

NEDERLANDSE NATUURKUNDIGE  
VERENIGING

PROGRAM OF THE ZEEMAN CONGRESS, 1946

Tuesday, September 17th.

- 10.00 Opening address by G.J. Sizoo, President of the Netherlands Physical Society.
- 10.15 C.J. Bakker (Amsterdam): Fifty years Zeeman Effect.
- 11.15 A.G. Shenstone (Princeton): Some remaining problems in the analysis of spectra.
- 12.30 Lunch in the Zoological Gardens "Natura Artis Magistra", 40, Plantage Kerklaan.
- 14.15 Visits for Foreign Members to the Physical Laboratory (6, Plantage and Muidergracht), the Zeeman Laboratory (4, Plantage Muidergracht), or
- 16.00 the Van der Waals Laboratory (129, Nieuwe Achtergracht).

Wednesday, September 18th:

- 9.15 D.C. Jackson (Oxford): Zeeman Effect and hyperfine structure.
- 10.15 F. Zernike (Groningen): The convection of light under different circumstances, with special reference to Zeeman's experiments.
- 11.15 B. Edlén (Lund): Spectra of highly ionized atoms.
- 12.30 Lunch
- 14.15 Sectional meetings in the Physical Laboratory and the Zeeman Laboratory.
- 16.45 Roundtrip by boat for the Foreign Members and their Ladies through the canals and harbours of the city.

Thursday, September 19th:

- 9.15 B. Strömgren (Copenhagen): The solar spectrum and the model of the solar atmosphere.
- 10.15 D. Chalonge (Paris): The opacity of the solar atmosphere and the negative hydrogen ion.
- 11.15 D.H. Menzel (Cambridge, Mass.): The constitution of giant stars.
- 12.30 Lunch
- 14.15 O. Struve (Chicago): The effect of diluted radiation in astronomical spectra.
- 15.15 A. Pannekoek (Amsterdam): Line spectra of Delta Cephei.
- 21.00 Reception of the Members of the Congress and their Ladies by the Municipality of Amsterdam in the Municipal Museum, 13 Paulus Potterstreet.

Friday, September 20th:

- 9.15 Sectional Meetings in the Physical Laboratory, the Zeeman Laboratory and the Astronomical Institute (Oudemanhuispoort).
- 12.30 Lunch
- 13.30 Visit to Utrecht, Leyden or Delft (for Foreign Members).

Saturday, September 21st

- 9.15 J.A. Smit (Utrecht): Determination of temperature from spectra.  
10.15 L. Vegard (Oslo): Spectroscopy of the higher atmosphere.  
11.15 B. Bleaney (Oxford): Radiofrequency spectroscopy.  
12.15 C.J. Gorter (Leyden): Final remarks.

Sunday, September 22nd:

- 10.00 Excursion for the Foreign Members and their Ladies to Volendam, the Wieringermeer and the Zuyderzee Works.

The General Meetings will be held in the Physical Laboratory of the University of Amsterdam, 6, Plantage Muidergracht. During the Congress the Bureau will be in the same building. Before the Congress its address is Zeeman Laboratory, 4, Plantage Muidergracht.

Wednesday afternoon it is not intended to have an astrophysical section. Astrophysicists then have the opportunity to take part in the physical sections.

Friday morning, September 20th, at 9.15 meeting of the Astrophysical Section at the Astronomical Institute of the University of Amsterdam, Oude-manhuispoort: Demonstration of the Intensigraph at the Institute and informal discussions on the subjects of the previous day and on further subjects not announced.

The list of foreign guests is now: A. Arnulf, D. Barbier, E. Bauer, B. Bleaney, M.J. Brochard, J.A. Carroll, D. Chalonge, M. Désirant, E. Edlén, P. Fleury, R. Fortrat, S. Freed, D.A. Jackson, P. Jacquinet, A. Kastler, Sir Kariamanikkan Krishnan, H. Kuhn, O. Laporte, H.L. van der Linden, J.E. Mack, D.H. Menzel, E. Miescher, M.V. Migeotte, E.A. Milne, H.H. Plaskett, E. Rasmussen, N. Ryde, A.G. Shenstone, F.J.M. Stratton, B. Strömgren, O. Struve, S. Tolansky, L. Vegard, M. Waldmeier, H. Wergeland, K. Wieland and probably: Sir Lawrence Bragg, J. Dufay, E.F. Gross, E. Hylleraas, W. Pauli, E. Schrödinger, P. Swings, R. Wildt.

The Congress Committee:

H.A. Kramers, President.  
J. Clay, Vice-President.  
C.J. Gorter, Secretary.  
S.R. de Groot, President of the Bureau  
C.J. Bakker  
J.M.W. Milatz  
M.G.J. Minnaert  
G.J. Sizoo  
H. Zanstra

First Newspaper of the Zeeman- Congress 1946

I. General Meetings

At the General Meetings the Chair will be occupied by:

J. Clay	on Tuesday morning	September 17th
J.M.W. Milatz	on Wednesday morning	September 18th
J.H. Coort	on Thursday morning	September 19th
J. Houtgast	on Thursday afternoon	September 19th
C.J. Bakker	on Saturday morning	September 21st

II. Sectional Meetings

The program of the sections will be:

Wednesday, September 18th from 14.15 till 16.15:

Section A. (Physical Laboratory) In the chair: F. Zernike.

P.F.A. Klinkenberg: Electric depolarization of the Zeeman-effect

S. Tolansky: The intensity efficiency of the Fabry-Pérot interferometer in high resolution spectroscopy.

Multiple beam interference examination of the topography of a diamond crystal.

E. Rasmussen: Testing of planeness of interferometer plates.

Section B. (Zeeman-Laboratory) In the chair: C.J. Gorter.

L.J.F. Broer: Atomic spectra in solids and solutions.

A. Kastler: Le problème de la luminescence du sodium dans la haute atmosphère.

Le rôle des ions négatifs oxygène dans l'équilibre ionosphérique et dans la luminescence du ciel nocturne.

J.E. Mack: Experimental attainment of very long series in the spectra of the alkali atoms.

Atomic beam apparatus for the study of the hydrogen-alpha line

Friday, September 20th from 9.15 till 12.15:

Section A. (Astronomical Institute) In the chair: H. Zanstra.

Section B. (Physical Laboratory) In the chair: H.B. Dorgelo.

J.E. Mack: Optical phenomena at the atomic bomb test.

Pn. Schuurmans: Methods of analysis in the spectra of the rare earths and in the very complex spectra of thorium and uranium

P. Jacquinet: Les raies interdites de l'hélium et leur effet Zeeman

S.R. de Groot: The energies of a compressed hydrogen atom.

In the physical sections about twenty minutes will be given to the contributors of papers.

III. National Gallery

On Wednesday 18th at 21.00 there will be a visit for foreign members of the Congress to the National Gallery (State Museum), Stadhouderskade-Museumplein.

IV. Philips Physical Laboratories.

In case of sufficient participation an excursion to the Physical Laboratories of the Philips'Works, Kastanjelaan, Eindhoven, will be organized for foreign members of the Congress and their ladies. Autocars will start on Monday, September 23rd at 8.00 a.m. before the Cook office, Vijgendaan, Amsterdam-C. They will be back at Amsterdam at about 18.30. The Philips'Works offer this transport and a lunch. Those, who wish to participate this visit, are requested to give their names to the Congress Bureau before Thursday, September 19th.

V. Rationbooks.

The foreign members are requested to deliver their passports at the Bureau on Tuesday morning, in order that the Bureau can get rationbooks for them.

VI. Please write your name on the enclosed small card, to be worn visibly.

Second Newspaper of the Zeeman-Congress 1946

I. Reception in the Municipal Museum

Thursday, September 19th, 21.00 (no evening dress).

II. Lunch on Friday, September 20th

The lunch on Friday will take place at 12.00 exactly, instead of at 12.30, because the trains to Utrecht, Leyden and Delft that should be taken at the Central Station for the visits start at 13.22, 13.35 and 13.35 respectively. For the return journey to Amsterdam, the following trains are available: Traintickets will be given at lunch or at the Central Station.

from Utrecht	arr. A'dam	from Delft	from Leyden	arr. A'dam
16.02	17.09	16.03	16.27	17.10
16.49	17.35	16.33	16.57	17.40
17.02 & 17.19	18.09	17.03	17.27	18.10
17.48 & 17.49	18.40	17.33	17.57	18.40
18.19 c	19.19		18.07	18.50
18.43	19.35	18.03	18.27	19.10
18.49 c	19.49	18.33	18.57	19.40
19.49 c	20.40	19.03	19.27	20.10
19.55	20.53	19.33	19.57	20.40
20.48 and 20.49 c	21.45	20.33	20.57	21.40
21.49 c	22.49	21.33	21.57	22.40
22.00	22.38	22.33	22.57	23.40
22.07	23.18	23.33	23.57	0.40
22.49	23.40			
23.19 c	0.19 "c"			

"c" means you have to change trains at Hilversum.

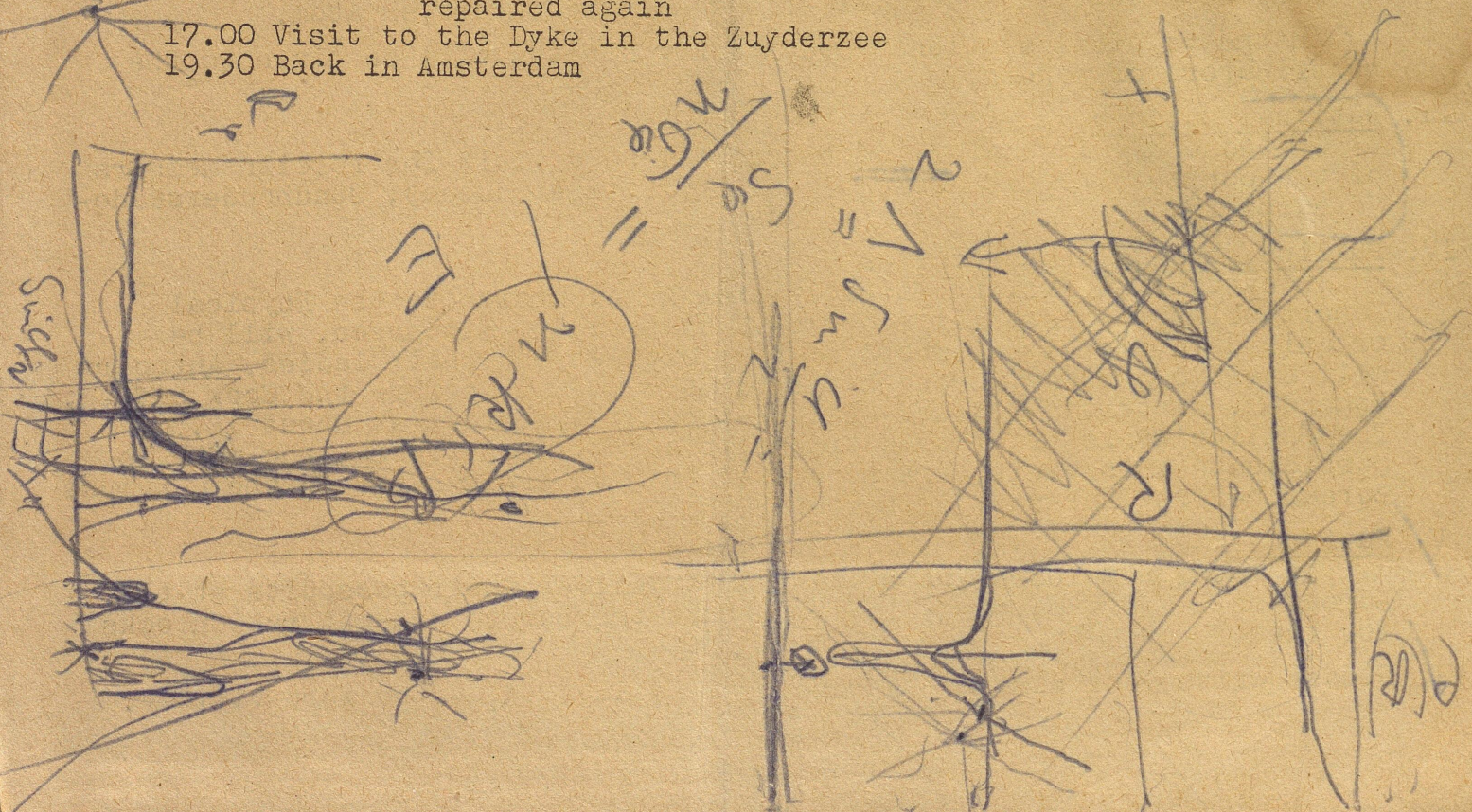
III. Lunch on Saturday, September 21st

The ticket A can be used for a lunch on Saturday, September 21st.

IV. Excursion on Sunday, September 22nd

The program of the excursion for foreign guests on Sunday is as follows:

- 10.00 Start from Rokin 5, V.V.V. Office, Amsterdam C
- 11.15 Monnikendam, Volendam
- 12.00 Lunch in Restaurant Spaander, Volendam
- 13.30 Start from Volendam
- 14.30 - 15.15 Visit to the "Gemaal de Lely"
- 16.15 - 16.40 Visit to the dyke, damaged by the Germans and now repaired again
- 17.00 Visit to the Dyke in the Zuyderzee
- 19.30 Back in Amsterdam



At Tuesday night September 17th 1946 an informal discussion took place between a number of members of the Zeeman Congress. The following people were present. Some of them attended the Congress as the official delegates of the Physical Societies of their countries:

E. Bauer	) France	G.J. Sizoo	
P. Fleury		C.J. Gorter	
H.L. van der Linden,	Belgium	H.B. Dorgelo	
K. Wieland	) Switzerland	F. Zernike	Neth. Phys. Society
E. Miescher		J. de Boer	
Sir K. Krishnan,	India	S.R. de Groot	
B. Edlén,	Sweden	H. Brinkman	
E. Rasmussen,	Denmark	J. v.d. Handel	
L. Vegard,	Norway		
F.J.M. Stratton,	England		
H.P. Berlage,	<del>Neth.</del> Neth. East Indies		
A. Establier,	Institut Int. de Coop. Intell.		
J.M. Burgers	) Netherlands		
J. Clay			

Though this was not an official session still it seemed worth while summarizing the general remarks and conclusions with which every one could agree.

Prof. Stratton as general secretary of the International Council of Scientific Unions gave a review of the situation in the Union and of the activity of the Physical Union. It seemed that in several Unions the international cooperation was very good i.e. in the astronomical union where for many years already a very intensive cooperation has existed, but in the Physical Union it has always been very weak, perhaps as a result of some political difficulties arising after the first world war. As a matter of fact there is a great difference between astronomy and physics. The first cannot work without an international organization, but the general feeling was that also in physics many researches i.e. those on cosmic rays, standards, units and constants could be done much better if an international working scheme existed and cooperation could be better maintained with other unions in such matters as atomic weights of isotopes, chemico-physical constants, the ionosphere.

Also it will be good if a definite group exists that can help with the organization of international congresses such as the International Institute of Intellectual Cooperation used to organize. Research workers in some restricted regions were already establishing some international contact. As an example it was mentioned that recently there has been organized an international group on crystallography. It is intended to organize also an international section on optics when the optical congress in Paris will take place. It was stated that this organization hoped to enter with their section into the larger union.

At this moment Prof. Siegbahn is President of the Physical Union and the acting secretary of Prof. Ewald. The archives were lost during the war. Everyone present insisted on the necessity of bringing the Union to a new life and investigating the causes of its failure in the past. In this connection the following main points were mentioned during the session:

1. Absence of a definite scientific program.
2. In constituting the board it will be desirable not to look only to people with a great name in science but for people that have enough time and organizing qualities to be able to do all the work that should be done.

As to the necessity of the revival of the International Union it was put forward that it should concentrate the activities of the different international sections, as e.g. the optical section, applied physics etc, and that no section should be formed outside the Union.

As to the new organization the following points were put forward:

1. Foundation of a Bureau and a permanent staff.
2. It will be necessary that the organization will be as general as possible.
3. It was asked that the Netherlands Physical Society should prepare a report containing definite advice for improving the present organization and present it to the next meeting of the International Union.