

DR. BRAHM PRAKASH

1912 - 1984

Dr. Prakash never raised his voice in anger, never missed a schedule or failed to complete a responsibility he had undertaken—how do you measure the contributions of such a man? We will all miss him.

A. Lawu



A Eulogy

Homage to

January 3, 1984 was a sad day for the Indian Space Research Organisation (ISRO) and the Department of Space (DOS). For, it was on this black tuesday that Dr. Brahm Prakash breathed his last in Bombay.

For most of us in ISRO/DOS, the name of Dr. Brahm Prakash has become synonymous with ISRO itself. He was a member of the Space Commission and of the ISRO Council since their very inception. Even after his formal retirement from the post of Director, Vikram Sarabhai Space Centre, he was called upon by ISRO to assist in the solution of many complex issues-technical, managerial and administrative. Anything suggested by Dr. BP, as he was fondly referred to, be it a formal recommendation, advice, comment or a remark, was always accepted. This was something unique about him and was a true measure of his acumen, sense of justice and fairplay, and affectionate humaneness. A man of few words, he was an illustrious example of hard work, sincerity, dedication and above all a calm but deep commitment to our goals. His humanism pervaded all facets of work and was a constant hope to all who worked with him.

Born on August 21, 1912 at Lahore, Brahm Prakash obtained his B.Sc. (Hons) in 1933, M.Sc. in 1934 and Ph.D in Physical Chemistry in 1942 from the Punjab University. He had a distinguished academic career throughout, finishing with a Sc.D in metallurgy from the Massachusetts Institute of Technology, USA in 1949.

Dr. Brahm Prakash joined the Atomic Energy Commission in 1949 where he was a metallurgist for a year. During 1951-57 he was at the Indian Institute of Science, Bangalore as Professor and Head of Metallurgy Department. He was the Scientific Secretary to the first UN Conference on peaceful uses of atomic energy in Geneva 1955. Renewing his association with the Atomic Energy Establishment as the Director of Metallurgy Group in 1957, Dr. Brahm Prakash made significant contributions for the development of nuclear materials and production of strategic nuclear plant products. Know how developed under his guidance for the fuel elements for research reactors led to the establishment of the Nuclear Fuel Fabrication Facility at Trombay and the Nuclear Fuel Complex at Hyderabad, of which he was the Project Director until mid 1972.

On May 17, 1972 Dr. Brahm Prakash was appointed the Director of the Space Science & Technology Centre (SSTC) at Trivandrum. That was the beginning of his long and memorable association with the Indian Space Programme which indeed continued until the last day of his life. Soon after his joining SSTC, the space research complex at Trivandrum was integrated into a single R&D

a distinguished scientist

Centre called the Vikram Sarabhai Space Centre (VSSC). Dr. Brahm Prakash became that Centre's first Director, the post he held until his formal retirement in late 1979.

As the Director of VSSC he was in over all charge of the Projects ARYABHATA and SLV-3, which ushered ISRO into definite programmes. From the beginning he was the Chairman of SHAR Projects Board and played a pivotal role in shaping SHAR into a fullfledged ISRO Centre. The Indian Scientific Satellite Project (ISSP) took shape under his guidance as a part of VSSC. This later evolved into the ISRO Satellite Centre (ISAC).

When the National Remote Sensing Agency (NRSA) was brought under the folds of Department of Space it was Dr. Brahm Prakash who showed the way for integrating the remote sensing activities of Space Applications Centre (SAC) and the NRSA. His report still remains the guiding spirit. So is his evaluation of the PSLV Project and its management scheme.

A much decorated scientist, Dr. Brahm Prakash's position in the professional firmament scarcely needs special mention. Rarely, however, does one find such perfect alloying of greatness and humility. Gestures and demonstrations of regard or gratitude embarrassed him deeply and he shunned them. Ends and means were equally sacred to him and he never expected any rewards or recognitions for his contributions. Nevertheless, prestigious awards and honours trailed behind him on their own, and gained lustre in the process. Thus he was awarded the Padma Shri in 1961 and again the Padma Bhushan in 1968. He was the recipient of the Bhatnagar Memorial Award for engineering Sciences in 1963 and the Vasvik Research Award for Metallurgical Science in 1976. In 1979 he was awarded the Bhatnagar Memorial Medal of the Indian Academy of Science.

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A veil of grief descended on the establishments of the Department of Space on January 4, 1984, but in accordance with Dr. Brahm Prakash's own philosophy of life, work continued in all the Centres and Units. The Space Commission met at New Delhi and adopted a condolence resolution, while messages containing rich tributes and fond memories poured in at the residence of Dr. Brahm Prakash at Bombay, and ISRO HQ at Bangalore. A selection from these reminiscences eloquently describe the complete man that Dr. BP was.

Fond memories and

I first met Brahm Prakash some 39 years ago on board a Norwegian troop ship in Karachi. Over this long stretch of time my first impression of a gentle, quiet, unusually capable person has remained. As we came to know each other better first at the Indian Institute of Science and then in ISRO, my amazement at his patience, ability to keep calm, unruffled and clear headed continued to grow. He worked hard, long hours and meticulously, but never made a show of it. His outstanding work in metallurgy, the many contributions at BARC, VSSC and many bodies which he participated in, all bore the characteristic stamp of careful, brilliant work, often bringing him into the limelight, but leaving him essentially the same simple, straightforward person. During my visits to Trivandrum or his to Bangalore, we would naturally discuss many issues and problems. To my query 'Dr Prakash how are things?' he often smiled and replied, 'never a dull moment' obviously referring to the stresses and strains of coping with a myriad issues—from personnel to propellants and from a detailed technical review to matters relating to thali meals in the canteen. For ISRO alone, a quick estimate shows, he put in over 5 lakh hours of superb quality work. Never raised his voice in anger, never missed a schedule or failed to fully complete a responsibility he had undertaken—how do you measure the contributions of such a man! We will all miss him.

Prof. S. Dhawan

Chairman, Space Commission & Secretary, Department of Space

I first met Dr. Brahm Prakash and his family at the Indian Institute of Science where we were neighbours during the years when he was setting up the Department of Metallurgy there.

A more dignified, courteous and quietly competent-looking gentleman I have yet to encounter. His passion for working early and late is legendary.

He is blessed with a bright, loving family and my heart goes out to it at the loss of this most endearing member.

Smt. Nalini Dhawan

“Dharma Putra”, as he was popularly known is the most apt description of Dr. Brahm Prakash. I met Dr. Brahm Prakash for the first time at the Santa Cruz airport in Bombay in 1972, when he was proceeding to Trivandrum to assume the Directorship of VSSC. As Director of VSSC, he was also the administrative head of both the Indian Scientific Satellite Project at Bangalore and the SHAR Centre during the early years.

He was the most self effacing scientist I have come across. He gave the entire credit to his colleagues for every one of the accomplishments. Timely accomplishment of Aryabhata and SLV-3 projects was possible only because of Dr. Brahm Prakash's philosophy of management.

Eventhough as a scientist Dr. Brahm Prakash was unquestionably one of the foremost in the country, it is as a human being he scaled great heights and touched the lives of many with his kind and understanding nature; and in doing so, enriched them with his own generosity and spirit. He went out of his way to assist people in distress, whatever may be their level in the organisation.

In Dr. Brahm Prakash's death, ISRO has not only lost a very good scientist and an administrator but also a great human being.

Prof. UR Rao

Director, ISRO Satellite Centre

Though I had heard a lot about Dr. Brahm Prakash even before I joined the Thumba fraternity, I came to know him intimately only after he took over the reigns of what later came to be known as the Vikram Sarabhai Space Centre (VSSC). What you see as VSSC today is the integration work of Dr. Brahm Prakash. He did it most unobtrusively—anything he did had this characteristic.

Even where he had full faith in a colleague he would not allow that faith to overtake the rigours of his own judgement on issues. His capacity for details was phenomenal and his insistence to pursue with it in all circumstances was also equally so.

Dr. Brahm Prakash's human qualities are widely known : transparent simplicity, self-effacing humility, unquestioned integrity and implicit faith in the dignity of man. All this he showed in his own way—with few words. He was a saint among scientists. To me the loss is intensely personal; I lost a mentor and a guide, the significance of which I came to realise more and more after he left Thumba. All of a sudden he is no more. But the magnificent institution he has left behind, the VSSC, is a source of inspiration for many like us.

Dr. Vasant Gowariker

Director, Vikram Sarabhai Space Centre

A poet's idea of

For twenty five years it was my good fortune to have known Dr. Brahm Prakash as a friend of the family. On what shall one write about when talking of Dr. Prakash? His deep erudition when talking of his scientific subjects came through in great clarity. His knowledge of administrative and financial matters was both a surprise and a treat. In all that he said or did there was the authenticity of a person who spoke knowingly; who spoke carefully. But excellence of thinking combined with economy of words was not that which stood out most. What did stand out was his humanism. It mattered not who the other person was; Dr. Prakash always had the same uniform consideration for all. Young or old, high or low, he treated them with the same respect born of the knowing humility of wisdom and the abiding wisdom of knowledge.

He spoke ill of no one; even of those whose failings he knew well and from some of which he suffered. Even when they wounded him harshly, he spoke of them gently and never in rancour. Of the many distinctions which came in search of him, many have written. Many others will write of his great achievements of management. Or of his gentleness and of his humanism. But no picture of facets will do justice to this man of whom it might well be said that he represented the poet's idea, of the complete man.

TN Seshan

Additional Secretary, Department of Space

The space research establishments at Thumba in early 1972 were preparing to take on the task of developing the SLV-3, which by any standard was an extremely complex one. Wide spectrum of technologies required to be implemented, exacting reliability requirements, rather tender stage of build-up of infrastructure at Thumba and SHAR, integration of large number of disciplines into a single cohesive system and so on were really not the issues to be tackled at a leisurely pace by a retired individual. But Dr. Brahm Prakash belied all apprehensions, if there were any. He listened to everybody with infinite patience and asked strategic questions, not with the spirit of one-up-manship but to evoke solution from the person himself, who came to get his problem solved. Those who had the privilege of working close to him know that he had neither favourite persons or solutions, nor prejudice against anybody or anything. His only favourite method was one requiring straightforwardness, thoroughness and objectivity. The confidence and vigour displayed by VSSC even after the setback in the first experimental flight of SLV-3, was solid proof of a healthy, well-knit development team, built and nurtured by Dr. Brahm Prakash.

Dr. SC Gupta

Director, Avionics Group VSSC

I had known Dr. Brahm Prakash since 1957 when I joined the then AEET (now BARC). When he used to walk into his simple cabin through a maze lined on either side with furnaces, workbenches and metallurgical instruments little did I realise the greatness of that man. My association with him was very close since 1972, when in his sixties Dr. Brahm Prakash became the Director of VSSC. There were innumerable complex technical decisions to be made to progress the SLV-3 Project. It may be a conflict between the project and the Quality Assurance Group or an irreconcilable stand taken by a subsystem contractor with regard to Project schedule. Dr. Brahm Prakash would solve both the situations with his characteristic impartiality. He was humane and kind. On many rough situations he had to face, involving angry employees, he was serene and objective. While a lesser human being would become vindictive, he never nurtured hostility against anyone.

In my mind I still see him in the Director's Office, sitting on a simple chair with his left leg folded under the right thigh, his left elbow pressed on the table with a cigarette between his fingers, the right hand holding a dark green ball-point pen. I salute him.

MR Kurup

Director, Propellents & Chemicals Group VSSC

It was at 2130 hours on twelfth December, 1972 that Dr. Brahm Prakash approved the Project Management Plan for SLV-3. His words, after signing the document were vivid: "Kalam, SSC has concurred with many aspects of the Project Management Plan; some got modified and a few divergent views could not be accepted. Please remember, these divergent views may not be acceptable now, but they lead to proper solutions eventually. Scientists who have put in such views and have been critical, are equally contributing to the Project" This timely spark was the guiding principle thereon for the Project Management.

There are two more memorable days. One is the tenth of August 1979 when the first experimental SLV-3 launch did not place the Rohini Technology Payload into orbit. Dr. Brahm Prakash touched my shoulder and said "Don't give up, let us get ready for the next mission." This kindly touch did not allow me and my team to look back for nearly one year until the second SLV-3 launch which led to the mission fulfillment. On this second important day of eighteenth July 1980, I had the privilege of being close to the radiance of Brahmprakash happiness. I looked at the architect of Vikram Sarabhai Space Centre and whispered to myself "Lead, Kindly Light."

APJ Abdul Kalam

Director, Defence Research & Development Laboratory

Salute to an

In 1972 when the Thumba complex was just emerging as a conglomeration of heterogeneous units, Dr. Brahm Prakash came into the scene. Apart from nurturing the newborn programme, his role was to integrate and harmonise these disparate elements into a single organic entity with a clear objective.

He was an ideal mentor for his colleagues. Always respecting and listening to the other point of view, he was fair and objective in his decision making. A man who did not have pretensions of any kind, almost to the point of appearing shy and unsophisticated, he succeeded in commanding the respect of his colleagues, professional or otherwise. Never a man for dramatics, his ability to work hard without appearing to do so is legendary among his colleagues. A very sound judge of people, he conveyed an air of genuine friendliness, while never encouraging inner circles or coteries.

In these days when so much store is set by dynamised project management many basic ethical values tend to get forgotten. Dr. Brahm Prakash with his gentle and unobstrusive methods, always helped at such times to put things back in the right perspective. His loss has left a vacuum hard to fill.

R Aravamudan

Director, Systems Reliability Group VSSC

My earliest recollection of Dr. Brahm Prakash is when he was captaining VSSC side against the Chairman's eleven in a festival cricket match. As I entered the field I saw the VSSC skipper executing a cover drive and following it up with a pull for two successive fours. He retired after scoring 47 and his master performance was in strong contrast with the depressing show that followed. My association with him over the years has convinced me that he belongs to a different league in many other fields also.

My joining the PPEG made it possible to be closely associated with Dr. Brahm Prakash. Working as a member of his staff was a very rewarding experience. Though he was never demanding, all his assignments drove one with a sense of urgency and a compulsion to complete them as flawlessly as possible. Anything else seemed a violation. In his presence one always felt responsibility and a seriousness of purpose. Altogether I am thankful to have been associated with a great man and treasure memories of him.

Dr. S Ramnath

Director, Programme Planning & Evaluation Group VSSC

Dr. Brahm Prakash was a remarkable and fine gentleman, very well respected by the scientific community for his simplicity and devotion to the advancement of Science and Technology. It is indeed fortunate that he accepted the Directorship of the Space Science and Technology Centre during the turbulent & critical years of its growth. I do not think that the SLV-3 Project would have been successful without his guidance and personal involvement. He always respected different viewpoints, and it was a privilege to work under his leadership during the initial phases of development of the SHAR Centre. I still remember and cherish that day, seven years ago, when we had breakfast together as I was leaving the SHAR Centre. I wish India will produce more scientists like Dr. Brahm Prakash to contribute to the well being of all people.

Dr. YJ Rao

Trained in science and with faith in the supremacy of reason, I always retained doubts about the description of Dharmaputra in Mahabharata and the stories about Buddha. I never imagined I would meet such persons in today's world dominated by the rat race, hypocrisy and cynicism, till I met Dr. Brahm Prakash. While I was fortunate to work for him and be close to him (I am sure everybody who came in contact with him, felt a nearness to him!), I realise now more vividly what we all have lost. I am only happy that, in my lifetime, I met and worked with a latter-day Dharmaputra. Those who had never come into contact with Dr. Brahm Prakash would never believe that such as he was in our midst.

YS Rajan

Scientific Secretary, ISRO

In the demise of Dr. Brahm Prakash we have lost a father-figure well known for his technical direction, administrative capabilities and above all a kind hearted person with humane approach to problems. His pioneering contributions to atomic energy and space programmes will be remembered for ever. A personification of modesty, his success is attributable to his capability to judge people and his unbiased approach to the problems. He was a man of few words but full of action. He had every interest in bringing up talented persons in the organisation and the care with which he went ahead with the reorganisation to consolidate and nurture VSSC is a very good example. Only some of us close to him knew his untiring work to give quality assurance its meaningful role in SLV-3 project as well as to bring the SLV-3 project and SHAR launch complex people together. I only hope that this culture will continue to flourish in ISRO for tackling more challenging tasks in the coming years.

RM Vasagam

Project Director, APPLE

Shrine for a

Words fail to convey the feeling of desolation in the passage of that pure, gentle and great soul Dr. Brahm Prakash. His silent and unremitting contributions to the technological self-reliance, growth and security of the country will remain unmatched for years to come. Nobody else in a single lifetime could have done as much as he did for India's Nuclear, Space and Defence Programmes and for the country's self-reliant advancement in metallurgy and materials science. Dr. BP embodied a superb combination of scientific, technological, managerial, administrative and human capabilities—a complete man, outstanding in all respects. His most striking feature, however, was his saintliness which ennobled most of those who came in contact with him. He was a legend for economy of speech and listened to every one patiently and with deep concentration. Dr. BP had the memory of a computer and analytical capability of a scientific wizard. He could distill the essence of complex problems in no time.

P Sudarsan

Director, Budget & Economic Analysis ISRO

Ten years ago I met at VSSC a fair, honest & kind man. I learnt soon thereafter that he was a colossus in the world of Science and Technology. There were several occasions when a raging controversy would be resolved by looking at the problem the way Dr. Brahm Prakash would look at it. Dr. BP's judgement of issues and people was respected by even those who considered themselves adversely affected by that judgement. I will miss him, as will a whole generation of scientists in our country who look with alarm at a depleting resource: people with integrity and compassion, merit and fine judgement.

Dr. V Siddhartha

Advisor, CSIR.

Dr. Brahm Prakash's awareness of the evolving nature of ISRO and his ways of dealing with individuals and groups were admirable and typical of a mature and highly experienced manager. Where responsibilities cannot be defined precisely, motivation is the sole prime mover and direct questions on the viability of new ideas and proposals from scientists will just result in the opposite. Spontaneous searching questions asked by Dr. Brahm Prakash, eloquently put in passive form, did the trick and sent analysts reeling and searching for finer details time and again. His docile figure walking across from SSTC building to Scientists' Hostel, after working for long hours late in the evenings—most holidays saw him in half trousers and slacks—did make many a staff take keen interest in the work and try to emulate his worthy example.

R Madhavan

Head, Programme Planning & Evaluation Group ISAC.

Some persons do not impose themselves on us while they are in our midst; yet they leave a vacuum when they depart. We keenly feel their imperceptible presence; we miss them. Dr. Brahm Prakash was one such. The world is the poorer not just for an eminent metallurgist but, more grievously, for a man, a complete person that Dr. Brahm Prakash was.

Meetings with him provided me a close encounter of the best kind. The bony frame, the pallid face and the jerky movements do not belong to the type that impresses from a distance. Even at close quarters initially, the impassive face (eternally shrouded in a cloud of smoke, in his smoking days) would only have an unsettling effect. Slowly did one realize that there was an aura about him; he exuded certain benign waves. One was then struck by a presence. When he bared his tobacco-stained teeth in a gracious smile laden with sincerity, one was at ease again. The best was when he, occasionally, broke into peals of rapturous laughter; there was in him the innocence of a child. The best shrine for him is in our hearts. The highest credit we can give ourselves is that a Dr. Brahm Prakash trod amongst us in the most crucial days of VSSC.

P Radhakrishnan

Head, Test & Evaluation Division VSSC

Life generally is short and for the most part, stale and tasteless. Yet even in such life there are finer things of great value—this was taught to me by Dr. Brahm Prakash. His personality has influenced me beyond measure.

We all remember how death almost got him in 1978; but on second thoughts it gave him a few more years for our sake. I gather that he has in the past been heard occasionally to mention his own death. Did he perhaps know that death was catching up with him? He was a man of reserve; his social activities were rather limited. Yet, he found time to attend my wedding in 1970 at Bombay; again in 1979, he graced the occasion of housewarming of my present residence at Trivandrum. These are events which I cherish dearly.

“What does a blade of grass know of
thy greatness?
How can a tiny shell gauge the
vast deep ocean?”

V Vijayan

PA to Director, VSSC

A benign presence



Indian Space Research Organisation, Bangalore