422									

Table VIII-84

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 16.15.31 ON 1/31/74. NORMALIZING FACTOR = 1.9327E 01									
2600.0	0.00004	0.00004	0.00021	0.00004	0.00004	0.00005	0.00004	0.00004	0.00004	0.00005
2700.0	0.00005	0.00004	0.00004	0.00006	0.00006	0.00005	0.00005	0.00005	0.00006	0.00005
2800.0	0.00004	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00007
2900.0	0.00011	0.00025	0.00047	0.00101	0.00527	0.00478	0.00901	0.01509	0.02705	0.03598
3000.0	0.04390	0.06837	0.09181	0.13400	0.18573	0.23541	0.24912	0.32384	0.37633	0.36144
3100.0	0.42927	0.58890	0.58271	0.63435	0.66854	0.67350	0.64294	0.82263	0.75994	0.79359
3200.0	0.88753	0.85978	0.81504	0.77215	0.90107	0.97843	1.17405	1.16399	1.08781	1.20058
3300.0	1.24149	1.11641	1.11711	1.07333	1.06493	1.10541	0.95170	0.91474	0.99998	1.04253
3400.0	1.09952	1.01693	1.04480	1.04896	0.85233	0.94995	0.95058	0.94283	0.91264	0.88916
3500.0	1.00000	0.98109	0.90880	0.94165	1.06171	1.03072	0.92013	0.77872	0.69131	0.82544
3600.0	0.94843	0.80686	0.85511	0.88915	0.90100	0.93666	1.06294	1.01480	0.93769	0.97830
3700.0	0.97097	0.93528	0.86043	0.76699	0.70586	0.75895	0.82692	0.89996	1.00698	0.84152
3800.0	0.83443	0.84564	0.63790	0.50192	0.60666	0.71462	0.67406	0.68723	0.66532	0.72949
3900.0	0.81345	0.87028	0.76477	0.43925	0.55789	0.80857	0.66863	0.51965	0.86771	1.00971
4000.0	1.03151									
	ZENITH SCAN STARTING AT 16.17.17 ON 1/31/74. NORMALIZING FACTOR = 1.9119E 01									
2600.0	0.00006	0.00003	0.00004	0.00004	0.00004	0.00003	0.00004	0.00005	0.00004	0.00003
2700.0	0.00003	0.00005	0.00006	0.00007	0.00005	0.00005	0.00005	0.00006	0.00005	0.00005
2800.0	0.00004	0.00005	0.00004	0.00005	0.00006	0.00005	0.00005	0.00006	0.00006	0.00007
2900.0	0.00012	0.00026	0.00047	0.00102	0.00446	0.00545	0.00836	0.01388	0.02281	0.03493
3000.0	0.04323	0.06613	0.08899	0.13515	0.18538	0.23437	0.24903	0.31886	0.37589	0.35970
3100.0	0.41457	0.58944	0.58416	0.63043	0.66402	0.66703	0.62985	0.82088	0.76510	0.79179
3200.0	0.88744	0.86452	0.81664	0.76919	0.89036	0.96258	1.16759	1.15551	1.06120	1.20251
3300.0	1.24104	1.10809	1.11043	1.06997	1.05646	1.10153	0.96142	0.90892	0.99780	1.03834
3400.0	1.10081	1.01424	1.04043	1.04783	0.85776	0.93396	0.94624	0.94320	0.91249	0.89702
3500.0	1.00000	0.97953	0.91430	0.95119	1.05467	1.02180	0.91075	0.77471	0.67900	0.82183
3600.0	0.93085	0.80305	0.84476	0.88367	0.88702	0.92921	1.04907	1.00451	0.93017	0.97057
3700.0	0.97739	0.92576	0.85156	0.76136	0.69969	0.75147	0.82251	0.89274	1.00738	0.84993
3800.0	0.82166	0.85090	0.63270	0.50503	0.58264	0.71608	0.67848	0.68668	0.66555	0.72513
3900.0	0.81999	0.87970	0.76367	0.45517	0.54252	0.82358	0.66594	0.52166	0.86542	1.01889
4000.0	1.04097									
	ZENITH SCAN STARTING AT 16.19.41 ON 1/31/74. NORMALIZING FACTOR = 1.8876E 01									
2600.0	0.00007	0.00007	0.00009	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00007
2700.0	0.00010	0.00008	0.00014	0.00008	0.00010	0.00009	0.00009	0.00009	0.00012	0.00010
2800.0	0.00010	0.00014	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0.00013
2900.0	0.00018	0.00026	0.00053	0.00100	0.00200	0.00429	0.00814	0.01370	0.02191	0.03376
3000.0	0.04477	0.06813	0.08944	0.14780	0.18141	0.23483	0.24852	0.31535	0.37263	0.36119
3100.0	0.40508	0.57343	0.57300	0.62359	0.65750	0.66773	0.62411	0.79308	0.75063	0.77987
3200.0	0.86013	0.85481	0.80824	0.76455	0.87770	0.94881	1.13604	1.14711	1.06657	0.93786
3300.0	1.23991	1.10142	1.10059	1.06829	1.02504	0.69986	0.95944	0.90055	0.98800	1.03165
3400.0	1.09970	1.02040	1.03527	1.05325	0.86354	0.93679	0.95366	0.94929	0.91286	0.89082
3500.0	1.00000	1.00292	0.92422	0.95667	1.06620	1.05254	0.95035	0.79548	0.67883	0.79642
3600.0	0.93858	0.79961	0.83907	0.88598	0.88823	0.91292	1.04719	1.00695	0.93340	0.96757
3700.0	0.98674	0.92912	0.86602	0.77521	0.70476	0.75967	0.82439	0.89321	1.02126	0.86949
3800.0	0.82414	0.86529	0.65191	0.51259	0.57707	0.72278	0.68005	0.69460	0.67141	0.73701
3900.0	0.82360	0.87915	0.78538	0.46998	0.53041	0.81701	0.70134	0.50469	0.84526	1.01182
4000.0	1.03998									
	ZENITH SCAN STARTING AT 16.21.27 ON 1/31/74. NORMALIZING FACTOR = 1.9241E 01									
2600.0	0.00008	0.00008	0.00009	0.00008	0.00008	0.00009	0.00008	0.00008	0.00009	0.00010
2700.0	0.00009	0.00009	0.00009	0.00009	0.00010	0.00011	0.00010	0.00013	0.00016	0.00012
2800.0	0.00012	0.00012	0.00013	0.00013	0.00015	0.00013	0.00014	0.00016	0.00015	0.00016
2900.0	0.00020	0.00030	0.00051	0.00103	0.00201	0.00414	0.00813	0.01298	0.02148	0.03329
3000.0	0.04426	0.06796	0.08914	0.13259	0.18489	0.23374	0.24870	0.32187	0.37833	0.36590
3100.0	0.41827	0.58820	0.58540	0.63428	0.67375	0.68104	0.64179	0.82215	0.76759	0.79645
3200.0	0.88862	0.87418	0.82569	0.77344	0.90084	0.97537	1.17819	1.18387	1.10256	1.20693
3300.0	1.25124	1.14929	1.14898	1.08101	1.06379	1.11605	0.97272	0.91313	0.99975	1.04502
3400.0	1.11091	1.03498	1.04997	1.06684	0.86382	0.93731	0.96063	0.95861	0.91979	0.90358
3500.0	1.00000	0.99519	0.92294	0.94981	1.06309	1.03510	0.93399	0.78529	0.68954	0.80520
3600.0	0.94846	0.81034	0.84308	0.89648	0.89904	0.92202	1.06043	1.01305	0.94074	0.96870
3700.0	0.99540	0.93602	0.86782	0.77868	0.70744	0.74970	0.82847	0.89237	1.01780	0.86194
3800.0	0.82937	0.87346	0.65586	0.51422	0.59417	0.72658	0.68844	0.68722	0.66270	0.71136
3900.0	0.81137	0.86800	0.78024	0.46253	0.53132	0.79485	0.69032	0.47144	0.82078	0.99197
4000.0	1.01801									
	ZENITH SCAN STARTING AT 16.23.13 ON 1/31/74. NORMALIZING FACTOR = 1.9846E 01									
2600.0	0.00004	0.00004	0.00004	0.00007	0.00004	0.00004	0.00005	0.00004	0.00005	0.00005
2700.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005	0.00006
2800.0	0.00006	0.00006	0.00005	0.00005	0.00007	0.00005	0.00006	0.00006	0.00006	0.00007
2900.0	0.00011	0.00022	0.00048	0.00098	0.00606	0.00453	0.00829	0.01350	0.02204	0.03366
3000.0	0.04412	0.06449	0.08603	0.13108	0.18120	0.23243	0.24698	0.31299	0.37151	0.36027
3100.0	0.41401	0.58822	0.58130	0.63311	0.66661	0.67217	0.63125	0.81212	0.76105	0.79218
3200.0	0.88009	0.86275	0.81792	0.77473	0.88661	0.95797	1.14507	1.14463	1.05368	1.17067
3300.0	1.21766	1.08476	1.08582	1.04966	1.03300	1.07447	0.94139	0.88724	0.97261	1.01545
3400.0	1.08381	1.00194	1.02743	1.03477	0.85502	0.93615	0.94616	0.94441	0.90759	0.88636
3500.0	1.00000	0.98581	0.91045	0.95322	1.05480	1.03042	0.91748	0.77736	0.68481	0.80391
3600.0	0.94104	0.80228	0.82399	0.87340	0.89075	0.92006	1.04171	1.00289	0.92383	0.96321
3700.0	0.98771	0.92660	0.86246	0.77376	0.70488	0.74804	0.82225	0.89446	1.01189	0.84763
3800.0	0.82660	0.86030	0.63753	0.50457	0.60647	0.72472	0.67870	0.69008	0.66746	0.73834
3900.0	0.82318	0.87723	0.78120	0.46020	0.56950	0.82281	0.69911	0.50583	0.85959	1.01680
4000.0	1.04400									
	ZENITH SCAN STARTING AT 16.27.38 ON 1/31/74. NORMALIZING FACTOR = 2.0526E 01									
2600.0	0.00003	0.00003	0.00004	0.00004	0.00003	0.00005	0.00004	0.00004	0.00003	0.00004
2700.0	0.00004	0.00003	0.00004	0.00004	0.00004	0.00008	0.00004	0.00004	0.00004	0.00004
2800.0	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00007
2900.0	0.00013	0.00021	0.00044	0.00095	0.00414	0.00522	0.00807	0.01311	0.02163	0.03303
3000.0	0.04167	0.06360	0.08416	0.14705	0.17673	0.22382	0.23793	0.30746	0.36046	0.34635
3100.0	0.40152	0.56545	0.56022	0.60485	0.64024	0.64271	0.60384	0.78578	0.73942	0.76432
3200.0	0.85771	0.83564	0.79112	0.74432	0.86205	0.93372	1.13200	1.12981	1.04668	1.16382
3300.0	1.20849	1.08073	1.08566	1.04834	1.03187	1.08024	0.94375	0.89165	0.98116	1.02464
3400.0	1.08691	1.00145	1.02738	1.03857	0.84356	0.92313	0.93748	0.93555	0.90541	0.88611
3500.0	1.00000	0.98410	0.90805	0.94739	1.05151	1.02479	0.92014	0.77252	0.68475	0.81167
3600.0	0.93783	0.80068	0.84716	0.88345	0.89036	0.93146	1.04463	0.98478	0.92897	0.96853
3700.0	0.97806	0.92473	0.85375	0.77669	0.70472	0.76652	0.82746	0.89878	1.01445	0.85693
3800.0	0.83442	0.86155	0.65212	0.51449	0.61493	0.72694	0.68987	0.70224	0.68089	0.74977
3900.0	0.83896	0.89491	0.78030	0.40824	0.57352	0.84556	0.69737	0.53042	0.89546	1.03914
4000.0	1.06262									

Table VIII-85

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 16.29.24 ON 1/31/74, NORMALIZING FACTOR = 2.0110E 01									
2600.0	0.00007	0.00008	0.00008	0.00008	0.00009	0.00007	0.00008	0.00009	0.00009	0.00009
2700.0	0.00009	0.00008	0.00009	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010	0.00012
2800.0	0.00010	0.00011	0.00010	0.00010	0.00012	0.00012	0.00013	0.00016	0.00014	0.00015
2900.0	0.00020	0.00028	0.00050	0.00095	0.00189	0.00400	0.00768	0.01284	0.02069	0.03176
3000.0	0.04176	0.06278	0.08376	0.14447	0.17544	0.22740	0.24114	0.30274	0.36137	0.35144
3100.0	0.38828	0.56048	0.55969	0.60714	0.64043	0.65058	0.60365	0.77291	0.73791	0.76272
3200.0	0.84188	0.84346	0.79481	0.74840	0.85682	0.92807	1.11335	1.13658	1.05194	1.14990
3300.0	1.23214	1.09037	1.09515	1.05738	1.04313	1.09655	0.97240	0.90881	0.99817	1.04926
3400.0	1.12511	1.04473	1.03464	1.04961	0.87278	0.92688	0.94742	0.94951	0.91382	0.89287
3500.0	1.00000	0.99959	0.92521	0.94416	1.05786	1.04176	0.93882	0.78015	0.69741	0.79189
3600.0	0.94589	0.79951	0.84285	0.89048	0.88925	0.91510	1.04435	1.01122	0.93266	0.96452
3700.0	0.99984	0.93373	0.88426	0.79082	0.70988	0.73926	0.82933	0.89350	1.02248	0.87642
3800.0	0.83127	0.87824	0.66830	0.52050	0.60261	0.73971	0.68988	0.70633	0.68568	0.73729
3900.0	0.84269	0.90142	0.81805	0.47853	0.54117	0.83173	0.72910	0.51214	0.86415	1.02588
4000.0	1.05399									
	ZENITH SCAN STARTING AT 16.31.10 ON 1/31/74, NORMALIZING FACTOR = 2.0364E 01									
2600.0	0.00009	0.00010	0.00016	0.00012	0.00012	0.00009	0.00011	0.00013	0.00012	0.00010
2700.0	0.00013	0.00010	0.00011	0.00013	0.00012	0.00011	0.00012	0.00014	0.00012	0.00012
2800.0	0.00014	0.00013	0.00014	0.00014	0.00014	0.00014	0.00015	0.00015	0.00016	0.00018
2900.0	0.00021	0.00030	0.00053	0.00100	0.00194	0.00406	0.00773	0.01295	0.02086	0.03221
3000.0	0.04336	0.06484	0.08586	0.14492	0.17682	0.22531	0.23945	0.30957	0.36254	0.35197
3100.0	0.40053	0.56716	0.56511	0.61393	0.65327	0.66511	0.62633	0.77629	0.73733	0.76114
3200.0	0.84824	0.83589	0.79379	0.74100	0.86143	0.93116	1.12991	1.13502	1.05862	1.15540
3300.0	1.22379	1.09478	1.09636	1.06017	1.04063	1.09774	0.95987	0.89922	0.98690	1.03189
3400.0	1.09334	1.02021	1.03796	1.05784	0.85896	0.92447	0.94710	0.95005	0.91212	0.89534
3500.0	1.00000	0.99284	0.92318	0.94276	1.06154	1.03746	0.93353	0.78712	0.69433	0.80699
3600.0	0.96127	0.81252	0.85625	0.90635	0.90194	0.93337	1.07078	1.03336	0.95939	0.99601
3700.0	1.02200	0.95425	0.88775	0.78496	0.71095	0.76108	0.84124	0.91052	1.03179	0.88511
3800.0	0.83816	0.87861	0.66948	0.52306	0.59760	0.73828	0.69449	0.71145	0.68664	0.74926
3900.0	0.84106	0.89287	0.80390	0.46498	0.52665	0.81691	0.71814	0.50688	0.85431	1.02212
4000.0	1.05177									
	ZENITH SCAN STARTING AT 16.33.31 ON 1/31/74, NORMALIZING FACTOR = 1.9802E 01									
2600.0	0.00010	0.00010	0.00010	0.00009	0.00010	0.00009	0.00010	0.00010	0.00010	0.00010
2700.0	0.00010	0.00011	0.00011	0.00011	0.00011	0.00013	0.00012	0.00012	0.00012	0.00013
2800.0	0.00013	0.00013	0.00013	0.00014	0.00013	0.00014	0.00014	0.00015	0.00015	0.00016
2900.0	0.00020	0.00029	0.00053	0.00103	0.00193	0.00417	0.00788	0.01277	0.02110	0.03194
3000.0	0.04274	0.06440	0.08426	0.14792	0.17905	0.22915	0.24398	0.30598	0.36809	0.35591
3100.0	0.39382	0.57466	0.57021	0.61170	0.64931	0.65535	0.60639	0.79187	0.75251	0.76985
3200.0	0.85478	0.85118	0.80410	0.74825	0.85824	0.92826	1.13183	1.14427	1.05871	1.16202
3300.0	1.23959	1.09619	1.10007	1.06911	1.04374	1.09996	0.97697	0.90438	0.99180	1.04020
3400.0	1.11335	1.03247	1.05117	1.07406	0.89360	0.95759	0.97353	0.94119	0.91762	0.90110
3500.0	1.00000	1.00283	0.92824	0.94033	1.06068	1.03916	0.93998	0.78100	0.69512	0.80317
3600.0	0.96034	0.80958	0.84990	0.90348	0.89940	0.92203	1.06119	1.02392	0.94864	0.97736
3700.0	0.99809	0.94085	0.88401	0.79084	0.71836	0.76364	0.84616	0.90619	1.03791	0.89066
3800.0	0.84460	0.89759	0.68031	0.53302	0.59579	0.75300	0.70569	0.71994	0.69893	0.74784
3900.0	0.85403	0.91231	0.82840	0.49745	0.53798	0.83782	0.74334	0.51867	0.87853	1.05872
4000.0	1.09142									
	ZENITH SCAN STARTING AT 16.35.17 ON 1/31/74, NORMALIZING FACTOR = 1.9362E 01									
2600.0	0.00010	0.00011	0.00009	0.00010	0.00011	0.00010	0.00014	0.00012	0.00014	0.00012
2700.0	0.00012	0.00013	0.00012	0.00013	0.00013	0.00013	0.00013	0.00016	0.00015	0.00017
2800.0	0.00016	0.00015	0.00015	0.00016	0.00017	0.00018	0.00017	0.00018	0.00018	0.00020
2900.0	0.00024	0.00033	0.00055	0.00103	0.00205	0.00429	0.00809	0.01342	0.02165	0.03311
3000.0	0.04385	0.06601	0.08739	0.14868	0.18101	0.23438	0.24861	0.31307	0.37354	0.36301
3100.0	0.40182	0.57312	0.57418	0.62358	0.66001	0.67117	0.62628	0.79663	0.76048	0.79004
3200.0	0.87672	0.87035	0.79714	0.75463	0.87143	0.94360	1.13096	1.14747	1.06841	1.15537
3300.0	1.24082	1.10766	1.10588	1.07108	1.05105	1.10222	0.96867	0.90663	0.98810	1.03747
3400.0	1.10830	1.02994	1.04474	1.08261	0.86961	0.93901	0.96129	0.95974	0.92104	0.90639
3500.0	1.00000	1.00305	0.93223	0.94719	1.06987	1.04779	0.94538	0.79167	0.70289	0.81070
3600.0	0.95447	0.81690	0.85097	0.90653	0.89774	0.92225	1.07096	1.02925	0.95345	0.98764
3700.0	1.00851	0.95053	0.89475	0.80454	0.73127	0.76876	0.85780	0.90880	1.03260	0.87764
3800.0	0.83744	0.88505	0.67755	0.52737	0.59142	0.73958	0.69703	0.70925	0.68755	0.73574
3900.0	0.84066	0.89503	0.81666	0.47136	0.52649	0.82019	0.72279	0.51182	0.86596	1.03351
4000.0	1.06523									
	ZENITH SCAN STARTING AT 16.37.38 ON 1/31/74, NORMALIZING FACTOR = 1.9451E 01									
2600.0	0.00010	0.00010	0.00011	0.00011	0.00010	0.00011	0.00016	0.00010	0.00011	0.00011
2700.0	0.00011	0.00011	0.00013	0.00012	0.00013	0.00013	0.00013	0.00014	0.00013	0.00013
2800.0	0.00015	0.00013	0.00013	0.00015	0.00014	0.00014	0.00015	0.00016	0.00016	0.00017
2900.0	0.00021	0.00031	0.00051	0.00099	0.00193	0.00407	0.00750	0.01266	0.02079	0.03255
3000.0	0.04198	0.06402	0.08383	0.14569	0.17638	0.22280	0.23706	0.29939	0.35882	0.34666
3100.0	0.38657	0.55852	0.55510	0.59448	0.63139	0.63698	0.59229	0.77240	0.73075	0.74876
3200.0	0.83314	0.82415	0.78029	0.72562	0.83756	0.90465	1.10389	1.11264	1.03046	1.13031
3300.0	1.20116	1.06883	1.07029	1.03772	1.01790	1.07449	0.94622	0.87769	0.96555	1.00963
3400.0	1.07676	0.99926	1.01885	1.03700	0.85294	0.91638	0.93533	0.93968	0.90566	0.88820
3500.0	1.00000	0.99083	0.89015	0.92309	1.03374	1.01469	0.91477	0.76207	0.66857	0.77772
3600.0	0.93757	0.79003	0.82835	0.87787	0.87788	0.90181	1.03456	0.99819	0.92431	0.95311
3700.0	0.98462	0.92065	0.86025	0.77408	0.70351	0.75429	0.82936	0.89640	1.02504	0.87021
3800.0	0.83019	0.87823	0.66900	0.51927	0.59456	0.72701	0.68556	0.70238	0.68006	0.74236
3900.0	0.83664	0.88949	0.81700	0.47373	0.55150	0.82760	0.72295	0.49439	0.86379	1.03113
4000.0	1.06258									
	ZENITH SCAN STARTING AT 16.41.12 ON 1/31/74, NORMALIZING FACTOR = 1.7654E 01									
2600.0	0.00011	0.00011	0.00013	0.00013	0.00013	0.00012	0.00012	0.00012	0.00012	0.00013
2700.0	0.00012	0.00022	0.00013	0.00013	0.00013	0.00013	0.00028	0.00013	0.00014	0.00015
2800.0	0.00015	0.00015	0.00015	0.00015	0.00016	0.00016	0.00016	0.00017	0.00022	0.00019
2900.0	0.00022	0.00033	0.00054	0.00104	0.00202	0.00408	0.00813	0.01317	0.02142	0.03342
3000.0	0.04272	0.06482	0.08739	0.14681	0.17928	0.22790	0.24146	0.30883	0.36549	0.35465
3100.0	0.39815	0.56171	0.56144	0.60665	0.64540	0.65131	0.60879	0.78461	0.73408	0.75985
3200.0	0.84479	0.83690	0.79087	0.73766	0.86013	0.93095	1.11935	1.13004	1.05359	1.14399
3300.0	1.21647	1.09002	1.09051	1.05823	1.03527	1.09228	0.96913	0.89546	0.97872	1.02618
3400.0	1.08888	1.01775	1.03318	1.05847	0.85819	0.92365	0.94709	0.95023	0.91395	0.89686
3500.0	1.00000	0.99676	0.93077	0.95022	1.07037	1.05521	0.92249	0.78776	0.69026	0.79636
3600.0	0.94562	0.80441	0.83469	0.88642	0.88851	0.91502	1.05414	1.01755	0.94457	0.97279
3700.0	0.99971	0.93956	0.88316	0.78867	0.71223	0.76256	0.84177	0.90866	1.03321	0.87723
3800.0	0.84398	0.88746	0.67772	0.52287	0.60710	0.75387	0.70501	0.71276	0.69481	0.74566
3900.0	0.85040	0.91083	0.82974	0.49329	0.53383	0.83359	0.73736	0.50113	0.87063	1.04781
4000.0	1.07933									

Table VIII-86

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 16.45.19 ON 1/31/74. NORMALIZING FACTOR = 1.6851E 01									
2600.0	0.00011	0.00012	0.00011	0.00012	0.00013	0.00013	0.00012	0.00012	0.00014	0.00014
2700.0	0.00013	0.00014	0.00014	0.00014	0.00015	0.00015	0.00015	0.00016	0.00015	0.00016
2800.0	0.00015	0.00018	0.00016	0.00016	0.00017	0.00019	0.00019	0.00019	0.00019	0.00020
2900.0	0.00026	0.00034	0.00056	0.00106	0.00203	0.00427	0.00814	0.01350	0.02168	0.03356
3000.0	0.04479	0.06651	0.08886	0.15099	0.18342	0.23544	0.24341	0.30998	0.37236	0.36122
3100.0	0.39432	0.57522	0.57141	0.61575	0.65093	0.65967	0.61149	0.78208	0.75017	0.77302
3200.0	0.85647	0.85586	0.80532	0.75571	0.86598	0.93678	1.12767	1.15247	1.06586	1.15809
3300.0	1.24844	1.10336	1.10635	1.07276	1.04923	1.10425	0.97949	0.90867	0.99149	1.04166
3400.0	1.11253	1.03102	1.04593	1.06263	0.87837	0.94384	0.96406	0.96239	0.92220	0.90313
3500.0	1.00000	1.00977	0.93189	0.95452	1.07403	1.05615	0.95162	0.79898	0.70713	0.81682
3600.0	0.98224	0.81263	0.84118	0.89598	0.89663	0.92873	1.06901	1.02567	0.95054	0.97377
3700.0	1.00463	0.94561	0.88894	0.79658	0.71550	0.76312	0.84841	0.91395	1.03852	0.89158
3800.0	0.83952	0.89633	0.67431	0.52995	0.59449	0.75185	0.69877	0.71423	0.69508	0.75042
3900.0	0.85070	0.91280	0.83150	0.48822	0.53589	0.83669	0.72954	0.50859	0.86906	1.03953
4000.0	1.07071									
	ZENITH SCAN STARTING AT 16.47.40 ON 1/31/74. NORMALIZING FACTOR = 1.6796E 01									
2600.0	0.00012	0.00011	0.00012	0.00011	0.00011	0.00013	0.00013	0.00013	0.00012	0.00013
2700.0	0.00013	0.00013	0.00015	0.00015	0.00014	0.00014	0.00014	0.00015	0.00016	0.00016
2800.0	0.00018	0.00022	0.00018	0.00019	0.00019	0.00021	0.00022	0.00021	0.00038	0.00023
2900.0	0.00026	0.00035	0.00056	0.00103	0.00202	0.00410	0.00801	0.01301	0.02106	0.03304
3000.0	0.04283	0.06547	0.08516	0.14766	0.18050	0.22816	0.24259	0.30813	0.36803	0.35725
3100.0	0.39874	0.56906	0.56751	0.61117	0.65084	0.65917	0.61074	0.79342	0.75148	0.77316
3200.0	0.85849	0.85597	0.80441	0.74958	0.87021	0.94198	1.14424	1.15921	1.07763	1.17468
3300.0	1.25644	1.12324	1.12704	1.09591	1.07729	1.13760	0.99761	0.91303	0.99245	1.04217
3400.0	1.11041	1.03954	1.04875	1.07330	0.87874	0.94301	0.96446	0.96400	0.92519	0.90958
3500.0	1.00000	1.00922	0.93241	0.94766	1.06951	1.05153	0.94665	0.79515	0.69979	0.80681
3600.0	0.98831	0.82362	0.85983	0.91213	0.91552	0.94012	1.08224	1.04457	0.96709	0.99669
3700.0	1.02740	0.96619	0.90501	0.80782	0.73558	0.78705	0.86675	0.92779	1.07470	0.92151
3800.0	0.86478	0.91710	0.70557	0.54609	0.61998	0.77284	0.72830	0.74719	0.72279	0.79759
3900.0	0.88510	0.92837	0.84345	0.49757	0.56235	0.85141	0.75249	0.50842	0.88590	1.06960
4000.0	1.10269									
	ZENITH SCAN STARTING AT 16.49.26 ON 1/31/74. NORMALIZING FACTOR = 1.6783E 01									
2600.0	0.00013	0.00015	0.00012	0.00013	0.00013	0.00013	0.00014	0.00015	0.00013	0.00015
2700.0	0.00014	0.00015	0.00016	0.00015	0.00015	0.00016	0.00016	0.00018	0.00016	0.00017
2800.0	0.00018	0.00017	0.00018	0.00018	0.00018	0.00019	0.00019	0.00020	0.00021	0.00021
2900.0	0.00026	0.00033	0.00056	0.00105	0.00198	0.00422	0.00788	0.01273	0.02116	0.03221
3000.0	0.04365	0.06528	0.08625	0.14812	0.18086	0.23351	0.24853	0.31126	0.37610	0.36465
3100.0	0.39363	0.56001	0.56546	0.60804	0.64571	0.65010	0.60194	0.78263	0.74946	0.76463
3200.0	0.85138	0.84865	0.80064	0.74556	0.85629	0.92668	1.12620	1.14473	1.06119	1.16202
3300.0	1.24241	1.10001	1.10280	1.07280	1.04395	1.10408	0.97801	0.90449	0.99186	1.04111
3400.0	1.11293	1.03040	1.04704	1.06652	0.88985	0.94535	0.96384	0.96008	0.92188	0.90281
3500.0	1.00000	1.01156	0.93500	0.95398	1.07076	1.05596	0.95652	0.80279	0.71384	0.81811
3600.0	0.97453	0.83367	0.86239	0.92263	0.92701	0.93293	1.06714	1.03344	0.95567	0.98750
3700.0	1.01527	0.94710	0.89378	0.80782	0.72816	0.77919	0.85543	0.91692	1.06035	0.90858
3800.0	0.85323	0.91032	0.69809	0.53688	0.60765	0.76455	0.71243	0.72710	0.70388	0.76286
3900.0	0.86595	0.91823	0.83177	0.49130	0.54365	0.84261	0.75305	0.51491	0.87832	1.05873
4000.0	1.09248									
	ZENITH SCAN STARTING AT 16.51.15 ON 1/31/74. NORMALIZING FACTOR = 1.6737E 01									
2600.0	0.00012	0.00013	0.00012	0.00012	0.00014	0.00014	0.00013	0.00013	0.00014	0.00014
2700.0	0.00014	0.00014	0.00014	0.00014	0.00016	0.00015	0.00015	0.00017	0.00015	0.00016
2800.0	0.00018	0.00016	0.00019	0.00018	0.00017	0.00022	0.00020	0.00021	0.00022	0.00023
2900.0	0.00026	0.00036	0.00056	0.00104	0.00205	0.00397	0.00794	0.01289	0.02082	0.03255
3000.0	0.04311	0.06520	0.08719	0.14490	0.17849	0.22727	0.24193	0.30897	0.36607	0.35733
3100.0	0.39741	0.56115	0.56381	0.61067	0.64674	0.65713	0.61712	0.78475	0.74199	0.76450
3200.0	0.84731	0.84670	0.79658	0.74588	0.86712	0.94000	1.13049	1.14857	1.07234	1.15995
3300.0	1.24266	1.11321	1.11529	1.08925	1.05996	1.11948	0.98492	0.92227	1.00995	1.06199
3400.0	1.11899	1.02141	1.03983	1.05890	0.87204	0.93831	0.96069	0.96272	0.92093	0.90191
3500.0	1.00000	1.01198	0.93105	0.95437	1.06901	1.04945	0.94268	0.79348	0.69998	0.80099
3600.0	0.97272	0.82321	0.85872	0.91386	0.91390	0.94152	1.08023	1.04385	0.96630	1.00079
3700.0	1.03852	0.97375	0.92175	0.82542	0.74255	0.77571	0.87065	0.93281	1.08540	0.91652
3800.0	0.87568	0.94137	0.71619	0.55490	0.62038	0.78321	0.73803	0.75223	0.73329	0.78217
3900.0	0.89712	0.95454	0.87377	0.53648	0.58004	0.85331	0.75099	0.53700	0.91664	1.08220
4000.0	1.11616									
	ZENITH SCAN STARTING AT 16.53.36 ON 1/31/74. NORMALIZING FACTOR = 1.6218E 01									
2600.0	0.00018	0.00013	0.00014	0.00013	0.00013	0.00014	0.00014	0.00014	0.00013	0.00015
2700.0	0.00016	0.00015	0.00015	0.00016	0.00015	0.00016	0.00017	0.00018	0.00016	0.00017
2800.0	0.00017	0.00017	0.00018	0.00019	0.00019	0.00021	0.00021	0.00020	0.00020	0.00023
2900.0	0.00026	0.00036	0.00056	0.00103	0.00194	0.00402	0.00774	0.01228	0.02081	0.03170
3000.0	0.04269	0.06448	0.08456	0.14486	0.18010	0.22910	0.24375	0.30810	0.37005	0.35891
3100.0	0.39228	0.57621	0.57673	0.61909	0.65996	0.65383	0.61373	0.78472	0.74097	0.76502
3200.0	0.84643	0.84495	0.79552	0.74351	0.86293	0.93264	1.13286	1.14670	1.06899	1.15651
3300.0	1.23922	1.10626	1.10512	1.07252	1.04577	1.10558	0.97536	0.90514	0.99038	1.03821
3400.0	1.10498	1.03046	1.04306	1.06638	0.87688	0.92984	0.95336	0.95478	0.91710	0.89944
3500.0	1.00000	1.00339	0.93141	0.94334	1.06279	1.04526	0.95134	0.79276	0.70398	0.78995
3600.0	0.96651	0.82541	0.84693	0.90663	0.90721	0.93128	1.08490	1.04671	0.97371	0.99920
3700.0	1.00931	0.95041	0.89515	0.80075	0.72359	0.75502	0.84968	0.91105	1.04683	0.89824
3800.0	0.84918	0.90306	0.69366	0.53311	0.60329	0.75887	0.70724	0.72381	0.70263	0.75198
3900.0	0.86060	0.92357	0.84446	0.50889	0.54662	0.85374	0.74571	0.49307	0.86629	1.05548
4000.0	1.08723									
	ZENITH SCAN STARTING AT 16.55.21 ON 1/31/74. NORMALIZING FACTOR = 1.6165E 01									
2600.0	0.00012	0.00012	0.00012	0.00013	0.00014	0.00013	0.00014	0.00013	0.00014	0.00014
2700.0	0.00015	0.00015	0.00014	0.00015	0.00017	0.00015	0.00015	0.00015	0.00016	0.00016
2800.0	0.00016	0.00016	0.00017	0.00018	0.00018	0.00019	0.00019	0.00020	0.00019	0.00022
2900.0	0.00031	0.00033	0.00057	0.00101	0.00191	0.00409	0.00759	0.01249	0.02039	0.03115
3000.0	0.04198	0.06277	0.08421	0.14258	0.17438	0.22610	0.24079	0.30284	0.36344	0.35340
3100.0	0.38765	0.56030	0.56005	0.60866	0.64164	0.65301	0.60561	0.77291	0.74077	0.76666
3200.0	0.84210	0.84849	0.80046	0.75100	0.86625	0.94068	1.12821	1.15172	1.06870	1.15920
3300.0	1.25183	1.11377	1.11288	1.08359	1.06036	1.11102	0.98546	0.92154	1.00163	1.05255
3400.0	1.12801	1.05674	1.06891	1.09462	0.89607	0.92239	0.95232	0.95998	0.91856	0.90023
3500.0	1.00000	1.01234	0.93500	0.95392	1.06581	1.05230	0.94737	0.79594	0.70813	0.81274
3600.0	0.96259	0.82272	0.85376	0.91039	0.90985	0.93151	1.08330	1.04274	0.96718	0.98866
3700.0	1.01462	0.96113	0.90868	0.80690	0.73394	0.78894	0.86942	0.93580	1.07629	0.91831
3800.0	0.86690	0.91942	0.70115	0.54983	0.60970	0.78001	0.72726	0.73838	0.71741	0.76702
3900.0	0.88534	0.93870	0.86368	0.51884	0.56291	0.87109	0.78117	0.54083	0.91078	1.08726
4000.0	1.09585									

Table VIII-87

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 16.57.42 ON 1/31/74. NORMALIZING FACTOR = 1.5993E 01									
2600.0	0.00006	0.00011	0.00007	0.00007	0.00010	0.00011	0.00006	0.00007	0.00006	0.00006
2700.0	0.00010	0.00009	0.00008	0.00008	0.00017	0.00008	0.00007	0.00008	0.00008	0.00009
2800.0	0.00009	0.00010	0.00011	0.00009	0.00009	0.00009	0.00009	0.00014	0.00010	0.00010
2900.0	0.00014	0.00024	0.00044	0.00093	0.00345	0.00550	0.00818	0.01262	0.02157	0.03283
3000.0	0.04170	0.06333	0.08373	0.14223	0.17275	0.22027	0.23378	0.30202	0.35539	0.34383
3100.0	0.39503	0.55385	0.55135	0.59658	0.63290	0.63962	0.60181	0.77708	0.72652	0.75313
3200.0	0.82542	0.83016	0.79050	0.73949	0.86050	0.92563	1.12979	1.13682	1.05436	1.16416
3300.0	1.22322	1.09402	1.09742	1.06274	1.04290	1.09808	0.96813	0.90511	0.99408	1.03904
3400.0	1.10629	1.02175	1.04578	1.05536	0.87387	0.94624	0.95644	0.95595	0.91747	0.89769
3500.0	1.00000	1.00227	0.92573	0.95679	1.06378	1.04013	0.93341	0.78849	0.69926	0.80751
3600.0	0.95444	0.81994	0.85471	0.90303	0.90588	0.93813	1.07379	1.03438	0.95406	0.99227
3700.0	1.01645	0.96694	0.90505	0.80864	0.72901	0.77652	0.85961	0.92640	1.05627	0.90187
3800.0	0.86246	0.91133	0.68595	0.54051	0.61990	0.76941	0.72063	0.73245	0.71068	0.77120
3900.0	0.87509	0.93870	0.83570	0.48285	0.55816	0.86834	0.73987	0.52478	0.91093	1.07779
4000.0	1.10497									
	ZENITH SCAN STARTING AT 0. 0.12 ON 1/31/74. NORMALIZING FACTOR = 1.5178E 01									
2600.0	0.00012	0.00013	0.00012	0.00011	0.00013	0.00013	0.00012	0.00013	0.00013	0.00015
2700.0	0.00013	0.00014	0.00015	0.00014	0.00014	0.00015	0.00015	0.00017	0.00016	0.00015
2800.0	0.00017	0.00017	0.00017	0.00017	0.00016	0.00016	0.00016	0.00017	0.00018	0.00028
2900.0	0.00028	0.00031	0.00053	0.00098	0.00190	0.00382	0.00780	0.01225	0.02077	0.03174
3000.0	0.04257	0.06467	0.08584	0.14935	0.18100	0.23129	0.24564	0.30806	0.37070	0.36000
3100.0	0.39823	0.57405	0.57415	0.61554	0.65275	0.66097	0.61243	0.78886	0.75783	0.77953
3200.0	0.86167	0.86600	0.81452	0.76341	0.87190	0.94488	1.13792	1.16874	1.08110	1.18387
3300.0	1.27366	1.12438	1.12617	1.09573	1.07118	1.12472	1.00157	0.92739	1.01561	1.06277
3400.0	1.13548	1.05814	1.07422	1.09460	0.90087	0.97404	0.99419	0.99824	0.95578	0.93457
3500.0	1.00000	1.02049	0.94424	0.98478	1.07818	1.06295	0.95539	0.80393	0.71323	0.82200
3600.0	0.97921	0.83071	0.85700	0.91101	0.91448	0.93648	1.09020	1.04753	0.97465	1.00830
3700.0	1.03647	0.96558	0.91511	0.81801	0.74008	0.79019	0.87354	0.93336	1.07336	0.92061
3800.0	0.87218	0.92663	0.70633	0.54938	0.61667	0.77024	0.72313	0.74232	0.72036	0.78300
3900.0	0.88447	0.94683	0.86605	0.52271	0.55584	0.86040	0.77047	0.50742	0.89614	1.09091
4000.0	1.12686									
	ZENITH SCAN STARTING AT 0. 0. 6 ON 1/31/74. NORMALIZING FACTOR = 1.4794E 01									
2600.0	0.00012	0.00012	0.00012	0.00013	0.00013	0.00013	0.00013	0.00013	0.00014	0.00019
2700.0	0.00016	0.00015	0.00015	0.00016	0.00016	0.00017	0.00017	0.00017	0.00017	0.00018
2800.0	0.00018	0.00014	0.00023	0.00019	0.00020	0.00020	0.00021	0.00021	0.00022	0.00024
2900.0	0.00027	0.00035	0.00058	0.00102	0.00194	0.00409	0.00770	0.01272	0.02079	0.03178
3000.0	0.04302	0.06462	0.08696	0.14685	0.17983	0.23046	0.24595	0.31017	0.37034	0.36256
3100.0	0.39688	0.56670	0.57109	0.61829	0.65452	0.66663	0.62227	0.79038	0.75548	0.78042
3200.0	0.86207	0.86960	0.82086	0.77096	0.88837	0.93176	1.12436	1.15674	1.07312	1.15394
3300.0	1.25643	1.11266	1.11394	1.08420	1.05770	1.10851	0.98578	0.91315	0.99854	1.04670
3400.0	1.11758	1.04227	1.05225	1.07667	0.87593	0.93453	0.96550	0.96871	0.92530	0.91092
3500.0	1.00000	1.01003	0.93847	0.94784	1.07203	1.04961	0.95198	0.79087	0.70136	0.79043
3600.0	0.97722	0.82708	0.86208	0.91605	0.91710	0.94022	1.07954	1.04525	0.96562	0.99437
3700.0	1.02967	0.97568	0.92321	0.83018	0.74378	0.77607	0.87743	0.93440	1.08663	0.94060
3800.0	0.87743	0.92204	0.70987	0.54416	0.61665	0.77099	0.72015	0.73869	0.71624	0.77011
3900.0	0.87707	0.92840	0.84975	0.50980	0.57029	0.85561	0.76009	0.50381	0.88736	1.07172
4000.0	1.10562									
	ZENITH SCAN STARTING AT 0. 1.33 ON 1/31/74. NORMALIZING FACTOR = 1.4811E 01									
2600.0	0.00007	0.00006	0.00021	0.00006	0.00006	0.00006	0.00006	0.00008	0.00007	0.00007
2700.0	0.00007	0.00008	0.00007	0.00007	0.00007	0.00008	0.00007	0.00009	0.00008	0.00009
2800.0	0.00012	0.00008	0.00009	0.00008	0.00008	0.00008	0.00008	0.00009	0.00009	0.00010
2900.0	0.00029	0.00024	0.00044	0.00093	0.00276	0.00621	0.00847	0.01269	0.02215	0.03580
3000.0	0.04585	0.06463	0.08346	0.14671	0.17785	0.22569	0.23952	0.30462	0.36342	0.34990
3100.0	0.39895	0.56840	0.56490	0.60892	0.64255	0.64785	0.60431	0.78709	0.74523	0.76860
3200.0	0.85853	0.86506	0.74941	0.74994	0.86435	0.93733	1.13754	1.14617	1.06263	1.17558
3300.0	1.24068	1.10369	1.10634	1.07313	1.05184	1.10488	0.97668	0.91085	0.99936	1.04585
3400.0	1.11495	1.03223	1.04970	1.06312	0.88666	0.95075	0.96143	0.95889	0.92080	0.89887
3500.0	1.00000	0.99785	0.92856	0.95047	1.05393	1.03413	0.93407	0.78128	0.69854	0.80219
3600.0	0.95799	0.81425	0.85868	0.89943	0.90421	0.93880	1.06555	1.02354	0.94297	0.98203
3700.0	1.01144	0.95072	0.88530	0.80124	0.72254	0.76000	0.84864	0.91395	1.04939	0.89540
3800.0	0.84955	0.88504	0.68038	0.52997	0.60956	0.75181	0.70589	0.72331	0.70161	0.77651
3900.0	0.86251	0.91939	0.83347	0.48186	0.56690	0.84920	0.73058	0.53833	0.89985	1.06328
4000.0	1.09396									
	ZENITH SCAN STARTING AT 0. 0.40 ON 1/31/74. NORMALIZING FACTOR = 1.4647E 01									
2600.0	0.00013	0.00012	0.00015	0.00012	0.00012	0.00013	0.00014	0.00012	0.00013	0.00013
2700.0	0.00013	0.00015	0.00015	0.00015	0.00020	0.00016	0.00017	0.00016	0.00020	0.00017
2800.0	0.00018	0.00019	0.00018	0.00020	0.00019	0.00020	0.00020	0.00020	0.00021	0.00023
2900.0	0.00028	0.00033	0.00056	0.00102	0.00198	0.00417	0.00804	0.01343	0.02221	0.03411
3000.0	0.04627	0.06946	0.09265	0.15793	0.19191	0.24879	0.26594	0.33206	0.39958	0.38659
3100.0	0.41293	0.59779	0.59450	0.64370	0.67994	0.68946	0.63508	0.80916	0.77641	0.79871
3200.0	0.88070	0.88703	0.83209	0.77885	0.89055	0.96017	1.15345	1.18899	1.10545	1.17900
3300.0	1.25144	1.11706	1.11948	1.09055	1.06627	1.11536	0.99010	0.92266	1.00178	1.05054
3400.0	1.12198	1.04761	1.05590	1.08246	0.88053	0.93749	0.96198	0.96425	0.92491	0.90923
3500.0	1.00000	1.00224	0.92896	0.93857	1.05332	1.02853	0.93048	0.77669	0.68489	0.77740
3600.0	0.94809	0.80507	0.84194	0.89412	0.89424	0.91836	1.05409	1.02114	0.94729	0.97621
3700.0	1.01347	0.94209	0.89058	0.79479	0.71620	0.76076	0.85226	0.91355	1.04774	0.90093
3800.0	0.85498	0.91239	0.69325	0.54310	0.60533	0.72787	0.70126	0.71695	0.69537	0.74515
3900.0	0.85233	0.91318	0.82140	0.51240	0.54113	0.83346	0.74755	0.49222	0.86939	1.04014
4000.0	1.07422									
	ZENITH SCAN STARTING AT 0. 0.41 ON 1/31/74. NORMALIZING FACTOR = 1.4165E 01									
2600.0	0.00013	0.00013	0.00013	0.00015	0.00015	0.00013	0.00014	0.00014	0.00014	0.00014
2700.0	0.00018	0.00017	0.00015	0.00016	0.00015	0.00016	0.00018	0.00017	0.00017	0.00017
2800.0	0.00017	0.00018	0.00019	0.00020	0.00018	0.00019	0.00022	0.00019	0.00020	0.00022
2900.0	0.00025	0.00033	0.00053	0.00099	0.00189	0.00377	0.00763	0.01235	0.02046	0.03212
3000.0	0.04231	0.06660	0.08770	0.14714	0.17485	0.22526	0.24074	0.30632	0.36594	0.35831
3100.0	0.39558	0.56083	0.56594	0.61186	0.64963	0.66010	0.61822	0.78492	0.74696	0.76821
3200.0	0.84876	0.85350	0.80189	0.74908	0.86904	0.93428	1.13296	1.15347	1.07554	1.15704
3300.0	1.24629	1.11376	1.11331	1.07956	1.05504	1.11326	0.98226	0.91030	0.99618	1.04480
3400.0	1.10661	1.03374	1.04783	1.07055	0.89295	0.93898	0.95918	0.96321	0.92455	0.90352
3500.0	1.00000	1.01425	0.93966	0.95310	1.06916	1.05894	0.96400	0.80270	0.71835	0.77598
3600.0	0.94106	0.81632	0.83710	0.89353	0.89711	0.92553	1.05771	1.02661	0.95505	0.97521
3700.0	1.00628	0.94728	0.90056	0.80794	0.72410	0.75785	0.85062	0.90252	1.04550	0.90700
3800.0	0.84448	0.90581	0.68871	0.53687	0.58744	0.74643	0.70396	0.72192	0.69706	0.75646
3900.0	0.85868	0.90171	0.84121	0.50826	0.54668	0.83088	0.74908	0.48910	0.85096	1.04886
4000.0	1.07824									

Table VIII-88

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 0. 0.39 ON 1/31/74, NORMALIZING FACTOR = 1.3767E 01									
2600.0	0.00009	0.00008	0.00006	0.00007	0.00008	0.00009	0.00008	0.00007	0.00007	0.00008
2700.0	0.00007	0.00007	0.00010	0.00010	0.00009	0.00009	0.00012	0.00008	0.00009	0.00010
2800.0	0.00012	0.00009	0.00008	0.00009	0.00010	0.00012	0.00010	0.00010	0.00010	0.00011
2900.0	0.00017	0.00023	0.00043	0.00090	0.00198	0.00653	0.00796	0.01350	0.02169	0.03317
3000.0	0.04466	0.06402	0.08620	0.14499	0.17737	0.22816	0.24296	0.31117	0.36596	0.35314
3100.0	0.39134	0.56133	0.56317	0.60978	0.64383	0.65156	0.60986	0.77851	0.74199	0.77002
3200.0	0.85151	0.84961	0.80182	0.75778	0.86935	0.94374	1.13060	1.15073	1.06783	1.16253
3300.0	1.24845	1.10692	1.10874	1.07528	1.05784	1.10170	0.97011	0.91359	0.99439	1.03955
3400.0	1.10221	1.03045	1.04346	1.05945	0.86270	0.92641	0.94924	0.95100	0.91506	0.89851
3500.0	1.00000	0.98690	0.91933	0.94295	1.04765	1.02814	0.92500	0.77111	0.68170	0.78958
3600.0	0.94022	0.80248	0.84133	0.87638	0.86097	0.91014	1.03797	0.99760	0.92205	0.95319
3700.0	0.96532	0.91657	0.86479	0.76959	0.69567	0.75274	0.82142	0.88526	1.00902	0.85862
3800.0	0.82579	0.86203	0.65062	0.51180	0.58528	0.72939	0.68222	0.69645	0.67385	0.73341
3900.0	0.82670	0.88551	0.78987	0.46105	0.52755	0.80502	0.70668	0.48574	0.85465	1.00043
4000.0	1.03065									
	ZENITH SCAN STARTING AT 24. 1.28 ON 1/31/74, NORMALIZING FACTOR = 1.3636E 01									
2600.0	0.00016	0.00012	0.00013	0.00012	0.00012	0.00013	0.00013	0.00013	0.00014	0.00014
2700.0	0.00013	0.00014	0.00016	0.00015	0.00015	0.00017	0.00015	0.00015	0.00017	0.00016
2800.0	0.00017	0.00016	0.00016	0.00020	0.00023	0.00019	0.00019	0.00021	0.00022	0.00023
2900.0	0.00024	0.00032	0.00052	0.00095	0.00183	0.00382	0.00736	0.01224	0.02000	0.03106
3000.0	0.04192	0.06386	0.08486	0.14617	0.17823	0.22632	0.24193	0.30682	0.36727	0.35766
3100.0	0.39842	0.56833	0.57006	0.61383	0.65326	0.66197	0.61950	0.79557	0.75694	0.77636
3200.0	0.86211	0.86145	0.81281	0.75704	0.87314	0.94541	1.15335	1.16908	1.08830	1.18495
3300.0	1.26946	1.13049	1.13367	1.10197	1.07562	1.14068	1.01425	0.93919	1.02943	1.05300
3400.0	1.12101	1.04137	1.05749	1.07673	0.89358	0.95250	0.97100	0.97051	0.92924	0.90845
3500.0	1.00000	1.01576	0.94075	0.95404	1.07231	1.05867	0.95443	0.80147	0.71225	0.80038
3600.0	0.97494	0.82812	0.85300	0.91130	0.91147	0.92982	1.08012	1.04893	0.97495	0.99457
3700.0	1.03399	0.97622	0.92461	0.82912	0.74248	0.77360	0.87290	0.93275	1.07702	0.92957
3800.0	0.86504	0.92001	0.70119	0.55322	0.60953	0.77482	0.72861	0.74625	0.72386	0.77756
3900.0	0.89065	0.94600	0.87525	0.54844	0.62920	0.81788	0.76282	0.50500	0.89650	1.06569
4000.0	1.10124									
	ZENITH SCAN STARTING AT 0. 0.37 ON 1/31/74, NORMALIZING FACTOR = 1.3590E 01									
2600.0	0.00014	0.00014	0.00021	0.00014	0.00014	0.00016	0.00016	0.00016	0.00018	0.00017
2700.0	0.00016	0.00015	0.00016	0.00017	0.00017	0.00018	0.00020	0.00020	0.00018	0.00019
2800.0	0.00021	0.00020	0.00020	0.00020	0.00020	0.00021	0.00021	0.00023	0.00023	0.00024
2900.0	0.00026	0.00035	0.00057	0.00096	0.00183	0.00388	0.00733	0.01192	0.01989	0.03037
3000.0	0.04193	0.06242	0.08510	0.14585	0.17909	0.23112	0.24682	0.30768	0.37364	0.36522
3100.0	0.39286	0.57661	0.58278	0.62303	0.64679	0.66003	0.60870	0.78269	0.75990	0.77629
3200.0	0.85586	0.86448	0.81208	0.76102	0.86707	0.94144	1.13152	1.16457	1.07642	1.16448
3300.0	1.26649	1.11856	1.12005	1.09318	1.06335	1.11534	0.99356	0.91863	1.00274	1.05021
3400.0	1.12224	1.05239	1.05694	1.08254	0.88382	0.93731	0.96924	0.96957	0.92722	0.90966
3500.0	1.00000	1.01165	0.93779	0.95117	1.07440	1.05437	0.94972	0.79662	0.70492	0.81334
3600.0	0.97770	0.83280	0.86120	0.92269	0.94223	1.09799	1.05960	0.97290	0.98583	
3700.0	1.01795	0.95764	0.91091	0.81594	0.72434	0.76349	0.86016	0.91518	1.05665	0.91666
3800.0	0.85510	0.91303	0.69479	0.54550	0.60834	0.75913	0.70891	0.72566	0.70425	0.75359
3900.0	0.86143	0.91628	0.83407	0.51687	0.54801	0.84185	0.74407	0.50729	0.86888	1.05084
4000.0	1.08136									
	ZENITH SCAN STARTING AT 0. 1.20 ON 1/31/74, NORMALIZING FACTOR = 1.3484E 01									
2600.0	0.00013	0.00013	0.00014	0.00016	0.00014	0.00014	0.00015	0.00014	0.00015	0.00016
2700.0	0.00017	0.00015	0.00016	0.00016	0.00016	0.00018	0.00018	0.00018	0.00018	0.00020
2800.0	0.00019	0.00019	0.00019	0.00018	0.00019	0.00019	0.00019	0.00020	0.00027	0.00025
2900.0	0.00027	0.00037	0.00054	0.00095	0.00182	0.00384	0.00732	0.01208	0.01987	0.03050
3000.0	0.04185	0.06323	0.08567	0.14246	0.17618	0.22720	0.24236	0.30663	0.36651	0.35957
3100.0	0.39348	0.55963	0.56660	0.61188	0.64922	0.66238	0.61960	0.78143	0.74897	0.77097
3200.0	0.85025	0.85818	0.80581	0.75541	0.87464	0.94407	1.13806	1.16195	1.08611	1.16675
3300.0	1.26000	1.12536	1.12341	1.09064	1.06396	1.12553	0.99377	0.92483	1.00912	1.06086
3400.0	1.12979	1.06247	1.07567	1.08666	0.87706	0.94113	0.95833	0.96266	0.92190	0.90318
3500.0	1.00000	1.00845	0.93462	0.94953	1.06369	1.05058	0.95091	0.79090	0.70818	0.78397
3600.0	0.96898	0.82360	0.85777	0.90640	0.90576	0.93335	1.07323	1.03530	0.95960	0.98673
3700.0	1.02219	0.95650	0.91566	0.81788	0.72977	0.75894	0.86173	0.91231	1.05147	0.90792
3800.0	0.85441	0.91593	0.70315	0.54053	0.59419	0.76612	0.71616	0.73096	0.70927	0.76233
3900.0	0.86977	0.92993	0.85326	0.51308	0.53713	0.83645	0.76694	0.51082	0.86551	1.02498
4000.0	1.07655									
	ZENITH SCAN STARTING AT 17.19.12 ON 1/31/74, NORMALIZING FACTOR = 1.3315E 01									
2600.0	0.00014	0.00021	0.00015	0.00021	0.00016	0.00018	0.00017	0.00015	0.00016	0.00016
2700.0	0.00016	0.00018	0.00017	0.00025	0.00018	0.00021	0.00018	0.00019	0.00021	0.00019
2800.0	0.00021	0.00021	0.00021	0.00021	0.00021	0.00022	0.00022	0.00024	0.00022	0.00025
2900.0	0.00028	0.00035	0.00057	0.00102	0.00189	0.00372	0.00747	0.01198	0.02026	0.03073
3000.0	0.04162	0.06447	0.08486	0.14721	0.17979	0.23052	0.24581	0.30724	0.37319	0.36217
3100.0	0.39384	0.57965	0.58028	0.62167	0.66215	0.67087	0.62245	0.80803	0.76207	0.77012
3200.0	0.86007	0.85777	0.81040	0.75443	0.86622	0.93671	1.13442	1.16596	1.07773	1.17546
3300.0	1.26252	1.11816	1.11810	1.09650	1.05850	1.11839	0.99694	0.91447	1.00316	1.05134
3400.0	1.12221	1.04311	1.05379	1.09004	0.88099	0.94278	0.96545	0.96746	0.92607	0.90637
3500.0	1.00000	1.01176	0.93669	0.94992	1.07076	1.05306	0.95127	0.79653	0.70264	0.80509
3600.0	0.96499	0.82707	0.85464	0.91763	0.91304	0.93404	1.08906	1.04805	0.96928	0.99735
3700.0	1.04039	0.97567	0.91959	0.81814	0.73276	0.77891	0.86089	0.91162	1.05992	0.91156
3800.0	0.85756	0.91430	0.69270	0.53848	0.60373	0.75571	0.70998	0.72927	0.70651	0.76651
3900.0	0.86618	0.91796	0.84570	0.49447	0.55465	0.84510	0.76518	0.52217	0.89564	1.05663
4000.0	1.08552									
	ZENITH SCAN STARTING AT 17.21.33 ON 1/31/74, NORMALIZING FACTOR = 1.3153E 01									
2600.0	0.00022	0.00016	0.00016	0.00017	0.00014	0.00015	0.00015	0.00015	0.00016	0.00016
2700.0	0.00015	0.00017	0.00017	0.00017	0.00016	0.00017	0.00018	0.00019	0.00018	0.00019
2800.0	0.00019	0.00019	0.00018	0.00019	0.00019	0.00025	0.00020	0.00021	0.00022	0.00022
2900.0	0.00027	0.00035	0.00054	0.00099	0.00185	0.00392	0.00738	0.01211	0.02021	0.03076
3000.0	0.04223	0.06271	0.08502	0.14633	0.17913	0.23121	0.24599	0.30714	0.37085	0.36213
3100.0	0.39011	0.56949	0.57147	0.61957	0.65312	0.66446	0.61177	0.77925	0.75877	0.77745
3200.0	0.85988	0.86808	0.81350	0.76583	0.87187	0.94582	1.13558	1.16758	1.08213	1.16587
3300.0	1.27227	1.12946	1.12497	1.09648	1.06878	1.11976	0.99413	0.92450	1.00532	1.05495
3400.0	1.12300	1.05517	1.06523	1.09057	0.90184	0.95200	0.98056	0.98440	0.92302	0.89995
3500.0	1.00000	1.01349	0.93774	0.95014	1.06493	1.05217	0.95276	0.79097	0.70910	0.78402
3600.0	0.96894	0.82177	0.85659	0.90958	0.91020	0.93630	1.07267	1.03863	0.95932	0.98607
3700.0	1.03074	0.95841	0.91023	0.81624	0.73356	0.76451	0.86354	0.91528	1.05933	0.91170
3800.0	0.85717	0.92513	0.70683	0.54553	0.61416	0.77385	0.71896	0.73408	0.71335	0.75811
3900.0	0.87033	0.92470	0.84084	0.52067	0.54827	0.84679	0.77860	0.51979	0.87483	1.06694
4000.0	1.10825									

Table VIII-89

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 17.23.22 ON 1/31/74, NORMALIZING FACTOR = 1.2891E 01										
2600.0	0.00014	0.00015	0.00015	0.00019	0.00016	0.00015	0.00017	0.00019	0.00022	0.00017
2700.0	0.00017	0.00017	0.00018	0.00018	0.00019	0.00019	0.00019	0.00019	0.00019	0.00021
2800.0	0.00021	0.00021	0.00021	0.00021	0.00022	0.00022	0.00030	0.00024	0.00024	0.00024
2900.0	0.00031	0.00037	0.00057	0.00100	0.00194	0.00397	0.00769	0.01246	0.02040	0.03184
3000.0	0.04312	0.06458	0.08612	0.14751	0.18120	0.22974	0.24580	0.31336	0.37235	0.36423
3100.0	0.40185	0.57440	0.57688	0.62298	0.66254	0.67231	0.63073	0.80316	0.76473	0.78720
3200.0	0.87412	0.87939	0.82694	0.75869	0.87314	0.94651	1.15016	1.16420	1.08403	1.17513
3300.0	1.25465	1.12110	1.12380	1.09191	1.05974	1.12176	0.99711	0.91894	1.00615	1.05251
3400.0	1.12235	1.04241	1.05768	1.07470	0.89438	0.95015	0.97041	0.96849	0.92886	0.90744
3500.0	1.00000	1.01627	0.94111	0.95943	1.07213	1.05690	0.95650	0.80077	0.70966	0.80989
3600.0	0.97137	0.83184	0.85351	0.91326	0.91343	0.93237	1.08745	1.05133	0.97734	1.00414
3700.0	1.03884	0.97083	0.93041	0.83187	0.74560	0.78712	0.88576	0.93711	1.03069	0.90941
3800.0	0.86051	0.91654	0.70763	0.54191	0.60554	0.77166	0.72237	0.73271	0.71516	0.76501
3900.0	0.87361	0.92555	0.84148	0.52193	0.54528	0.84630	0.76186	0.51207	0.89678	1.06711
4000.0	1.10213									
ZENITH SCAN STARTING AT 17.25. 7 ON 1/31/74, NORMALIZING FACTOR = 1.3005E 01										
2600.0	0.00016	0.00014	0.00019	0.00015	0.00017	0.00021	0.00025	0.00015	0.00016	0.00016
2700.0	0.00017	0.00020	0.00017	0.00018	0.00018	0.00018	0.00020	0.00031	0.00023	0.00022
2800.0	0.00019	0.00022	0.00023	0.00020	0.00023	0.00021	0.00021	0.00022	0.00027	0.00023
2900.0	0.00027	0.00034	0.00059	0.00099	0.00178	0.00379	0.00722	0.01177	0.01888	0.03045
3000.0	0.04043	0.06222	0.08090	0.14209	0.17415	0.22290	0.23820	0.29735	0.36147	0.35131
3100.0	0.38077	0.56034	0.56103	0.59923	0.63832	0.64563	0.59634	0.77260	0.74688	0.75915
3200.0	0.84099	0.84525	0.79604	0.74083	0.84600	0.91683	1.11064	1.14193	1.05404	1.14375
3300.0	1.24332	1.09565	1.09525	1.06862	1.04022	1.09311	0.97523	0.90051	0.98337	1.03234
3400.0	1.10096	1.03161	1.03678	1.06579	0.87187	0.92334	0.95416	0.96180	0.92097	0.90504
3500.0	1.00000	1.01142	0.94135	0.93743	1.04145	1.02887	0.93074	0.77422	0.69499	0.77297
3600.0	0.94940	0.80441	0.83702	0.89071	0.89148	0.90827	1.05666	1.02125	0.94530	0.97220
3700.0	1.01711	0.94405	0.88610	0.79904	0.72207	0.76862	0.84944	0.90320	1.04318	0.90211
3800.0	0.84532	0.91153	0.70028	0.53698	0.60002	0.75580	0.70476	0.72358	0.69681	0.75765
3900.0	0.85868	0.90657	0.83930	0.50487	0.54140	0.83124	0.75492	0.49869	0.87187	1.04919
4000.0	1.08599									
ZENITH SCAN STARTING AT 17.29.14 ON 1/31/74, NORMALIZING FACTOR = 1.2513E 01										
2600.0	0.00017	0.00015	0.00015	0.00016	0.00015	0.00017	0.00017	0.00019	0.00017	0.00023
2700.0	0.00018	0.00014	0.00021	0.00020	0.00037	0.00020	0.00021	0.00019	0.00019	0.00019
2800.0	0.00020	0.00020	0.00020	0.00020	0.00023	0.00023	0.00021	0.00022	0.00022	0.00025
2900.0	0.00027	0.00035	0.00053	0.00101	0.00189	0.00370	0.00757	0.01185	0.02024	0.03119
3000.0	0.04170	0.06456	0.08169	0.14319	0.17870	0.22623	0.24226	0.30543	0.36672	0.35785
3100.0	0.39118	0.56728	0.56851	0.60992	0.64973	0.65668	0.61511	0.78880	0.75257	0.77687
3200.0	0.85338	0.85731	0.80836	0.75175	0.86488	0.93191	1.13434	1.16025	1.07554	1.16562
3300.0	1.25454	1.11303	1.11393	1.08375	1.05401	1.11219	0.99691	0.91346	0.99804	1.05032
3400.0	1.12127	1.04369	1.05245	1.07682	0.89117	0.94771	0.96752	0.97397	0.92959	0.90846
3500.0	1.00000	1.01702	0.94056	0.95500	1.08054	1.06536	0.96491	0.79522	0.68603	0.80021
3600.0	0.95870	0.81828	0.84467	0.90214	0.90224	0.91661	1.06937	1.03086	0.95776	0.98552
3700.0	1.01575	0.94953	0.90340	0.80994	0.72807	0.76061	0.85876	0.91852	1.05624	0.91141
3800.0	0.85752	0.91398	0.70779	0.54478	0.60388	0.75919	0.71241	0.73111	0.70749	0.76177
3900.0	0.86604	0.91481	0.84714	0.49564	0.54238	0.85529	0.75630	0.49911	0.87983	1.05218
4000.0	1.09130									
ZENITH SCAN STARTING AT 17.33.21 ON 1/31/74, NORMALIZING FACTOR = 1.2424E 01										
2600.0	0.00015	0.00015	0.00017	0.00015	0.00016	0.00020	0.00022	0.00016	0.00017	0.00020
2700.0	0.00017	0.00018	0.00017	0.00019	0.00021	0.00021	0.00024	0.00026	0.00020	0.00019
2800.0	0.00019	0.00021	0.00027	0.00021	0.00021	0.00021	0.00022	0.00022	0.00023	0.00024
2900.0	0.00028	0.00037	0.00055	0.00096	0.00184	0.00358	0.00729	0.01156	0.01935	0.03017
3000.0	0.04030	0.06223	0.08298	0.14167	0.17428	0.22204	0.23800	0.29173	0.36046	0.35598
3100.0	0.39260	0.55728	0.56202	0.60616	0.64690	0.65688	0.61377	0.77701	0.74466	0.76379
3200.0	0.84401	0.85169	0.80093	0.74718	0.86845	0.93456	1.13209	1.15313	1.07594	1.15942
3300.0	1.24543	1.11048	1.11139	1.08131	1.04917	1.10891	0.98808	0.91175	0.99695	1.04173
3400.0	1.11091	1.03563	1.05147	1.08868	0.88707	0.94632	0.96522	0.96347	0.92234	0.90355
3500.0	1.00000	1.01105	0.93891	0.95107	1.06781	1.05540	0.95821	0.80255	0.71538	0.79945
3600.0	0.97739	0.83865	0.84618	0.89564	0.90308	0.92809	1.06937	1.03395	0.96486	0.98450
3700.0	1.01690	0.95463	0.91199	0.81474	0.73092	0.76002	0.85699	0.91136	1.05759	0.90421
3800.0	0.85345	0.91290	0.69647	0.53980	0.59695	0.76543	0.71242	0.72935	0.70655	0.75264
3900.0	0.86267	0.92078	0.84745	0.50002	0.55547	0.84856	0.74406	0.49889	0.86909	1.05480
4000.0	1.09045									
ZENITH SCAN STARTING AT 17.37.30 ON 1/31/74, NORMALIZING FACTOR = 1.2707E 01										
2600.0	0.00008	0.00009	0.00008	0.00010	0.00008	0.00009	0.00010	0.00010	0.00008	0.00011
2700.0	0.00010	0.00009	0.00010	0.00009	0.00009	0.00010	0.00010	0.00008	0.00009	0.00009
2800.0	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011	0.00010	0.00011	0.00010	0.00013
2900.0	0.00016	0.00036	0.00057	0.00085	0.00195	0.00596	0.00777	0.01269	0.02077	0.03125
3000.0	0.04281	0.06163	0.08315	0.13914	0.17024	0.21711	0.23153	0.29925	0.35263	0.34333
3100.0	0.38952	0.54440	0.54365	0.59673	0.63093	0.63838	0.59737	0.76566	0.73280	0.76060
3200.0	0.83772	0.83775	0.79010	0.74756	0.85935	0.93262	1.11785	1.13725	1.05429	1.15807
3300.0	1.23724	1.09796	1.09923	1.08845	1.04962	1.09421	0.96701	0.90642	0.99028	1.03621
3400.0	1.10420	1.02923	1.04391	1.05988	0.86039	0.93148	0.94849	0.95219	0.91787	0.89372
3500.0	1.00000	0.99839	0.92684	0.95037	1.05713	1.03507	0.93325	0.77719	0.69357	0.79536
3600.0	0.94893	0.81393	0.84760	0.89799	0.90040	0.93318	1.06145	1.00968	0.94191	0.97445
3700.0	0.99930	0.94230	0.88295	0.78585	0.71525	0.76728	0.84327	0.91779	1.03994	0.87753
3800.0	0.84421	0.89010	0.66606	0.52585	0.61052	0.74995	0.70382	0.71721	0.69435	0.75482
3900.0	0.85203	0.90560	0.80323	0.48766	0.57750	0.84435	0.71622	0.53143	0.88438	1.04270
4000.0	1.07162									
ZENITH SCAN STARTING AT 17.39.16 ON 1/31/74, NORMALIZING FACTOR = 1.2281E 01										
2600.0	0.00013	0.00013	0.00017	0.00014	0.00014	0.00017	0.00014	0.00016	0.00015	0.00016
2700.0	0.00017	0.00015	0.00015	0.00017	0.00017	0.00018	0.00021	0.00017	0.00018	0.00020
2800.0	0.00017	0.00018	0.00018	0.00021	0.00026	0.00020	0.00022	0.00026	0.00023	0.00024
2900.0	0.00027	0.00036	0.00052	0.00093	0.00181	0.00364	0.00728	0.01156	0.01945	0.03036
3000.0	0.04096	0.06240	0.08306	0.14242	0.17549	0.22277	0.23939	0.30168	0.36287	0.35589
3100.0	0.39089	0.56121	0.56548	0.60902	0.64952	0.66048	0.61920	0.78561	0.75068	0.77143
3200.0	0.85324	0.85955	0.80949	0.75426	0.87393	0.93873	1.14607	1.16983	1.08988	1.17544
3300.0	1.26364	1.12589	1.12863	1.10178	1.07004	1.13284	1.01637	0.93092	1.02083	1.07111
3400.0	1.14775	1.06695	1.04468	1.07931	0.89081	0.95071	0.97140	0.97176	0.92842	0.90942
3500.0	1.00000	1.01722	0.94035	0.95013	1.07190	1.05884	0.95543	0.80075	0.70862	0.80708
3600.0	0.97219	0.83100	0.85554	0.92057	0.91632	0.93143	1.08277	1.04825	0.97364	0.99343
3700.0	1.03647	0.96690	0.92334	0.82943	0.73996	0.78508	0.87450	0.93707	1.07219	0.91905
3800.0	0.86635	0.93070	0.72151	0.55897	0.61497	0.77714	0.72992	0.74587	0.72345	0.76882
3900.0	0.88859	0.94006	0.87073	0.51931	0.55424	0.86175	0.79197	0.66514	0.87838	1.06782
4000.0	1.10454									

Table VIII-90

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 17.41.37 ON 1/31/74. NORMALIZING FACTOR = 1.2383E 01										
2600.0	0.00016	0.00021	0.00016	0.00015	0.00017	0.00018	0.00016	0.00016	0.00018	0.00020
2700.0	0.00018	0.00018	0.00018	0.00018	0.00018	0.00018	0.00019	0.00019	0.00022	0.00020
2800.0	0.00021	0.00021	0.00021	0.00021	0.00023	0.00023	0.00027	0.00023	0.00023	0.00028
2900.0	0.00029	0.00035	0.00055	0.00096	0.00175	0.00368	0.00704	0.01154	0.01925	0.02950
3000.0	0.04060	0.06074	0.08257	0.14249	0.17449	0.22594	0.24076	0.29986	0.36347	0.35630
3100.0	0.38582	0.56305	0.56661	0.61394	0.65183	0.66675	0.61286	0.75798	0.74548	0.76414
3200.0	0.84294	0.85301	0.80141	0.75107	0.85823	0.92889	1.11614	1.14942	1.06236	1.15188
3300.0	1.25382	1.11175	1.10742	1.07696	1.03916	1.10244	0.97824	0.91082	0.99039	1.03882
3400.0	1.10397	1.03589	1.04298	1.06985	0.88060	0.92729	0.95314	0.96004	0.91975	0.90141
3500.0	1.00000	1.00480	0.93308	0.94412	1.05966	1.04986	0.94572	0.78548	0.70414	0.78370
3600.0	0.96615	0.81791	0.85349	0.91124	0.91091	0.93040	1.07460	1.04293	0.96238	0.99262
3700.0	1.04255	0.96302	0.89616	0.81242	0.72620	0.76181	0.85602	0.90888	1.04786	0.91143
3800.0	0.84585	0.91436	0.68429	0.54147	0.59360	0.75734	0.71313	0.72431	0.70085	0.74174
3900.0	0.85824	0.90988	0.83240	0.51011	0.54009	0.82926	0.75604	0.50343	0.85728	1.04541
4000.0	1.08089									
ZENITH SCAN STARTING AT 17.45. 8 ON 1/31/74. NORMALIZING FACTOR = 1.2126E 01										
2600.0	0.00009	0.00011	0.00009	0.00009	0.00009	0.00010	0.00017	0.00010	0.00014	0.00010
2700.0	0.00008	0.00010	0.00010	0.00010	0.00009	0.00009	0.00008	0.00009	0.00010	0.00009
2800.0	0.00014	0.00009	0.00011	0.00016	0.00012	0.00011	0.00010	0.00012	0.00013	0.00012
2900.0	0.00015	0.00025	0.00044	0.00086	0.00207	0.01025	0.00781	0.01234	0.02017	0.03105
3000.0	0.04217	0.06148	0.08160	0.14360	0.17296	0.22048	0.23508	0.29975	0.35738	0.34618
3100.0	0.38683	0.56058	0.55982	0.60348	0.64024	0.64559	0.60565	0.78961	0.74570	0.76602
3200.0	0.85340	0.84464	0.79443	0.74787	0.87042	0.93333	1.13616	1.14993	1.06767	1.17683
3300.0	1.24334	1.10809	1.11184	1.07708	1.05504	1.11053	0.98000	0.91334	1.00309	1.04662
3400.0	1.11340	1.03120	1.04936	1.06614	0.87521	0.94925	0.96269	0.96377	0.92312	0.89971
3500.0	1.00000	1.00292	0.92755	0.95651	1.06507	1.03946	0.93645	0.78553	0.68986	0.80804
3600.0	0.96126	0.81643	0.85220	0.90286	0.90471	0.93069	1.07299	1.02734	0.95094	0.98557
3700.0	1.01519	0.95544	0.89432	0.79721	0.72781	0.76098	0.86217	0.91796	1.05478	0.89389
3800.0	0.85577	0.89374	0.68307	0.53883	0.60848	0.76118	0.71067	0.72491	0.70513	0.76508
3900.0	0.86431	0.92259	0.82935	0.49008	0.55991	0.86414	0.74882	0.50699	0.89982	1.05832
4000.0	1.09271									
ZENITH SCAN STARTING AT 17.47.29 ON 1/31/74. NORMALIZING FACTOR = 1.2026E 01										
2600.0	0.00014	0.00015	0.00016	0.00014	0.00015	0.00014	0.00014	0.00015	0.00014	0.00015
2700.0	0.00015	0.00016	0.00015	0.00018	0.00015	0.00015	0.00016	0.00018	0.00017	0.00018
2800.0	0.00017	0.00019	0.00018	0.00017	0.00019	0.00018	0.00020	0.00019	0.00024	0.00022
2900.0	0.00025	0.00034	0.00049	0.00087	0.00172	0.00347	0.00663	0.01078	0.01853	0.02832
3000.0	0.03903	0.05967	0.08039	0.13690	0.16967	0.21937	0.23515	0.29405	0.35652	0.34964
3100.0	0.37683	0.54392	0.55265	0.59695	0.63374	0.64714	0.59691	0.76074	0.73883	0.75915
3200.0	0.83353	0.84685	0.79521	0.74692	0.85420	0.92579	1.11216	1.14271	1.06178	1.13575
3300.0	1.24064	1.10360	1.09965	1.06888	1.04430	1.10350	0.97322	0.90506	0.98871	1.03598
3400.0	1.09661	1.02810	1.04345	1.06501	0.88543	0.93271	0.95952	0.96321	0.92318	0.90638
3500.0	1.00000	0.99964	0.91709	0.93126	1.04580	1.03186	0.93510	0.78477	0.69643	0.78733
3600.0	0.94402	0.81333	0.83149	0.89156	0.89103	0.91077	1.05620	1.02375	0.94558	0.97359
3700.0	1.00599	0.94157	0.90071	0.81167	0.72573	0.75732	0.85259	0.91078	1.04773	0.90722
3800.0	0.84322	0.89636	0.69039	0.53835	0.58769	0.75232	0.70951	0.72678	0.71072	0.76939
3900.0	0.86721	0.92451	0.84598	0.49924	0.54498	0.85567	0.75270	0.51980	0.88914	1.06059
4000.0	1.09696									
ZENITH SCAN STARTING AT 17.49.18 ON 1/31/74. NORMALIZING FACTOR = 1.1640E 01										
2600.0	0.00016	0.00018	0.00015	0.00016	0.00015	0.00022	0.00017	0.00016	0.00016	0.00016
2700.0	0.00018	0.00028	0.00021	0.00020	0.00019	0.00022	0.00020	0.00019	0.00020	0.00021
2800.0	0.00022	0.00025	0.00021	0.00026	0.00024	0.00022	0.00026	0.00025	0.00024	0.00026
2900.0	0.00029	0.00038	0.00055	0.00094	0.00175	0.00358	0.00699	0.01151	0.01908	0.02958
3000.0	0.04036	0.06110	0.08469	0.14322	0.17574	0.22313	0.23959	0.30284	0.36427	0.35705
3100.0	0.39461	0.56565	0.56893	0.61361	0.65505	0.66465	0.62122	0.79696	0.75966	0.78203
3200.0	0.86344	0.87182	0.82416	0.76886	0.89293	0.96055	1.14495	1.15812	1.07862	1.16975
3300.0	1.25733	1.11827	1.11847	1.09053	1.05909	1.11801	1.00091	0.91654	1.00303	1.05161
3400.0	1.12280	1.04698	1.05511	1.08085	0.88980	0.94450	0.96752	0.97066	0.92786	0.91390
3500.0	1.00000	1.01101	0.93644	0.94541	1.07054	1.05360	0.95717	0.80133	0.71020	0.80618
3600.0	0.96998	0.83070	0.85547	0.91903	0.91733	0.93002	1.08576	1.04936	0.97714	1.00012
3700.0	1.03609	0.96644	0.92723	0.83050	0.74224	0.79085	0.88201	0.94093	1.08547	0.94120
3800.0	0.87602	0.88998	0.71530	0.54674	0.60858	0.76751	0.72184	0.73807	0.71860	0.76389
3900.0	0.87822	0.92674	0.86228	0.51688	0.55691	0.86199	0.76058	0.50766	0.89955	1.07032
4000.0	1.10993									
ZENITH SCAN STARTING AT 17.51. 3 ON 1/31/74. NORMALIZING FACTOR = 1.1763E 01										
2600.0	0.00015	0.00014	0.00015	0.00017	0.00016	0.00015	0.00016	0.00017	0.00016	0.00019
2700.0	0.00017	0.00025	0.00017	0.00018	0.00018	0.00018	0.00018	0.00018	0.00018	0.00019
2800.0	0.00020	0.00020	0.00020	0.00020	0.00020	0.00021	0.00020	0.00025	0.00023	0.00026
2900.0	0.00035	0.00034	0.00053	0.00090	0.00171	0.00360	0.00679	0.01120	0.01872	0.02875
3000.0	0.03919	0.05732	0.07711	0.13454	0.17077	0.21917	0.23444	0.29309	0.35585	0.34734
3100.0	0.37313	0.55235	0.55574	0.59582	0.63398	0.64108	0.59412	0.77117	0.74194	0.75704
3200.0	0.84017	0.84663	0.79335	0.74363	0.84970	0.92186	1.10687	1.14147	1.05646	1.13869
3300.0	1.24184	1.09822	1.09874	1.06996	1.04097	1.09339	0.97453	0.90353	0.98626	1.03318
3400.0	1.10343	1.03191	1.03784	1.06560	0.86940	0.92290	0.95215	0.95878	0.92055	0.89834
3500.0	1.00000	1.00985	0.93616	0.95145	1.06796	1.05720	0.91390	0.77647	0.69679	0.77876
3600.0	0.95966	0.81413	0.84050	0.90050	0.89926	0.92087	1.05747	1.02305	0.94479	0.97377
3700.0	1.01203	0.95238	0.89928	0.80421	0.72695	0.75366	0.84999	0.90897	1.05630	0.90294
3800.0	0.85048	0.90960	0.68994	0.54245	0.59114	0.75947	0.71125	0.72855	0.70431	0.76946
3900.0	0.86747	0.92032	0.83476	0.50377	0.56145	0.85122	0.76997	0.51913	0.88269	1.06420
4000.0	1.10044									
ZENITH SCAN STARTING AT 17.53.25 ON 1/31/74. NORMALIZING FACTOR = 1.1543E 01										
2600.0	0.00022	0.00008	0.00008	0.00008	0.00009	0.00009	0.00008	0.00008	0.00009	0.00010
2700.0	0.00009	0.00010	0.00009	0.00009	0.00010	0.00015	0.00014	0.00009	0.00009	0.00015
2800.0	0.00011	0.00013	0.00010	0.00011	0.00010	0.00019	0.00012	0.00012	0.00013	0.00015
2900.0	0.00018	0.00024	0.00043	0.00084	0.00199	0.00780	0.00736	0.01260	0.02000	0.03173
3000.0	0.04245	0.06244	0.08242	0.13906	0.17091	0.21979	0.23287	0.30094	0.35538	0.34695
3100.0	0.39113	0.55157	0.55528	0.60228	0.63971	0.65047	0.61498	0.78160	0.73801	0.76508
3200.0	0.84943	0.84432	0.79699	0.74920	0.87220	0.94710	1.13825	1.15082	1.07200	1.16606
3300.0	1.23351	1.09905	1.11071	1.07533	1.05615	1.11273	0.97785	0.91347	1.00087	1.04512
3400.0	1.10996	1.03176	1.05346	1.06585	0.88385	0.94525	0.96016	0.96094	0.92171	0.90276
3500.0	1.00000	1.00572	0.92571	0.95078	1.06329	1.04255	0.93979	0.79211	0.70115	0.81472
3600.0	0.95144	0.81866	0.84902	0.89930	0.90164	0.92746	1.07056	1.03135	0.95908	0.99065
3700.0	1.00846	0.95373	0.90631	0.80824	0.73084	0.76659	0.85955	0.92225	1.05393	0.88819
3800.0	0.85731	0.90330	0.68636	0.53654	0.60046	0.76417	0.73065	0.72629	0.70422	0.75957
3900.0	0.86601	0.92025	0.83041	0.49142	0.56468	0.84826	0.74619	0.51332	0.88766	1.06223
4000.0	1.09594									

Table VIII-91

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
				ZENITH SCAN STARTING AT 17.55.10 ON 1/31/74. NORMALIZING FACTOR = 1.1383E 01						
2600.0	0.00015	0.00014	0.00014	0.00016	0.00015	0.00015	0.00015	0.00015	0.00016	0.00016
2700.0	0.00015	0.00016	0.00017	0.00015	0.00016	0.00018	0.00020	0.00020	0.00018	0.00019
2800.0	0.00020	0.00020	0.00019	0.00019	0.00019	0.00019	0.00021	0.00021	0.00021	0.00025
2900.0	0.00028	0.00035	0.00051	0.00092	0.00171	0.00352	0.00688	0.01101	0.01889	0.02913
3000.0	0.03936	0.06094	0.08053	0.14420	0.17507	0.22027	0.23179	0.29539	0.35723	0.34872
3100.0	0.38520	0.55696	0.55794	0.60095	0.64074	0.64930	0.60147	0.78150	0.74908	0.76312
3200.0	0.84652	0.85491	0.80107	0.74499	0.85723	0.92797	1.13072	1.15463	1.06927	1.16746
3300.0	1.24956	1.10498	1.10812	1.08088	1.05286	1.10737	0.99068	0.91254	0.99810	1.04538
3400.0	1.11664	1.03929	1.04873	1.07370	0.87954	0.94268	0.96442	0.97060	0.92946	0.90945
3500.0	1.00000	1.00906	0.94261	0.95016	1.07271	1.05758	0.96186	0.80596	0.71370	0.80834
3600.0	0.98788	0.83809	0.84961	0.91219	0.91005	0.92990	1.07450	1.03606	0.96306	0.98576
3700.0	1.03049	0.95784	0.91020	0.81242	0.73384	0.77871	0.86591	0.92756	1.06509	0.91938
3800.0	0.85976	0.91501	0.69007	0.54985	0.60221	0.76263	0.71773	0.73814	0.71458	0.76315
3900.0	0.87514	0.92347	0.84253	0.52265	0.55208	0.84578	0.75699	0.53373	0.88665	1.07281
4000.0	1.10907									
				ZENITH SCAN STARTING AT 17.57.31 ON 1/31/74. NORMALIZING FACTOR = 1.1458E 01						
2600.0	0.00016	0.00014	0.00017	0.00016	0.00016	0.00017	0.00016	0.00016	0.00016	0.00015
2700.0	0.00017	0.00015	0.00017	0.00017	0.00017	0.00018	0.00017	0.00018	0.00018	0.00021
2800.0	0.00026	0.00021	0.00022	0.00022	0.00022	0.00022	0.00022	0.00024	0.00023	0.00026
2900.0	0.00028	0.00034	0.00056	0.00089	0.00167	0.00339	0.00652	0.01062	0.01781	0.02753
3000.0	0.03787	0.05771	0.07605	0.13514	0.16644	0.21516	0.23027	0.28635	0.34987	0.34306
3100.0	0.36840	0.54731	0.55229	0.59375	0.63038	0.64162	0.59334	0.76181	0.73807	0.75500
3200.0	0.83031	0.83815	0.78513	0.73756	0.84093	0.91171	1.09509	1.13255	1.04947	1.12795
3300.0	1.23898	1.10447	1.10404	1.07895	1.05503	1.10696	0.95792	0.89457	0.97520	1.02161
3400.0	1.08195	1.01761	1.02759	1.05457	0.88531	0.93327	0.95743	0.96268	0.92140	0.90348
3500.0	1.00000	1.01753	0.93991	0.95220	1.06707	1.05837	0.95741	0.79262	0.71016	0.78462
3600.0	0.97175	0.83283	0.86096	0.91657	0.91605	0.94074	1.08231	1.05099	0.97048	0.99797
3700.0	1.03837	0.97580	0.92619	0.83227	0.74178	0.76986	0.86648	0.92273	1.07205	0.91523
3800.0	0.85177	0.91041	0.71362	0.54604	0.60151	0.77689	0.72504	0.73839	0.71658	0.76486
3900.0	0.87664	0.83401	0.75671	0.50073	0.53028	0.82884	0.75357	0.51682	0.87885	1.04758
4000.0	1.08268									
				ZENITH SCAN STARTING AT 17.59.17 ON 1/31/74. NORMALIZING FACTOR = 1.1135E 01						
2600.0	0.00016	0.00015	0.00019	0.00019	0.00018	0.00018	0.00019	0.00019	0.00019	0.00019
2700.0	0.00019	0.00018	0.00019	0.00019	0.00018	0.00022	0.00020	0.00022	0.00022	0.00020
2800.0	0.00020	0.00023	0.00023	0.00022	0.00023	0.00022	0.00024	0.00022	0.00024	0.00032
2900.0	0.00028	0.00036	0.00049	0.00091	0.00169	0.00346	0.00686	0.01098	0.01841	0.02905
3000.0	0.03882	0.06021	0.08273	0.14154	0.17336	0.22015	0.23683	0.29769	0.36211	0.35367
3100.0	0.38203	0.54815	0.55560	0.60041	0.64079	0.65143	0.61059	0.77585	0.74101	0.76215
3200.0	0.84111	0.84923	0.79828	0.74632	0.86673	0.93576	1.13653	1.15461	1.07263	1.16351
3300.0	1.24468	1.11121	1.11319	1.08275	1.05531	1.11518	0.99027	0.91276	0.99774	1.04658
3400.0	1.11513	1.03900	1.05060	1.07214	0.88346	0.94621	0.96841	0.97067	0.92631	0.91154
3500.0	1.00000	1.01503	0.93713	0.94971	1.07330	1.05790	0.95832	0.80523	0.71071	0.80893
3600.0	0.97423	0.83717	0.86267	0.92504	0.92703	0.93371	1.06647	1.04201	0.96509	0.99412
3700.0	1.02806	0.96463	0.92214	0.82561	0.73732	0.76622	0.86580	0.91971	1.06682	0.92671
3800.0	0.86136	0.92919	0.70960	0.55085	0.60830	0.76470	0.72269	0.73488	0.71627	0.76077
3900.0	0.87447	0.93440	0.85998	0.51831	0.53619	0.86011	0.76657	0.50155	0.88054	1.06906
4000.0	1.10404									
				ZENITH SCAN STARTING AT 18. 1. 3 ON 1/31/74. NORMALIZING FACTOR = 1.1259E 01						
2600.0	0.00011	0.00017	0.00009	0.00010	0.00011	0.00008	0.00008	0.00010	0.00017	0.00012
2700.0	0.00009	0.00009	0.00009	0.00010	0.00009	0.00010	0.00012	0.00012	0.00009	0.00011
2800.0	0.00010	0.00010	0.00010	0.00012	0.00014	0.00019	0.00015	0.00015	0.00011	0.00012
2900.0	0.00016	0.00025	0.00040	0.00079	0.00153	0.00854	0.00843	0.01135	0.01902	0.02911
3000.0	0.03972	0.04996	0.07527	0.13611	0.16520	0.21291	0.22750	0.28689	0.34717	0.33766
3100.0	0.37451	0.54534	0.54753	0.59094	0.62656	0.63607	0.59188	0.76354	0.73510	0.75780
3200.0	1.66112	1.56677	0.79266	0.74848	0.85781	0.93045	1.11944	1.14261	1.05642	1.15714
3300.0	1.23874	1.09614	1.10194	1.07220	1.05086	1.09680	0.97176	0.91011	0.99386	1.03748
3400.0	1.09254	1.02557	1.04301	1.06201	0.87138	0.93250	0.94906	0.95426	0.91895	0.89924
3500.0	1.00000	0.99662	0.92525	0.94982	1.05779	1.03755	0.92475	0.78001	0.68614	0.80014
3600.0	0.95118	0.80870	0.84558	0.89871	0.90177	0.76692	1.06116	1.02019	0.94503	0.97890
3700.0	1.00970	0.94518	0.88529	0.78608	0.72219	0.77836	0.85009	0.92641	1.04598	0.88452
3800.0	0.85045	0.89555	0.67191	0.53412	0.60865	0.74660	0.70528	0.72349	0.70322	0.76461
3900.0	0.85999	0.91313	0.82533	0.49818	0.54839	0.78133	0.72496	0.54382	0.91034	1.04890
4000.0	1.07908									
				ZENITH SCAN STARTING AT 18. 3.26 ON 1/31/74. NORMALIZING FACTOR = 1.2130E 01						
2600.0	0.00018	0.00013	0.00015	0.00014	0.00015	0.00018	0.00015	0.00015	0.00015	0.00016
2700.0	0.00015	0.00016	0.00017	0.00017	0.00016	0.00017	0.00017	0.00017	0.00018	0.00018
2800.0	0.00019	0.00019	0.00020	0.00019	0.00020	0.00020	0.00021	0.00022	0.00021	0.00023
2900.0	0.00026	0.00032	0.00045	0.00079	0.00152	0.00317	0.00629	0.01057	0.01737	0.02741
3000.0	0.03763	0.05683	0.07841	0.13227	0.16551	0.21390	0.22729	0.28982	0.34672	0.34333
3100.0	0.37660	0.53827	0.54536	0.59068	0.62943	0.61918	0.57555	0.72087	0.69791	0.71946
3200.0	0.78933	0.80108	0.75124	0.70764	0.81507	0.88115	1.05530	1.08274	1.01151	1.08037
3300.0	1.16892	1.06030	1.09180	1.06904	1.07909	1.14184	1.00653	0.92773	1.01175	1.05748
3400.0	1.12490	1.05103	1.06401	1.08520	0.90283	0.94316	0.97066	0.96796	0.92648	0.90701
3500.0	1.00000	1.01449	0.93697	0.95100	1.06706	1.05566	0.95792	0.79562	0.71140	0.79059
3600.0	0.96359	0.83098	0.84912	0.91134	0.90740	0.92764	1.08040	1.04854	0.96645	0.99361
3700.0	0.99433	0.94086	0.90041	0.80109	0.71796	0.76425	0.85336	0.90395	1.03960	0.90534
3800.0	0.84382	0.90121	0.68352	0.53849	0.60811	0.75836	0.70906	0.72380	0.69917	0.74680
3900.0	0.85569	0.90810	0.83873	0.52289	0.56834	0.84200	0.74761	0.51376	0.85762	1.04652
4000.0	1.07577									
				ZENITH SCAN STARTING AT 18. 5.12 ON 1/31/74. NORMALIZING FACTOR = 1.0502E 01						
2600.0	0.00023	0.00016	0.00015	0.00016	0.00017	0.00017	0.00018	0.00018	0.00018	0.00018
2700.0	0.00016	0.00017	0.00017	0.00017	0.00018	0.00019	0.00021	0.00018	0.00021	0.00023
2800.0	0.00020	0.00020	0.00019	0.00022	0.00023	0.00023	0.00020	0.00022	0.00023	0.00027
2900.0	0.00032	0.00035	0.00051	0.00088	0.00156	0.00314	0.00637	0.01003	0.01734	0.02688
3000.0	0.03669	0.05718	0.07574	0.13777	0.16786	0.21538	0.23140	0.29276	0.35481	0.34690
3100.0	0.37807	0.55644	0.56123	0.60113	0.64299	0.65172	0.60397	0.78252	0.75793	0.77205
3200.0	0.85377	0.86405	0.81555	0.75981	0.86776	0.93752	1.14492	1.17020	1.08044	1.18078
3300.0	1.27086	1.12435	1.12701	1.09997	1.06829	1.12800	1.00834	0.92536	1.01368	1.06253
3400.0	1.13669	1.06573	1.07656	1.09945	0.89842	0.90440	0.96155	0.96910	0.92664	0.91213
3500.0	1.00000	1.00398	0.93655	0.94700	1.06486	1.04469	0.94559	0.79277	0.69942	0.79444
3600.0	0.96563	0.82018	0.85281	0.91607	0.91441	0.93219	1.07210	1.03798	0.95967	0.98204
3700.0	1.02498	0.95311	0.90137	0.80997	0.73132	0.78306	0.86946	0.92044	1.07121	0.91922
3800.0	0.86847	0.92932	0.71169	0.54489	0.61908	0.76936	0.71698	0.73290	0.71546	0.76875
3900.0	0.87465	0.92984	0.86197	0.51689	0.55226	0.86209	0.78076	0.51513	0.89760	1.07850
4000.0	1.10024									

Table VIII-92

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 18. 9.19 ON 1/31/74. NORMALIZING FACTOR = 1.0618E 01										
2600.0	0.00017	0.00017	0.00021	0.00019	0.00015	0.00016	0.00016	0.00017	0.00016	0.00021
2700.0	0.00017	0.00018	0.00017	0.00017	0.00019	0.00018	0.00018	0.00019	0.00020	0.00019
2800.0	0.00019	0.00019	0.00021	0.00020	0.00022	0.00025	0.00021	0.00022	0.00023	0.00023
2900.0	0.00026	0.00033	0.00047	0.00083	0.00149	0.00306	0.00622	0.00987	0.01688	0.02633
3000.0	0.03549	0.05606	0.07543	0.13286	0.16354	0.20837	0.22410	0.28435	0.34331	0.33686
3100.0	0.37625	0.53820	0.54238	0.58514	0.62551	0.63647	0.59515	0.76455	0.73183	0.75030
3200.0	0.83322	0.84095	0.79001	0.73907	0.85598	0.91547	1.12001	1.14070	1.05784	1.14932
3300.0	1.23637	1.09911	1.10052	1.07075	1.04400	1.10293	0.97953	0.90474	0.99449	1.04084
3400.0	1.10815	1.03055	1.04381	1.00314	0.88397	0.94566	0.97537	0.97901	0.93347	0.90599
3500.0	1.00000	1.00097	0.92040	0.93676	1.05164	1.03909	0.93356	0.78632	0.69689	0.78667
3600.0	0.95180	0.82102	0.84165	0.89957	0.89407	0.92049	1.06158	1.02805	0.95951	0.98123
3700.0	1.01802	0.95785	0.90738	0.79959	0.71934	0.76381	0.85534	0.91146	1.03859	0.89357
3800.0	0.84252	0.90712	0.68390	0.52943	0.58385	0.75153	0.71040	0.72518	0.70207	0.74157
3900.0	0.84630	0.90420	0.83375	0.46945	0.53257	0.82379	0.74097	0.50109	0.86300	1.03321
4000.0	1.06428									
ZENITH SCAN STARTING AT 18.11. 5 ON 1/31/74. NORMALIZING FACTOR = 1.0263E 01										
2600.0	0.00015	0.00015	0.00015	0.00015	0.00019	0.00016	0.00020	0.00017	0.00026	0.00029
2700.0	0.00019	0.00019	0.00018	0.00019	0.00020	0.00019	0.00023	0.00019	0.00021	0.00021
2800.0	0.00022	0.00021	0.00022	0.00023	0.00023	0.00023	0.00027	0.00025	0.00024	0.00025
2900.0	0.00028	0.00036	0.00050	0.00084	0.00154	0.00310	0.00616	0.00987	0.01705	0.02616
3000.0	0.03633	0.05579	0.07494	0.13645	0.16607	0.21436	0.23063	0.28990	0.35347	0.34580
3100.0	0.37330	0.55273	0.55933	0.60157	0.64127	0.65287	0.60383	0.77758	0.75793	0.77404
3200.0	0.85825	0.87461	0.82059	0.76756	0.86885	0.92388	1.12089	1.15855	1.06914	1.15385
3300.0	1.26152	1.11397	1.11171	1.08771	1.05796	1.11118	0.99130	0.91388	0.99437	1.04125
3400.0	1.11188	1.04489	1.04904	1.01541	0.88754	0.92547	0.96295	0.96578	0.92044	0.90795
3500.0	1.00000	1.00526	0.93724	0.94073	1.06693	1.04800	0.94803	0.79239	0.69981	0.79077
3600.0	0.97402	0.82258	0.85519	0.91858	0.91689	0.92495	1.06991	1.03758	0.96790	0.99105
3700.0	1.02514	0.96193	0.91973	0.81629	0.73863	0.78476	0.87886	0.93327	1.07823	0.92362
3800.0	0.86250	0.91428	0.70459	0.54242	0.58983	0.76564	0.72118	0.73008	0.70865	0.75174
3900.0	0.85781	0.91347	0.84868	0.46942	0.53389	0.83945	0.75351	0.51379	0.87006	1.04427
4000.0	1.07918									
ZENITH SCAN STARTING AT 18.15.14 ON 1/31/74. NORMALIZING FACTOR = 9.7307E 00										
2600.0	0.00017	0.00016	0.00016	0.00016	0.00017	0.00027	0.00017	0.00020	0.00017	0.00020
2700.0	0.00021	0.00018	0.00019	0.00023	0.00027	0.00021	0.00022	0.00023	0.00026	0.00021
2800.0	0.00022	0.00021	0.00024	0.00022	0.00024	0.00024	0.00027	0.00027	0.00025	0.00027
2900.0	0.00030	0.00037	0.00051	0.00090	0.00164	0.00323	0.00620	0.00988	0.01691	0.02595
3000.0	0.03508	0.05385	0.07072	0.12687	0.15446	0.19492	0.20860	0.26109	0.31715	0.31014
3100.0	0.34131	0.49445	0.49918	0.53471	0.57215	0.58043	0.54042	0.69959	0.67455	0.68771
3200.0	0.76168	0.76973	0.72588	0.67758	0.78138	0.84103	1.02796	1.05750	0.98128	1.04725
3300.0	1.14531	1.02330	1.03407	1.01954	1.00294	1.07396	0.97242	0.90471	1.00413	1.06094
3400.0	1.13202	1.05813	1.06969	1.10056	0.89898	0.94524	0.96300	0.96189	0.91876	0.90768
3500.0	1.00000	1.01775	0.95185	0.97959	1.12218	1.11637	1.02756	0.88231	0.81228	0.97102
3600.0	1.22723	1.09443	1.15406	1.24832	1.24375	1.25092	1.40552	1.26570	1.10418	1.07363
3700.0	1.05806	0.95728	0.87901	0.76298	0.67624	0.70490	0.77966	0.82327	0.93843	0.81406
3800.0	0.76486	0.81908	0.63580	0.49189	0.56602	0.70990	0.68148	0.70993	0.70088	0.76593
3900.0	0.89077	0.96690	0.89645	0.52617	0.55670	0.86886	0.75583	0.51177	0.88348	1.04320
4000.0	1.06836									
ZENITH SCAN STARTING AT 18.17. 0 ON 1/31/74. NORMALIZING FACTOR = 8.2418E 00										
2600.0	0.00020	0.00020	0.00020	0.00020	0.00019	0.00018	0.00018	0.00019	0.00022	0.00019
2700.0	0.00019	0.00020	0.00019	0.00023	0.00035	0.00020	0.00020	0.00020	0.00027	0.00023
2800.0	0.00022	0.00024	0.00024	0.00026	0.00022	0.00025	0.00027	0.00024	0.00025	0.00030
2900.0	0.00031	0.00036	0.00053	0.00088	0.00158	0.00326	0.00614	0.01003	0.01690	0.02591
3000.0	0.03594	0.05436	0.07494	0.13205	0.16468	0.22352	0.24305	0.30892	0.38169	0.39220
3100.0	0.44831	0.65823	0.66923	0.73126	0.78169	0.80067	0.74243	0.94050	0.92058	0.94743
3200.0	1.03199	1.02185	0.92062	0.83676	0.94042	1.00403	1.19221	1.21588	1.12245	1.20190
3300.0	1.30284	1.14989	1.14372	1.11021	1.07625	1.12215	0.99423	0.91962	0.99580	1.04327
3400.0	1.10962	1.03400	1.03894	1.00262	0.87714	0.91950	0.94755	0.95576	0.91874	0.90234
3500.0	1.00000	1.01537	0.95343	0.97175	1.11310	1.11255	1.02485	0.86752	0.78428	0.93702
3600.0	1.17067	0.97785	0.98514	1.03051	1.04227	1.06228	1.20567	1.15911	1.06448	1.08279
3700.0	1.12619	1.03948	0.97274	0.87784	0.77571	0.79480	0.87286	0.90012	1.02824	0.88033
3800.0	0.81454	0.86140	0.66899	0.51328	0.56561	0.71962	0.68202	0.70051	0.68363	0.74582
3900.0	0.86308	0.93686	0.87565	0.52676	0.54866	0.84580	0.76157	0.50707	0.84547	0.98934
4000.0	1.01643									
ZENITH SCAN STARTING AT 18.19.21 ON 1/31/74. NORMALIZING FACTOR = 8.1632E 00										
2600.0	0.00023	0.00019	0.00019	0.00019	0.00017	0.00018	0.00021	0.00020	0.00021	0.00018
2700.0	0.00021	0.00021	0.00018	0.00019	0.00022	0.00020	0.00030	0.00020	0.00028	0.00029
2800.0	0.00023	0.00023	0.00023	0.00023	0.00024	0.00025	0.00023	0.00024	0.00048	0.00029
2900.0	0.00033	0.00040	0.00057	0.00093	0.00170	0.00331	0.00662	0.01058	0.01756	0.02707
3000.0	0.03677	0.05695	0.07723	0.13419	0.16669	5.28911	0.22788	0.28700	0.34715	0.34134
3100.0	0.37898	0.53991	0.54615	0.59117	0.63336	0.64671	0.60856	0.77349	0.74004	0.76108
3200.0	0.84160	0.85098	0.79981	0.74819	0.86964	0.92951	1.12794	1.15319	1.07782	1.16948
3300.0	1.26790	1.13458	1.13826	1.10469	1.04772	1.10224	0.98082	0.90514	0.99758	1.04875
3400.0	1.11885	1.04175	1.05525	1.01305	0.88696	0.93894	0.96143	0.96126	0.91824	0.89808
3500.0	1.00000	1.01567	0.93921	0.95654	1.07625	1.06254	0.96591	0.80618	0.71480	0.79483
3600.0	0.96372	0.82989	0.84984	0.91795	0.92606	0.95680	1.10415	1.06814	0.98850	1.01623
3700.0	1.05297	0.98857	0.92561	0.83861	0.75230	0.77926	0.88138	0.94248	1.04981	0.93434
3800.0	0.89008	0.94921	0.74082	0.56800	0.62834	0.80546	0.75725	0.77200	0.72564	0.89365
3900.0	0.83017	0.96965	0.89404	0.53323	0.61026	0.90554	0.80954	0.55071	0.94193	1.14122
4000.0	1.17967									
ZENITH SCAN STARTING AT 18.21. 7 ON 1/31/74. NORMALIZING FACTOR = 7.9453E 00										
2600.0	0.00017	0.00018	0.00024	0.00018	0.00017	0.00018	0.00021	0.00019	0.00019	0.00019
2700.0	0.00018	0.00022	0.00492	0.00021	0.00023	0.00019	0.00337	0.00235	0.00026	0.00025
2800.0	0.00021	0.00024	0.00021	0.00024	0.00024	0.00025	0.00024	0.00024	0.00026	0.00025
2900.0	0.00030	0.00035	0.00053	0.00088	0.00152	0.00297	0.00607	0.00955	0.01702	0.62084
3000.0	0.03686	0.05352	0.07349	0.12952	0.17016	0.21469	0.23823	0.28313	0.35645	0.35297
3100.0	0.35798	0.53392	0.56380	0.59638	0.64303	0.66021	0.61246	0.74847	0.78490	0.77401
3200.0	0.84040	0.89665	0.82661	0.77374	0.85437	0.93735	1.11104	1.20066	1.11745	1.15767
3300.0	1.31473	1.16130	1.14655	1.13303	1.08607	1.14233	1.06030	0.94361	1.01009	1.07714
3400.0	1.13698	1.09864	1.06673	1.11267	0.95285	0.92361	0.99796	1.00293	0.95871	0.94740
3500.0	1.00000	1.05622	0.98704	0.94953	1.08739	1.09875	1.00865	0.84408	0.75357	0.76461
3600.0	1.00548	0.87857	0.87268	0.95663	0.91455	0.93623	1.08360	1.07240	0.99919	0.98632
3700.0	1.03560	0.97320	0.92415	0.82916	0.75085	0.78124	0.88054	0.93790	1.07437	0.92735
3800.0	0.86869	0.93097	0.71363	0.53436	0.61782	0.77643	0.72670	0.74095	0.71866	0.75865
3900.0	0.86842	0.91923	0.85612	0.52196	0.53930	0.83593	0.76534	0.49899	0.87202	1.05517
4000.0	1.09175									

Table VIII-93

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 18.31. 3 ON 1/31/74. NORMALIZING FACTOR = 7.5649E 00										
2600.0	0.00020	0.00020	0.00017	0.00016	0.00020	0.00019	0.00018	0.00017	0.00018	0.00017
2700.0	0.00020	0.00019	0.00018	0.00017	0.00017	0.00019	0.00019	0.00022	0.00022	0.00021
2800.0	0.00023	0.00020	0.00019	0.00020	0.00023	0.00022	0.00022	0.00021	0.00023	0.00023
2900.0	0.00030	0.00030	0.00037	0.00056	0.00104	0.00177	0.00374	0.00667	0.01143	0.01807
3000.0	0.02874	0.03793	0.05923	0.08815	0.14681	0.17594	0.22308	0.23870	0.31146	0.35938
3100.0	0.34284	0.42455	0.57391	0.57179	0.62170	0.65231	0.65160	0.63168	0.81593	0.75351
3200.0	0.79287	0.89996	0.86122	0.81961	0.79266	0.92290	1.01608	1.21939	1.16867	1.11272
3300.0	1.30085	1.23126	1.15315	1.15779	1.10264	1.14221	1.10630	0.95673	1.01978	1.08884
3400.0	1.15888	1.12216	1.09470	1.13693	0.96749	0.94534	1.02147	1.02468	0.95802	0.94157
3500.0	1.00000	1.04905	0.97158	0.95500	1.10252	1.08120	0.97331	0.81634	0.72555	0.81778
3600.0	0.98507	0.84522	0.87815	0.93553	0.93663	0.95342	1.10616	1.06380	0.98293	1.00162
3700.0	1.04515	0.96803	0.92562	0.82813	0.74396	0.79768	0.88328	0.93567	1.07820	0.93045
3800.0	0.86918	0.93498	0.70061	0.55224	0.61193	0.77496	0.72830	0.74218	0.71808	0.77210
3900.0	0.86172	0.90924	0.84053	0.50143	0.48640	0.82540	0.75526	0.50506	0.84281	1.04226
4000.0	1.08144									
ZENITH SCAN STARTING AT 18.35.10 ON 1/31/74. NORMALIZING FACTOR = 7.5803E 00										
2600.0	0.00021	0.00019	0.00019	0.00016	0.00040	0.00018	0.00017	0.00016	0.00019	0.00018
2700.0	0.00018	0.00020	0.00020	0.00021	0.00020	0.00017	0.00020	0.00019	0.00019	0.00019
2800.0	0.00022	0.00022	0.00022	0.00022	0.00022	0.00027	0.00029	0.00034	0.00021	0.00023
2900.0	0.00025	0.00028	0.00040	0.00059	0.00111	0.00199	0.00418	0.00687	0.01287	0.02066
3000.0	0.03206	0.04563	0.06531	0.10766	0.15844	0.20127	0.22507	0.26826	0.34174	0.34753
3100.0	0.35286	0.52387	0.49118	0.54906	0.63612	0.65115	0.60986	0.75172	0.77052	0.76367
3200.0	0.83142	0.88712	0.82023	0.76269	0.85741	0.93232	1.11909	1.19317	1.11143	1.15311
3300.0	1.29688	1.15554	1.14116	1.12491	1.07347	1.13944	1.05968	0.93153	1.00293	1.07069
3400.0	1.13223	1.08872	1.06547	0.89911	0.95342	0.93754	1.00360	1.00556	0.95636	0.94402
3500.0	1.00000	1.07011	0.98573	0.96382	1.08023	1.08811	0.98640	15.24869	7.47392	0.81429
3600.0	0.97915	0.84153	0.86232	0.91958	0.92112	0.93363	1.09034	1.05457	0.98017	0.99293
3700.0	1.03173	0.96848	0.92319	0.82916	0.74208	0.77651	0.86944	0.91813	1.06332	0.91822
3800.0	0.85252	0.91048	0.70246	0.54769	0.60320	0.76073	0.71508	0.72590	0.70501	0.74731
3900.0	0.85505	0.90457	0.83761	0.50354	0.53371	0.81939	0.75686	0.50087	0.84153	1.03412
4000.0	1.07045									
ZENITH SCAN STARTING AT 18.49.17 ON 1/31/74. NORMALIZING FACTOR = 7.4690E 00										
2600.0	0.00016	0.00016	0.00019	0.00017	0.00018	0.00021	0.00016	0.00015	0.00016	0.00015
2700.0	0.00021	0.00020	0.00037	0.00051	0.00027	0.00021	0.00023	0.00018	0.00022	0.00023
2800.0	0.00020	0.00019	0.00018	0.00022	0.00022	0.00023	0.00026	0.00035	0.00024	0.00025
2900.0	0.00026	0.00024	0.00044	0.00065	0.00117	0.00198	0.00436	0.00711	0.01294	0.01937
3000.0	0.02930	0.04188	0.06077	0.08085	3.39675	0.18171	0.21646	0.24992	0.32181	0.34498
3100.0	0.34026	0.48033	0.55001	0.57120	0.62801	0.64976	0.62527	0.70702	0.79123	0.75721
3200.0	0.81567	0.90866	0.84048	0.78735	0.84672	0.94175	1.09013	1.21697	1.15011	1.13510
3300.0	1.31606	1.21235	1.16314	1.15814	1.10195	1.15407	1.11148	0.96176	1.01103	1.09329
3400.0	1.14540	1.14277	1.08114	1.11421	1.01879	0.91225	1.01400	1.00583	0.95995	0.94669
3500.0	1.00000	1.06990	0.98635	0.96188	1.08991	1.10243	1.01514	0.85293	0.76127	0.76240
3600.0	0.99733	0.87384	0.85471	0.94123	0.93422	0.94591	1.09415	1.07957	1.00253	0.99057
3700.0	1.06324	0.97802	0.96669	0.86644	0.75909	0.76124	0.87694	0.90752	1.06252	0.95842
3800.0	0.87320	0.92832	0.71593	0.55544	0.60739	0.76768	0.72447	0.74346	0.72170	0.76950
3900.0	0.87579	0.93096	0.85830	0.51857	0.54441	0.83557	0.79684	0.65949	0.85503	1.04656
4000.0	1.08140									
ZENITH SCAN STARTING AT 19.45. 6 ON 1/31/74. NORMALIZING FACTOR = 5.7856E 00										
2600.0	0.00018	0.00017	0.00017	0.00016	0.00016	0.00016	0.00021	0.00024	0.00020	0.00018
2700.0	0.00020	0.00019	0.00020	0.00021	0.00023	0.00017	0.00021	0.00020	0.00035	0.00024
2800.0	0.00024	0.00025	0.00019	0.00019	0.00021	0.00018	0.00023	0.00021	0.00030	0.00027
2900.0	0.00028	0.00024	0.00026	0.00029	0.00047	0.00058	0.00130	0.00241	0.00467	0.00748
3000.0	0.01318	0.01883	0.03150	0.05258	0.08699	0.11478	0.14562	0.17266	0.23317	0.26558
3100.0	0.26340	0.35669	0.45614	0.46347	0.53573	0.56992	0.55425	0.63303	0.71819	0.70668
3200.0	0.75521	0.85525	0.80032	0.74749	0.82225	0.91163	1.05354	1.19728	1.12634	1.11152
3300.0	1.30164	1.19904	1.14628	1.14629	1.09519	1.14655	29.52753	0.95904	1.00326	1.08652
3400.0	1.13868	1.13746	1.08366	1.13705	1.03040	0.91830	1.02866	1.02678	0.98497	0.97955
3500.0	1.00000	1.11467	1.02178	0.98051	1.08654	1.12965	1.04772	0.88911	0.79688	0.73087
3600.0	1.00173	0.91400	0.85873	0.93554	0.94716	0.94918	1.08097	1.10724	1.03824	0.97415
3700.0	1.06572	0.94884	0.99775	0.89380	32.97318	9.32116	0.88021	0.90731	1.05653	1.03702
3800.0	0.86839	0.95789	0.82688	0.61288	0.55881	0.75451	0.74750	0.74878	0.73140	0.74812
3900.0	0.87071	0.91554	0.90820	0.50344	0.48576	0.82301	0.82831	0.51074	0.80603	1.04353
4000.0	1.09815									
ZENITH SCAN STARTING AT 19.46.52 ON 1/31/74. NORMALIZING FACTOR = 5.9241E 00										
2600.0	0.00019	0.00020	0.00018	0.00017	0.00024	0.00019	0.00022	0.00022	0.00020	0.00020
2700.0	0.00017	0.00021	0.00032	0.00019	0.00022	0.00020	0.00017	0.00022	0.00020	0.00023
2800.0	0.00020	0.00020	0.00020	0.00019	0.00021	0.00020	0.00022	0.00023	0.00021	0.00023
2900.0	0.00028	0.00027	0.00032	0.00041	0.00058	0.00109	0.00202	0.00363	0.00624	0.01076
3000.0	0.01570	0.02618	0.03894	0.07299	0.09580	0.13333	0.14693	0.20244	0.25172	0.25445
3100.0	4.40780	0.35528	0.44573	0.49167	0.53531	0.55977	0.53100	0.69055	0.66791	0.70540
3200.0	0.77909	0.80542	0.76130	0.71730	0.84867	0.90790	1.11708	1.12555	1.03046	1.14956
3300.0	1.23349	1.08770	1.10332	1.07470	1.04206	1.10953	0.99065	6.45686	8.13350	1.04664
3400.0	1.10971	1.03667	1.04883	1.09817	0.88487	0.94465	0.96842	0.98950	0.92594	0.91222
3500.0	1.00000	1.01245	0.93509	0.93026	1.06805	1.05136	0.94957	0.80207	0.71231	0.79812
3600.0	0.94017	0.82742	0.84838	0.90823	0.90686	0.92648	1.06833	0.99965	0.96725	0.98388
3700.0	1.01313	0.94986	0.90366	0.81219	0.73290	0.77138	0.85787	0.89918	1.02814	0.90848
3800.0	0.85049	0.90498	0.67131	0.54453	0.58218	0.74359	0.70579	0.71733	0.69200	0.73609
3900.0	0.83948	0.88935	0.82110	0.50533	0.55656	0.81840	0.73097	0.50523	0.83958	1.01700
4000.0	1.05175									
ZENITH SCAN STARTING AT 19.51. 1 ON 1/31/74. NORMALIZING FACTOR = 5.6679E 00										
2600.0	0.00018	0.00020	0.00016	0.00019	0.00020	0.00021	0.00018	0.00019	0.00024	0.00033
2700.0	0.00019	0.00017	0.00018	0.00018	0.00028	0.00019	0.00024	0.00034	0.00021	0.00026
2800.0	0.00021	0.00021	0.00021	0.00028	0.00022	0.00023	0.00023	0.00021	0.00022	0.00026
2900.0	0.00026	0.00024	0.00030	0.00039	0.00057	0.00098	0.00196	0.00318	0.00611	0.00981
3000.0	0.01531	0.02445	0.03637	0.06919	0.09484	0.13008	0.14967	0.19711	0.25222	0.26507
3100.0	0.28429	0.41578	0.45404	0.49636	0.54335	0.57459	0.54638	0.67289	0.69720	0.71202
3200.0	0.76941	23.66411	0.78414	0.73201	0.84690	0.91535	1.09572	1.18404	1.09955	1.14430
3300.0	1.30114	1.15966	1.12244	1.11617	1.06433	1.13291	1.04933	0.92935	1.00084	1.06826
3400.0	1.12574	1.08428	1.06766	1.10906	0.95926	0.93323	0.99830	0.99910	0.94974	0.93777
3500.0	1.00000	1.06137	0.97881	0.94996	1.08233	1.09651	1.00494	0.84556	0.75802	0.76388
3600.0	0.98789	0.86737	0.85121	0.93750	0.92858	0.93184	1.08154	1.06815	0.99455	0.97943
3700.0	1.06053	0.97022	0.95547	0.85192	20.23340	0.77465	0.87213	0.92163	1.06974	0.92651
3800.0	0.86242	0.91310	0.71203	0.53164	0.60557	0.77137	0.71863	0.71236	0.70715	0.76330
3900.0	0.85537	0.90331	0.83934	0.50199	0.53648	23.66202	0.75830	0.50067	0.83066	1.03284
4000.0	1.06673									

Table VIII-94

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 19.55.20 ON 1/31/74, NORMALIZING FACTOR = 5.5182E 00									
2600.0	0.00011	0.00011	0.00010	0.00009	0.00012	0.00013	0.00017	0.00021	0.00012	0.00011
2700.0	0.00012	0.00016	0.00011	0.00021	0.00022	0.00011	0.00019	0.00015	0.00011	0.00014
2800.0	0.00014	0.00014	0.00014	0.00011	0.00011	0.00012	0.00015	0.00015	0.00014	0.00018
2900.0	0.00038	0.00016	0.00043	0.00023	0.00037	0.00069	0.00140	0.00256	0.00480	0.01865
3000.0	0.01498	0.02140	0.03417	0.05598	0.09295	0.12207	0.15172	0.17039	0.22963	0.25891
3100.0	0.25891	0.36079	0.44714	0.47055	0.52298	0.55669	0.55330	0.60047	0.71469	0.68704
3200.0	0.73709	0.84179	0.79307	0.74466	0.79111	0.89508	1.00823	1.17545	1.12336	1.08045
3300.0	1.26482	1.16073	1.12706	1.12683	1.07349	1.12448	1.06932	0.93171	0.98701	1.06674
3400.0	1.11740	1.10493	1.07087	1.10632	0.94196	0.93688	0.99090	0.99424	0.95090	0.93736
3500.0	1.00000	1.05243	0.97468	0.95823	1.08312	1.08402	0.98860	0.82095	0.74543	0.76589
3600.0	0.98378	0.84606	0.85722	0.93116	0.92034	0.93398	1.07255	1.05164	0.96631	0.99142
3700.0	1.01555	0.95753	0.89715	0.80752	0.73343	0.76985	0.85309	0.90964	1.04015	0.89298
3800.0	0.84128	0.88371	0.68388	0.52629	0.59958	0.74711	0.69955	0.71315	0.68993	0.74034
3900.0	0.83906	0.85686	0.77732	0.47840	0.55832	0.81252	0.70781	0.52257	0.84866	1.01092
4000.0	1.03836									
	ZENITH SCAN STARTING AT 19.57. 6 ON 1/31/74, NORMALIZING FACTOR = 5.7267E 00									
2600.0	0.00011	0.00011	0.00010	0.00010	0.00012	0.00012	0.00013	0.00023	0.00012	0.00011
2700.0	0.00011	0.00010	0.00009	0.00008	0.00010	0.00009	0.00010	0.00013	0.00012	0.00012
2800.0	0.00008	0.00031	0.00011	0.00013	0.00010	0.00012	0.00011	0.00013	0.00015	0.00014
2900.0	0.00011	0.00013	0.00023	0.00025	0.00045	0.00095	0.00191	0.00355	0.00942	0.01707
3000.0	0.01675	0.02810	0.04083	0.07705	0.10009	0.13882	0.14395	0.19808	0.24147	0.24422
3100.0	0.29405	0.41669	0.43707	0.48249	0.52479	0.54488	0.52405	0.68675	0.65852	0.69613
3200.0	0.77337	0.78712	0.74344	0.70758	0.83843	0.89056	1.10381	1.11942	1.03536	1.15634
3300.0	1.21566	1.08144	1.09705	1.06694	1.04110	1.10148	0.97325	0.90338	0.99446	1.04269
3400.0	1.10430	1.02436	1.04829	1.05719	0.87518	0.94918	0.96175	0.95895	0.92074	0.89829
3500.0	1.00000	0.99577	0.92098	0.93209	1.05861	1.03372	0.93744	0.78802	0.69265	0.80828
3600.0	0.94288	0.80821	0.84284	0.89266	0.88912	0.91585	1.04057	1.00379	0.92827	0.96117
3700.0	0.98641	0.92420	0.83428	0.77298	0.70845	0.75723	0.82385	0.88359	1.00954	0.85548
3800.0	0.82463	0.85822	0.63959	0.51416	0.57670	0.72096	0.67868	0.69218	0.67296	0.72562
3900.0	0.81469	0.86669	0.78365	0.45722	0.55905	0.80317	0.67371	0.50627	0.83367	0.99459
4000.0	1.02134									
	ZENITH SCAN STARTING AT 20.13. 6 ON 1/31/74, NORMALIZING FACTOR = 5.2031E 00									
2600.0	0.00030	0.00019	0.00015	0.00018	0.00021	0.00018	0.00014	0.00019	0.00017	0.00014
2700.0	0.00036	0.00015	0.00026	0.00018	0.00016	0.00021	0.00027	0.00231	0.00026	0.00017
2800.0	0.00019	0.00018	0.00022	0.00024	0.00019	0.00020	0.00021	0.00020	0.00023	0.00023
2900.0	0.00019	0.00023	0.00024	0.00037	0.00049	0.00061	0.00126	0.00205	0.00414	0.00654
3000.0	0.01134	0.01666	0.02701	0.04589	0.07648	0.09923	0.13200	0.15420	0.22025	0.24716
3100.0	0.24607	0.34670	0.43251	0.45449	0.50841	0.54395	0.54559	0.68867	0.71644	0.67910
3200.0	0.73539	0.83598	0.79742	0.74907	0.77154	0.90025	1.00942	1.19496	1.14111	1.09755
3300.0	1.28487	1.18588	1.12029	31.29352	1.08122	1.11112	1.12397	0.95839	0.98095	1.06854
3400.0	1.11149	1.08385	1.06922	1.11572	0.95643	0.93841	1.00561	1.00836	0.95589	0.94491
3500.0	1.00000	1.06184	0.98203	0.95261	1.09019	1.09736	1.00853	0.84649	0.75774	0.76584
3600.0	0.99798	0.87081	0.87292	0.93637	0.93244	0.94623	1.09853	1.06322	0.98759	1.00220
3700.0	1.03973	0.97468	0.93092	0.83440	0.74807	0.78509	0.87553	0.92737	1.06446	0.92688
3800.0	0.86575	0.91889	0.70225	0.55580	0.60346	0.72407	0.70528	0.72462	0.70494	17.78423
3900.0	5.89399	0.89799	0.83581	0.50072	0.52036	0.83009	0.74233	0.49657	0.85977	1.03002
4000.0	1.06855									
	ZENITH SCAN STARTING AT 20.14.51 ON 1/31/74, NORMALIZING FACTOR = 5.3975E 00									
2600.0	0.00013	0.00016	0.00012	0.00013	0.00018	0.00015	0.00022	0.00022	0.00019	0.00023
2700.0	0.00017	0.00020	0.00015	0.00018	0.00016	0.00019	0.00020	0.00017	0.00017	0.00021
2800.0	0.00025	0.00018	0.00019	0.00021	0.00018	0.00028	0.00028	0.00024	0.00023	0.00022
2900.0	0.00016	0.00022	0.00021	0.00025	0.00039	0.00061	0.00212	0.00792	0.00374	0.00605
3000.0	0.01036	0.01560	0.02561	0.04334	0.07337	0.09516	0.12162	0.14411	0.18563	0.23291
3100.0	0.23423	0.31980	0.41064	0.43768	0.48949	0.52250	0.50629	0.58420	0.66846	0.66275
3200.0	0.72426	0.79939	0.74494	0.70659	0.82403	0.87811	1.07710	1.11987	1.02283	1.13040
3300.0	1.23351	1.07990	1.09013	1.06857	1.03526	1.09434	0.97853	0.89963	0.98403	1.04035
3400.0	1.10426	1.03419	1.04380	1.07023	0.87548	0.92938	0.96161	0.96588	0.92318	0.90896
3500.0	1.00000	1.00739	0.93631	0.94601	1.05988	1.04797	0.94853	0.79745	0.70583	0.79233
3600.0	0.92219	0.81583	0.84509	0.89892	0.89653	0.91484	1.05177	1.01492	0.93843	0.96123
3700.0	0.99591	0.93288	0.88501	0.79381	0.71656	0.69822	0.83374	0.87872	1.01801	0.87702
3800.0	0.82139	0.87065	0.68298	0.52525	0.57117	0.72987	0.68267	0.69737	0.67917	0.72526
3900.0	0.81866	0.86872	0.80156	0.49567	0.52341	0.79906	0.71324	0.49466	0.82760	0.99023
4000.0	1.02223									
	ZENITH SCAN STARTING AT 20.18.58 ON 1/31/74, NORMALIZING FACTOR = 5.3070E 00									
2600.0	0.00020	0.00017	0.00027	0.00023	0.00022	0.00018	0.00016	0.00020	0.00019	0.00020
2700.0	0.00015	0.00021	0.00020	0.00018	0.00017	0.00019	0.00022	0.00023	0.00022	0.00023
2800.0	0.00019	0.00024	0.00028	0.00021	0.00043	0.00019	0.00019	0.00019	0.00021	0.00028
2900.0	0.00026	0.00020	0.00025	0.00033	0.00049	0.00088	0.00163	0.00274	0.00494	0.00869
3000.0	0.01274	0.02203	0.03292	0.06259	0.08296	0.11616	0.13260	0.18715	0.23260	0.23554
3100.0	0.26911	0.39686	0.41530	0.40473	0.50817	14.21917	0.92323	0.66807	0.65304	0.68861
3200.0	0.76264	0.79118	0.74365	0.70528	0.82784	0.88097	1.09275	1.12921	1.03099	1.14917
3300.0	1.23559	1.08327	1.09877	1.07740	1.03854	1.10613	0.99230	0.90354	0.99090	1.04725
3400.0	1.11299	1.03789	1.04871	1.07508	0.88225	0.93940	0.96739	0.97417	0.93013	0.91302
3500.0	1.00000	1.01194	0.94142	0.94558	1.07027	1.05386	0.95395	0.80164	0.71216	0.79712
3600.0	0.97068	0.82783	0.85938	0.91757	0.91008	0.92645	1.05449	1.02069	0.94722	0.96093
3700.0	1.00603	0.93485	0.88274	0.79195	0.71897	0.74401	0.83360	0.88670	1.02000	0.87544
3800.0	0.82999	0.87493	0.67916	0.53024	0.57394	0.73246	0.68771	0.69984	3.50842	15.60588
3900.0	0.81876	0.86720	0.79331	0.49451	0.53360	0.79367	0.72468	0.51238	0.82379	0.99299
4000.0	1.02647									
	ZENITH SCAN STARTING AT 20.23. 8 ON 1/31/74, NORMALIZING FACTOR = 5.2164E 00									
2600.0	0.00018	0.00019	0.00016	0.00015	0.00016	0.00016	0.00021	0.00028	0.00016	0.00021
2700.0	0.00020	0.00019	0.00017	0.00019	0.00020	0.00027	0.00019	0.00017	0.00019	0.00017
2800.0	0.00018	0.00021	0.00029	0.00026	0.00021	0.00017	0.00016	0.00020	0.00021	0.00021
2900.0	0.00023	0.00022	0.00028	0.00030	0.00044	0.00082	0.00162	0.00308	0.00494	0.00833
3000.0	0.01271	0.02137	0.03219	0.06206	0.08176	0.11799	0.13150	0.18180	0.22802	0.23484
3100.0	0.27429	0.39960	0.42114	0.47026	0.51132	0.52920	0.51135	0.67058	0.65339	0.69010
3200.0	0.75744	0.79237	0.74407	0.70137	0.83403	0.88383	1.09646	1.12868	1.03695	1.14794
3300.0	1.23740	1.08862	1.10480	1.07910	1.04464	1.11236	0.99221	0.90751	0.99495	1.05004
3400.0	1.11283	1.04063	1.05319	1.07446	0.89910	0.94778	0.97309	0.97549	0.93203	0.91312
3500.0	1.00000	1.02223	0.94480	0.96784	1.07351	1.06103	0.96119	0.81186	0.71825	0.80283
3600.0	0.97137	0.83436	0.85418	0.91519	0.91627	0.93144	1.07679	1.04474	0.97248	0.96439
3700.0	0.98915	0.94422	0.89593	0.81066	0.72635	0.74610	0.83835	0.88626	1.02850	0.89290
3800.0	0.82971	0.87434	0.67060	0.52956	0.57352	0.72844	0.68838	0.70175	0.58870	0.72827
3900.0	0.82666	0.87287	0.81440	0.48052	0.50682	0.80489	0.72580	0.48337	0.82809	0.99756
4000.0	1.03450									

Table VIII-95

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 20.33. 8 ON 1/31/74, NORMALIZING FACTOR = 5.0241E 00									
2600.0	0.00013	0.00017	0.00019	0.00022	0.00017	0.00018	0.00020	0.00014	0.00020	0.00022
2700.0	0.00018	0.00016	0.00023	0.00017	0.00018	0.00020	0.00015	0.00016	0.00021	0.00016
2800.0	0.00018	0.00017	0.00023	0.00018	0.00026	0.00023	0.00023	0.00020	0.00041	0.00028
2900.0	0.00040	0.00026	0.00026	0.00029	0.00048	0.00070	0.04917	0.00235	0.00483	0.00753
3000.0	0.01211	0.02007	0.92151	0.05668	0.08010	0.11152	0.13022	0.17501	0.22815	0.24080
3100.0	0.25997	0.38822	0.42229	0.46493	14.19927	0.54754	0.52252	0.65589	0.67741	0.69242
3200.0	0.75085	0.82074	0.77071	0.71633	0.82678	0.89673	1.08296	1.16384	1.07570	1.13001
3300.0	1.27662	1.13226	1.12510	1.11413	1.06161	1.13086	1.04770	0.92863	1.00085	1.06957
3400.0	1.12879	1.08661	1.06704	1.11022	0.96163	0.93783	1.00776	1.00685	0.96071	0.94809
3500.0	1.00000	1.07263	0.99040	0.96042	1.08672	1.09488	1.00509	2.79749	9.53760	0.76371
3600.0	1.00248	0.87149	0.85917	0.94866	0.93681	0.93264	1.09093	1.07695	1.01126	0.98817
3700.0	1.05205	0.96584	0.95279	0.85772	0.75559	0.76283	0.87440	0.90079	1.04754	24.82068
3800.0	0.84891	0.93244	11.16015	0.57528	0.57832	0.75296	0.72113	0.73916	0.71200	0.72889
3900.0	0.84973	0.89307	0.87624	0.59258	0.49165	0.78745	0.80519	0.52235	0.77864	1.02521
4000.0	1.07517									
	ZENITH SCAN STARTING AT 20.37.17 ON 1/31/74, NORMALIZING FACTOR = 4.9589E 00									
2600.0	0.00019	0.00016	0.00017	0.00023	0.00017	0.00019	0.00420	0.00471	0.00018	0.00018
2700.0	0.00021	0.00017	0.00023	0.00016	0.00027	0.00024	0.00019	0.00017	0.00020	0.00018
2800.0	0.00025	0.00038	0.00091	0.00021	0.00018	0.00026	0.00025	0.00030	0.00021	0.00028
2900.0	0.00019	0.00020	0.00025	0.00034	0.00038	0.00060	0.00122	0.00196	0.00384	0.00620
3000.0	0.01064	0.01605	0.02596	0.04317	0.07100	0.09693	0.12731	0.14767	0.20787	0.24132
3100.0	0.24259	0.33235	0.42236	0.45342	0.50647	0.54175	0.52856	0.60982	0.68831	0.67610
3200.0	0.72886	0.82336	0.77502	0.72240	0.79932	0.88906	27.26413	1.16764	1.09452	1.08732
3300.0	1.27356	1.16267	1.11533	1.12117	1.06276	1.11594	1.07908	0.93593	0.99624	1.06500
3400.0	1.11864	1.08520	1.06396	1.10477	0.95872	0.92705	0.99343	0.99761	0.96621	0.94227
3500.0	1.00000	1.06503	0.98528	0.96235	1.08708	1.10235	1.01608	0.84631	0.76100	0.81783
3600.0	0.98974	0.84897	0.86625	0.92879	0.92759	0.94346	1.09178	1.05608	0.97232	0.99813
3700.0	1.03354	0.96300	0.91607	0.83161	0.74220	0.76872	0.86639	0.91580	1.05140	0.90808
3800.0	0.85112	0.90100	0.89351	0.54889	0.60771	0.74701	0.70513	0.71994	0.70086	0.74005
3900.0	0.84631	0.89739	0.83014	0.49619	0.52903	0.81313	0.75384	10.98680	6.03566	1.02861
4000.0	1.08167									
	ZENITH SCAN STARTING AT 20.39. 3 ON 1/31/74, NORMALIZING FACTOR = 4.8684E 00									
2600.0	0.00017	0.00015	0.00014	0.00020	0.00016	0.00024	0.00016	0.00027	0.00015	0.00017
2700.0	0.00036	0.00031	0.00019	0.00018	0.00019	0.00019	0.00020	0.00021	0.00027	0.00031
2800.0	0.00022	0.00023	0.00026	0.00029	0.00023	0.00022	0.00019	0.00021	0.00285	0.00026
2900.0	0.00030	0.00028	0.00029	0.00032	0.00052	0.00068	0.00141	0.00224	0.00447	0.00700
3000.0	0.01139	0.01796	0.02802	0.05079	0.07702	0.10311	0.12892	0.15881	0.22076	0.24147
3100.0	0.24661	0.36865	0.42616	0.38110	0.51193	0.54516	0.52771	0.62606	0.69807	0.68775
3200.0	0.74385	0.83674	0.78266	0.73199	0.80882	0.89801	1.04744	1.18794	1.10803	1.11069
3300.0	1.22547	1.17383	1.13925	1.13996	1.05793	1.12104	1.09196	0.93617	0.98231	1.06756
3400.0	1.11107	1.11210	1.05875	1.11520	1.00029	0.92666	1.00572	1.00805	0.95819	0.94415
3500.0	1.00000	1.06582	0.98579	0.95868	1.09174	1.10346	1.01560	0.85906	0.76057	0.77312
3600.0	1.00355	0.87687	0.86316	0.94478	0.93767	0.93628	1.09501	1.07923	1.01533	0.99559
3700.0	1.06289	0.97081	0.95962	0.85694	0.75422	0.76457	0.87734	0.91212	1.05943	4.26540
3800.0	19.53864	0.94079	0.75459	0.57550	0.57088	0.75490	0.72312	0.74149	0.70729	0.73034
3900.0	0.84470	0.88929	0.87166	0.57809	0.50783	0.82808	0.74638	0.52924	0.85343	1.03508
4000.0	1.08854									
	ZENITH SCAN STARTING AT 20.40.49 ON 1/31/74, NORMALIZING FACTOR = 5.0624E 00									
2600.0	0.00020	0.00019	0.00021	0.00013	0.00013	0.00015	0.00016	0.00016	0.00017	0.00022
2700.0	0.00058	0.00016	0.00017	0.00019	0.00015	0.00022	0.00022	0.00019	0.00028	0.00021
2800.0	0.00022	0.00033	0.00031	0.00022	0.00020	0.00023	0.00023	0.00025	0.00027	0.00020
2900.0	0.00019	0.00023	0.00024	0.00030	0.00045	0.00075	0.00144	0.00228	0.00447	0.00740
3000.0	0.01145	0.01912	0.02834	0.05537	0.07668	0.10607	0.12557	0.16184	0.21768	0.22915
3100.0	0.20989	0.37105	0.40615	0.44925	0.49242	0.52540	0.49721	0.62544	0.63908	0.67983
3200.0	0.74543	0.78355	0.73239	0.70022	0.82158	0.87497	1.06742	1.11238	1.02028	1.11901
3300.0	1.22317	1.07157	1.08504	1.06377	1.03081	1.08653	0.96936	0.89658	0.97735	1.03286
3400.0	1.09579	1.02729	1.03629	1.08292	0.87728	0.92218	0.95169	0.96018	0.92145	0.90067
3500.0	1.00000	1.00697	0.93732	0.94754	1.06433	1.05002	0.95200	0.79525	0.71398	0.79060
3600.0	0.96909	0.82627	0.86177	0.90464	0.90406	0.92886	1.06178	1.02259	0.94493	0.96845
3700.0	1.00562	0.93586	0.88317	0.79369	0.72195	0.76618	0.83664	0.88315	1.02188	0.87732
3800.0	0.83061	0.87859	0.88240	0.52571	0.57430	0.73350	0.68861	0.69962	0.67657	0.72828
3900.0	0.82295	0.87044	0.80764	0.48727	0.50424	0.80054	0.71736	0.49000	0.83190	0.99726
4000.0	1.03272									
	ZENITH SCAN STARTING AT 20.42.47 ON 1/31/74, NORMALIZING FACTOR = 4.8272E 00									
2600.0	0.00019	0.00022	0.00022	0.00021	0.00017	0.00018	0.00019	0.00031	0.00019	0.00029
2700.0	0.00017	0.00017	0.00017	0.00016	0.00016	0.00028	0.00018	0.00022	0.00018	0.00016
2800.0	0.00023	0.00023	0.00022	0.00038	0.00022	0.00026	0.00023	0.00023	0.00658	0.00065
2900.0	0.00022	0.00026	0.00030	0.00034	0.00053	0.00082	0.00152	0.00248	0.00459	0.00754
3000.0	0.01187	0.01919	0.02928	0.05623	0.07847	0.11072	1.89218	2.23001	6.11353	0.24140
3100.0	0.26176	0.38761	0.42433	0.46644	0.51668	0.54946	0.52399	0.65375	0.67993	0.69708
3200.0	0.75380	0.82676	0.77400	0.72141	0.83648	0.90381	1.08907	1.17392	1.08689	1.13724
3300.0	1.28965	1.14444	1.13568	1.16678	1.07535	1.14489	1.06455	0.94121	0.99468	1.05357
3400.0	1.12132	1.08083	1.06208	1.10342	0.95752	0.92954	0.99484	0.99514	0.94991	0.93936
3500.0	1.00000	1.06367	0.98231	0.96270	1.08493	1.09495	1.00780	0.84943	0.76255	0.76306
3600.0	0.99658	0.87271	0.85683	0.93840	0.93376	0.94100	1.08884	1.07243	0.99754	0.98548
3700.0	1.05464	0.96979	0.95157	0.85001	0.74897	0.75521	0.87153	0.89853	1.04620	0.96519
3800.0	0.84475	0.92870	0.75126	0.56622	0.57130	0.74816	0.71603	0.73641	0.71250	0.72962
3900.0	0.85272	0.89601	0.88662	0.60729	0.54813	0.80160	0.75951	0.50864	0.84412	1.03387
4000.0	1.07015									
	ZENITH SCAN STARTING AT 20.51. 3 ON 1/31/74, NORMALIZING FACTOR = 4.5570E 00									
2600.0	0.00016	0.00014	0.00022	0.00042	0.00018	0.00018	0.00018	0.00017	0.00016	0.00016
2700.0	0.00019	0.00018	0.00029	0.00019	0.00020	0.00024	0.00017	0.00021	0.00020	0.00017
2800.0	0.00022	0.00019	0.00025	0.00026	0.00022	0.00036	0.00020	0.00022	0.00023	0.00021
2900.0	0.00020	0.00026	0.00028	0.00035	0.00050	0.00039	0.00063	0.00118	0.00202	0.00394
3000.0	0.00597	0.01067	0.01571	0.02599	0.04572	0.07409	0.09859	0.12784	0.15170	0.21612
3100.0	0.24692	0.22818	0.34991	0.43866	0.46268	0.51475	0.55416	0.55014	0.59788	0.72892
3200.0	0.70037	0.75513	0.86633	0.86061	0.77171	0.81328	0.92448	1.03207	1.22585	1.16314
3300.0	1.11673	1.33216	1.25145	1.10568	1.18385	1.12730	1.15981	1.15795	0.99202	1.01265
3400.0	1.11128	1.16117	1.18685	1.10519	1.16356	1.08929	0.92077	1.06110	1.04618	1.01177
3500.0	1.00000	0.99617	1.12777	1.05028	0.96381	1.09783	1.16057	1.08685	0.93837	0.83168
3600.0	1.20269	25.54503	0.96612	0.88424	0.97904	0.97766	0.97783	1.11854	1.13158	1.05823
3700.0	1.02057	1.11323	1.01697	1.00790	0.90421	0.78820	0.78581	0.90230	0.92065	1.08904
3800.0	1.03731	0.87591	0.97401	0.82564	0.60928	0.57842	0.76452	0.75898	0.76756	0.75091
3900.0	0.75575	0.88478	0.92698	0.94826	0.64775	0.47774	0.81387	0.88049	0.56496	0.75183
4000.0	1.06210									

Table VIII-96

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 1/31/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
		ZENITH SCAN STARTING AT 20.55.10 ON 1/31/74, NORMALIZING FACTOR = 4.9121E 00								
2600.0	0.00023	0.00014	0.00013	0.00023	0.00019	0.00019	0.00021	0.00015	0.00015	0.00020
2700.0	0.00016	0.00024	0.00036	0.00019	0.00020	0.00016	0.00022	0.00016	0.00017	0.00017
2800.0	0.00022	0.00026	0.00016	0.00019	0.00023	0.00020	0.00028	0.00028	0.00035	0.00027
2900.0	0.00045	0.00027	0.00035	0.00029	0.00050	0.00083	0.00156	0.00263	0.00468	0.00798
3000.0	0.01165	0.02032	0.03008	0.05951	0.07856	0.11022	0.12528	0.17538	0.22346	0.22876
3100.0	0.26265	0.39173	0.41075	0.43643	0.49987	0.52402	0.49689	0.65741	0.64703	0.68245
3200.0	0.75519	0.78338	0.73898	0.70007	0.82133	0.87555	1.08658	1.11835	1.02192	1.14060
3300.0	1.22416	1.07246	1.08751	1.08553	1.03104	1.09383	0.97902	0.89727	0.98386	1.03725
3400.0	1.10205	1.02785	1.04301	1.08356	0.88021	0.93696	0.96224	0.96734	0.92380	0.90644
3500.0	1.00000	1.01264	0.93168	0.94692	1.05617	1.03852	0.93891	0.79068	0.89600	0.80247
3600.0	0.95812	0.81532	0.84437	0.90322	0.90407	0.91666	1.05549	1.01926	0.94577	0.96214
3700.0	1.00033	0.92836	0.88113	0.79262	0.71293	0.75307	0.83619	0.88745	1.01500	0.88004
3800.0	0.82488	0.87694	0.66436	0.52433	0.58697	0.72856	0.68928	0.69846	0.67618	0.71582
3900.0	0.81516	0.86587	0.78605	0.49068	0.53852	0.79695	0.71660	0.51116	0.83388	0.99375
4000.0	1.02657									
		ZENITH SCAN STARTING AT 21. 6.59 ON 1/31/74, NORMALIZING FACTOR = 4.6184E 00								
2600.0	0.00017	0.00019	0.00029	0.00016	0.00018	0.00019	0.00018	0.00014	0.00015	0.00016
2700.0	0.00023	0.00019	0.00456	0.00018	0.00032	0.00019	0.00021	0.00018	0.00023	0.00028
2800.0	0.00024	0.00018	0.00019	0.00024	0.00022	0.00021	0.00020	0.00020	0.00024	0.00020
2900.0	0.00023	0.00022	0.00024	0.00032	0.00044	0.00072	0.00133	0.00212	0.00411	0.00638
3000.0	0.01084	0.01638	0.02604	0.04858	0.07392	0.10065	0.12521	0.15424	0.21858	0.24228
3100.0	0.24872	0.35527	0.41057	0.44966	0.50083	0.53721	0.52600	0.60160	0.68454	0.68044
3200.0	0.72879	0.82534	0.76897	0.72222	0.83017	0.89561	1.06673	1.16546	1.07515	1.07615
3300.0	1.28586	1.13738	1.12293	1.11464	1.06417	1.12489	1.04159	0.92975	0.99190	1.06500
3400.0	1.11273	1.05521	1.06055	1.10656	0.94661	0.92132	0.99514	1.00068	0.95883	0.94866
3500.0	1.00000	1.06180	0.98742	0.93720	1.04060	1.10566	1.01385	0.84560	0.76339	0.76953
3600.0	1.02011	0.87946	0.87353	0.98075	0.94582	0.95957	1.08064	0.91000	0.96016	0.98189
3700.0	1.05960	0.95932	0.93956	0.85372	0.74861	0.76871	0.87216	0.89298	1.05140	0.94905
3800.0	0.84181	0.92374	0.75513	0.55418	0.57022	0.75672	0.72146	0.73698	0.71008	0.72825
3900.0	0.84554	0.89034	0.88605	0.52745	0.53864	0.83325	0.75080	0.50958	0.86467	1.03804
4000.0	1.07998									
		ZENITH SCAN STARTING AT 21. 8.47 ON 1/31/74, NORMALIZING FACTOR = 4.7306E 00								
2600.0	0.00018	0.00033	0.00016	0.00015	0.00020	0.00017	0.00019	0.00020	0.00023	0.00018
2700.0	0.00023	0.00016	0.00029	0.00023	0.00019	0.00018	0.00017	0.00018	0.00016	0.00019
2800.0	0.00019	0.00023	0.00020	0.00024	0.00019	0.00024	0.00029	0.00027	0.00023	0.00022
2900.0	0.00037	0.00026	0.00035	0.00030	0.00044	0.00061	0.00130	0.00201	0.00382	0.00623
3000.0	0.00998	0.01587	0.02460	0.04489	0.06971	0.09528	0.11847	0.16214	0.21365	0.22762
3100.0	0.24698	0.36945	0.40427	0.44588	0.49225	0.52622	0.46215	0.63083	0.65171	0.66918
3200.0	0.72698	0.79315	0.74307	0.69473	0.67335	0.87880	1.08812	1.11654	1.03077	1.13897
3300.0	1.22366	1.08204	1.09579	1.07024	1.03988	1.10645	0.98015	0.90661	0.99572	1.04908
3400.0	1.10386	1.02671	1.03975	1.05663	0.88067	0.93344	0.95687	0.95860	0.91730	0.89907
3500.0	1.00000	1.00869	0.93416	0.95073	1.06066	1.04941	0.95079	0.80033	0.70928	0.79322
3600.0	0.95581	0.82712	0.84640	0.90817	0.90528	0.92064	1.06339	1.03354	0.96036	0.97671
3700.0	1.00902	0.94929	0.89774	0.84474	20.16620	0.75779	0.84938	0.90021	1.02553	0.89627
3800.0	0.83465	0.89397	0.68563	0.53492	0.58661	0.73218	0.69558	0.71275	0.69169	0.74102
3900.0	0.83379	0.88262	0.82282	0.49511	0.51860	0.80290	0.62662	0.52347	0.83347	1.00534
4000.0	1.04260									
		ZENITH SCAN STARTING AT 21.20.51 ON 1/31/74, NORMALIZING FACTOR = 4.5667E 00								
2600.0	0.00021	0.00020	0.00030	0.00019	0.00016	0.00016	0.00020	0.00021	0.00022	0.00021
2700.0	0.00058	0.00020	0.00017	0.00024	0.00018	0.00026	0.00025	0.00016	0.00020	0.00018
2800.0	0.00019	0.00019	0.00020	0.00021	0.00018	0.00019	0.00021	0.00019	0.00024	0.00022
2900.0	0.00034	0.00019	0.00023	0.00030	0.00049	0.00063	0.00133	0.00214	0.00336	0.00528
3000.0	0.00908	0.01383	0.02232	1.41030	0.06443	0.08845	0.11152	0.13877	0.19704	0.21396
3100.0	0.22269	0.33716	0.39261	0.42529	0.47329	0.50713	0.49315	0.57705	0.65989	0.65234
3200.0	0.70404	0.79588	0.74285	0.69580	0.76312	0.85326	0.94191	1.12819	1.05089	1.03207
3300.0	1.24026	1.11236	1.07723	1.08811	1.02755	1.07571	1.04917	0.90327	0.94215	1.02655
3400.0	1.07721	1.07422	1.01735	29.52570	0.96753	0.90489	0.96633	0.97031	0.92728	0.91648
3500.0	1.00000	1.01632	0.94589	0.95963	1.07861	1.04282	0.95692	0.80241	0.71307	0.79815
3600.0	0.97089	0.83824	0.85611	25.02771	0.91455	0.92582	1.07428	1.03734	0.96084	0.97788
3700.0	1.01152	0.94039	0.89423	0.80314	0.73024	0.76822	0.85013	0.90477	1.03710	0.89236
3800.0	0.83828	0.89155	0.69205	8.59006	3.99042	6.74316	13.29272	0.71221	0.69237	0.74081
3900.0	0.83403	0.88458	0.76438	0.49466	0.54295	0.80770	0.72451	0.50605	0.84394	1.01228
4000.0	1.04868									

Table VIII-97

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/19/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 20. 2.21 ON 4/19/74, NORMALIZING FACTOR = 2.3135E 01										
2600.0	0.00006	0.00005	0.00006	0.00006	0.00009	0.00006	0.00006	0.00007	0.00006	0.00007
2700.0	0.00007	0.00007	0.00007	0.00007	0.00009	0.00008	0.00008	0.00008	0.00008	0.00008
2800.0	0.00008	0.00009	0.00009	0.00010	0.00009	0.00009	0.00009	0.00010	0.00011	0.00011
2900.0	0.00015	0.00021	0.00043	0.00074	0.00147	0.00313	0.00630	0.01037	0.01748	0.02795
3000.0	0.03725	0.05878	0.07906	0.13726	0.16722	0.21443	0.22961	0.29782	0.35519	0.34499
3100.0	0.40065	0.56843	0.56738	0.61726	0.65748	0.66824	0.63073	0.82397	0.77721	0.79778
3200.0	0.86397	0.85552	0.81285	0.76074	0.88006	0.94855	1.15878	1.15853	1.07379	1.18633
3300.0	1.23963	1.10673	1.10732	1.06863	1.05027	1.10022	0.95575	0.90124	0.99059	1.02965
3400.0	1.09229	1.01181	1.03265	1.04923	0.84987	0.92906	0.94705	0.94736	0.90971	0.88621
3500.0	1.00000	0.99492	0.92377	0.96622	1.06390	1.04375	0.93761	0.78915	0.69924	0.81093
3600.0	0.95419	0.81769	0.85677	0.91003	0.90955	0.93118	1.07815	1.03387	0.95850	0.98988
3700.0	1.01141	0.95416	0.89324	0.80318	0.70815	0.74308	0.81514	0.86732	0.99013	0.84254
3800.0	0.80409	0.83748	0.62320	0.49284	0.56078	0.68945	0.64930	0.65982	0.63279	0.68780
3900.0	0.77355	0.82490	0.74235	0.44306	0.48759	0.76152	0.66296	0.45813	0.79924	0.94078
4000.0	0.97262									
ZENITH SCAN STARTING AT 20. 4.42 ON 4/19/74, NORMALIZING FACTOR = 3.0452E 01										
2600.0	0.00003	0.00003	0.00002	0.00002	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003
2700.0	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00004
2800.0	0.00003	0.00003	0.00003	0.00004	0.00004	0.00004	0.00004	0.00010	0.00005	0.00004
2900.0	0.00007	0.00012	0.00026	0.00211	0.00466	0.00308	0.00498	0.00885	0.01461	0.02215
3000.0	0.03118	0.04707	0.06454	0.11306	0.13747	0.18082	0.19419	0.25163	0.29720	0.28902
3100.0	0.33975	0.47488	0.47354	0.52028	0.54814	0.55756	0.53104	0.68203	0.64054	0.67321
3200.0	0.75388	0.74534	0.71083	0.65135	0.79330	0.86585	1.03536	1.04271	0.97701	1.09505
3300.0	1.14376	1.02051	1.02552	1.00135	0.99488	1.02689	0.89658	0.86254	0.95260	0.99548
3400.0	1.06082	0.97991	1.00594	1.01243	0.83465	0.92148	0.92856	0.93194	0.90393	0.89169
3500.0	1.00000	0.98085	0.91294	0.96281	1.07169	1.04492	0.93845	0.79796	0.70514	0.84870
3600.0	0.97212	0.83640	0.88251	0.93378	0.93941	0.98164	1.11199	1.06576	0.98912	1.03487
3700.0	1.04007	0.99033	0.91411	0.83164	0.76023	0.81545	0.88541	0.96626	1.09434	0.89834
3800.0	0.90215	0.91947	0.69298	0.54632	0.64023	0.78800	0.74198	0.75200	0.73140	0.82473
3900.0	0.90024	0.96106	0.85422	0.48382	0.60627	0.90962	0.75707	0.55856	0.98842	1.14709
4000.0	1.18333									
ZENITH SCAN STARTING AT 20. 6.28 ON 4/19/74, NORMALIZING FACTOR = 3.3510E 01										
2600.0	0.00002	0.00002	0.00002	0.00002	0.00003	0.00002	0.00010	0.00003	0.00003	0.00008
2700.0	0.00003	0.00003	0.00003	0.00003	0.00004	0.00003	0.00003	0.00003	0.00003	0.00003
2800.0	0.00003	0.00004	0.00004	0.00005	0.00003	0.00004	0.00004	0.00004	0.00004	0.00005
2900.0	0.00007	0.00012	0.00025	0.00052	0.00243	0.00278	0.00484	0.00862	0.01405	0.02274
3000.0	0.03051	0.04649	0.06347	0.11075	0.13560	0.17676	0.18863	0.25270	0.29439	0.28466
3100.0	0.34334	0.47562	0.47678	0.52394	0.55586	0.56339	0.54012	0.69682	0.64745	0.67927
3200.0	0.76244	0.74083	0.70795	0.67229	0.77822	0.85808	1.04366	1.03611	0.97305	1.09062
3300.0	1.12484	1.01505	1.02029	0.98528	0.98411	1.02501	0.88296	0.85669	0.94366	0.98659
3400.0	1.04486	0.96908	0.99994	1.01286	0.82568	0.92038	0.92736	0.92891	0.90009	0.87854
3500.0	1.00000	0.98360	0.91083	0.96242	1.06495	1.03169	0.93014	0.78949	0.69327	0.84591
3600.0	0.96802	0.82088	0.87377	0.91701	0.91845	0.96736	1.10427	1.06111	0.98433	1.03207
3700.0	1.04516	0.99891	0.92413	0.82089	0.77855	0.84514	0.92888	1.01065	1.14116	0.97374
3800.0	0.97357	1.00177	0.74575	0.54927	0.71141	0.86416	0.82176	0.83799	0.81466	0.89801
3900.0	1.00894	1.08640	0.94204	0.55566	0.68666	1.03216	0.86553	0.66203	1.11311	1.31933
4000.0	1.35988									
ZENITH SCAN STARTING AT 20. 9.27 ON 4/19/74, NORMALIZING FACTOR = 3.0695E 01										
2600.0	0.01135	0.01282	0.01450	0.01639	0.01840	0.02011	0.02104	0.02135	0.02157	0.02201
2700.0	0.02264	0.02376	0.02583	0.02849	0.03040	0.03134	0.03177	0.03172	0.03147	0.03128
2800.0	0.03149	0.03348	0.03540	0.03747	0.03983	0.04215	0.04423	0.04603	0.04782	0.04944
2900.0	0.05028	0.05055	0.05066	0.05044	0.04959	0.04858	0.04736	0.04628	0.04628	0.04760
3000.0	0.05814	0.05412	0.05984	0.06597	0.07138	0.07646	0.07951	0.07945	0.07826	0.07692
3100.0	0.07569	0.07545	0.17543	0.44155	0.47048	0.48384	0.45860	0.59114	0.56168	0.59264
3200.0	0.66241	0.66171	0.63176	0.60175	0.70381	0.77069	0.93165	0.95058	0.89145	0.96156
3300.0	1.02539	0.92744	0.93606	0.91087	0.90423	0.95230	0.83278	0.79748	0.88015	0.92723
3400.0	0.99344	0.93033	0.95771	0.93085	0.80756	0.89273	0.90997	0.91558	0.88885	0.87658
3500.0	1.00000	0.99630	0.92580	0.97022	1.08702	1.07236	0.97543	0.82423	0.73421	0.85941
3600.0	1.01812	0.87785	0.92201	0.99135	1.00236	1.04976	1.20092	1.16138	1.08527	1.12741
3700.0	1.16377	1.10283	1.04238	0.94127	0.86727	0.93574	1.04170	1.12363	1.29703	1.11477
3800.0	1.08434	1.15193	0.87550	0.67401	0.81945	0.99892	0.94361	0.96493	0.94169	1.04480
3900.0	1.17330	1.25655	1.14912	0.65741	0.76181	1.21371	1.03927	0.74406	1.30300	1.55781
4000.0	1.61085									
SOLAR SCAN STARTING AT 20.18.34 ON 4/19/74, NORMALIZING FACTOR = 1.2234E 03										
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005
2700.0	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007
2800.0	0.00007	0.00007	0.00008	0.00010	0.00010	0.00010	0.00011	0.00011	0.00012	0.00012
2900.0	0.00013	0.00016	0.00020	0.00033	0.00061	0.00130	0.00257	0.00472	0.00792	0.01330
3000.0	0.01863	0.02988	0.04240	0.07465	0.09282	0.12185	0.13179	0.17524	0.21019	0.20629
3100.0	0.24095	0.34766	0.34841	0.38509	0.41274	0.42296	0.40031	0.53034	0.49797	0.52129
3200.0	0.59278	0.58482	0.56152	0.53052	0.62761	0.68566	0.84839	0.85690	0.80629	0.90167
3300.0	0.95709	0.86476	0.87823	0.86047	0.85711	0.91212	0.80291	0.77039	0.85230	0.88805
3400.0	0.95657	0.89405	0.92781	0.93658	0.78702	0.86343	0.89343	0.90389	0.87757	0.86792
3500.0	1.00000	0.99930	0.93044	0.98682	1.10350	1.09228	0.98940	0.83322	0.74238	0.88619
3600.0	1.06839	0.90433	0.96160	1.00952	1.03473	1.07799	1.25051	1.21329	1.13357	1.18645
3700.0	1.21403	1.15848	1.10226	0.99708	0.90178	0.96906	1.09414	1.19748	1.38559	1.17534
3800.0	1.13742	1.21427	0.90660	0.72652	0.86918	1.06698	1.00504	1.03869	1.01823	1.12853
3900.0	1.22971	1.29973	1.18459	0.66645	0.78231	1.23045	1.06482	0.73613	1.36761	1.61265
4000.0	1.67664									
ZENITH SCAN STARTING AT 20.22.41 ON 4/19/74, NORMALIZING FACTOR = 2.1249E 01										
2600.0	0.00030	0.00029	0.00029	0.00032	0.00031	0.00031	0.00032	0.00031	0.00031	0.00032
2700.0	0.00032	0.00032	0.00032	0.00035	0.00034	0.00033	0.00032	0.00032	0.00037	0.00032
2800.0	0.00033	0.00033	0.00033	0.00033	0.00033	0.00034	0.00033	0.00034	0.00037	0.00036
2900.0	0.00037	0.00041	0.00051	0.00075	0.00211	0.00492	0.00522	0.00868	0.01382	0.02219
3000.0	0.02968	0.04555	0.06297	0.10778	0.13310	0.17523	0.18851	0.25004	0.29633	0.28953
3100.0	0.34142	0.47702	0.48028	0.52989	0.56175	0.57183	0.54805	0.70287	0.65746	0.69037
3200.0	0.77213	0.75645	0.72144	0.66690	0.80442	0.87770	1.05090	1.05066	0.98459	1.08957
3300.0	1.13995	1.02779	1.03289	0.99976	0.99378	1.04101	0.90472	0.86665	0.95246	0.99368
3400.0	1.05610	0.98232	1.00620	0.99521	0.83889	0.92259	0.93262	0.93519	0.90773	0.88606
3500.0	1.00000	0.99141	0.92300	0.96109	1.07164	1.05071	0.94024	0.79712	0.70653	0.84648
3600.0	0.97852	0.84156	0.88867	0.93587	0.93771	0.98414	1.11580	1.07153	0.99686	1.04336
3700.0	1.05530	1.01263	0.93996	0.83927	0.77732	0.83163	0.91126	0.99640	1.12812	0.95210
3800.0	0.92980	0.97134	0.73601	0.57470	0.66303	0.82464	0.78411	0.79575	0.77379	0.85385
3900.0	0.95809	1.02488	0.90472	0.58311	0.66036	0.94816	0.80177	0.57627	0.98398	1.17219
4000.0	1.23029									

Table VIII-98

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/19/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 20.24.27 ON 4/19/74, NORMALIZING FACTOR = 1.9138E 01										
2600.0	0.00017	0.00018	0.00021	0.00020	0.00019	0.00019	0.00019	0.00019	0.00020	0.00019
2700.0	0.00019	0.00020	0.00020	0.00020	0.00020	0.00021	0.00021	0.00021	0.00021	0.00021
2800.0	0.00021	0.00022	0.00022	0.00022	0.00022	0.00022	0.00023	0.00023	0.00023	0.00024
2900.0	0.00025	0.00029	0.00039	0.00062	0.00110	0.00221	0.00448	0.00759	0.01278	0.02122
3000.0	0.02856	0.04704	0.06368	0.11269	0.13876	0.16096	0.19563	0.25683	0.30912	0.30153
3100.0	0.34375	0.50028	0.50407	0.54888	0.58548	0.59678	0.56288	0.74259	0.67884	0.70768
3200.0	0.79237	0.78457	0.74058	0.69438	0.80595	0.86996	1.06340	1.07271	0.99277	1.10162
3300.0	1.16856	1.03763	1.04736	1.02064	0.99840	1.04858	0.92654	0.86787	0.95562	0.99966
3400.0	1.06639	0.98796	1.01085	1.03151	0.84852	0.92245	0.94081	0.95011	0.91213	0.89352
3500.0	1.00000	1.00703	0.93196	0.95819	1.07757	1.05935	0.96302	0.80361	0.70769	0.83152
3600.0	0.99350	0.85084	0.88457	0.94804	0.94875	0.98419	1.13908	1.09796	1.02183	1.05897
3700.0	1.09576	1.03911	0.97958	0.84993	0.77486	0.81243	0.91404	0.99202	1.13251	0.96859
3800.0	0.93266	0.97972	0.74427	0.57407	0.66872	0.83353	0.78354	0.80142	0.77588	0.84381
3900.0	0.95833	1.02992	0.94231	0.53781	0.61198	0.96405	0.84986	0.56280	1.03036	1.21868
4000.0	1.26937									
ZENITH SCAN STARTING AT 20.26.15 ON 4/19/74, NORMALIZING FACTOR = 1.9356E 01										
2600.0	0.00013	0.00013	0.00013	0.00014	0.00014	0.00014	0.00016	0.00014	0.00015	0.00014
2700.0	0.00014	0.00015	0.00015	0.00015	0.00021	0.00016	0.00015	0.00015	0.00015	0.00016
2800.0	0.00027	0.00017	0.00017	0.00016	0.00016	0.00017	0.00017	0.00017	0.00017	0.00018
2900.0	0.00019	0.00024	0.00034	0.00057	0.00102	0.00214	0.00422	0.00721	0.01252	0.02017
3000.0	0.02840	0.04483	0.06195	0.10934	0.13528	0.17965	0.19312	0.24911	0.30230	0.29613
3100.0	0.33422	0.48571	0.49102	0.53837	0.56493	0.58332	0.54865	0.70477	0.67012	0.70144
3200.0	0.77997	0.77854	0.73666	0.69869	0.80746	0.87593	1.05345	1.07277	0.99457	1.09652
3300.0	1.17154	1.04021	1.04460	1.01536	0.99900	1.04792	0.92915	0.87035	0.95804	1.00247
3400.0	1.07497	0.99840	1.02247	1.04387	0.85940	0.93899	0.95250	0.96048	0.90772	0.88914
3500.0	1.00000	0.99539	0.92807	0.95851	1.06983	1.05110	0.95554	0.79535	0.70307	0.82214
3600.0	0.98754	0.84225	0.88862	0.93897	0.93782	0.96343	1.11023	1.07653	1.00256	1.04220
3700.0	1.05587	1.00343	0.96052	0.86058	0.76934	0.81355	0.90780	0.97628	1.12849	0.95241
3800.0	0.92152	0.97223	0.73647	0.56816	0.65213	0.82640	0.78090	0.80364	0.78403	0.86365
3900.0	0.96806	1.02998	0.94384	0.55488	0.63844	0.96813	0.84874	0.57322	1.03187	1.23347
4000.0	1.28837									
ZENITH SCAN STARTING AT 20.28.36 ON 4/19/74, NORMALIZING FACTOR = 1.9816E 01										
2600.0	0.00008	0.00010	0.00008	0.00008	0.00008	0.00008	0.00009	0.00012	0.00009	0.00009
2700.0	0.00009	0.00009	0.00008	0.00009	0.00010	0.00009	0.00009	0.00009	0.00009	0.00010
2800.0	0.00010	0.00009	0.00009	0.00010	0.00010	0.00011	0.00010	0.00010	0.00010	0.00012
2900.0	0.00013	0.00016	0.00027	0.00048	0.00113	0.00494	0.00442	0.00777	0.01296	0.02139
3000.0	0.02920	0.04511	0.06302	0.10823	0.13455	0.17745	0.18970	0.25353	0.30071	0.29404
3100.0	0.35012	0.48968	0.49228	0.54018	0.57412	0.58549	0.56010	0.72233	0.67459	0.70795
3200.0	0.79237	0.77688	0.73148	0.67600	0.81693	0.88727	1.07796	1.07597	1.00577	1.11611
3300.0	1.16338	1.04495	1.05130	1.01922	1.01047	1.05873	0.92469	0.88016	0.96790	1.00957
3400.0	1.07017	0.99450	1.02176	1.03612	0.83948	0.93300	0.94461	0.94585	0.91263	0.88995
3500.0	1.00000	1.00039	0.93116	0.97374	1.07810	1.05462	0.95431	0.79914	0.70494	0.83958
3600.0	0.98521	0.84714	0.88995	0.93983	0.93934	0.97554	1.12087	1.08068	1.00921	1.06125
3700.0	1.06028	1.01924	0.95996	0.86210	0.78254	0.83087	0.91487	0.98908	1.13634	0.96580
3800.0	0.93644	0.97917	0.73080	0.57643	0.68638	0.83927	0.79303	0.80846	0.78511	0.87618
3900.0	0.96978	1.03601	0.92861	0.55585	0.68369	0.98808	0.82890	0.61668	1.04241	1.20163
4000.0	1.21165									
ZENITH SCAN STARTING AT 20.30.22 ON 4/19/74, NORMALIZING FACTOR = 2.0145E 01										
2600.0	0.00009	0.00009	0.00009	0.00009	0.00010	0.00009	0.00009	0.00010	0.00011	0.00011
2700.0	0.00011	0.00011	0.00010	0.00010	0.00011	0.00011	0.00011	0.00012	0.00012	0.00011
2800.0	0.00012	0.00012	0.00013	0.00015	0.00013	0.00014	0.00013	0.00013	0.00013	0.00014
2900.0	0.00015	0.00019	0.00027	0.00047	0.00087	0.00195	0.00384	0.00653	0.01153	0.01960
3000.0	0.02697	0.04421	0.05925	0.10766	0.13287	0.17462	0.18876	0.24390	0.29817	0.29130
3100.0	0.33046	0.48515	0.48844	0.53139	0.56638	0.57777	0.53833	0.70194	0.67167	0.69800
3200.0	0.78298	0.78044	0.73723	0.67545	0.80163	0.86844	1.04769	1.06912	0.99023	1.09151
3300.0	1.16645	1.02978	1.03735	1.01031	0.98836	1.03979	0.92349	0.86188	0.94914	0.99422
3400.0	1.06369	0.98465	1.00389	1.02607	0.84129	0.90288	0.93454	0.94034	0.90959	0.89632
3500.0	1.00000	1.00859	0.92473	0.93311	1.04717	1.02807	0.93273	0.78429	0.69439	0.81115
3600.0	0.98464	0.81881	0.86344	0.91424	0.91015	0.93661	1.08277	1.04592	0.97095	1.00573
3700.0	1.03307	0.97514	0.91959	0.83663	0.75192	0.79594	0.88754	0.96218	1.09858	0.92718
3800.0	0.89563	0.95243	0.71270	0.56251	0.65687	0.81335	0.76070	0.77768	0.75327	0.82006
3900.0	0.93296	0.99390	0.91232	0.53549	0.60050	0.93076	0.81285	0.56906	1.00143	1.18240
4000.0	1.23222									
ZENITH SCAN STARTING AT 20.32.43 ON 4/19/74, NORMALIZING FACTOR = 1.9805E 01										
2600.0	0.00009	0.00010	0.00010	0.00009	0.00010	0.00009	0.00010	0.00010	0.00013	0.00012
2700.0	0.00013	0.00012	0.00015	0.00012	0.00013	0.00012	0.00012	0.00014	0.00013	0.00014
2800.0	0.00014	0.00013	0.00015	0.00015	0.00014	0.00014	0.00014	0.00016	0.00016	0.00016
2900.0	0.00020	0.00021	0.00029	0.00049	0.00089	0.00194	0.00383	0.00673	0.01162	0.01883
3000.0	0.02705	0.04208	0.06045	0.10596	0.13218	0.17706	0.19182	0.24905	0.30209	0.29720
3100.0	0.33626	0.48529	0.49351	0.54239	0.57624	0.59259	0.55786	0.71434	0.68206	0.71373
3200.0	0.79452	0.79846	0.75536	0.71826	0.83763	0.90929	1.09662	1.10160	1.00841	1.09946
3300.0	1.17962	1.05440	1.05741	1.02695	1.00952	1.05711	0.93153	0.88042	0.96301	1.00920
3400.0	1.08028	1.00666	1.02432	1.04212	0.86425	0.92270	0.94475	0.95340	0.91912	0.90130
3500.0	1.00000	1.00369	0.93211	0.96071	1.08176	1.06453	0.96015	0.80757	0.71578	0.83599
3600.0	0.98818	0.84760	0.88773	0.94432	0.94801	0.98881	1.13058	1.08626	1.01049	1.05104
3700.0	1.08105	1.02207	0.95806	0.86558	0.79032	0.84250	0.93109	1.00211	1.15843	0.98971
3800.0	0.95543	1.00398	0.72797	0.58244	0.66460	0.82788	0.78511	0.80492	0.77949	0.84093
3900.0	0.96280	1.02951	0.92482	0.54793	0.64319	0.96500	0.83165	0.59714	1.02158	1.20853
4000.0	1.25620									
ZENITH SCAN STARTING AT 20.34.29 ON 4/19/74, NORMALIZING FACTOR = 1.9842E 01										
2600.0	0.00009	0.00009	0.00010	0.00014	0.00010	0.00010	0.00009	0.00010	0.00009	0.00010
2700.0	0.00010	0.00013	0.00011	0.00011	0.00011	0.00011	0.00011	0.00013	0.00012	0.00012
2800.0	0.00013	0.00013	0.00013	0.00013	0.00014	0.00014	0.00014	0.00015	0.00014	0.00014
2900.0	0.00015	0.00021	0.00026	0.00045	0.00086	0.00182	0.00374	0.00661	0.01116	0.01888
3000.0	0.02632	0.04199	0.05603	0.10364	0.12896	0.16877	0.18390	0.24142	0.29238	0.28777
3100.0	0.33269	0.47779	0.48312	0.52591	0.56379	0.57559	0.53704	0.70692	0.67065	0.69761
3200.0	0.77939	0.77504	0.73475	0.68675	0.80267	0.86322	1.05928	1.06873	0.98955	1.09370
3300.0	1.16167	1.03668	1.04204	1.01542	0.99474	1.04844	0.92761	0.86551	0.95511	0.99588
3400.0	1.05840	0.98894	1.01262	1.02811	0.83416	0.90944	0.93496	0.94089	0.90687	0.88697
3500.0	1.00000	1.00098	0.93098	0.96765	1.08216	1.06681	0.96981	0.80265	0.70742	0.81267
3600.0	0.96675	0.83507	0.87306	0.93053	0.92892	0.94912	1.11256	1.07233	0.99648	1.02581
3700.0	1.05876	0.99426	0.93745	0.85577	0.76882	0.80907	0.90960	0.98027	1.12745	0.95495
3800.0	0.91905	0.97245	0.74265	0.58087	0.66103	0.82407	0.77311	0.79795	0.77381	0.83510
3900.0	0.95032	1.00998	0.93997	0.55118	0.61797	0.96080	0.83979	0.57340	0.98375	1.20292
4000.0	1.25052									

Table VIII-99

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/19/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 20.38.36 ON 4/19/74, NORMALIZING FACTOR = 2.0370E 01										
2600.0	0.00009	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009	0.00010	0.00009
2700.0	0.00009	0.00010	0.00010	0.00010	0.00011	0.00010	0.00010	0.00011	0.00012	0.00011
2800.0	0.00011	0.00012	0.00013	0.00012	0.00012	0.00013	0.00012	0.00014	0.00015	0.00014
2900.0	0.00015	0.00019	0.00027	0.00045	0.00087	0.00190	0.00389	0.00702	0.01197	0.01992
3000.0	0.02823	0.04475	0.06318	0.10941	0.13625	0.17592	0.18499	0.23256	0.28528	0.28268
3100.0	0.32311	0.46555	0.47354	0.51770	0.55592	0.57105	0.53540	0.69632	0.66058	0.68735
3200.0	0.76572	0.76745	0.72537	0.68330	0.80228	0.86798	1.05088	1.06705	0.99546	1.08595
3300.0	1.16190	1.03783	1.04340	1.01400	0.99567	1.05152	0.92362	0.86796	0.95259	0.99813
3400.0	1.05973	0.99222	1.01270	1.03785	0.84672	0.91512	0.93973	0.94523	0.90876	0.89004
3500.0	1.00000	1.00766	0.93277	0.95822	1.07952	1.06017	0.96744	0.80800	0.72395	0.82687
3600.0	1.01390	0.85202	0.87770	0.92926	0.93445	0.95414	1.10095	1.07103	1.00033	1.03092
3700.0	1.05910	1.00122	0.95394	0.85794	0.77478	0.81321	0.91196	0.98084	1.13344	0.96656
3800.0	0.92234	0.97289	0.74926	0.57578	0.64934	0.83136	0.77958	0.79900	0.77414	0.84278
3900.0	0.95447	1.01862	0.92122	0.53737	0.60665	0.95072	0.82995	0.56438	1.02157	1.20249
4000.0	1.24545									
ZENITH SCAN STARTING AT 20.40.24 ON 4/19/74, NORMALIZING FACTOR = 2.6283E 01										
2600.0	0.00008	0.00008	0.00008	0.00009	0.00009	0.00010	0.00009	0.00009	0.00009	0.00009
2700.0	0.00010	0.00009	0.00010	0.00010	0.00011	0.00010	0.00011	0.00011	0.00012	0.00013
2800.0	0.00012	0.00014	0.00015	0.00014	0.00013	0.00014	0.00014	0.00015	0.00015	0.00015
2900.0	0.00017	0.00019	0.00025	0.00040	0.00073	0.00154	0.00316	0.00552	0.00998	0.01651
3000.0	0.02331	0.03819	0.05208	0.09688	0.12125	0.16003	0.17515	0.22895	0.28032	0.27615
3100.0	0.31235	0.46394	0.46732	0.50906	0.54658	0.55757	0.51941	0.68655	0.65665	0.67909
3200.0	0.75984	0.76055	0.72251	0.67703	0.78520	0.85180	1.04669	1.06347	0.98574	1.09322
3300.0	1.16832	1.03809	1.04968	1.02593	1.00930	1.07612	0.95627	0.86379	0.94910	0.99803
3400.0	1.07151	0.99715	1.01424	1.03824	0.86043	0.91900	0.94161	0.94410	0.91096	0.89991
3500.0	1.00000	0.99955	0.92946	0.95383	1.07971	1.06155	0.95494	0.80613	0.71594	0.82642
3600.0	0.99375	0.84752	0.88091	0.93743	0.94346	0.97625	1.13292	1.09189	1.01425	1.04720
3700.0	1.08529	1.02066	0.95447	0.86606	0.78202	0.83647	0.93153	1.00346	1.15868	0.98422
3800.0	0.94293	1.01336	0.76285	0.60619	0.67978	0.87155	0.81758	0.84746	0.83319	0.90799
3900.0	1.05995	1.11665	1.01984	0.61303	0.67790	1.05994	0.90418	0.65260	1.13555	1.36289
4000.0	1.42431									
ZENITH SCAN STARTING AT 20.42.45 ON 4/19/74, NORMALIZING FACTOR = 2.7484E 01										
2600.0	0.00009	0.00010	0.00009	0.00009	0.00009	0.00010	0.00009	0.00010	0.00010	0.00010
2700.0	0.00010	0.00010	0.00011	0.00011	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012
2800.0	0.00012	0.00012	0.00013	0.00013	0.00014	0.00014	0.00014	0.00015	0.00015	0.00016
2900.0	0.00016	0.00019	0.00026	0.00039	0.00068	0.00150	0.00304	0.00545	0.00968	0.01598
3000.0	0.02326	0.03693	0.05223	0.09472	0.11948	0.16206	0.17746	0.23054	0.28445	0.28222
3100.0	0.31952	0.45879	0.46744	0.50625	0.54290	0.55895	0.52792	0.67700	0.64521	0.67440
3200.0	0.74930	0.75487	0.71388	0.67592	0.78781	0.85628	1.03324	1.05275	0.97980	1.06459
3300.0	1.15087	1.02821	1.03446	1.00623	0.98815	1.04148	0.92053	0.86466	0.94564	0.99644
3400.0	1.06871	0.99727	1.01260	1.03567	0.85165	0.92350	0.93899	0.94442	0.91068	0.89557
3500.0	1.00000	1.00613	0.93244	0.95102	1.07775	1.06147	0.95947	0.80287	0.71758	0.83004
3600.0	0.98945	0.84763	0.88792	0.96072	0.96947	1.00135	1.13319	1.08892	1.00643	1.04698
3700.0	1.08393	1.01784	0.94743	0.85201	0.77538	0.82358	0.92100	0.99561	1.14127	0.97539
3800.0	0.92674	0.98938	0.75103	0.58320	0.67326	0.83501	0.77725	0.79755	0.77588	0.83831
3900.0	0.96836	1.04066	0.93756	0.56069	0.62620	0.97450	0.83370	0.59693	1.02919	1.24401
4000.0	1.27529									
ZENITH SCAN STARTING AT 20.44.31 ON 4/19/74, NORMALIZING FACTOR = 2.8844E 01										
2600.0	0.00009	0.00008	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010
2700.0	0.00010	0.00010	0.00010	0.00011	0.00010	0.00011	0.00012	0.00011	0.00011	0.00012
2800.0	0.00013	0.00012	0.00014	0.00013	0.00013	0.00014	0.00016	0.00016	0.00016	0.00017
2900.0	0.00018	0.00019	0.00027	0.00040	0.00068	0.00141	0.00293	0.00517	0.00924	0.01594
3000.0	0.02274	0.03712	0.05152	0.09264	0.11744	0.15562	0.17122	0.22886	0.27752	0.27455
3100.0	0.31819	0.46105	0.46658	0.51063	0.54875	0.56252	0.53064	0.69300	0.65475	0.68114
3200.0	0.76041	0.76164	0.72436	0.67684	0.79387	0.85486	1.05121	1.06252	0.98898	1.08838
3300.0	1.16327	1.03645	1.04362	1.01851	1.00239	1.06552	0.94687	0.88138	0.97444	1.02629
3400.0	1.10216	1.02770	1.02506	1.04850	0.84921	0.92066	0.94949	0.95408	0.92022	0.90656
3500.0	1.00000	1.00271	0.92609	0.94873	1.07188	1.05865	0.96281	0.80749	0.71808	0.81628
3600.0	1.00376	0.85335	0.87798	0.94265	0.95390	0.99148	1.13925	1.09452	1.02189	1.04549
3700.0	1.09394	1.02616	0.96742	0.86590	0.78273	0.83361	0.92996	1.00122	1.14979	0.98462
3800.0	0.93493	0.99655	0.77001	0.59961	0.67875	0.85731	0.79785	0.81615	0.79544	0.87360
3900.0	0.98926	1.06434	0.97502	0.57229	0.64427	0.99401	0.84209	0.58671	1.01423	1.22061
4000.0	1.25424									
ZENITH SCAN STARTING AT 20.46.17 ON 4/19/74, NORMALIZING FACTOR = 2.9936E 01										
2600.0	0.00010	0.00012	0.00009	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00011
2700.0	0.00011	0.00011	0.00011	0.00012	0.00011	0.00012	0.00012	0.00013	0.00013	0.00014
2800.0	0.00014	0.00013	0.00013	0.00015	0.00014	0.00016	0.00015	0.00015	0.00016	0.00018
2900.0	0.00017	0.00019	0.00024	0.00036	0.00062	0.00134	0.00276	0.00493	0.00893	0.01498
3000.0	0.02180	0.03528	0.04957	0.09258	0.11692	0.15779	0.17378	0.22727	0.28153	0.27881
3100.0	0.31520	0.47062	0.47839	0.52518	0.56565	0.58117	0.53407	0.68333	0.65903	0.68776
3200.0	0.76605	0.76946	0.72836	0.68751	0.79406	0.86358	1.04249	1.06752	0.98824	1.08613
3300.0	1.17074	1.03782	1.04340	1.01944	0.99890	1.05076	0.93291	0.86962	0.95596	1.00644
3400.0	1.07909	1.00151	1.02078	1.03901	0.86295	0.92848	0.94492	0.94788	0.91261	0.89890
3500.0	1.00000	0.99959	0.93305	0.95288	1.07901	1.06085	0.95679	0.80373	0.71081	0.82817
3600.0	0.98999	0.84417	0.88491	0.94508	0.95580	0.97451	1.13264	1.10158	1.02390	1.06725
3700.0	1.11039	1.00763	0.95650	0.86002	0.77356	0.82522	0.91876	0.98941	1.14589	0.97768
3800.0	0.93374	0.98579	0.75301	0.58323	0.66735	0.83473	0.78246	0.80118	0.78009	0.84809
3900.0	0.96408	1.03147	0.93836	0.53766	0.63781	0.95873	0.82725	0.59379	1.02153	1.21868
4000.0	1.24957									
ZENITH SCAN STARTING AT 20.48.38 ON 4/19/74, NORMALIZING FACTOR = 3.1045E 01										
2600.0	0.00009	0.00009	0.00009	0.00009	0.00009	0.00010	0.00009	0.00011	0.00009	0.00009
2700.0	0.00010	0.00011	0.00010	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011	0.00011
2800.0	0.00011	0.00012	0.00012	0.00013	0.00013	0.00013	0.00013	0.00013	0.00014	0.00014
2900.0	0.00015	0.00018	0.00021	0.00029	0.00047	0.00094	0.00190	0.00358	0.00625	0.01075
3000.0	0.01599	0.02611	0.03795	0.06800	0.08769	0.11933	0.13068	0.17528	0.21497	0.21590
3100.0	0.24893	0.35991	0.37074	0.40923	0.44203	0.45772	0.43493	0.56159	0.53998	0.56538
3200.0	0.63285	0.64293	0.61174	0.56514	0.69200	0.74954	0.91054	0.92936	0.86822	0.94613
3300.0	1.01979	0.91621	0.92310	0.90261	0.89150	0.94652	0.83569	0.78694	0.87166	0.92917
3400.0	1.00094	0.95049	0.97754	1.02545	0.85555	0.92070	0.96222	0.95396	0.91676	0.89647
3500.0	1.00000	1.01068	0.93818	0.96352	1.08043	1.06633	0.96565	0.80662	0.71269	0.82062
3600.0	0.99928	0.84387	0.88403	0.94618	0.94882	0.98149	1.12949	1.09168	1.01367	1.04287
3700.0	1.08726	1.02189	0.96567	0.86298	0.77712	0.81119	0.91853	0.98500	1.14665	0.98105
3800.0	0.92110	0.98572	0.74536	0.58182	0.67084	0.83837	0.77916	0.79734	0.77407	0.83776
3900.0	0.95978	1.02363	0.94038	0.55316	0.61805	0.95584	0.82781	0.58296	1.01677	1.22972
4000.0	1.25279									

Table VIII-100

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/19/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 20.52.25 ON 4/19/74, NORMALIZING FACTOR = 2.4338E 01									
2600.0	0.00005	0.00005	0.00005	0.00007	0.00006	0.00005	0.00005	0.00006	0.00005	0.00006
2700.0	0.00006	0.00005	0.00006	0.00005	0.00007	0.00006	0.00006	0.00006	0.00006	0.00006
2800.0	0.00007	0.00006	0.00006	0.00006	0.00007	0.00006	0.00006	0.00007	0.00007	0.00007
2900.0	0.00009	0.00013	0.00015	0.00026	0.00074	0.00541	0.00529	0.00487	0.00884	0.01464
3000.0	0.02129	0.03325	0.04884	0.08873	0.11134	0.15293	0.16982	0.22529	0.27670	0.27419
3100.0	0.32250	0.46068	0.47113	0.52279	0.55916	0.57685	0.54920	0.70373	0.67126	0.70776
3200.0	0.78804	0.78676	0.74494	0.74378	0.82821	0.90061	1.08551	1.10037	1.02338	1.12959
3300.0	1.19818	1.06734	1.07644	1.04733	1.03139	1.07252	0.96338	0.89428	0.98064	1.02762
3400.0	1.09630	1.01741	1.03876	1.05250	0.85760	0.94904	0.95943	0.95719	0.92486	0.90070
3500.0	1.00000	0.99509	0.93200	0.96573	1.07088	1.04489	0.93409	0.78664	0.69320	0.81365
3600.0	0.94921	0.81543	0.86257	0.91347	0.90821	0.93741	1.07351	1.03899	0.96008	1.00371
3700.0	1.00785	0.96261	0.89999	0.81564	0.73568	0.78828	0.86682	0.93808	1.07365	0.90183
3800.0	0.88037	0.91879	0.88653	0.54934	0.63544	0.77808	0.73546	0.75226	0.73171	0.80002
3900.0	0.89382	0.95264	0.85957	0.49623	0.60661	0.89262	0.76239	0.56529	0.95327	1.12701
4000.0	1.16073									
	ZENITH SCAN STARTING AT 20.54.10 ON 4/19/74, NORMALIZING FACTOR = 2.3553E 01									
2600.0	0.00009	0.00009	0.00009	0.00010	0.00012	0.00010	0.00010	0.00010	0.00010	0.00011
2700.0	0.00013	0.00011	0.00012	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013
2800.0	0.00016	0.00014	0.00014	0.00014	0.00015	0.00016	0.00016	0.00016	0.00016	0.00017
2900.0	0.00019	0.00020	0.00024	0.00035	0.00059	0.00122	0.00244	0.00456	0.00812	0.01375
3000.0	0.02047	0.03344	0.04889	0.08800	0.11358	0.15336	0.16916	0.22739	0.27953	0.28001
3100.0	0.32619	0.47156	0.48308	0.53084	0.57322	0.59247	0.55819	0.72695	0.69292	0.72728
3200.0	0.81077	0.81900	0.78151	0.73550	0.86389	0.92746	1.09597	1.11271	1.03306	1.13620
3300.0	1.20925	1.08038	1.08762	1.05881	1.03456	1.09504	0.96950	0.89742	0.98643	1.03220
3400.0	1.09520	1.02128	1.03841	1.06090	0.87004	0.92522	0.95195	0.95966	0.92097	0.90261
3500.0	1.00000	1.00512	0.92930	0.95140	1.07381	1.05437	0.95052	0.79857	0.70693	0.81729
3600.0	0.97390	0.83040	0.86379	0.92022	0.92345	0.94322	1.10028	1.06056	0.98329	1.01868
3700.0	1.04481	0.98340	0.93235	0.84161	0.76376	0.82162	0.90072	0.95901	1.11925	0.96512
3800.0	0.89638	0.94162	0.71214	0.55343	0.62303	0.78753	0.74356	0.75956	0.73435	0.79110
3900.0	0.90032	0.96159	0.87596	0.52052	0.58969	0.87689	0.78701	0.54865	0.91661	1.10985
4000.0	1.14616									
	ZENITH SCAN STARTING AT 20.56.31 ON 4/19/74, NORMALIZING FACTOR = 3.1214E 01									
2600.0	0.00008	0.00008	0.00009	0.00009	0.00012	0.00009	0.00009	0.00010	0.00009	0.00009
2700.0	0.00010	0.00010	0.00010	0.00010	0.00011	0.00010	0.00011	0.00011	0.00011	0.00011
2800.0	0.00011	0.00012	0.00013	0.00013	0.00012	0.00014	0.00013	0.00013	0.00016	0.00017
2900.0	0.00016	0.00018	0.00026	0.00048	0.00098	0.00251	0.00524	0.00907	0.01485	0.02209
3000.0	0.02718	0.02698	0.03461	0.09434	0.08176	0.11128	0.12318	0.16204	0.20232	0.20135
3100.0	0.23102	0.34409	0.34969	0.38318	0.41290	0.42506	0.39728	0.51770	0.49897	0.51821
3200.0	0.57386	0.58416	0.55307	0.52967	0.62073	0.68535	0.86288	0.93400	0.89845	1.05767
3300.0	1.19126	1.08164	1.12688	1.13790	1.15575	1.25164	1.12550	1.06915	1.20690	1.28781
3400.0	1.39573	1.30712	1.33714	1.37275	1.09950	1.15779	1.13121	1.07962	0.99255	0.93472
3500.0	1.00000	0.98653	0.91977	0.95188	1.05560	1.00587	0.84536	0.69177	0.60759	0.68481
3600.0	0.82174	0.68832	0.70581	0.74678	0.73762	0.75040	0.85145	0.80598	0.73287	0.74493
3700.0	0.75963	0.70850	0.65834	0.56728	0.52908	0.54864	0.61715	0.66507	0.76434	0.64631
3800.0	0.61247	0.64855	0.49377	0.37532	0.42725	0.52434	0.49112	0.49740	0.48170	0.51414
3900.0	0.59055	0.63165	0.56080	0.33729	0.36727	0.58423	0.50553	0.35566	0.61970	0.73386
4000.0	0.75573									
	ZENITH SCAN STARTING AT 21. 0.21 ON 4/19/74, NORMALIZING FACTOR = 1.5518E 01									
2600.0	0.00012	0.00012	0.00012	0.00012	0.00012	0.00014	0.00012	0.00012	0.00012	0.00013
2700.0	0.00014	0.00013	0.00014	0.00014	0.00015	0.00015	0.00015	0.00016	0.00014	0.00016
2800.0	0.00017	0.00016	0.00016	0.00016	0.00016	0.00017	0.00017	0.00017	0.00017	0.00018
2900.0	0.00029	0.00028	0.00028	0.00039	0.00067	0.00128	0.00262	0.00442	0.00800	0.01363
3000.0	0.01931	0.03277	0.04707	0.08581	0.11016	0.14259	0.15746	0.21151	0.26083	0.26237
3100.0	0.30523	0.43994	0.45371	0.49908	0.53538	0.55794	0.52908	0.68353	0.65878	0.69673
3200.0	0.77529	0.78318	0.74425	0.70078	0.82256	0.89465	1.10437	1.11199	1.02562	1.12446
3300.0	1.20208	1.06876	1.06944	1.03706	1.00906	1.06759	0.94208	0.87428	0.95751	1.00875
3400.0	1.07454	1.01124	1.02797	1.05180	0.86879	0.93394	0.96302	0.96292	0.92103	0.90528
3500.0	1.00000	1.00331	0.93302	0.96244	1.07570	1.06119	0.95933	0.80436	0.71248	0.80281
3600.0	0.91533	0.80918	0.83424	0.89542	0.89223	0.92596	1.05968	1.02400	0.95502	0.97578
3700.0	1.01902	0.95229	0.89392	0.81342	0.73395	0.78269	0.86035	0.91664	1.06057	0.91064
3800.0	0.85133	0.91238	0.70030	0.54152	0 61530	0.76546	0.70557	0.72337	0.69619	0.75850
3900.0	0.86128	0.91068	0.82942	0.50849	0.56068	0.82956	0.73424	0.49101	0.86908	1.03869
4000.0	1.07153									
	ZENITH SCAN STARTING AT 21. 2.42 ON 4/19/74, NORMALIZING FACTOR = 1.3437E 02									
2600.0	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
2700.0	0.00002	0.00001	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
2800.0	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
2900.0	0.00002	0.00002	0.00003	0.00004	0.00007	0.00014	0.00059	0.00059	0.00094	0.00151
3000.0	0.00219	0.00351	0.00470	0.00879	0.01107	0.01506	0.01668	0.02199	0.02717	0.02707
3100.0	0.03151	0.04614	0.04697	0.05195	0.05580	0.05752	0.05463	0.07049	0.06776	0.07141
3200.0	0.07920	0.07986	0.07454	0.07059	0.08107	0.08672	0.10422	0.10614	0.09845	0.10914
3300.0	0.11664	0.10377	0.10653	0.10729	0.11011	0.21311	0.32883	0.33909	0.46424	0.53909
3400.0	0.64756	0.59789	0.58156	0.61666	0.58828	0.59729	0.61736	0.73955	0.87864	0.93319
3500.0	1.00000	0.98894	0.98878	1.26639	1.61498	0.95668	7.05007	0.64846	0.50292	0.45634
3600.0	0.39303	0.21437	0.17047	0.17017	0.16564	0.16969	0.19223	0.18060	0.16441	0.16428
3700.0	0.16560	0.15348	0.14504	0.12612	0.11029	0.11744	0.12963	0.13604	0.15669	0.13344
3800.0	0.12367	0.13005	0.10005	0.07548	0.08291	0.10673	0.10000	0.10237	0.09767	0.10347
3900.0	0.11181	0.11967	0.10886	0.08607	0.06856	0.10686	0.09371	0.06200	0.11081	0.13183
4000.0	0.13599									
	ZENITH SCAN STARTING AT 21. 6.16 ON 4/19/74, NORMALIZING FACTOR = 1.4550E 01									
2600.0	0.00009	0.00012	0.00011	0.00010	0.00010	0.00011	0.00011	0.00012	0.00012	0.00013
2700.0	0.00011	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.00014	0.00013	0.00013
2800.0	0.00014	0.00013	0.00013	0.00014	0.00017	0.00018	0.00016	0.00016	0.00016	0.00017
2900.0	0.00019	0.00021	0.00025	0.00040	0.00059	0.00112	0.00229	0.00390	0.00717	0.01225
3000.0	0.01771	0.03052	0.04474	0.08428	0.10599	0.14415	0.16122	0.21446	0.27086	0.27329
3100.0	0.31567	0.46745	0.48184	0.53075	0.57568	0.59306	0.55254	0.73556	0.71451	0.74007
3200.0	0.82038	0.83199	0.78550	0.73746	0.85178	0.91664	1.12916	1.16350	1.06684	1.18111
3300.0	1.27061	1.12126	1.13425	1.10934	1.08007	1.14372	1.02364	0.93927	1.02989	1.07343
3400.0	1.09656	1.04395	1.05739	1.07368	0.89535	0.94440	0.95933	0.95956	0.92164	0.91177
3500.0	1.00000	1.00580	0.92898	0.93904	1.05330	1.03965	0.93967	0.78243	0.70087	0.79428
3600.0	0.96168	0.81550	0.85255	0.96635	0.90231	0.92083	1.05136	1.01665	0.93914	0.96066
3700.0	1.00387	0.93757	0.89230	0.79452	0.71020	0.73891	0.83113	0.88930	1.02495	0.88303
3800.0	0.82382	0.88605	0.67649	0.51916	0.58183	0.74254	0.68817	0.69684	0.67643	0.73147
3900.0	0.83153	0.87816	0.80363	0.47525	0.51344	0.79549	0.69965	0.45992	0.80891	0.96971
4000.0	0.99845									

Table VIII-101

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/19/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	SOLAR SCAN STARTING AT 21.12. 9 ON 4/19/74. NORMALIZING FACTOR = 1.0706E 03									
2600.0	0.00007	0.00007	0.00007	0.00008	0.00011	0.00009	0.00009	0.00009	0.00009	0.00010
2700.0	0.00010	0.00010	0.00011	0.00011	0.00011	0.00012	0.00012	0.00013	0.00013	0.00013
2800.0	0.00014	0.00014	0.00015	0.00015	0.00016	0.00017	0.00017	0.00018	0.00019	0.00019
2900.0	0.00020	0.00021	0.00023	0.00026	0.00030	0.00045	0.00081	0.00145	0.00277	0.00494
3000.0	0.00786	0.01433	0.02237	0.04428	0.05747	0.08069	0.09182	0.12429	0.15956	0.16262
3100.0	0.18957	0.28905	0.29806	0.33222	0.36421	0.37925	0.35832	0.47960	0.46816	0.48857
3200.0	0.54762	0.56315	0.53895	0.51493	0.60354	0.66333	0.81523	0.84828	0.79449	0.88098
3300.0	0.96744	0.86112	0.87445	0.86279	0.85389	0.90658	0.81115	0.76471	0.84996	0.90168
3400.0	0.97727	0.92157	0.94351	0.97924	0.80572	0.87979	0.91277	0.92476	0.89393	0.88613
3500.0	1.00000	1.02089	0.95235	0.98509	1.11860	1.11374	1.01677	0.85381	0.76488	0.87733
3600.0	1.09103	0.93093	0.98214	1.04981	1.06111	1.09317	1.28628	1.25223	1.17586	1.21141
3700.0	1.27350	1.19702	1.16548	1.09005	0.98429	0.99450	1.13444	1.24025	1.43041	1.23219
3800.0	1.17523	1.26468	0.95043	0.75333	0.85559	1.11672	1.04876	1.08055	1.05498	1.17101
3900.0	1.33511	1.42919	1.32373	0.73406	0.86940	1.37531	1.22672	0.80505	1.46732	1.79143
4000.0	1.86659									
	ZENITH SCAN STARTING AT 21.14.30 ON 4/19/74. NORMALIZING FACTOR = 1.5556E 01									
2600.0	0.00073	0.00073	0.00074	0.00072	0.00073	0.00073	0.00073	0.00075	0.00077	0.00075
2700.0	0.00076	0.00078	0.00077	0.00078	0.00079	0.00079	0.00080	0.00081	0.00081	0.00081
2800.0	0.00082	0.00083	0.00083	0.00084	0.00084	0.00085	0.00086	0.00087	0.00087	0.00087
2900.0	0.00088	0.00090	0.00094	0.00103	0.00124	0.00607	0.00426	0.00565	0.00846	0.01299
3000.0	0.01831	0.02926	0.04254	0.07447	0.09661	0.13373	0.14898	0.20620	0.25292	0.25565
3100.0	0.30954	0.44085	0.45927	0.51387	0.55428	0.57653	0.55645	0.72077	0.68492	0.72532
3200.0	0.80550	0.81173	0.76495	0.76696	0.85947	0.92528	1.12382	1.13335	1.05221	1.16519
3300.0	1.22407	1.09356	1.10223	1.06554	1.04569	1.09859	0.95978	0.90812	0.99197	1.03755
3400.0	1.09568	1.02128	1.04234	1.05442	0.85946	0.93087	0.94787	0.94890	0.91414	0.90250
3500.0	1.00000	0.99810	0.92451	0.95774	1.06578	1.04326	0.94605	0.79757	0.70396	0.82185
3600.0	0.95316	0.83004	0.86827	0.92654	0.93330	0.98911	1.12151	1.08324	1.00164	1.03895
3700.0	1.05567	0.98649	0.92192	0.82844	0.75343	0.79353	0.86521	0.92700	1.04796	0.87332
3800.0	0.84290	0.86367	0.66061	0.51716	0.59031	0.72409	0.69102	0.70071	0.67702	0.74478
3900.0	0.82009	0.86872	0.77930	0.40389	0.54714	0.79752	0.69757	0.49760	0.85378	1.00611
4000.0	1.05260									
	ZENITH SCAN STARTING AT 21.16.15 ON 4/19/74. NORMALIZING FACTOR = 1.3991E 01									
2600.0	0.00045	0.00032	0.00033	0.00033	0.00033	0.00033	0.00033	0.00037	0.00037	0.00038
2700.0	0.00034	0.00035	0.00035	0.00035	0.00036	0.00036	0.00036	0.00036	0.00037	0.00038
2800.0	0.00038	0.00038	0.00037	0.00038	0.00038	0.00038	0.00037	0.00039	0.00040	0.00039
2900.0	0.00040	0.00041	0.00042	0.00054	0.00072	0.00119	0.00351	0.00577	0.00735	0.01131
3000.0	0.01664	0.02782	0.03892	0.07104	0.09277	0.12592	0.14123	0.19008	0.23755	0.23947
3100.0	0.28355	0.41652	0.43002	0.47568	0.51613	0.53371	0.50822	0.67292	0.64366	0.67843
3200.0	0.75785	0.76071	0.71772	0.67867	0.78503	0.85797	1.05676	1.07280	0.98969	1.10699
3300.0	1.17570	1.04100	1.05331	1.02428	1.00376	1.06341	0.94500	0.87496	0.96263	1.01012
3400.0	1.07683	1.00053	1.02315	1.03636	0.86043	0.92098	0.94002	0.94452	0.91067	0.89773
3500.0	1.00000	0.99361	0.92649	0.94546	1.06104	1.03966	0.93419	0.78606	0.69629	0.81060
3600.0	0.96985	0.82814	0.86472	0.91204	0.91455	0.95444	1.08389	1.04355	0.96175	0.99792
3700.0	1.03009	0.97479	0.91584	0.80030	0.73978	0.77430	0.86715	0.94313	1.07706	0.91996
3800.0	0.87574	0.92937	0.69794	0.55080	0.62874	0.77399	0.72953	0.74695	0.72642	0.80108
3900.0	0.84182	0.95100	0.84794	0.51631	0.57107	0.87176	0.74388	0.52714	0.92091	1.09145
4000.0	1.12645									
	ZENITH SCAN STARTING AT 21.18.36 ON 4/19/74. NORMALIZING FACTOR = 1.4546E 01									
2600.0	0.00023	0.00024	0.00025	0.00024	0.00025	0.00026	0.00026	0.00027	0.00025	0.00024
2700.0	0.00024	0.00025	0.00027	0.00025	0.00025	0.00025	0.00027	0.00026	0.00026	0.00027
2800.0	0.00027	0.00028	0.00028	0.00027	0.00028	0.00031	0.00028	0.00028	0.00029	0.00030
2900.0	0.00030	0.00032	0.00035	0.00041	0.00063	0.00111	0.00216	0.00408	0.00715	0.01230
3000.0	0.01948	0.03339	0.04929	0.09413	0.12311	0.17095	0.19031	0.25295	0.32108	0.32592
3100.0	0.37244	0.54665	0.55538	0.61003	0.66280	0.68965	0.62683	0.78813	0.75796	0.79002
3200.0	0.86042	0.87672	0.81521	0.76436	0.88866	0.95331	1.15034	1.17820	1.08363	1.16914
3300.0	1.26691	1.11722	1.12251	1.10096	1.07280	1.12653	0.99052	0.92358	1.00360	1.05306
3400.0	1.12444	1.05144	1.05325	1.07759	0.88147	0.94101	0.96634	0.97112	0.92740	0.91265
3500.0	1.00000	1.00797	0.92912	0.94231	1.02795	1.02136	0.91497	0.76658	0.67976	0.75815
3600.0	0.91655	0.78794	0.81011	0.86312	0.86339	0.88325	1.03329	0.99335	0.92527	0.95642
3700.0	0.98808	0.91769	0.86378	0.77695	0.69532	0.74057	0.82113	0.87562	0.99592	0.85281
3800.0	0.80646	0.86893	0.65438	0.50944	0.56702	0.72063	0.67665	0.69432	0.67344	0.71654
3900.0	0.81425	0.86058	0.79273	0.47348	0.51216	0.78314	0.69757	0.46672	0.81261	0.97140
4000.0	0.99964									
	ZENITH SCAN STARTING AT 21.20.25 ON 4/19/74. NORMALIZING FACTOR = 1.1220E 01									
2600.0	0.00017	0.00017	0.00016	0.00017	0.00016	0.00017	0.00017	0.00017	0.00019	0.00018
2700.0	0.00022	0.00020	0.00020	0.00024	0.00021	0.00018	0.00019	0.00022	0.00019	0.00019
2800.0	0.00019	0.00020	0.00020	0.00020	0.00020	0.00020	0.00019	0.00020	0.00022	0.00020
2900.0	0.00021	0.00024	0.00028	0.00038	0.00058	0.00105	0.00203	0.00948	0.00713	0.01158
3000.0	0.01669	0.02813	0.04087	0.07374	0.09645	0.13230	0.14815	0.20321	0.25110	0.25398
3100.0	0.30651	0.43899	0.45654	0.50924	0.55179	0.57603	0.55407	0.71859	0.68651	0.72573
3200.0	0.80747	0.81996	0.77375	0.73470	0.86819	0.92680	1.14340	1.15655	1.06450	1.17237
3300.0	1.25005	1.11299	1.12474	1.09151	1.06579	1.12485	0.99345	0.92261	1.01209	1.05892
3400.0	1.11942	1.04047	1.06061	1.07155	0.88472	0.94760	0.96096	0.96421	0.92721	0.90599
3500.0	1.00000	0.99732	0.92647	0.94757	1.05676	1.03163	0.92529	0.77984	0.68628	0.79762
3600.0	0.92976	0.79711	0.83184	0.88060	0.88054	0.90029	1.03529	0.99230	0.91667	0.94988
3700.0	0.96934	0.91024	0.85169	0.75904	0.69197	0.73979	0.80827	0.86597	0.98715	0.83976
3800.0	0.80110	0.83692	0.63636	0.50851	0.57893	0.70040	0.65469	0.66394	0.64171	0.70288
3900.0	0.78131	0.82841	0.73874	0.44306	0.50487	0.76090	0.64946	0.46222	0.78758	0.92677
4000.0	0.95045									
	ZENITH SCAN STARTING AT 21.22.11 ON 4/19/74. NORMALIZING FACTOR = 1.1662E 01									
2600.0	0.00017	0.00016	0.00018	0.00017	0.00017	0.00018	0.00017	0.00017	0.00019	0.00021
2700.0	0.00019	0.00017	0.00019	0.00021	0.00020	0.00022	0.00019	0.00022	0.00020	0.00019
2800.0	0.00021	0.00023	0.00021	0.00020	0.00024	0.00021	0.00021	0.00022	0.00021	0.00024
2900.0	0.00023	0.00030	0.00029	0.00037	0.00060	0.00100	0.00201	0.00332	0.00605	0.01021
3000.0	0.01521	0.02668	0.03977	0.07503	0.09771	0.13361	0.15039	0.20191	0.25422	0.25785
3100.0	0.29606	0.44490	0.46160	0.51080	0.55579	0.57654	0.54485	0.72098	0.69625	0.72752
3200.0	0.80578	0.82609	0.77778	0.72940	0.84880	0.91037	1.11565	1.15092	1.05636	1.16649
3300.0	1.26473	1.10699	1.11587	1.09144	1.05890	1.11603	0.99448	0.91531	1.00062	1.05093
3400.0	1.11792	1.03986	1.05030	1.07085	0.88523	0.94266	0.96224	0.96041	0.91783	0.90031
3500.0	1.00000	1.00742	0.93234	0.94494	1.06446	1.05212	0.95569	0.79276	0.71714	0.77916
3600.0	0.94179	0.79698	0.83147	0.88369	0.88012	0.89951	1.03375	0.99998	0.93024	0.94594
3700.0	0.97886	0.91671	0.86801	0.77780	0.69767	0.72794	0.81523	0.88076	1.00675	0.85993
3800.0	0.80911	0.85998	0.65549	0.51300	0.57330	0.70916	0.66844	0.67856	0.65598	0.70206
3900.0	0.79579	0.84361	0.77743	0.48756	0.49171	0.76917	0.69072	0.46511	0.78825	0.94955
4000.0	0.98250									

Table VIII-102

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/19/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	ZENITH SCAN STARTING AT 21.24.32 ON 4/19/74, NORMALIZING FACTOR = 1.2810E 01									
2600.0	0.00014	0.00015	0.00015	0.00015	0.00015	0.00015	0.00016	0.00015	0.00020	0.00015
2700.0	0.00016	0.00016	0.00017	0.00016	0.00016	0.00017	0.00017	0.00018	0.00023	0.00021
2800.0	0.00018	0.00019	0.00019	0.00019	0.00022	0.00021	0.00020	0.00020	0.00021	0.00021
2900.0	0.00023	0.00025	0.00029	0.00036	0.00052	0.00092	0.00169	0.00294	0.00524	0.00891
3000.0	0.01366	0.02297	0.03510	0.05777	0.09006	0.12517	0.14192	0.19129	0.24113	0.24706
3100.0	0.28665	0.42009	0.44203	0.49393	0.53737	0.56465	0.53787	0.68945	0.67422	0.71053
3200.0	0.78174	0.81189	0.76281	0.74309	0.84555	0.90889	1.10601	1.14028	1.05819	1.15219
3300.0	1.25592	1.11634	1.12541	1.00699	1.05494	1.11487	0.98617	0.91586	0.99947	1.05090
3400.0	1.11407	1.04862	1.05598	1.07874	0.88997	0.93395	0.96583	0.96337	0.91921	0.89812
3500.0	1.00000	1.00560	0.93255	0.94675	1.05172	1.03730	0.93793	0.78290	0.69164	0.76754
3600.0	0.93956	0.80476	0.81922	0.87825	0.87537	0.90073	1.02698	0.98650	0.91844	0.93270
3700.0	0.96884	0.90506	0.85376	0.76316	0.68343	0.70869	0.80029	0.85346	0.98364	0.85020
3800.0	0.79148	0.84242	0.63284	0.49839	0.55637	0.69037	0.64898	0.65992	0.62277	0.66619
3900.0	0.76210	0.80928	0.74078	0.44523	0.47632	0.73211	0.64473	0.43713	0.75704	0.90602
4000.0	0.93290									
	ZENITH SCAN STARTING AT 21.26.18 ON 4/19/74, NORMALIZING FACTOR = 1.3043E 01									
2600.0	0.00014	0.00014	0.00014	0.00014	0.00015	0.00015	0.00015	0.00015	0.00016	0.00015
2700.0	0.00016	0.00016	0.00016	0.00016	0.00016	0.00017	0.00017	0.00017	0.00018	0.00017
2800.0	0.00019	0.00018	0.00018	0.00019	0.00020	0.00021	0.00019	0.00020	0.00020	0.00020
2900.0	0.00021	0.00023	0.00025	0.00031	0.00045	0.00076	0.00146	0.00260	0.00462	0.00816
3000.0	0.01250	0.02241	0.03453	0.05726	0.09011	0.12408	0.14273	0.19105	0.23844	0.24667
3100.0	0.29373	0.42967	0.45108	0.50288	0.54904	0.57406	0.54721	0.71361	0.69246	0.72625
3200.0	0.80343	0.82725	0.77967	0.74316	0.85837	0.91577	1.12871	1.16267	1.06982	1.18066
3300.0	1.26504	1.11993	1.12753	1.00905	1.06663	1.13110	1.00248	0.92018	1.01053	1.06092
3400.0	1.12554	1.04834	1.06253	1.08367	0.89539	0.94357	0.96823	0.97559	0.93065	0.90952
3500.0	1.00000	1.01730	0.94150	0.94903	1.06483	1.05271	0.95356	0.79249	0.70967	0.78802
3600.0	0.97415	0.82567	0.84819	0.89632	0.89500	0.91244	1.05104	1.02161	0.94607	0.96759
3700.0	1.01060	0.93489	0.89269	0.79629	0.71034	0.75581	0.83723	0.89643	1.03053	0.89024
3800.0	0.84081	0.90237	0.68617	0.54371	0.57603	0.74303	0.69772	0.70737	0.68202	0.73110
3900.0	0.82987	0.87514	0.80583	0.47627	0.52037	0.79401	0.71321	0.49954	0.84142	0.98809
4000.0	1.01891									
	ZENITH SCAN STARTING AT 21.28.39 ON 4/19/74, NORMALIZING FACTOR = 1.4167E 01									
2600.0	0.00008	0.00008	0.00008	0.00010	0.00010	0.00009	0.00010	0.00009	0.00009	0.00008
2700.0	0.00009	0.00008	0.00008	0.00009	0.00010	0.00009	0.00009	0.00010	0.00010	0.00010
2800.0	0.00010	0.00010	0.00011	0.00016	0.00012	0.00010	0.00011	0.00010	0.00012	0.00011
2900.0	0.00011	0.00013	0.00018	0.00024	0.00038	0.00074	0.00149	0.00581	0.00602	0.00925
3000.0	0.01438	0.02496	0.03635	0.07215	0.09246	0.13059	0.14919	0.20169	0.25571	0.25987
3100.0	0.30743	0.45282	0.47339	0.52957	0.57320	0.60172	0.57473	0.74216	0.71876	0.76189
3200.0	0.84262	0.85772	0.80628	0.76908	0.89902	0.96576	1.16692	1.19331	1.10204	1.21331
3300.0	1.29768	1.14718	1.15755	1.02862	1.11045	1.16470	1.02212	0.95484	1.02671	1.07094
3400.0	1.12541	1.03606	1.04517	1.06349	0.86796	0.94001	0.95566	0.95127	0.91167	0.88999
3500.0	1.00000	0.99117	0.91215	0.94612	1.05120	1.03195	0.93513	0.78853	0.70054	0.79955
3600.0	0.95782	0.82004	0.86287	0.92104	0.92663	0.95496	1.10349	1.06771	0.99530	1.01678
3700.0	1.03578	0.97211	0.90711	0.81377	0.74014	0.77892	0.86304	0.92581	1.05067	0.88091
3800.0	0.84843	0.87893	0.65823	0.52374	0.59864	0.72155	0.68683	0.69438	0.66933	0.73988
3900.0	0.81045	0.85834	0.78002	0.45630	0.51752	0.77120	0.66367	0.47715	0.80335	0.95891
4000.0	0.98396									
	ZENITH SCAN STARTING AT 21.30.24 ON 4/19/74, NORMALIZING FACTOR = 1.6114E 01									
2600.0	0.00013	0.00013	0.00013	0.00012	0.00012	0.00013	0.00015	0.00012	0.00012	0.00013
2700.0	0.00013	0.00013	0.00014	0.00015	0.00013	0.00015	0.00015	0.00015	0.00015	0.00015
2800.0	0.00015	0.00015	0.00016	0.00016	0.00016	0.00017	0.00017	0.00018	0.00018	0.00018
2900.0	0.00019	0.00022	0.00023	0.00028	0.00040	0.00065	0.00127	0.00229	0.00415	0.00772
3000.0	0.01173	0.02144	0.03333	0.06549	0.08834	0.12524	0.14408	0.20030	0.25444	0.26358
3100.0	0.31490	0.46258	0.48661	0.52911	0.57516	0.60598	0.57979	0.74743	0.72655	0.76445
3200.0	0.84501	0.87705	0.82296	0.77520	0.91150	0.97445	1.17939	1.21142	1.12217	1.21403
3300.0	1.31248	1.16105	1.16294	1.03046	1.09890	1.15802	1.02233	0.94842	1.03197	1.08379
3400.0	1.14517	1.07099	1.07459	1.09697	0.89539	0.94338	0.97404	0.97435	0.93005	0.90939
3500.0	1.00000	1.01866	0.94206	0.93863	1.07695	1.06343	0.96172	0.80481	0.71498	0.80382
3600.0	0.99280	0.84237	0.87232	0.93940	0.94140	0.95591	1.10971	1.07794	0.97283	0.98040
3700.0	1.01474	0.94600	0.89214	0.79631	0.71600	0.74676	0.84057	0.89280	1.01877	0.88272
3800.0	0.82090	0.87230	0.66492	0.51580	0.57917	0.72237	0.67548	0.68745	0.66288	0.71541
3900.0	0.80273	0.84779	0.78204	0.48055	0.49403	0.76743	0.69256	0.48385	0.78947	0.94752
4000.0	0.97905									
	ZENITH SCAN STARTING AT 21.32.13 ON 4/19/74, NORMALIZING FACTOR = 1.6217E 01									
2600.0	0.00012	0.00013	0.00012	0.00013	0.00013	0.00013	0.00013	0.00015	0.00014	0.00013
2700.0	0.00013	0.00014	0.00014	0.00014	0.00014	0.00015	0.00015	0.00015	0.00016	0.00015
2800.0	0.00015	0.00016	0.00019	0.00017	0.00017	0.00016	0.00017	0.00020	0.00021	0.00020
2900.0	0.00020	0.00022	0.00024	0.00029	0.00037	0.00062	0.00113	0.00197	0.00377	0.00656
3000.0	0.01043	0.01914	0.02863	0.05917	0.07996	0.11269	0.13038	0.17695	0.23046	0.23704
3100.0	0.27743	0.42114	0.44251	0.49150	0.53824	0.56325	0.53289	0.70094	0.69146	0.72639
3200.0	0.80747	0.83291	0.78315	0.74137	0.86542	0.93152	1.13754	1.18156	1.08715	1.20012
3300.0	1.29878	1.13950	1.14849	1.12175	1.08879	1.15160	1.02641	0.94350	1.03482	1.09063
3400.0	1.16150	1.08297	1.09051	1.07660	0.88644	0.94238	0.97242	0.97391	0.93199	0.90985
3500.0	1.00000	1.00978	0.93355	0.94930	1.06349	1.04459	0.94585	0.79549	0.70296	0.78665
3600.0	0.94970	0.81349	0.84443	0.89963	0.90273	0.91891	1.05729	1.02528	0.94833	0.97722
3700.0	1.01244	0.94597	0.89187	0.80660	0.72475	0.75796	0.84923	0.89981	1.04119	0.89851
3800.0	0.84936	0.89224	0.68902	0.52950	0.58814	0.74738	0.69919	0.71069	0.68821	0.73988
3900.0	0.84134	0.89290	0.80840	0.48592	0.52056	0.81727	0.72131	0.48751	0.80725	0.98641
4000.0	1.01996									
	ZENITH SCAN STARTING AT 21.34.34 ON 4/19/74, NORMALIZING FACTOR = 1.4953E 01									
2600.0	0.00012	0.00013	0.00017	0.00014	0.00013	0.00013	0.00013	0.00013	0.00015	0.00015
2700.0	0.00016	0.00015	0.00014	0.00014	0.00015	0.00015	0.00015	0.00015	0.00016	0.00016
2800.0	0.00016	0.00017	0.00017	0.00017	0.00018	0.00017	0.00018	0.00019	0.00020	0.00019
2900.0	0.00020	0.00022	0.00027	0.00032	0.00039	0.00062	0.00116	0.00194	0.00353	0.00618
3000.0	0.00944	0.01734	0.02690	0.05442	0.07449	0.10588	0.12267	0.16937	0.21691	0.22485
3100.0	0.26832	0.39478	0.42085	0.47543	0.52253	0.55472	0.52747	0.67338	0.64437	0.68319
3200.0	0.75097	0.78456	0.73763	0.69942	0.81887	0.88064	1.07112	1.10847	1.02569	1.11385
3300.0	1.21415	1.07423	1.07661	24.07552	1.30429	1.07689	0.95383	0.88728	0.97009	1.02617
3400.0	1.09352	1.03204	1.04075	1.06697	0.88425	0.92644	0.95985	0.96384	0.92481	0.90993
3500.0	1.00000	1.01262	0.92698	0.94271	1.04899	1.02700	0.92608	0.77369	0.68111	0.76341
3600.0	0.92263	0.79336	0.81899	0.88180	0.88147	0.89887	1.04203	1.01303	0.94568	0.96343
3700.0	1.00929	0.93484	0.88061	0.79202	0.71741	0.74220	0.83607	0.89632	1.03553	0.88810
3800.0	0.83043	0.88207	0.66891	0.52538	0.58839	0.72868	0.69023	0.70455	0.67829	0.72034
3900.0	0.82348	0.87256	0.80342	0.48355	0.50665	0.80143	0.71106	0.49062	0.81951	0.98962
4000.0	1.01861									

Table VIII-103

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/19/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 21.36.20 ON 4/19/74, NORMALIZING FACTOR = 1.2635E 01										
2600.0	0.00013	0.00013	0.00013	0.00015	0.00014	0.00013	0.00013	0.00015	0.00016	0.00014
2700.0	0.00015	0.00014	0.00016	0.00015	0.00017	0.00017	0.00016	0.00017	0.00016	0.00016
2800.0	0.00019	0.00019	0.00018	0.00019	0.00017	0.00031	0.00017	0.00017	0.00018	0.00019
2900.0	0.00019	0.00021	0.00028	0.00033	0.00042	0.00068	0.00120	0.00210	0.00368	0.00658
3000.0	0.01000	0.01783	0.02797	0.05523	0.07418	0.10674	0.12360	0.17188	0.21795	0.22584
3100.0	0.26859	0.39729	0.42065	0.47190	0.51534	0.54331	0.51981	0.67369	0.65231	0.69027
3200.0	0.76558	0.79337	0.74803	0.70700	0.83551	0.89717	1.10306	1.13088	1.04539	1.15144
3300.0	1.23541	1.09538	1.10872	1.08343	1.05153	1.11740	0.99156	0.91163	1.00329	1.05610
3400.0	1.12571	1.04938	1.06441	1.04128	0.91105	0.96778	0.99136	0.98365	0.92433	0.89901
3500.0	1.00000	1.00737	0.93211	0.96397	1.05856	1.04740	0.94041	0.78642	0.70189	0.77679
3600.0	0.95951	0.81072	0.86162	0.89917	0.90014	0.91850	1.05689	1.02967	0.95110	0.97200
3700.0	1.01578	0.94936	0.90283	0.81567	0.73419	0.77251	0.86789	0.92614	1.08140	0.94067
3800.0	0.87814	0.92583	0.69730	0.53727	0.59267	0.73289	0.69230	0.71028	0.68507	0.73349
3900.0	0.83575	0.88581	0.81829	0.48101	0.51713	0.80299	0.73202	0.49684	0.83378	1.01195
4000.0	1.04769									
ZENITH SCAN STARTING AT 21.38. 5 ON 4/19/74, NORMALIZING FACTOR = 1.0752E 01										
2600.0	0.00015	0.00014	0.00017	0.00015	0.00014	0.00015	0.00017	0.00026	0.00015	0.00016
2700.0	0.00016	0.00015	0.00016	0.00017	0.00016	0.00018	0.00016	0.00018	0.00019	0.00019
2800.0	0.00020	0.00018	0.00019	0.00019	0.00020	0.00026	0.00024	0.00021	0.00021	0.00022
2900.0	0.00021	0.00024	0.00028	0.00033	0.00045	0.00071	0.00128	0.00202	0.00371	0.00626
3000.0	0.00977	0.01743	0.02582	0.05446	0.07271	0.10434	0.12158	0.16402	0.21401	0.22057
3100.0	0.25600	0.38831	0.41364	0.46489	0.51036	0.54139	0.51252	0.67360	0.66621	0.70585
3200.0	0.78147	0.81772	0.75451	0.71254	0.84034	0.90026	1.09395	1.14004	1.05051	1.14368
3300.0	1.25726	1.10695	1.11237	1.09151	1.06023	1.11865	0.99672	0.91914	1.00322	1.05725
3400.0	1.12282	1.05396	1.06046	1.08743	0.89438	0.94806	0.97839	0.97559	0.93010	0.90861
3500.0	1.00000	1.02281	0.94099	0.95878	1.07636	1.06660	0.97165	0.81443	0.72659	0.80333
3600.0	0.97091	0.83716	0.85296	0.92126	0.92400	0.94879	1.09274	1.05839	0.98619	0.99925
3700.0	1.03918	0.96779	0.92779	0.83838	0.75509	0.78742	0.88417	0.93139	1.05297	0.91647
3800.0	0.86028	0.91770	0.68930	0.54736	0.60061	0.75537	0.71375	0.73221	0.70830	0.75923
3900.0	0.85896	0.91008	0.83948	0.50372	0.51799	0.82635	0.74737	0.49634	0.84518	1.03660
4000.0	1.06780									
ZENITH SCAN STARTING AT 21.40.26 ON 4/19/74, NORMALIZING FACTOR = 9.6572E 00										
2600.0	0.00013	0.00014	0.00014	0.00015	0.00014	0.00014	0.00015	0.00014	0.00015	0.00014
2700.0	0.00015	0.00015	0.00015	0.00016	0.00016	0.00016	0.00017	0.00016	0.00017	0.00018
2800.0	0.00016	0.00017	0.00019	0.00017	0.00017	0.00023	0.00017	0.00018	0.00019	0.00019
2900.0	0.00019	0.00021	0.00024	0.00032	0.00045	0.00074	0.00132	0.00209	0.00377	0.00650
3000.0	0.00998	0.01707	0.02669	0.05284	0.07137	0.10432	0.12054	0.16635	0.21119	0.21879
3100.0	0.25976	0.38486	0.40821	0.45872	0.50429	0.53472	0.51341	0.66660	0.64801	0.68477
3200.0	0.75576	0.78691	0.74382	0.69990	0.82861	0.88834	1.09390	1.12362	1.04017	1.14104
3300.0	1.23338	1.09247	1.10088	1.07547	1.04478	1.10600	0.98113	0.90393	0.99005	1.04290
3400.0	1.10341	1.03616	1.04554	1.06924	0.87989	0.92916	0.96128	0.96592	0.92484	0.91247
3500.0	1.00000	1.00348	0.92084	0.92849	1.04371	1.02816	0.92581	0.78060	0.68869	0.77550
3600.0	0.93753	0.80389	0.82751	0.89107	0.89124	0.90128	1.03838	1.00946	0.93431	0.95192
3700.0	0.99395	0.92143	0.86971	0.79128	0.70888	0.73669	0.83217	0.87549	1.01863	0.87417
3800.0	0.82185	0.87484	0.66222	0.51645	0.56934	0.72454	0.68226	0.69422	0.67260	0.71175
3900.0	0.81166	0.86121	0.79956	0.46478	0.51550	0.78485	0.70669	0.48113	0.80289	0.98211
4000.0	1.01469									
ZENITH SCAN STARTING AT 21.42.12 ON 4/19/74, NORMALIZING FACTOR = 8.9880E 00										
2600.0	0.00016	0.00014	0.00014	0.00014	0.00014	0.00015	0.00014	0.00015	0.00015	0.00016
2700.0	0.00015	0.00019	0.00022	0.00016	0.00018	0.00017	0.00018	0.00018	0.00019	0.00017
2800.0	0.00019	0.00020	0.00018	0.00018	0.00021	0.00021	0.00023	0.00020	0.00019	0.00021
2900.0	0.00022	0.00024	0.00028	0.00034	0.00048	0.00076	0.00133	0.00218	0.00378	0.00651
3000.0	0.00953	0.01696	0.02580	0.05105	0.06968	0.09958	0.11508	0.15715	0.20486	0.21261
3100.0	0.24825	0.37771	0.39969	0.44740	0.49358	0.52026	0.49443	0.65658	0.64725	0.68139
3200.0	0.75479	0.79043	0.74437	0.70394	0.82695	0.88598	1.08741	1.10998	1.02413	1.12156
3300.0	1.23196	1.07805	1.09025	1.06925	1.03166	1.09692	0.98187	0.89667	0.98206	1.04053
3400.0	1.10698	1.03206	1.03905	1.06312	0.88684	0.93422	0.96173	0.96288	0.91837	0.89934
3500.0	1.00000	1.00996	0.93308	0.94014	1.05722	1.04235	0.95320	0.79156	0.69791	0.77382
3600.0	0.96582	0.82095	0.85106	0.90935	0.90992	0.92709	1.06374	1.03915	0.96334	0.97649
3700.0	1.02014	0.95227	0.90801	0.81770	0.73627	0.77106	0.86071	0.91182	1.06341	0.91496
3800.0	0.85900	0.90804	0.67880	0.54202	0.59529	0.74756	0.70832	0.71976	0.69530	0.74241
3900.0	0.84179	0.88904	0.82486	0.48518	0.52905	0.81350	0.71652	0.49203	0.83360	1.01180
4000.0	1.04343									
ZENITH SCAN STARTING AT 21.44.36 ON 4/19/74, NORMALIZING FACTOR = 7.6106E 00										
2600.0	0.00014	0.00015	0.00018	0.00014	0.00016	0.00018	0.00016	0.00015	0.00016	0.00015
2700.0	0.00018	0.00016	0.00016	0.00017	0.00016	0.00020	0.00016	0.00017	0.00018	0.00018
2800.0	0.00019	0.00022	0.00019	0.00019	0.00018	0.00017	0.00018	0.00018	0.00022	0.00020
2900.0	0.00023	0.00023	0.00027	0.00035	0.00050	0.00083	0.00145	0.00246	0.00406	0.00675
3000.0	0.01012	0.01695	0.02681	0.05271	0.07036	0.10183	0.11823	0.16264	0.20721	0.21515
3100.0	0.25262	0.37698	0.39651	0.44793	0.49059	0.52347	0.50171	0.64408	0.63706	0.67626
3200.0	0.74181	0.78207	0.73598	0.69728	0.82541	0.88547	1.08016	1.12488	1.03790	1.13020
3300.0	1.24073	1.09553	1.10175	1.07901	1.04681	1.10781	0.98231	0.90944	0.99332	1.04958
3400.0	1.11096	1.04712	1.05373	1.08041	0.89081	0.93484	0.97362	0.97476	0.93164	0.91227
3500.0	1.00000	1.02119	0.93994	0.95118	1.07866	1.06824	0.96097	0.80111	0.71818	0.79106
3600.0	0.96279	0.82993	0.84560	0.91565	0.91538	0.92392	1.07687	1.04393	0.96972	0.98360
3700.0	1.02328	0.94987	0.90008	0.81988	0.73840	0.77556	0.86631	0.91284	1.05782	0.92017
3800.0	0.85456	0.91882	0.70027	0.54595	0.59500	0.76110	0.71275	0.72814	0.70359	0.76102
3900.0	0.85197	0.90035	0.83708	0.50153	0.52956	0.81854	0.74588	0.49746	0.84329	1.02296
4000.0	1.05539									
ZENITH SCAN STARTING AT 21.46.22 ON 4/19/74, NORMALIZING FACTOR = 7.0217E 00										
2600.0	0.00015	0.00019	0.00015	0.00020	0.00015	0.00014	0.00015	0.00016	0.00018	0.00019
2700.0	0.00015	0.00015	0.00016	0.00016	0.00015	0.00017	0.00028	0.00025	0.00017	0.00018
2800.0	0.00019	0.00019	0.00021	0.00022	0.00019	0.00022	0.00023	0.00019	0.00021	0.00022
2900.0	0.00022	0.00023	0.00027	0.00036	0.00052	0.00085	0.00150	0.00245	0.00408	0.00675
3000.0	0.01010	0.01708	0.02595	0.05110	0.06853	0.09980	0.11489	0.16001	0.20460	0.21320
3100.0	0.25051	0.37363	0.39810	0.44725	0.49380	0.52364	0.50151	0.65955	0.64594	0.68220
3200.0	0.75342	0.78931	0.74685	0.70321	0.83018	0.89044	1.10541	1.14384	1.05329	1.16710
3300.0	1.26066	1.10607	1.08789	1.08057	1.04239	1.10891	0.99383	0.90543	0.99662	1.04850
3400.0	1.11494	1.04099	1.04935	1.07439	0.89808	0.93997	0.96546	0.96659	0.92572	0.90934
3500.0	1.00000	1.01141	0.93987	0.94885	1.06212	1.04716	0.95102	0.79566	0.70455	0.78722
3600.0	0.96313	0.81983	0.84233	0.90886	0.90961	0.92212	1.05993	1.03372	0.95916	0.97653
3700.0	1.01738	0.94690	0.90565	0.81679	0.73170	0.77458	0.85815	0.90261	1.05330	0.90344
3800.0	0.84699	0.90421	0.69372	0.54412	0.59279	0.75429	0.69425	0.69760	0.68934	0.73509
3900.0	0.83445	0.88304	0.80686	0.49460	0.51841	0.80509	0.73024	0.49177	0.83648	1.00661
4000.0	1.03568									

Table VIII-104

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/19/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
				ZENITH SCAN STARTING AT 21.48. 7 ON 4/19/74, NORMALIZING FACTOR = 6.5023E 00						
2600.0	0.00014	0.00013	0.00016	0.00018	0.00017	0.00015	0.00016	0.00015	0.00015	0.00019
2700.0	0.00018	0.00019	0.00018	0.00015	0.00015	0.00016	0.00016	0.00017	0.00016	0.00022
2800.0	0.00024	0.00019	0.00018	0.00020	0.00019	0.00019	0.00020	0.00019	0.00019	0.00020
2900.0	0.00020	0.00031	0.00028	0.00035	0.00051	0.00086	0.00155	0.00240	0.00419	0.00677
3000.0	0.01007	0.01677	0.02495	0.03097	0.06781	0.09749	0.11067	0.15255	0.20144	0.20936
3100.0	0.24270	0.36450	0.38686	0.43777	0.48027	0.51202	0.48608	0.63244	0.63154	0.67079
3200.0	0.73924	0.77788	0.73060	0.69610	0.81499	0.87233	1.06325	1.11990	1.02953	1.13012
3300.0	1.23876	1.08482	1.09764	1.07927	1.04363	1.10295	0.98826	0.90810	0.99069	1.04955
3400.0	1.11556	1.04265	1.04860	1.07783	0.88887	0.93772	0.96966	0.97158	0.92673	0.90732
3500.0	1.00000	1.01797	0.93750	0.94339	1.06941	1.05589	0.96283	0.80934	0.72230	0.80210
3600.0	0.97115	0.82275	0.83327	0.90555	0.90502	0.92000	1.06770	1.03700	0.96456	0.97877
3700.0	1.01384	0.94211	0.89827	0.81113	0.73004	0.77212	0.85899	0.90561	1.05009	0.91700
3800.0	0.85176	0.90687	0.68936	0.54272	0.59958	0.74380	0.70426	0.72285	0.69836	0.74418
3900.0	0.84702	0.89411	0.83523	0.50010	0.51878	0.81467	0.74866	0.50726	0.83230	1.01744
4000.0	1.05015									
				ZENITH SCAN STARTING AT 21.50.28 ON 4/19/74, NORMALIZING FACTOR = 6.1195E 00						
2600.0	0.00014	0.00017	0.00017	0.00015	0.00017	0.00019	0.00015	0.00014	0.00016	0.00015
2700.0	0.00018	0.00016	0.00017	0.00017	0.00017	0.00015	0.00016	0.00019	0.00017	0.00018
2800.0	0.00018	0.00032	0.00020	0.00020	0.00019	0.00018	0.00019	0.00019	0.00022	0.00027
2900.0	0.00021	0.00027	0.00027	0.00036	0.00053	0.00090	0.00159	0.00252	0.00417	0.00675
3000.0	0.00999	0.01656	0.02498	0.04869	0.06486	0.09517	0.10872	0.15308	0.19796	0.20620
3100.0	0.24290	0.35597	0.38063	0.43124	0.47437	0.50629	0.48753	0.62954	0.61995	0.65937
3200.0	0.72605	0.76716	0.72318	0.68539	0.81737	0.87569	1.07317	1.11244	1.02739	1.12494
3300.0	1.22657	1.08505	1.09563	1.07509	1.04251	1.10953	0.97057	0.89819	0.97922	1.03387
3400.0	1.09436	1.02952	1.04257	1.08823	0.88411	0.93234	0.96056	0.96268	0.92246	0.90776
3500.0	1.00000	1.00598	0.93192	0.93723	1.05749	1.04333	0.93922	0.78888	0.70217	0.78246
3600.0	0.94193	0.80546	0.82170	0.88114	0.88355	0.89560	1.04018	1.00531	0.93301	0.95402
3700.0	0.99068	0.91906	0.87171	0.78836	0.71048	0.73850	0.83331	0.87897	1.01681	0.87149
3800.0	0.82654	0.86878	0.67733	0.52427	0.57851	0.72409	0.68341	0.70052	0.68127	0.73444
3900.0	0.82007	0.80986	0.76061	0.48385	0.51230	0.77891	0.70312	0.49157	0.79915	0.96965
4000.0	1.00052									
				ZENITH SCAN STARTING AT 21.52.14 ON 4/19/74, NORMALIZING FACTOR = 5.8804E 00						
2600.0	0.00019	0.00018	0.00014	0.00015	0.00018	0.00025	0.00018	0.00020	0.00015	0.00018
2700.0	0.00017	0.00017	0.00017	0.00017	0.00017	0.00015	0.00018	0.00016	0.00016	0.00018
2800.0	0.00018	0.00021	0.00018	0.00019	0.00019	0.00019	0.00022	0.00020	0.00020	0.00019
2900.0	0.00020	0.00023	0.00026	0.00035	0.00055	0.00091	0.00161	0.00248	0.00413	0.00681
3000.0	0.00991	0.01668	0.02504	0.04827	0.06530	0.09384	0.10861	0.15385	0.20134	0.20861
3100.0	0.24078	0.35419	0.37953	0.42912	0.47435	0.50171	0.47714	0.63418	0.62964	0.66370
3200.0	0.73268	0.77442	0.72844	0.68718	0.81145	0.86708	1.06867	1.11908	1.02532	1.13055
3300.0	1.23498	1.08235	1.09966	1.07919	1.04009	1.10985	0.99728	0.90766	0.99447	1.05171
3400.0	1.11677	1.04369	1.05297	1.07843	0.90005	0.94280	0.96833	0.97454	0.93007	0.91243
3500.0	1.00000	1.02005	0.94284	0.94602	1.06588	1.05501	0.96347	0.80520	0.72222	0.78335
3600.0	0.97232	0.83329	0.85372	0.91400	0.91688	0.92857	1.04354	1.02965	0.95257	0.97064
3700.0	1.01252	0.94700	0.90406	0.81420	0.73067	0.75829	0.85179	0.89786	1.04214	0.89954
3800.0	0.83544	0.88998	0.67854	0.53532	0.57702	0.73299	0.69337	0.70739	0.68789	0.71742
3900.0	0.82975	0.87853	0.80505	0.49137	0.51023	0.78586	0.72016	0.49732	0.83182	1.00619
4000.0	1.03925									
				ZENITH SCAN STARTING AT 21.54.35 ON 4/19/74, NORMALIZING FACTOR = 5.5969E 00						
2600.0	0.00018	0.00011	0.00012	0.00010	0.00011	0.00010	0.00016	0.00014	0.00009	0.00010
2700.0	0.00011	0.00011	0.00013	0.00011	0.00011	0.00011	0.00014	0.00011	0.00020	0.00012
2800.0	0.00012	0.00017	0.00019	0.00014	0.00016	0.00015	0.00028	0.00011	0.00018	0.00020
2900.0	0.00021	0.00020	0.00021	0.00032	0.00046	0.00086	0.00154	0.00256	0.00428	0.00766
3000.0	0.02145	0.01804	0.02700	0.05137	0.06856	0.09944	0.11152	0.14915	0.19060	0.19827
3100.0	0.23937	0.34934	0.37180	0.42404	0.46626	0.49736	0.48337	0.62557	0.61272	0.65904
3200.0	0.72801	0.76199	0.71747	0.69112	0.82294	0.87952	1.07466	1.10896	1.02096	1.13795
3300.0	1.22304	1.07998	1.09492	1.08978	1.04365	1.09857	0.97195	0.90703	0.99392	1.04627
3400.0	1.10806	1.04765	1.05389	1.08857	0.87349	0.93367	0.96218	0.96496	0.92503	0.90290
3500.0	1.00000	1.00666	0.92712	0.95769	1.06343	1.04404	0.93806	0.79230	0.70128	0.80848
3600.0	0.95204	0.82086	0.85048	0.90456	0.90703	0.92752	1.06446	1.02835	0.95002	0.97950
3700.0	1.00838	0.94743	0.88489	0.79262	0.72712	0.77587	0.84791	0.90332	1.03560	0.87337
3800.0	0.84959	0.88650	0.67575	0.52660	0.59563	0.73767	0.69605	0.70684	0.68624	0.73930
3900.0	0.83149	0.88543	0.80058	0.48023	0.51857	0.80435	0.67664	0.49168	0.83513	0.99970
4000.0	1.02707									
				ZENITH SCAN STARTING AT 21.56.22 ON 4/19/74, NORMALIZING FACTOR = 5.5479E 00						
2600.0	0.00022	0.00023	0.00013	0.00016	0.00015	0.00015	0.00015	0.00014	0.00017	0.00020
2700.0	0.00014	0.00015	0.00017	0.00017	0.00012	0.00024	0.00015	0.00016	0.00015	0.00016
2800.0	0.00015	0.00017	0.00021	0.00018	0.00026	0.00019	0.00018	0.00021	0.00017	0.00018
2900.0	0.00021	0.00020	0.00025	0.00040	0.00054	0.00093	0.00156	0.00239	0.00392	0.00634
3000.0	0.00921	0.01528	0.02308	0.04454	0.06005	0.08746	0.10082	0.14421	0.18805	0.19730
3100.0	0.23374	0.34535	0.37022	0.42120	0.46607	0.49793	0.48619	0.62381	0.61742	0.65371
3200.0	0.72016	0.76435	0.72063	0.67875	0.80494	0.85934	1.07210	1.11131	1.01902	1.13029
3300.0	1.22450	1.07546	1.09239	1.07431	1.03442	1.10426	0.98728	0.90159	0.98928	1.04446
3400.0	1.10606	1.03610	1.04588	1.07153	0.89552	0.93056	0.96312	0.96660	0.92613	0.91281
3500.0	1.00000	1.01315	0.93954	0.94297	1.06415	1.05122	0.95189	0.79715	0.71230	0.79400
3600.0	0.97551	0.83049	0.84892	0.91652	0.91618	0.93580	1.07487	1.04385	0.96592	0.98866
3700.0	1.02565	0.94477	0.89907	0.81034	0.72899	0.75828	0.84983	0.90419	1.04687	0.90157
3800.0	0.84429	0.89714	0.70205	0.53676	0.59168	0.74956	0.70390	0.71977	0.69628	0.75133
3900.0	0.84462	0.88930	0.82341	0.51241	0.53144	0.81580	0.73724	0.48895	0.84773	1.01656
4000.0	1.05019									
				ZENITH SCAN STARTING AT 21.58.10 ON 4/19/74, NORMALIZING FACTOR = 5.0177E 00						
2600.0	0.00015	0.00013	0.00015	0.00013	0.00015	0.00016	0.00015	0.00014	0.00015	0.00016
2700.0	0.00018	0.00017	0.00015	0.00023	0.00018	0.00015	0.00018	0.00020	0.00018	0.00037
2800.0	0.00018	0.00018	0.00017	0.00020	0.00019	0.00018	0.00017	0.00018	0.00023	0.00021
2900.0	0.00023	0.00038	0.00028	0.00034	0.00045	0.00071	0.00118	0.00190	0.00330	0.00479
3000.0	0.00813	0.01130	0.01886	0.04238	0.05409	0.07272	0.09742	0.11710	0.17172	0.20380
3100.0	0.21082	0.29596	0.38187	0.40993	0.46180	0.50566	0.51193	0.54948	0.68990	0.66481
3200.0	0.71857	0.83078	0.79968	0.75328	0.78876	0.90912	1.00703	1.21589	1.16805	1.10970
3300.0	1.33121	1.27405	1.17534	1.20340	1.14672	1.17552	1.19065	1.02062	1.02607	1.13177
3400.0	1.18445	1.21900	1.13092	1.19266	1.13636	0.95767	1.07369	1.07015	1.03155	1.02008
3500.0	1.00000	1.14355	1.07444	0.99803	1.11364	1.18137	1.11678	0.97910	0.85413	0.76076
3600.0	0.99733	0.99286	0.89514	0.98692	0.98383	0.99517	1.09465	1.17467	1.11745	1.04345
3700.0	1.13253	1.06215	1.05576	0.94868	0.83738	0.80768	0.91008	0.94572	1.08471	1.12865
3800.0	0.93792	0.99340	0.91681	0.67396	0.59461	0.77066	0.81538	0.79437	0.78636	0.77459
3900.0	0.90257	0.98819	0.91258	0.56737	0.58138	0.90416	0.82377	0.55452	0.94184	1.12412
4000.0	1.13775									

Table VIII-105

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/19/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 22. 2.18 ON 4/19/74, NORMALIZING FACTOR = 5.5973E 00										
2600.0	0.00013	0.00013	0.00013	0.00014	0.00019	0.00014	0.00016	0.00015	0.00016	0.00014
2700.0	0.00019	0.00016	0.00017	0.00016	0.00016	0.00020	0.00015	0.00017	0.00017	0.00017
2800.0	0.00016	0.00023	0.00022	0.00016	0.00021	0.00016	0.00016	0.00018	0.00018	0.00019
2900.0	0.00019	0.00028	0.00034	0.00031	0.00047	0.00080	0.00124	0.00186	0.00314	0.00505
3000.0	0.00733	0.01219	0.01810	0.03577	0.04908	0.07210	0.08450	0.12305	0.16143	0.16982
3100.0	0.20480	0.31558	0.34204	0.38939	0.43331	0.46633	0.44966	0.60443	0.59813	0.64290
3200.0	0.71010	0.75574	0.71305	0.67527	0.80813	0.85931	1.07455	1.12069	1.02415	1.14817
3300.0	1.24929	1.09074	1.11234	1.09933	1.05671	1.12931	1.02080	0.92785	1.01604	1.07392
3400.0	1.14358	1.07423	1.08271	1.10914	0.92585	0.97622	1.00165	1.00662	0.96262	0.94404
3500.0	1.00000	1.01849	0.96153	0.97184	1.08515	1.07771	0.98179	0.81721	0.73097	0.80793
3600.0	0.99103	0.85329	0.86885	0.93141	0.93037	0.95304	1.09736	1.06843	0.99805	1.01476
3700.0	1.05704	0.98168	0.94215	0.84703	0.76049	0.79139	0.88996	0.94926	1.08874	0.95296
3800.0	0.88208	0.94601	0.71644	0.56866	0.62226	0.78179	0.73691	0.75518	0.73028	0.78388
3900.0	0.88390	0.93161	0.86446	0.52835	0.55199	0.84654	0.78304	0.53208	0.87842	1.06608
4000.0	1.10357									
ZENITH SCAN STARTING AT 22. 4. 3 ON 4/19/74, NORMALIZING FACTOR = 8.6215E 00										
2600.0	0.00015	0.00013	0.00013	0.00013	0.00021	0.00015	0.00015	0.00015	0.00015	0.00016
2700.0	0.00027	0.00016	0.00018	0.00020	0.00021	0.00019	0.00020	0.00018	0.00019	0.00019
2800.0	0.00021	0.00022	0.00019	0.00021	0.00021	0.00022	0.00022	0.00023	0.00024	0.00023
2900.0	0.00023	0.00024	0.00028	0.00041	0.00051	0.00061	0.00100	0.00145	0.00247	0.00396
3000.0	0.00593	0.01072	0.01668	0.03582	0.05051	0.07711	0.09497	0.13683	0.18755	0.20073
3100.0	0.24361	0.38192	0.42145	0.47301	0.55715	0.61142	0.59358	0.81161	0.81900	0.90538
3200.0	1.01981	1.10981	1.06813	1.04732	1.28226	1.37666	1.75899	1.88557	1.73415	1.92845
3300.0	2.15136	1.88360	1.90813	1.88508	1.75415	1.86643	1.67204	1.52150	1.66509	1.75515
3400.0	1.85324	1.72439	1.70802	1.70329	1.32362	1.28456	1.24222	1.15913	1.03577	0.96316
3500.0	1.00000	0.99405	0.90449	0.90694	1.02439	1.00936	0.91080	0.75870	0.66890	0.74295
3600.0	0.92360	0.78243	0.80732	0.87099	0.87205	0.88754	1.03299	1.00341	0.93320	0.95301
3700.0	1.00292	0.93284	0.84432	0.80026	0.72452	0.78806	0.85656	0.90845	1.06638	0.92608
3800.0	0.86254	0.90407	0.69967	0.55145	0.60502	0.77438	0.73189	0.75343	0.73549	0.79394
3900.0	0.90852	0.97064	0.89911	0.55365	0.60804	0.91169	0.83020	0.54880	0.97723	1.17080
4000.0	1.21750									
SOLAR SCAN STARTING AT 22. 6.24 ON 4/19/74, NORMALIZING FACTOR = 8.2135E 02										
2600.0	0.00008	0.00009	0.00008	0.00009	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010
2700.0	0.00010	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	0.00012	0.00013	0.00013
2800.0	0.00013	0.00014	0.00014	0.00014	0.00014	0.00015	0.00015	0.00016	0.00016	0.00017
2900.0	0.00018	0.00018	0.00019	0.00019	0.00020	0.00021	0.00022	0.00025	0.00032	0.00051
3000.0	0.00085	0.00186	0.00355	0.00857	0.01336	0.02400	0.03115	0.04997	0.07018	0.07841
3100.0	0.10220	0.15944	0.18018	0.21443	0.24530	0.27544	0.27134	0.36864	0.36818	0.40500
3200.0	0.45386	0.49189	0.47121	0.45173	0.55992	0.59671	0.76292	0.80143	0.74307	0.83928
3300.0	0.92570	0.82160	0.84716	0.84042	0.82148	0.89192	0.79840	0.74270	0.82998	0.88728
3400.0	0.95443	0.90652	0.93374	0.96433	0.81071	0.86979	0.90668	0.92329	0.89323	0.89194
3500.0	1.00000	1.02675	0.95860	0.98209	1.12216	1.10314	1.00984	0.84039	0.75019	0.84903
3600.0	1.07969	0.91693	0.96746	1.04384	1.05105	1.06983	1.26333	1.23384	1.14749	1.18817
3700.0	1.24909	1.17537	1.13390	1.04712	0.92325	0.97308	1.12078	1.19740	1.42058	1.21109
3800.0	1.15507	1.24791	0.96554	0.73963	0.82321	1.08261	1.01882	1.05732	1.02937	1.10626
3900.0	1.28487	1.37904	1.27483	0.79129	0.80010	1.27981	1.16880	0.75908	1.35179	1.64486
4000.0	1.70811									
ZENITH SCAN STARTING AT 22.10.34 ON 4/19/74, NORMALIZING FACTOR = 5.9855E 00										
2600.0	0.00168	0.00173	0.00169	0.00168	0.00171	0.00174	0.00170	0.00174	0.00175	0.00175
2700.0	0.00179	0.00176	0.00179	0.00182	0.00181	0.00183	0.00184	0.00186	0.00187	0.00191
2800.0	0.00189	0.00191	0.00189	0.00192	0.00191	0.00192	0.00191	0.00193	0.00193	0.00196
2900.0	0.00195	0.00199	0.00201	0.00207	0.00218	0.00241	0.00283	0.00340	0.00444	0.01207
3000.0	0.01620	0.01492	0.02046	0.03571	0.04841	0.07462	0.07557	0.10774	0.14006	0.14922
3100.0	0.18689	0.27926	0.30621	0.35589	0.39709	0.43294	0.49740	0.56367	0.55612	0.60462
3200.0	0.66950	0.71398	0.67211	0.64733	0.78595	0.84651	1.03645	1.07023	0.98568	1.10300
3300.0	1.18574	1.04885	1.06898	1.04520	1.01508	1.08385	0.95494	0.88882	0.97441	1.02880
3400.0	1.04557	1.01986	1.03767	1.03438	0.86753	0.92251	0.94797	0.95511	0.91608	0.89703
3500.0	1.00000	0.99462	0.92869	0.94656	1.05742	1.04563	0.93664	0.78919	0.70220	0.78257
3600.0	0.92218	0.82805	0.86841	0.92905	0.93775	0.97642	1.11054	1.08150	1.00641	1.03636
3700.0	1.08482	1.02363	0.96633	0.87923	0.80347	0.85339	0.95501	1.02863	1.19742	1.02516
3800.0	0.98594	1.04007	0.80277	0.66672	0.71647	0.90452	0.85547	0.88211	0.86243	0.93210
3900.0	1.07560	1.15509	1.05890	0.60564	0.71951	1.10247	0.98576	0.71207	1.19442	1.44640
4000.0	1.50142									
ZENITH SCAN STARTING AT 22.12.20 ON 4/19/74, NORMALIZING FACTOR = 5.3105E 00										
2600.0	0.00086	0.00085	0.00088	0.00092	0.00086	0.00087	0.00088	0.00089	0.00087	0.00089
2700.0	0.00088	0.00090	0.00094	0.00089	0.00089	0.00090	0.00090	0.00090	0.00096	0.00103
2800.0	0.00101	0.00094	0.00098	0.00102	0.00100	0.00095	0.00096	0.00097	0.00098	0.00098
2900.0	0.00106	0.00102	0.00104	0.00114	0.00117	0.00150	0.00199	0.00268	0.00387	0.00578
3000.0	0.01340	0.01492	0.02047	0.03689	0.05044	0.07047	0.08258	0.12075	0.15563	0.15418
3100.0	0.19087	0.28414	0.30787	0.35290	0.39427	0.41413	0.41768	0.55987	0.54845	0.59559
3200.0	0.66381	0.69643	0.65956	0.63439	0.76147	0.81083	1.01983	1.04749	0.95763	1.09306
3300.0	1.16254	1.02244	1.04715	1.02404	0.99283	1.05333	0.95585	0.87927	0.96996	1.02358
3400.0	1.04506	1.01188	1.03416	1.05111	0.87213	0.93495	0.95371	0.95379	0.91536	0.89789
3500.0	1.00000	1.00264	0.93177	0.95312	1.06204	1.04684	0.94870	0.79381	0.69765	0.80387
3600.0	0.96940	0.83297	0.87181	0.91835	0.91529	0.94957	1.08734	1.05089	0.98425	1.01312
3700.0	1.03725	0.98977	0.93497	0.84160	0.76166	0.79565	0.89652	0.96688	1.09736	0.94539
3800.0	0.90024	0.95428	0.73173	0.57930	0.64740	0.81733	0.76455	0.77813	0.75838	0.80691
3900.0	0.90409	0.98418	0.90512	0.53458	0.60711	0.92776	0.81533	0.55242	0.97237	1.15267
4000.0	1.19137									
ZENITH SCAN STARTING AT 22.14. 6 ON 4/19/74, NORMALIZING FACTOR = 4.5977E 00										
2600.0	0.00060	0.00059	0.00061	0.00065	0.00063	0.00063	0.00077	0.00063	0.00065	0.00063
2700.0	0.00066	0.00063	0.00063	0.00079	0.00066	0.00062	0.00063	0.00068	0.00061	0.00065
2800.0	0.00066	0.00064	0.00067	0.00066	0.00065	0.00064	0.00065	0.00065	0.00069	0.00075
2900.0	0.00069	0.00068	0.00070	0.00083	0.00092	0.00114	0.00174	0.00227	0.00342	0.00508
3000.0	0.00707	0.01097	0.01621	0.03159	0.04237	0.06258	0.07371	0.10490	0.14001	0.14566
3100.0	0.17584	0.28048	0.30500	0.35321	0.39384	0.43065	0.41745	0.55117	0.55319	0.60290
3200.0	0.66219	0.71427	0.67552	0.65064	0.77667	0.82648	1.01823	1.07791	0.98581	1.09242
3300.0	1.26760	28.31087	1.07217	1.03997	1.02205	1.08671	0.97787	0.89705	0.97633	1.04113
3400.0	1.10638	1.04014	1.04673	1.07840	0.89349	0.93138	0.97084	0.97523	0.93193	0.91157
3500.0	1.00000	1.02215	0.94600	0.95256	1.07573	1.08402	0.96774	0.81443	0.72499	0.79635
3600.0	0.97741	0.84396	0.88330	0.93399	0.92130	0.93782	1.08475	1.05298	0.98087	0.99119
3700.0	1.02787	0.95992	0.91638	0.82665	0.74566	0.78786	0.87763	0.93404	1.07278	0.93704
3800.0	0.86788	0.92640	0.71100	0.56384	0.61461	0.77233	0.72620	0.74557	0.71846	0.77793
3900.0	0.87301	0.92123	0.85662	0.50976	0.53410	0.84782	0.77239	0.53177	0.87766	1.06185
4000.0	1.10034									

Table VIII-106

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/19/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 22.18.12 ON 4/19/74, NORMALIZING FACTOR = 4.3347E 00										
2600.0	0.00038	0.00037	0.00036	0.00041	0.00035	0.00042	0.00046	0.00036	0.00037	0.00038
2700.0	0.00037	0.00042	0.00041	0.00039	0.00041	0.00038	0.00038	0.00037	0.00039	0.00038
2800.0	0.00040	0.00039	0.00043	0.00040	0.00039	0.00046	0.00042	0.00041	0.00044	0.00045
2900.0	0.00044	0.00042	0.00047	0.00053	0.00067	0.00096	0.00146	0.00201	0.00309	0.00462
3000.0	0.00660	0.01025	0.01469	0.02877	0.03854	0.05579	0.06571	0.09547	0.12777	0.13629
3100.0	0.16933	0.26770	0.29325	0.33666	0.36996	0.40854	0.39758	0.53298	0.53783	0.58905
3200.0	0.64779	0.70076	0.66067	0.63545	0.75954	0.80742	1.00220	1.06254	0.96365	1.07634
3300.0	1.19034	1.03309	1.05849	1.04816	1.01192	1.08474	0.98571	0.89656	0.97975	1.03680
3400.0	1.10270	1.03754	1.04747	1.07021	0.88684	0.94322	0.96552	0.96670	0.92568	0.91159
3500.0	1.00000	1.01291	0.93902	0.95468	1.06112	1.05058	0.95750	0.80200	0.71342	0.79374
3600.0	0.97066	0.83846	0.85781	0.96190	0.92024	0.93823	1.09437	1.05828	0.98416	0.98663
3700.0	1.02665	0.96895	0.92492	0.86806	0.73893	0.76709	0.86295	0.91811	1.04714	0.90899
3800.0	0.84698	0.91697	0.69799	0.55034	0.60715	0.76534	0.71898	0.72944	0.70800	0.74961
3900.0	0.85857	0.90669	0.84193	0.51396	0.54544	0.84016	0.76969	0.52005	0.87255	1.05784
4000.0	1.10086									
ZENITH SCAN STARTING AT 22.20.33 ON 4/19/74, NORMALIZING FACTOR = 4.2207E 00										
2600.0	0.00038	0.00031	0.00030	0.00036	0.00036	0.00035	0.00034	0.00031	0.00030	0.00032
2700.0	0.00034	0.00031	0.00033	0.00037	0.00035	0.00034	0.00033	0.00032	0.00035	0.00038
2800.0	0.00038	0.00033	0.00034	0.00035	0.00038	0.00033	0.00036	0.00035	0.00038	0.00055
2900.0	0.00036	0.00056	0.00040	0.00049	0.00063	0.00098	0.00130	0.00197	0.00301	0.00449
3000.0	0.00632	0.00987	0.01452	0.02758	0.03738	0.05564	0.06602	0.09463	0.12721	0.13507
3100.0	0.17002	0.26269	0.29021	0.33894	0.37828	0.41714	0.40898	0.53599	0.53888	0.59215
3200.0	0.64819	0.70614	0.66314	0.63441	0.77330	0.82170	1.01153	1.07022	0.98074	1.08267
3300.0	1.20015	1.05415	1.07296	1.06003	1.02404	1.09611	0.99220	0.90903	0.98814	1.04980
3400.0	1.11491	1.05684	1.06948	1.09257	0.93103	0.94496	0.96889	0.97892	0.93752	0.92221
3500.0	1.00000	1.01873	0.95397	0.94777	1.06816	1.05360	0.95813	0.80073	0.70892	0.78765
3600.0	0.97604	0.83246	0.86159	0.91404	0.92033	0.93955	1.08109	1.05033	0.97396	0.99703
3700.0	1.04313	0.98401	0.93198	0.83705	0.75357	0.79385	0.88134	0.93047	1.07540	0.92958
3800.0	0.87083	0.93784	0.72943	0.56658	0.61473	0.78322	0.73344	0.75273	0.73183	0.77722
3900.0	0.88427	0.92808	0.86684	0.53793	0.55659	0.83905	0.77855	0.52461	0.87073	1.04931
4000.0	1.08579									
SOLAR SCAN STARTING AT 22.26.28 ON 4/19/74, NORMALIZING FACTOR = 7.1260E 02										
2600.0	0.00009	0.00009	0.00009	0.00010	0.00010	0.00010	0.00010	0.00011	0.00014	0.00013
2700.0	0.00012	0.00013	0.00013	0.00013	0.00014	0.00014	0.00015	0.00015	0.00015	0.00016
2800.0	0.00016	0.00017	0.00017	0.00018	0.00018	0.00019	0.00020	0.00020	0.00021	0.00021
2900.0	0.00022	0.00023	0.00024	0.00025	0.00026	0.00026	0.00028	0.00029	0.00031	0.00036
3000.0	0.00044	0.00070	0.00124	0.00306	0.00515	0.01033	0.01454	0.02685	0.04012	0.04778
3100.0	0.07013	0.11169	0.13310	0.16474	0.19426	0.22726	0.22959	0.31777	0.32289	0.36823
3200.0	0.41259	0.46238	0.44094	0.42863	0.53599	0.57738	0.73410	0.78636	0.72575	0.82346
3300.0	0.92266	0.81270	0.84157	0.83892	0.82064	0.89103	0.80095	0.74564	0.83016	0.89288
3400.0	0.95904	0.91278	0.93724	0.97966	0.80817	0.86815	0.91373	0.93257	0.90097	0.89595
3500.0	1.00000	1.03057	0.96221	0.99254	1.13206	1.12956	1.02907	0.86893	0.77516	0.88379
3600.0	1.10521	0.93777	0.98552	1.06923	1.07434	1.10821	1.29536	1.26711	1.17501	1.21849
3700.0	1.29212	1.21739	1.16506	1.05653	0.95275	1.01936	1.15440	1.24817	1.45623	1.24249
3800.0	1.17228	1.28689	0.95765	0.75622	0.87066	1.11770	1.04855	1.08896	1.06684	1.15400
3900.0	1.34288	1.43105	1.34369	0.78933	0.84370	1.36965	1.24590	0.79805	1.46139	1.79202
4000.0	1.87489									
ZENITH SCAN STARTING AT 22.28.14 ON 4/19/74, NORMALIZING FACTOR = 5.2998E 00										
2600.0	0.00174	0.00174	0.00179	0.00175	0.00176	0.00180	0.00179	0.00182	0.00182	0.00181
2700.0	0.00182	0.00184	0.00183	0.00188	0.00192	0.00195	0.00191	0.00196	0.00192	0.00193
2800.0	0.00193	0.00195	0.00197	0.00197	0.00197	0.00198	0.00201	0.00199	0.00198	0.00199
2900.0	0.00202	0.00206	0.00207	0.00208	0.00215	0.00230	0.00259	0.00294	0.00366	0.00483
3000.0	0.00704	0.01610	0.01458	0.02547	0.03349	0.04441	0.05314	0.07463	0.09857	0.10542
3100.0	0.12900	0.19022	0.20829	0.24173	0.27219	0.29832	0.29245	0.39635	0.39653	0.43708
3200.0	0.48757	0.51920	0.49258	0.47947	0.57910	0.61313	0.77237	0.81128	0.74440	0.86113
3300.0	0.93595	0.82213	0.85585	0.84324	0.82183	0.88716	0.79585	0.73751	0.82054	0.88100
3400.0	0.94618	0.89301	0.92120	0.95152	0.79589	0.87655	0.91774	0.93473	0.90675	0.89718
3500.0	1.00000	1.00317	0.92461	0.92833	1.01845	1.00209	0.90597	0.76346	0.67857	0.76667
3600.0	0.90469	0.77520	0.79567	0.84848	0.85131	0.86866	1.00181	0.97611	0.91455	0.93988
3700.0	0.97157	0.92421	0.87255	0.77712	0.73114	0.78493	0.86219	0.92589	1.06754	0.91406
3800.0	0.88246	0.92535	0.70144	0.56552	0.64562	0.79669	0.75903	0.77979	0.76061	0.85002
3900.0	0.94966	1.04108	0.98496	0.59351	0.69353	1.10075	0.97531	0.70639	1.23397	1.53283
4000.0	1.60968									
ZENITH SCAN STARTING AT 22.30.35 ON 4/19/74, NORMALIZING FACTOR = 4.8998E 00										
2600.0	0.00087	0.00098	0.00085	0.00086	0.00087	0.00087	0.00087	0.00086	0.00089	0.00087
2700.0	0.00088	0.00088	0.00092	0.00103	0.00092	0.00094	0.00095	0.00103	0.00092	0.00095
2800.0	0.00096	0.00097	0.00094	0.00096	0.00098	0.00114	0.00099	0.00096	0.00098	0.00095
2900.0	0.00100	0.00101	0.00103	0.00112	0.00116	0.00131	0.00162	0.00207	0.00286	0.00398
3000.0	0.00535	0.00802	0.01138	0.02242	0.03007	0.04442	0.05327	0.07720	0.10581	0.11435
3100.0	0.14552	0.23033	0.25375	0.30019	0.33952	0.37921	0.37217	0.49527	0.50280	0.55928
3200.0	0.61561	0.67519	0.63660	0.61834	0.74959	0.79415	0.98427	1.04977	0.94160	1.05185
3300.0	1.17432	1.02802	1.05015	1.03926	1.00216	1.07182	0.95967	0.88097	0.96440	1.02874
3400.0	1.08917	1.02959	1.03863	1.06749	0.88638	0.92537	0.96556	0.97243	0.93208	0.91823
3500.0	1.00000	1.01938	0.94640	0.95347	1.07924	1.06565	0.97207	0.81679	0.72667	0.81101
3600.0	0.99466	0.84599	0.86990	0.93948	0.93979	0.95531	1.09792	1.06495	0.98707	1.00348
3700.0	1.05409	0.98004	0.93078	0.84478	0.75514	0.78979	0.88412	0.93721	1.08439	0.94370
3800.0	0.87320	0.94032	0.73140	0.57431	0.61842	0.78210	0.73501	0.74936	0.72928	0.77579
3900.0	0.88230	0.93553	0.86779	0.54828	0.56386	0.86298	0.79351	0.53963	0.89552	1.09611
4000.0	1.14387									
ZENITH SCAN STARTING AT 22.32.21 ON 4/19/74, NORMALIZING FACTOR = 3.8810E 00										
2600.0	0.00065	0.00066	0.00065	0.00104	0.00065	0.00072	0.00067	0.00067	0.00071	0.00074
2700.0	0.00069	0.00071	0.00074	0.00070	0.00072	0.00069	0.00072	0.00070	0.00073	0.00072
2800.0	0.00081	0.00085	0.00078	0.00072	0.00070	0.00073	0.00071	0.00092	0.00077	0.00075
2900.0	0.00073	0.00072	0.00076	0.00079	0.00092	0.00105	0.00143	0.00181	0.00270	0.00391
3000.0	0.00525	0.00826	0.01204	0.02206	0.03090	0.04546	0.05387	0.08232	0.10907	0.11859
3100.0	0.15780	0.24071	0.27339	0.32122	0.36516	0.40844	0.40505	0.55151	0.55376	0.61657
3200.0	0.68253	0.74547	0.70889	0.68069	0.83708	0.88589	1.12533	1.18476	1.07513	1.21373
3300.0	1.31553	1.14322	1.17480	1.13255	1.10065	1.17859	1.05420	0.95109	1.03732	1.09351
3400.0	1.14933	1.07269	1.08755	1.10475	0.90722	0.95298	0.97904	0.98087	0.93542	0.91464
3500.0	1.00000	1.00497	0.93271	0.93057	1.04984	1.03714	0.93327	0.78162	0.70754	0.77683
3600.0	0.94617	0.80869	0.83499	0.89131	0.88709	0.90513	1.04910	1.01375	0.94503	0.96007
3700.0	0.99291	0.93000	0.88229	0.79555	0.71725	0.75039	0.84099	0.88947	1.01961	0.89355
3800.0	0.83401	0.89176	0.68779	0.53596	0.58951	0.73678	0.69660	0.71023	0.68829	0.73385
3900.0	0.83575	0.87938	0.81926	0.48827	0.51742	0.80690	0.74450	0.51090	0.84216	1.01333
4000.0	1.04897									

Table VIII-107

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/19/74

SOLAR SCAN STARTING AT 22.36.30 ON 4/19/74. NORMALIZING FACTOR = 6.7988E 02

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
2600.0	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010	0.00010
2700.0	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	0.00012	0.00013	0.00013
2800.0	0.00014	0.00014	0.00014	0.00014	0.00015	0.00015	0.00015	0.00016	0.00016	0.00017
2900.0	0.00017	0.00017	0.00018	0.00018	0.00019	0.00020	0.00020	0.00021	0.00022	0.00024
3000.0	0.00027	0.00035	0.00057	0.00132	0.00230	0.00508	0.00761	0.01530	0.02384	0.03109
3100.0	0.04749	0.08154	0.10024	0.12882	0.15564	0.18509	0.18882	0.26969	0.28090	0.33164
3200.0	0.36984	0.42262	0.40305	0.40102	0.50870	0.53915	0.69589	0.75425	0.68468	0.79629
3300.0	0.89244	0.77948	0.81529	0.81672	0.79664	0.86786	0.78464	0.72873	0.81287	0.87937
3400.0	0.94805	0.90088	0.92734	0.96688	0.79384	0.86135	0.90607	0.92583	0.89500	0.89089
3500.0	1.00000	1.02951	0.96269	0.98161	1.13590	1.13334	1.03391	0.87538	0.78403	0.89846
3600.0	1.11524	0.95409	0.99832	1.05921	1.07637	1.09947	1.29394	1.27058	1.17936	1.22036
3700.0	1.28613	1.21521	1.16453	1.05593	0.95202	0.99714	1.14268	1.22696	1.45393	1.24607
3800.0	1.17775	1.27133	0.98541	0.76700	0.85422	1.10118	1.04594	1.08601	1.06785	1.14775
3900.0	1.34185	1.43659	1.32391	0.78281	0.83294	1.37951	1.25083	0.83200	1.45821	1.79519
4000.0	1.87147									

Table VIII-108

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/25/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
		SOLAR SCAN STARTING AT 21.27.41 ON 4/25/74. NORMALIZING FACTOR = 2.5317E 03								
2600.0	0.00003	0.00003	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004
2700.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006
2800.0	0.00006	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00009	0.00010
2900.0	0.00013	0.00017	0.00024	0.00041	0.00078	0.00169	0.00335	0.00593	0.00995	0.01596
3000.0	0.02201	0.03339	0.04579	0.08275	0.10227	0.13584	0.14609	0.18873	0.22828	0.22308
3100.0	0.25335	0.36672	0.36905	0.40656	0.43237	0.44360	0.41367	0.53995	0.51391	0.53762
3200.0	0.60430	0.60121	0.57776	0.54990	0.63994	0.70630	0.86012	0.87942	0.82327	0.91316
3300.0	0.98810	0.88240	0.89121	0.87259	0.86622	0.91685	0.81011	0.76724	0.86132	0.91022
3400.0	0.98080	0.92231	0.95763	0.99261	0.82406	0.87693	0.90739	0.92358	0.89765	0.88576
3500.0	1.00000	1.00186	0.94410	0.97935	1.11570	1.09637	0.99286	0.83577	0.75171	0.90275
3600.0	1.06844	0.91741	0.97030	1.03251	1.03248	1.07138	1.25220	1.21658	1.13003	1.17493
3700.0	1.20139	1.14204	1.07691	0.97223	0.88998	0.96722	1.07362	1.17179	1.35251	1.14204
3800.0	1.12015	1.18843	0.88297	0.70276	0.83842	1.04298	0.98207	1.01486	0.99124	1.09515
3900.0	1.25260	1.34457	1.23361	0.70258	0.82754	1.31796	1.10488	0.79396	1.41584	1.68276
4000.0	1.72357									
		ZENITH SCAN STARTING AT 21.31.48 ON 4/25/74. NORMALIZING FACTOR = 1.6649E 01								
2600.0	0.00056	0.00056	0.00055	0.00058	0.00057	0.00057	0.00058	0.00060	0.00058	0.00058
2700.0	0.00060	0.00060	0.00059	0.00060	0.00060	0.00062	0.00063	0.00061	0.00063	0.00063
2800.0	0.00064	0.00066	0.00064	0.00063	0.00064	0.00064	0.00065	0.00065	0.00067	0.00066
2900.0	0.00071	0.00076	0.00092	0.00789	0.00816	0.00528	0.00706	0.01059	0.01628	0.02479
3000.0	0.03286	0.04527	0.06479	0.10911	0.13265	0.17434	0.18714	0.24428	0.29151	0.28559
3100.0	0.33464	0.47135	0.48006	0.53157	0.56674	0.58364	0.55895	0.71726	0.67975	0.72030
3200.0	0.80066	0.80186	0.75807	0.72718	0.85404	0.92210	1.11192	1.12098	1.03755	1.15704
3300.0	1.21881	1.08433	1.09214	1.05681	1.04091	1.08713	0.95315	0.90214	0.98739	1.03571
3400.0	1.10045	1.01429	1.03978	1.04724	0.85450	0.93592	0.94523	0.94410	0.91389	0.89475
3500.0	1.00000	0.99571	0.91974	0.93654	1.05951	1.03560	0.92800	0.77953	0.69469	0.81545
3600.0	0.93978	0.81146	0.84816	0.88913	0.89296	0.91974	1.05552	1.01187	0.93495	0.96818
3700.0	0.98010	0.93377	0.86670	0.77221	0.70593	0.76014	0.83011	0.89759	1.00770	0.85171
3800.0	0.82523	0.85976	0.63943	0.50928	0.58240	0.72328	0.67821	0.68932	0.66737	0.72293
3900.0	0.81664	0.86995	0.77701	0.49470	0.55058	0.80112	0.68869	0.48845	0.85059	0.99723
4000.0	1.02440									
		SOLAR SCAN STARTING AT 21.35.55 ON 4/25/74. NORMALIZING FACTOR = 2.7514E 03								
2600.0	0.00003	0.00003	0.00003	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004
2700.0	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006
2800.0	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008	0.00009
2900.0	0.00010	0.00012	0.00018	0.00032	0.00063	0.00148	0.00288	0.00518	0.00876	0.01424
3000.0	0.02005	0.03051	0.04213	0.07632	0.09473	0.12685	0.13713	0.17811	0.21643	0.21216
3100.0	0.24220	0.35490	0.35454	0.39180	0.41742	0.42821	0.40010	0.52444	0.50075	0.52463
3200.0	0.59065	0.58965	0.56561	0.53679	0.62484	0.69066	0.83863	0.85807	0.80464	0.89394
3300.0	0.96294	0.86011	0.87178	0.85518	0.85006	0.89704	0.79450	0.75681	0.84118	0.89020
3400.0	0.96723	0.89772	0.93106	0.96982	0.79631	0.86579	0.89166	0.91036	0.88755	0.88060
3500.0	1.00000	1.01097	0.94781	0.98760	1.10702	1.08692	0.98085	0.82961	0.73189	0.88330
3600.0	1.04231	0.89741	0.95801	1.02114	1.03147	1.06860	1.24986	1.20963	1.12494	1.17770
3700.0	1.21700	1.15191	1.08782	0.97606	0.89041	0.95852	1.08172	1.18534	1.36639	1.16836
3800.0	1.12373	1.19683	0.91069	0.71075	0.83614	1.04695	0.98931	1.02523	1.00273	1.10685
3900.0	1.26493	1.36128	1.23859	0.71603	0.84090	1.31227	1.13018	0.77506	1.40946	1.70652
4000.0	1.77752									
		ZENITH SCAN STARTING AT 21.40. 4 ON 4/25/74. NORMALIZING FACTOR = 1.6211E 01								
2600.0	0.00033	0.00042	0.00035	0.00033	0.00034	0.00035	0.00034	0.00033	0.00034	0.00034
2700.0	0.00034	0.00035	0.00036	0.00035	0.00037	0.00035	0.00036	0.00037	0.00036	0.00051
2800.0	0.00035	0.00037	0.00038	0.00038	0.00037	0.00037	0.00039	0.00037	0.00038	0.00038
2900.0	0.00037	0.00041	0.00051	0.00072	0.00118	0.00503	0.00498	0.00726	0.01229	0.01813
3000.0	0.02593	0.03794	0.05072	0.09025	0.11611	0.14968	0.16582	0.20690	0.26255	0.26540
3100.0	0.28502	0.43277	0.45054	0.49045	0.53167	0.55532	0.51838	0.66185	0.66911	0.69071
3200.0	0.75795	0.79875	0.74586	0.70271	0.80701	0.87115	1.05584	1.11396	1.02278	1.09978
3300.0	1.22506	1.07412	1.07353	1.05840	1.01622	1.07729	0.94011	0.88450	0.95959	1.01946
3400.0	1.08517	1.02664	1.02438	1.05742	0.88539	0.90157	0.94709	0.95108	0.91238	0.89901
3500.0	1.00000	0.98587	0.92025	0.94994	1.05977	1.03241	0.92531	0.78082	0.68655	0.83435
3600.0	0.96088	0.81890	0.86880	0.90954	0.91922	0.95760	1.09109	1.05676	0.98267	1.03256
3700.0	1.04739	1.00145	0.93965	0.85383	0.78267	0.85044	0.92891	1.01121	1.15344	0.98369
3800.0	0.95598	1.00161	0.75204	0.59861	0.70819	0.86146	0.80745	0.82763	0.80372	0.87902
3900.0	0.99406	1.06715	0.94471	0.55843	0.64819	1.00071	0.83524	0.61970	1.08269	1.25838
4000.0	1.29705									
		ZENITH SCAN STARTING AT 21.41.50 ON 4/25/74. NORMALIZING FACTOR = 1.3050E 01								
2600.0	0.00024	0.00024	0.00025	0.00024	0.00025	0.00024	0.00024	0.00027	0.00026	0.00026
2700.0	0.00026	0.00025	0.00025	0.00027	0.00027	0.00026	0.00028	0.00027	0.00031	0.00029
2800.0	0.00028	0.00031	0.00034	0.00029	0.00036	0.00030	0.00030	0.00030	0.00035	0.00032
2900.0	0.00035	0.00039	0.00054	0.00086	0.00151	0.00302	0.00565	0.00942	0.01527	0.02366
3000.0	0.03213	0.04878	0.06580	0.11485	0.13959	0.18252	0.19490	0.24868	0.29783	0.29160
3100.0	0.32853	0.47334	0.47875	0.52682	0.56150	0.58235	0.55078	0.70999	0.68354	0.72464
3200.0	0.80095	0.81781	0.76750	0.73561	0.86051	0.92415	1.12150	1.14553	1.05981	1.16809
3300.0	1.25507	1.11454	1.12860	1.09259	1.03891	1.10028	0.96866	0.90457	0.98886	1.03736
3400.0	1.10250	1.02918	1.04189	1.03654	0.87181	0.93845	0.94973	0.95263	0.91464	0.89668
3500.0	1.00000	0.99766	0.92800	0.94907	1.05474	1.03906	0.93619	0.77911	0.68396	0.79141
3600.0	0.94981	0.80631	0.83664	0.89168	0.89058	0.91754	1.04740	1.00551	0.93180	0.95552
3700.0	0.97576	0.92938	0.87194	0.77948	0.70484	0.74674	0.82441	0.88368	1.00935	0.87067
3800.0	0.82087	0.86548	0.65580	0.51457	0.58632	0.72195	0.68047	0.69305	0.65820	0.71310
3900.0	0.80581	0.85218	0.76963	0.49346	0.51912	0.78048	0.69065	0.46938	0.81789	0.97688
4000.0	1.01049									
		ZENITH SCAN STARTING AT 21.43.36 ON 4/25/74. NORMALIZING FACTOR = 1.4373E 01								
2600.0	0.00019	0.00019	0.00018	0.00019	0.00020	0.00020	0.00018	0.00018	0.00020	0.00019
2700.0	0.00023	0.00020	0.00021	0.00018	0.00019	0.00020	0.00022	0.00021	0.00022	0.00021
2800.0	0.00022	0.00022	0.00021	0.00021	0.00021	0.00024	0.00023	0.00021	0.00024	0.00024
2900.0	0.00026	0.00031	0.00040	0.00072	0.00128	0.00251	0.00488	0.00796	0.01335	0.02102
3000.0	0.02810	0.04450	0.06170	0.10728	0.13099	0.16902	0.18243	0.23829	0.28433	0.27738
3100.0	0.32317	0.46588	0.47468	0.52262	0.56269	0.58234	0.55430	0.71653	0.68264	0.72084
3200.0	0.79973	0.81039	0.76202	0.71896	0.84838	0.90250	1.11798	1.13151	1.04209	1.16059
3300.0	1.22640	1.08921	1.10097	1.07037	1.04320	1.10510	0.97590	0.90366	0.99673	1.04278
3400.0	1.10851	1.03092	1.04838	1.07013	0.86761	0.93426	0.95834	0.95960	0.92268	0.90019
3500.0	1.00000	1.00969	0.93606	0.95729	1.06888	1.05158	0.94965	0.79931	0.70753	0.81952
3600.0	0.96031	0.82953	0.86141	0.90890	0.89267	0.91283	1.05368	1.00941	0.93570	0.96578
3700.0	0.98956	0.92864	0.86892	0.77631	0.70215	0.74833	0.82461	0.88014	1.00713	0.86277
3800.0	0.82107	0.85751	0.64929	0.50642	0.58196	0.71653	0.67007	0.68235	0.65802	0.71293
3900.0	0.80491	0.85001	0.77070	0.48155	0.52839	0.78730	0.67182	0.48607	0.81332	0.97157
4000.0	1.00126									

Table VIII-109

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/25/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
ZENITH SCAN STARTING AT 21.45.57 ON 4/25/74. NORMALIZING FACTOR = 1.4174E 01										
2600.0	0.00017	0.00015	0.00016	0.00014	0.00015	0.00014	0.00017	0.00022	0.00016	0.00017
2700.0	0.00015	0.00017	0.00016	0.00016	0.00016	0.00021	0.00018	0.00019	0.00018	0.00032
2800.0	0.00017	0.00019	0.00019	0.00023	0.00020	0.00020	0.00019	0.00020	0.00021	0.00022
2900.0	0.00023	0.00028	0.00042	0.00068	0.00123	0.00253	0.00480	0.00789	0.01313	0.02023
3000.0	0.02784	0.04240	0.05740	0.10508	0.12696	0.16688	0.17995	0.23040	0.28297	0.27908
3100.0	0.31337	0.46422	0.47165	0.51887	0.55654	0.57451	0.53756	0.70436	0.68335	0.71668
3200.0	0.79753	0.81214	0.76309	0.72470	0.84176	0.90218	1.09881	1.13415	1.04254	1.15435
3300.0	1.24298	1.09368	1.10652	1.08290	1.05422	1.11157	0.99147	0.92261	0.99325	1.02555
3400.0	1.09952	1.02618	1.04011	1.05828	0.87299	0.93757	0.95401	0.95540	0.91651	0.89773
3500.0	1.00000	1.00333	0.92877	0.94927	1.05904	1.03724	0.93206	0.78370	0.69088	0.74203
3600.0	0.95446	0.81010	0.84484	0.87623	0.89328	0.91410	1.04566	1.01250	0.93863	0.96600
3700.0	0.97979	0.92173	0.86200	0.76728	0.70444	0.74664	0.82533	0.88271	1.00651	0.84797
3800.0	0.81760	0.87036	0.65854	0.51158	0.58164	0.72216	0.67404	0.69092	0.66692	0.71616
3900.0	0.81249	0.86257	0.78607	0.47444	0.50966	0.77788	0.69615	0.47714	0.81280	0.96809
4000.0	0.99840									
ZENITH SCAN STARTING AT 21.47.42 ON 4/25/74. NORMALIZING FACTOR = 1.3965E 01										
2600.0	0.00015	0.00015	0.00014	0.00017	0.00016	0.00014	0.00017	0.00018	0.00015	0.00014
2700.0	0.00015	0.00016	0.00015	0.00018	0.00016	0.00016	0.00018	0.00020	0.00018	0.00016
2800.0	0.00019	0.00019	0.00018	0.00018	0.00018	0.00019	0.00017	0.00018	0.00018	0.00020
2900.0	0.00023	0.00030	0.00041	0.00070	0.00133	0.00272	0.00522	0.00873	0.01410	0.02224
3000.0	0.03006	0.04621	0.06555	0.11035	0.13700	0.17784	0.19238	0.25149	0.30356	0.30086
3100.0	0.34756	0.49798	0.51033	0.54724	0.59198	0.61704	0.58578	0.74849	0.71628	0.75168
3200.0	0.83034	0.84056	0.78673	0.74432	0.87799	0.93546	1.13599	1.15470	1.06442	1.16663
3300.0	1.24344	1.10150	1.10933	1.07590	1.05034	1.11196	0.97308	0.90872	0.99177	1.04351
3400.0	1.10282	1.03027	1.04574	1.06113	0.86732	0.93969	0.95517	0.95533	0.91504	0.89460
3500.0	1.00000	1.00049	0.92302	0.94626	1.05310	1.03651	0.93499	0.77620	0.69335	0.79335
3600.0	0.94366	0.80766	0.82895	0.86682	0.88902	0.90465	1.04824	1.00793	0.91263	0.93409
3700.0	0.95075	0.89456	0.83572	0.76199	0.67711	0.72347	0.79495	0.84755	0.96471	0.83167
3800.0	0.78586	0.82883	0.62247	0.48774	0.55122	0.68539	0.63928	0.65279	0.63242	0.68891
3900.0	0.76574	0.81257	0.73867	0.43613	0.49085	0.73386	0.64631	0.43942	0.77266	0.91189
4000.0	0.94452									
ZENITH SCAN STARTING AT 21.50. 4 ON 4/25/74. NORMALIZING FACTOR = 1.4560E 01										
2600.0	0.00013	0.00019	0.00012	0.00012	0.00016	0.00016	0.00014	0.00013	0.00013	0.00013
2700.0	0.00012	0.00014	0.00013	0.00013	0.00014	0.00013	0.00016	0.00015	0.00015	0.00013
2800.0	0.00015	0.00016	0.00022	0.00016	0.00017	0.00015	0.00016	0.00017	0.00021	0.00019
2900.0	0.00021	0.00027	0.00038	0.00065	0.00118	0.00236	0.00469	0.00755	0.01270	0.02010
3000.0	0.02691	0.04290	0.05985	0.10407	0.12685	0.16460	0.17856	0.23136	0.28250	0.27805
3100.0	0.32202	0.46862	0.47778	0.50272	0.56406	0.58000	0.54718	0.72499	0.69431	0.72665
3200.0	0.81057	0.81817	0.77136	0.72914	0.84933	0.90646	1.11187	1.13805	1.03959	1.16250
3300.0	1.23403	1.08585	1.10049	1.07079	1.04480	1.10644	0.97926	0.90512	0.99920	1.05055
3400.0	1.12065	1.04585	1.06745	1.06823	0.86842	0.93122	0.96017	0.96361	0.92420	0.90723
3500.0	1.00000	1.00155	0.92436	0.94545	1.06315	1.03831	0.93652	0.78839	0.69850	0.81348
3600.0	0.95545	0.81988	0.85930	0.91145	0.91134	0.93207	1.06834	1.03457	0.95646	0.98631
3700.0	1.00986	0.94706	0.88034	0.79876	0.71715	0.75628	0.84223	0.91140	1.04304	0.88091
3800.0	0.84321	0.89101	0.67442	0.52825	0.60026	0.74464	0.69265	0.70765	0.68134	0.73816
3900.0	0.83012	0.88656	0.79502	0.48226	0.53787	0.80933	0.70911	0.47912	0.82712	1.00008
4000.0	1.03056									
SOLAR SCAN STARTING AT 21.59.49 ON 4/25/74. NORMALIZING FACTOR = 2.7579E 03										
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005
2700.0	0.00005	0.00005	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007	0.00008	0.00008
2800.0	0.00008	0.00008	0.00009	0.00009	0.00010	0.00010	0.00010	0.00011	0.00011	0.00012
2900.0	0.00012	0.00014	0.00017	0.00026	0.00046	0.00099	0.00202	0.00376	0.00653	0.01125
3000.0	0.01553	0.02551	0.03527	0.06599	0.08359	0.11148	0.12284	0.16218	0.20142	0.19885
3100.0	0.22962	0.34054	0.34363	0.37727	0.40759	0.41762	0.39219	0.52635	0.50222	0.52229
3200.0	0.59386	0.59088	0.56768	0.53521	0.63061	0.69154	0.86159	0.88024	0.80999	0.90145
3300.0	0.97119	0.86716	0.87910	0.86158	0.85312	0.91024	0.80984	0.75915	0.84876	0.89935
3400.0	0.97406	0.91020	0.93450	0.96708	0.80502	0.86880	0.89692	0.91934	0.89036	0.88103
3500.0	1.00000	1.01186	0.94506	0.97515	1.11499	1.10263	1.00269	0.84314	0.74880	0.87740
3600.0	1.06966	0.90965	0.96511	1.03419	1.04211	1.07470	1.26271	1.22574	1.13727	1.19032
3700.0	1.22457	1.16212	1.09700	0.93680	0.90608	0.98760	1.09958	1.20614	1.39739	1.20119
3800.0	1.14615	1.25220	0.94650	0.71949	0.81288	1.06341	1.00219	1.03012	1.00788	1.10145
3900.0	1.27084	1.36715	1.25134	0.72949	0.83113	1.29557	1.16008	0.78043	1.41506	1.70233
4000.0	1.77142									
ZENITH SCAN STARTING AT 22. 5.41 ON 4/25/74. NORMALIZING FACTOR = 1.2337E 01										
2600.0	0.00035	0.00034	0.00033	0.00035	0.00036	0.00034	0.00039	0.00035	0.00037	0.00034
2700.0	0.00036	0.00037	0.00038	0.00038	0.00036	0.00035	0.00037	0.00037	0.00038	0.00038
2800.0	0.00039	0.00037	0.00037	0.00038	0.00039	0.00038	0.00038	0.00039	0.00040	0.00040
2900.0	0.00049	0.00048	0.00051	0.00073	0.00113	0.00207	0.00397	0.00643	0.01106	0.01744
3000.0	0.02446	0.03931	0.05320	0.09934	0.12281	0.16159	0.17513	0.22240	0.27597	0.27408
3100.0	0.31030	0.46118	0.47261	0.51797	0.56027	0.57712	0.54222	0.71467	0.69471	0.72588
3200.0	0.80601	0.82272	0.77380	0.72826	0.85088	0.91057	1.11876	1.15095	1.05307	1.16861
3300.0	1.25977	1.10046	1.11290	1.08774	1.05637	1.11285	0.99025	0.91318	1.00131	1.04989
3400.0	1.11625	1.03882	1.05332	1.07667	0.87975	0.93866	0.96685	0.96504	0.92233	0.90092
3500.0	1.00000	1.00386	0.92648	0.94424	1.05752	1.03949	0.94279	0.78246	0.69597	0.78893
3600.0	0.95321	0.80978	0.82614	0.86682	0.88189	0.88598	1.01048	0.97192	0.90518	0.91897
3700.0	0.94609	0.88958	0.84171	0.75342	0.68071	0.71115	0.79353	0.83680	0.96309	0.82913
3800.0	0.77961	0.82295	0.62935	0.48348	0.53486	0.68270	0.64235	0.65763	0.63513	0.69512
3900.0	0.77985	0.82451	0.76114	0.45353	0.49908	0.76387	0.67737	0.46455	0.78140	0.94251
4000.0	0.97595									
ZENITH SCAN STARTING AT 22. 8. 2 ON 4/25/74. NORMALIZING FACTOR = 1.2907E 01										
2600.0	0.00021	0.00021	0.00020	0.00021	0.00020	0.00022	0.00022	0.00029	0.00022	0.00021
2700.0	0.00025	0.00022	0.00021	0.00021	0.00021	0.00021	0.00022	0.00022	0.00022	0.00028
2800.0	0.00022	0.00026	0.00026	0.00022	0.00022	0.00023	0.00023	0.00022	0.00026	0.00024
2900.0	0.00028	0.00030	0.00043	0.00065	0.00115	0.00501	0.00679	0.00807	0.01291	0.02067
3000.0	0.02784	0.04323	0.05634	0.09965	0.12226	0.16120	0.17505	0.23145	0.27805	0.27536
3100.0	0.32306	0.45813	0.46838	0.51981	0.55708	0.57686	0.55071	0.71077	0.67629	0.71817
3200.0	0.79539	0.80326	0.75714	0.72346	0.85615	0.91980	1.11867	1.12805	1.04701	1.16089
3300.0	1.22388	1.09671	1.10005	1.08386	1.04373	1.09961	0.95533	0.90149	0.98874	1.03639
3400.0	1.10201	1.02298	1.04414	1.05868	0.85788	0.93971	0.95187	0.94880	0.91150	0.89062
3500.0	1.00000	0.99420	0.91609	0.93330	1.05345	1.02991	0.92624	0.77748	0.68589	0.80114
3600.0	0.93271	0.80534	0.84292	0.89170	0.89782	0.93171	1.07737	1.03849	0.96646	1.01133
3700.0	1.03982	0.98479	0.92666	0.84333	0.79935	0.88499	0.97129	1.05736	1.20932	1.00354
3800.0	0.97086	1.00337	0.75352	0.59864	0.68450	0.85057	0.79677	0.81304	0.78375	0.86190
3900.0	0.94715	0.97855	0.87209	0.52512	0.60122	0.91204	0.76011	0.54957	0.93359	1.10488
4000.0	1.13033									

Table VIII-110

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 4/25/74

ZENITH SCAN STARTING AT 22. 9.48 ON 4/25/74. NORMALIZING FACTOR = 1.1753E 01

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
2600.0	0.00022	0.00019	0.00028	0.00026	0.00027	0.00024	0.00025	0.00020	0.00022	0.00020
2700.0	0.00021	0.00020	0.00023	0.00022	0.00021	0.00023	0.00022	0.00023	0.00025	0.00023
2800.0	0.00024	0.00022	0.00022	0.00023	0.00024	0.00023	0.00025	0.00024	0.00027	0.00026
2900.0	0.00027	0.00037	0.00046	0.00068	0.00117	0.00224	0.00447	0.00707	0.01232	0.01924
3000.0	0.02648	0.04195	0.05827	0.10367	0.12941	0.16746	0.18233	0.23457	0.28808	0.28495
3100.0	0.32318	0.46671	0.46862	0.51702	0.55690	0.57682	0.54339	0.70784	0.68186	0.71130
3200.0	0.78903	0.80394	0.75822	0.71305	0.84471	0.89322	1.10293	1.12504	1.03875	1.14862
3300.0	1.22651	1.08240	1.09329	1.06707	1.03353	1.09687	0.97853	0.89576	0.98411	1.03625
3400.0	1.10234	1.02269	1.03675	1.05835	0.87738	0.92717	0.95141	0.95403	0.91380	0.89838
3500.0	1.00000	1.00259	0.92790	0.94247	1.05167	1.04129	0.94250	0.78794	0.69927	0.77642
3600.0	0.95932	0.81425	0.84672	0.90161	0.90073	0.91675	1.04749	1.00124	0.92684	0.95028
3700.0	0.98922	0.92533	0.87009	0.79141	0.70701	0.73548	0.82507	0.88380	1.02256	0.87836
3800.0	0.82037	0.87648	0.66112	0.56032	0.58271	0.73309	0.68574	0.69618	0.67388	0.72980
3900.0	0.82141	0.86583	0.80098	0.46378	0.50792	0.78935	0.70872	0.49496	0.82452	0.99076
4000.0	1.02253									

Table VIII-111

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 5/ 5/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	SOLAR SCAN STARTING AT 20.34.54 ON 5/ 5/74, NORMALIZING FACTOR = 2.4884E 03									
2600.0	0.00003	0.00003	0.00003	0.00003	0.00003	0.00004	0.00004	0.00004	0.00004	0.00004
2700.0	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006
2800.0	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008
2900.0	0.00009	0.00012	0.00017	0.00032	0.00064	0.00142	0.00295	0.00534	0.00894	0.01487
3000.0	0.01947	0.03166	0.04326	0.07728	0.09647	0.12723	0.13742	0.18341	0.22035	0.21584
3100.0	0.25121	0.36381	0.36386	0.49130	0.42986	0.44001	0.41793	0.54747	0.51255	0.53814
3200.0	0.61125	0.60137	0.57956	0.54693	0.64852	0.70862	0.87159	0.88017	0.82820	0.92102
3300.0	0.98077	0.88576	0.89529	0.87363	0.87002	0.92483	0.81163	0.77580	0.86403	0.91051
3400.0	0.98271	0.92170	0.95278	0.98294	0.81113	0.88767	0.91862	0.93627	0.91353	0.90774
3500.0	1.00000	1.01963	0.95607	0.99327	1.13517	1.11227	1.01282	0.84995	0.75063	0.92030
3600.0	1.08914	0.92912	0.98865	1.05177	1.05486	1.09858	1.27727	1.23975	1.15464	1.21234
3700.0	1.23894	1.18113	1.09773	1.00457	0.91566	0.98031	1.10610	1.21090	1.39114	1.17672
3800.0	1.14767	1.22470	0.91846	0.72444	0.86765	1.07080	1.01871	1.04118	1.01601	1.11246
3900.0	1.28665	1.38917	1.24434	0.72731	0.87932	1.32559	1.14302	0.79724	1.43162	1.72050
4000.0	1.78706									
	ZENITH SCAN STARTING AT 20.39. 1 ON 5/ 5/74, NORMALIZING FACTOR = 2.6890E 01									
2600.0	0.00031	0.00030	0.00031	0.00030	0.00031	0.00031	0.00031	0.00032	0.00033	0.00032
2700.0	0.00032	0.00032	0.00033	0.00033	0.00033	0.00033	0.00033	0.00034	0.00035	0.00035
2800.0	0.00036	0.00034	0.00034	0.00035	0.00036	0.00035	0.00036	0.00036	0.00036	0.00037
2900.0	0.00038	0.00042	0.00052	0.00077	0.00273	0.00338	0.00559	0.00915	0.01495	0.02375
3000.0	0.03292	0.04749	0.06544	0.11308	0.13835	0.18152	0.19541	0.25863	0.30528	0.29834
3100.0	0.35505	0.49256	0.49637	0.54687	0.58241	0.59687	0.57136	0.73189	0.68431	0.72377
3200.0	0.80720	0.79632	0.75335	0.71715	0.84233	0.91149	1.09793	1.10256	1.02784	1.13915
3300.0	1.19271	1.06761	1.07433	1.03968	1.02855	1.07108	0.93482	0.89287	0.97727	1.01965
3400.0	1.08825	1.00593	1.03135	1.03752	0.84947	0.93336	0.94153	0.94420	0.91116	0.89097
3500.0	1.00000	0.98536	0.91635	0.95136	1.04932	1.02147	0.92491	0.78467	0.69769	0.83290
3600.0	0.95387	0.81956	0.86346	0.90376	0.91023	0.94343	1.08042	1.03735	0.96330	1.00314
3700.0	1.01816	0.97080	0.89435	0.79926	0.73397	0.78457	0.86251	0.93542	1.06083	0.88375
3800.0	0.86906	0.89964	0.66988	0.53174	0.61871	0.75336	0.71731	0.72501	0.70241	0.77037
3900.0	0.85741	0.91109	0.80709	0.48528	0.59538	0.84682	0.71439	0.51940	0.90738	1.05651
4000.0	1.08586									
	SOLAR SCAN STARTING AT 21. 3.17 ON 5/ 5/74, NORMALIZING FACTOR = 2.7773E 03									
2600.0	0.00003	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004
2700.0	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007
2800.0	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00010	0.00010	0.00011	0.00011
2900.0	0.00012	0.00015	0.00020	0.00032	0.00061	0.00129	0.00271	0.00470	0.00813	0.01373
3000.0	0.01881	0.02972	0.04094	0.07369	0.09242	0.12158	0.13252	0.17502	0.21231	0.20856
3100.0	0.23912	0.35228	0.35288	0.38723	0.41616	0.42470	0.40101	0.53203	0.50193	0.52293
3200.0	0.59442	0.59024	0.56712	0.53286	0.63049	0.69101	0.85917	0.87462	0.82003	0.89206
3300.0	0.95407	0.85746	0.86954	0.85364	0.84653	0.90238	0.80091	0.75739	0.84675	0.89375
3400.0	0.96674	0.90182	0.93235	0.96401	0.78369	0.86215	0.89753	0.91073	0.88449	0.87573
3500.0	1.00000	1.00374	0.93433	0.97841	1.10676	1.09583	0.99716	0.83883	0.75304	0.88660
3600.0	1.06583	0.91482	0.96065	1.02925	1.03753	1.08473	1.26287	1.22365	1.13946	1.19244
3700.0	1.23497	1.17107	1.11447	1.01173	0.91739	0.98920	1.11168	1.21040	1.40100	1.20787
3800.0	1.16259	1.25764	0.95653	0.72956	0.83837	1.07714	1.01650	1.04973	1.02526	1.12107
3900.0	1.29579	1.39614	1.28963	0.73386	0.87008	1.35788	1.17335	0.80993	1.46186	1.75749
4000.0	1.82659									
	SOLAR SCAN STARTING AT 21. 9.10 ON 5/ 5/74, NORMALIZING FACTOR = 2.7152E 03									
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005
2700.0	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007
2800.0	0.00007	0.00007	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00010	0.00010
2900.0	0.00011	0.00013	0.00018	0.00031	0.00058	0.00124	0.00264	0.00454	0.00811	0.01345
3000.0	0.01869	0.02939	0.04005	0.07512	0.09349	0.12389	0.13480	0.17358	0.21252	0.21013
3100.0	0.23649	0.35446	0.35580	0.38930	0.41775	0.42686	0.39767	0.52669	0.50587	0.52552
3200.0	0.59353	0.59498	0.56901	0.53881	0.62705	0.69197	0.84395	0.86794	0.81345	0.90436
3300.0	0.97754	0.87161	0.88292	0.86579	0.85700	0.90990	0.81158	0.76342	0.85065	0.90217
3400.0	0.97875	0.91391	0.93678	0.97090	0.80746	0.87911	0.90348	0.91637	0.89414	0.88182
3500.0	1.00000	1.01678	0.94794	0.98591	1.12205	1.11198	1.00639	0.85255	0.75451	0.89356
3600.0	1.10226	0.94123	0.97983	1.03373	1.04930	1.08581	1.27471	1.23396	1.15083	1.19280
3700.0	1.24744	1.18351	1.11509	1.00231	0.91990	0.97620	1.10834	1.21259	1.41143	1.20939
3800.0	1.15865	1.23915	0.94487	0.73477	0.84766	1.08232	1.02252	1.06115	1.03973	1.15719
3900.0	1.30629	1.40655	1.27553	0.73766	0.86632	1.34646	1.18605	0.77950	1.45529	1.75401
4000.0	1.82191									
	SOLAR SCAN STARTING AT 21.28.53 ON 5/ 5/74, NORMALIZING FACTOR = 2.7969E 03									
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005
2700.0	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00007	0.00007	0.00008	0.00008
2800.0	0.00008	0.00008	0.00009	0.00009	0.00010	0.00010	0.00010	0.00011	0.00011	0.00012
2900.0	0.00013	0.00015	0.00019	0.00031	0.00059	0.00122	0.00260	0.00442	0.00795	0.01295
3000.0	0.01808	0.02895	0.03965	0.07339	0.09219	0.12130	0.13294	0.17200	0.21393	0.21096
3100.0	0.23543	0.35540	0.35742	0.38946	0.42051	0.42886	0.40106	0.53566	0.51193	0.52826
3200.0	0.59962	0.60145	0.57370	0.53855	0.63205	0.69340	0.85988	0.88091	0.82838	0.92162
3300.0	0.99979	0.89191	0.88841	0.87416	0.86403	0.91983	0.82193	0.77031	0.85808	0.90960
3400.0	0.98880	0.92020	0.94807	0.97881	0.80747	0.87884	0.90807	0.92709	0.89781	0.89031
3500.0	1.00000	1.01527	0.94865	0.98242	1.11990	1.10926	1.00428	0.84943	0.75895	0.88577
3600.0	1.08412	0.91878	0.96998	1.04034	1.04516	1.08489	1.27883	1.23455	1.15052	1.19206
3700.0	1.25411	1.19886	1.11818	1.01798	0.92135	0.99036	1.11734	1.20119	1.41545	1.21473
3800.0	1.16056	1.24917	0.96994	0.74242	0.85200	1.11324	1.02469	1.06032	1.03387	1.14089
3900.0	1.30642	1.40291	1.28696	0.73862	0.85249	1.33680	1.17723	0.77676	1.44710	1.72759
4000.0	1.80088									
	ZENITH SCAN STARTING AT 21.33. 2 ON 5/ 5/74, NORMALIZING FACTOR = 1.4053E 01									
2600.0	0.00065	0.00062	0.00063	0.00063	0.00062	0.00063	0.00064	0.00064	0.00063	0.00064
2700.0	0.00069	0.00065	0.00065	0.00065	0.00066	0.00068	0.00068	0.00067	0.00067	0.00068
2800.0	0.00072	0.00073	0.00070	0.00071	0.00071	0.00071	0.00072	0.00073	0.00072	0.00075
2900.0	0.00075	0.00079	0.00091	0.00121	0.00441	0.00646	0.00715	0.01061	0.01708	0.02551
3000.0	0.03472	0.05201	0.06764	0.11568	0.14209	0.18189	0.19465	0.25479	0.30132	0.29532
3100.0	0.34703	0.48677	0.49120	0.53883	0.57729	0.59268	0.56720	0.73228	0.69002	0.72769
3200.0	0.81431	0.81117	0.76551	0.72660	0.85865	0.92652	1.12074	1.12421	1.04587	1.16489
3300.0	1.21876	1.08412	1.09161	1.05514	1.03596	1.08542	0.96955	0.91178	1.00151	1.04760
3400.0	1.10874	1.03097	1.05179	1.06113	0.85866	0.93737	0.95155	0.95380	0.92111	0.90202
3500.0	1.00000	0.99295	0.91661	0.94938	1.06426	1.04187	0.93896	0.78468	0.68862	0.83506
3600.0	0.95710	0.82117	0.85823	0.90831	0.90961	0.94299	1.07227	1.02767	0.95204	0.98724
3700.0	0.99548	0.95205	0.89591	0.80001	0.73017	0.77080	0.84745	0.91684	1.04283	0.88379
3800.0	0.85433	0.89073	0.66322	0.52655	0.60316	0.75164	0.70889	0.71878	0.69089	0.75594
3900.0	0.83723	0.89426	0.79149	0.48098	0.57105	0.82296	0.69756	0.49896	0.87496	1.01782
4000.0	1.04806									

Table VIII-112

Spectral Energy Distribution of Zenith Sky Radiance and Solar Irradiance

NORMALIZED BUV ENERGY CURVES FROM FLIGHT OF 5/ 5/74

WAVELENGTH	00	10	20	30	40	50	60	70	80	90
	SOLAR SCAN STARTING AT 21.34.48 ON 5/ 5/74. NORMALIZING FACTOR = 2.7391E 03									
2600.0	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
2700.0	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007	0.00008
2800.0	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00010	0.00010	0.00011	0.00011
2900.0	0.00012	0.00014	0.00018	0.00028	0.00052	0.00111	0.00236	0.00415	0.00748	0.01239
3000.0	0.01755	0.02773	0.03798	0.05184	0.09032	0.12810	0.13176	0.17134	0.21374	0.21115
3100.0	0.23599	0.34885	0.35224	0.38616	0.41531	0.42644	0.39649	0.52425	0.50832	0.52636
3200.0	0.59650	0.59947	0.57194	0.53879	0.62906	0.69204	0.85154	0.87470	0.81854	0.90674
3300.0	0.98399	0.87862	0.89059	0.87648	0.86645	0.92096	0.82295	0.77072	0.85745	0.90929
3400.0	0.98610	0.92199	0.94622	0.97681	0.81323	0.88369	0.91007	0.92294	0.89487	0.88367
3500.0	1.00000	1.01663	0.95267	0.97832	1.11800	1.10552	1.00830	0.84954	0.75968	0.89693
3600.0	1.07881	0.92417	0.97803	1.05424	1.07051	1.09485	1.26787	1.23262	1.14846	1.19988
3700.0	1.24028	1.17542	1.10964	1.01588	0.92085	0.97671	1.11208	1.20196	1.39083	1.18233
3800.0	1.15162	1.24160	0.93781	0.72686	0.83830	1.07073	1.01118	1.04904	1.02487	1.10202
3900.0	1.28514	1.38551	1.26572	0.75757	0.84861	1.33035	1.17641	0.78382	1.43542	1.72417
4000.0	1.79288									
	ZENITH SCAN STARTING AT 21.38.49 ON 5/ 5/74. NORMALIZING FACTOR = 1.1715E 01									
2600.0	0.00089	0.00092	0.00088	0.00088	0.00090	0.00093	0.00090	0.00092	0.00090	0.00091
2700.0	0.00091	0.00092	0.00092	0.00096	0.00093	0.00093	0.00093	0.00095	0.00095	0.00096
2800.0	0.00096	0.00096	0.00097	0.00101	0.00100	0.00098	0.00099	0.00100	0.00101	0.00101
2900.0	0.00103	0.00110	0.00119	0.00150	0.00405	0.00652	0.00812	0.01117	0.01714	0.02522
3000.0	0.03258	0.04950	0.06558	0.11408	0.14028	0.18049	0.19355	0.25327	0.30085	0.29347
3100.0	0.34359	0.48411	0.48478	0.53416	0.57173	0.58242	0.55352	0.72172	0.68502	0.71608
3200.0	0.79988	0.80139	0.75524	0.71496	0.84305	0.90121	1.10733	1.11513	1.03411	1.15443
3300.0	1.21164	1.08057	1.09278	1.03971	1.03912	1.09528	0.95840	0.89997	0.98522	1.02756
3400.0	1.10121	1.02139	1.04421	1.05637	0.87499	0.93658	0.95044	0.95889	0.92356	0.90021
3500.0	1.00000	0.99177	0.92458	0.94934	1.05952	1.03372	0.93496	0.78539	0.69653	0.80898
3600.0	0.94153	0.81280	0.84954	0.89858	0.89742	0.92223	1.06110	1.01929	0.94400	0.97629
3700.0	0.99246	0.94247	0.87638	0.79088	0.72015	0.77462	0.84500	0.90752	1.03027	0.87302
3800.0	0.83879	0.87594	0.66788	0.56220	0.60014	0.74363	0.69811	0.71212	0.68697	0.75661
3900.0	0.83799	0.89204	0.79846	0.47991	0.53778	0.81902	0.69895	0.49682	0.84614	1.00924
4000.0	1.03554									
	SOLAR SCAN STARTING AT 22.25. 9 ON 5/ 5/74. NORMALIZING FACTOR = 2.7219E 03									
2600.0	0.00003	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004
2700.0	0.00004	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006
2800.0	0.00006	0.00006	0.00007	0.00007	0.00007	0.00007	0.00008	0.00010	0.00011	0.00011
2900.0	0.00012	0.00013	0.00015	0.00021	0.00035	0.00072	0.00149	0.00285	0.00514	0.00903
3000.0	0.01337	0.02185	0.03136	0.05186	0.07524	0.10372	0.11421	0.15491	0.19108	0.19207
3100.0	0.22313	0.32667	0.33435	0.37098	0.40254	0.41750	0.39550	0.51688	0.49378	0.51785
3200.0	0.58468	0.59011	0.56348	0.53235	0.63270	0.69587	0.85327	0.87515	0.82503	0.90528
3300.0	0.98433	0.88606	0.89704	0.87934	0.87127	0.93236	0.82638	0.77871	0.86950	0.92464
3400.0	0.99957	0.94370	0.94791	0.98297	0.81530	0.88480	0.91115	0.93147	0.90203	0.89428
3500.0	1.00000	1.01694	0.94645	0.97831	1.12085	1.11268	1.00628	0.84778	0.75846	0.88495
3600.0	1.08337	0.92437	0.98118	1.04183	1.05204	1.09211	1.27618	1.23460	1.15071	1.19007
3700.0	1.24889	1.18388	1.11911	1.00771	0.91591	0.98921	1.10964	1.19218	1.39747	1.19895
3800.0	1.15312	1.23184	0.94477	0.72675	0.83469	1.08066	1.01640	1.04716	1.02521	1.13162
3900.0	1.28980	1.40353	1.27676	0.77314	0.84701	1.34355	1.18914	0.79832	1.41265	1.72055
4000.0	1.78574									
	ZENITH SCAN STARTING AT 22.26.54 ON 5/ 5/74. NORMALIZING FACTOR = 1.0227E 01									
2600.0	0.00109	0.00116	0.00111	0.00115	0.00111	0.00114	0.00113	0.00114	0.00114	0.00116
2700.0	0.00118	0.00116	0.00116	0.00118	0.00119	0.00120	0.00120	0.00120	0.00121	0.00123
2800.0	0.00124	0.00126	0.00125	0.00125	0.00128	0.00126	0.00126	0.00129	0.00128	0.00129
2900.0	0.00131	0.00137	0.00149	0.00173	0.00226	0.01223	0.00824	0.01124	0.01620	0.02305
3000.0	0.03015	0.04536	0.06029	0.10647	0.13021	0.16742	0.17983	0.23287	0.28256	0.27542
3100.0	0.32102	0.46131	0.46663	0.51022	0.54721	0.56086	0.52879	0.68711	0.65819	0.69447
3200.0	0.77526	0.77876	0.73803	0.70207	0.83236	0.89046	1.09015	1.09826	1.02028	1.14008
3300.0	1.19462	1.06336	1.07740	1.04563	1.02864	1.08192	0.94704	0.89196	0.98414	1.02543
3400.0	1.08475	1.00585	1.02979	1.04163	0.85192	0.92775	0.93699	0.94141	0.90518	0.88603
3500.0	1.00000	0.98445	0.91302	0.94101	1.04647	1.02165	0.91524	0.77255	0.67948	0.80702
3600.0	0.93800	0.80146	0.84498	0.89515	0.88914	0.91541	1.04303	1.00831	0.93028	0.96681
3700.0	0.97616	0.90931	0.85852	0.78487	0.71288	0.75424	0.82753	0.89388	1.01875	0.86000
3800.0	0.82943	0.85866	0.64931	0.51451	0.58889	0.72182	0.68592	0.69804	0.67666	0.74967
3900.0	0.81833	0.86745	0.78718	0.47007	0.52794	0.79627	0.69093	0.48281	0.84126	0.98975
4000.0	1.02136									
	SOLAR SCAN STARTING AT 22.31. 4 ON 5/ 5/74. NORMALIZING FACTOR = 2.6840E 03									
2600.0	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005
2700.0	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007	0.00007	0.00008
2800.0	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00010	0.00010	0.00011	0.00011
2900.0	0.00011	0.00012	0.00014	0.00020	0.00032	0.00066	0.00141	0.00260	0.00479	0.00863
3000.0	0.01265	0.02125	0.03035	0.05039	0.07372	0.10086	0.11210	0.15191	0.18865	0.18972
3100.0	0.22069	0.32649	0.33361	0.36978	0.40228	0.41678	0.39476	0.52398	0.49953	0.52589
3200.0	0.59685	0.59775	0.56579	0.53263	0.62824	0.68946	0.85790	0.87582	0.82277	0.91277
3300.0	0.98583	0.88304	0.89586	0.87945	0.86668	0.92802	0.82474	0.77225	0.86369	0.91345
3400.0	0.98647	0.92230	0.95095	0.98145	0.81880	0.88053	0.90771	0.92861	0.89675	0.88652
3500.0	1.00000	1.01724	0.94866	0.97715	1.11743	1.10432	0.99937	0.69793	0.75194	0.88489
3600.0	1.06910	0.91521	0.96725	1.04547	1.04745	1.08516	1.27390	1.23830	1.15201	1.20450
3700.0	1.25414	1.19072	1.12828	1.02932	0.93409	0.99576	1.11848	1.19661	1.40111	1.19693
3800.0	1.14422	1.23438	0.92731	0.72654	0.84884	1.07841	1.00926	1.04219	1.01583	1.11543
3900.0	1.28110	1.36900	1.26662	0.73358	0.81183	1.30760	1.15806	0.78824	1.40055	1.70147
4000.0	1.76370									

For zenith sky radiance the units are $Wm^{-2}\ \mu\ m^{-1}\ ster^{-1}$ and for solar irradiance $Wm^{-2}\ \mu\ m^{-1}$. Each value is an average for the 10 A bandwidth centered at the corresponding wavelength. The first two digits of the wavelength in Ångströms are given in the first column and the last two digits are given in the second row of each page.

There is a total of 643 spectral scans on Tables VIII-1 through VIII-112. Above each scan is given basic information about the scan, whether it is a zenith scan or solar scan, starting time in hours, minutes and seconds, date and normalizing factor. The normalizing factor is in exponential format; for example, 5. 3213E 02 should be read as 532. 13 and 5. 3213E-01 should be read as 0. 53213.

Several hundred scans could not be processed either because there were too many illogical entries in the tape record or the scans were terminated before the end. They are not shown in Table VIII though values are available in printouts of the format of Table I. In the 54 scans shown in Tables VIII-59 through VIII-67 the date given is an error; it should be 11/5/73 and not 11/3/73. The starting time shown for these scans is also erroneous; all times are close to 0 hours and do not increase sequentially as for the rest of Table VIII. The INS data for the same date are given in Table VI-6; the time is between 19:1:39 and 21:21:41. The starting time can thus be known approximately. A similar error in starting time occurs in the data for 1/31/74 between 16:57:42 and 17:19:12 (Tables VIII-87 and VIII-88). All the times shown on the table are close to 0 hours. Since this gap

is for only 22 minutes and there are nine scans in the gap, the time for each scan can be determined rather accurately by linear interpolation. There are a few abnormally high values scattered here and there in the tables. An example of high values is on Table VIII-80. They are relatively few and can readily be spotted. They are due to illegal entries in the flight record.

All the INS data of Table VI and the spectral radiance/irradiance data of Table VIII have been recorded on a Master tape. The tables are useful for assessing the quality of the data, for manual processing of the spectral data and for developing the computer programs. The Master tape is useful for computer processing of the data for ozone overburden, ozone profiles and turbidity parameters.

X. ACKNOWLEDGMENTS

Donald F. Heath was the principal investigator of the BUV experiment. The work was done under his direction. Howard Reid, Bert Roeder and Paul Mitzin of Beckman Instruments, Inc., were responsible for the modification of the BUV from its original form for the present configuration for the RB 57. The first-named author acknowledges these contributions, as also those of his co-authors, R. S. Mitchell who did all of the computer programming and was responsible for Tables I, II, IV, VI and VIII, B. M. Burda who did a major part of the manual data analysis and prepared the rest of the tables and all the figures and J. S. Fedor who was responsible for checking out the instrument and mounting it on the aircraft.

REFERENCES

1. M. P. Thekaekara, R. Kruger and C. H. Duncan, Solar Spectral Irradiance Measurements from a Research Aircraft, Ap. Optics, 8, 1713-1732 (1969)

2. M. P. Thekaekara, Extraterrestrial Solar Spectrum, 3000-6100 A, at 1-A Intervals, Ap. Optics, 13, 518-522 (1973)

3. Anon, Solar Electromagnetic Radiation, NASA SP8005, Washington, D. C., May 1971

4. Anon, Standard Specification for Solar Constant and Air Mass Zero Solar Spectral Irradiance, ASTM Standard, E 490-73a, 1974 Annual Book of ASTM Standards, Part 41, 609-615, ASTM, Philadelphia, Pa., 1974

5. John J. DeLuisi, private communication, July 1973

6. L. Elterman, UV, Visible and IR Attenuation for Altitudes to 50 km, 1968, AFCRL, 68-0153, April 1968

7. S. L. Valley, Ed., Handbook of Geophysics and Space Environments, AFCRL, Bedford, MA, p. 6-6, 1965

8. J. London, K. Ooyama and C. Prabhakara, New York U., Final Report, Contract AF 19(604)-5492, AFCRL, Bedford, MA, 1962

9. J. V. Dave and P. M. Furukawa, Scattered Radiation in the Ozone Absorption Bands at Selected Levels of a Terrestrial, Rayleigh Atmosphere, Meteorological Monographs, 7, (29) January 1966, American Meteorological Society, Boston, MA