

u 8/19

TRAJECT: ad RHENUM

Instituut voor Theoretische Natuurkunde  
Prof. Dr S. R. de Groot  
Bylhouwerstraat 6, Utrecht  
Telefoon 11109 (K 3400)

Utrecht 20th June 1949

Sir K.S. Krishnan F.R.S.,  
Director of the  
National Physical Laboratory,  
University Buildings,  
Delhi, India

Dear Sir Krishnan,

I want to thank you very much for your kind letter of 30th April 1949. We were very sorry that we missed you last year. As a matter of fact we too were in England and France in the fall of 1948. I gave your new address to the administration of the Van der Waals laboratory. I left Amsterdam and after spending a year at the Collège de France in Paris, I went to the Utrecht University. My present address is

Prof. S.R. de Groot,  
Institute for theoretical physics,  
Bylhouwerstraat 6,  
Utrecht, Netherlands

With kind regards from my wife and me,

Yours sincerely,

(S.R. de Groot)

30th April 1949

Dear Professor de Groot,

I received a few days ago reprints of several papers by you and others from the Van der Waals Laboratory. I read them with much interest. They remind me of the very pleasant week which I spent with you and Mrs. de Groot at Amsterdam during the Zeeman celebrations in 1946. I was in Europe again in the fall of 1948, but I spent most of my time in England, France and Switzerland, and I am sorry I could not visit Holland. I left the Allahabad University about two years ago and my present address is that given at the top of this letter.

With kind regards to both of you,

Yours sincerely,

Professor S.R. de Groot,  
3, Plantage Muidergracht,  
Amsterdam-C.



NEDERLANDSCHE  
NATUURKUNDIGE VEREENIGING

Amsterdam, 14th August 1946.  
~~BRINDHOVEN~~

~~2e SECR. BOSCHHOVEN~~ Plantage Muidergracht 3  
~~BRINDHOVEN~~ Amsterdam-C.

dGr/K.

Sir K.S.Krishnan, D.Sc., F.R.S.,  
c/o. The Royal Institution,  
21 Albemarle Street,  
London. W.1

Dear Sir Krishnan,

With reference to your letter I give you hereby some informations concerning the Zeeman-congress, that are at hand.

The meetings will take place in the Physical and Zeeman-laboratories, Plantage Muidergracht 6 and 4, at Amsterdam from 17th - 22nd September 1946.

The following physicists and astrophysicists have accepted to speak at the conferences:

Dr A.G. Shenstone, Princeton (on "Some remaining problems in the analysis of spectra"); Dr D.H. Menzel, Harvard Observatory, Dr O. Struve, Yerkes Observatory; Dr D. Chalonge, Paris (the Opacity of the Atmosphere of the Sun and the negative hydrogen ion); Dr B. Edlen, Lund; Dr. L. Vegard, Oslo; Dr B. Strömberg, Copenhagen; and probably: Dr F. Bloch, Stanford and Dr P. Jacquinot, Clermond-Ferrand.

A number of other scientists have accepted our invitation to be our guests:

Dr P. Swings (Pasadena, Liège); Dr S. Freed (Chicago); Dr E.A. Milne (Oxford); Dr S. Tolansky (Manchester); Dr F. Twyman (London); Dr F.J.M. Stratton (Cambridge); Dr H. Kuhn (Oxford); Dr P. Fleury (Paris); Dr J. Cabannes (Paris); Dr J. Brochard (Bellevue); Dr R. Fortrat (Grenoble); Dr D. Barbier (Paris); Dr M.V. Migeotte (Liège); Dr Van der Linden (Ghent); Dr M. Waldmeier (Zürich); Dr E. Miescher (Bâle); Dr E. Rasmussen (Copenhagen); and probably: Dr J.E. Mack (Los Alamos); Dr H.H. Plaskett (Oxford); Dr W. Pauli (Zürich); Dr J. Holtsmark (Oslo); Dr E. Schrödinger (Dublin); Dr J. Dufay (Lyon); Dr. Kastler (Paris).

There will certainly be other visitors to the meeting, who did not yet answer definitively our letters.

Some Netjerlands scientists will speak and of course our leading physicists and astrophysicists will attend the conference.

As soon as the complete program has been established, it will be sent to you.

T.o.p.

I hope that for the moment these informations  
can be of some use to you, and I remain,

Yours sincerely,



Dr S.R.de Groot,  
Second Secretary Netherlands Physical  
Society, Plantage Muidergrecht 4,  
Amsterdam-C.

NEDERLANDSE NATUURKUNDIGE VERENIGING  
PLANTAGE MUIDERGRACHT = 4  
Amsterdam-C.

Amsterdam, July 3d., 1946.

*Replies accepted  
M.M.*

Dear Colleague,

The Netherlands Physical Society (Nederlandse Natuurkundige Vereniging) intends to organize an international scientific meeting in Amsterdam on the occasion of the 50th anniversary of the discovery of the Zeeman-effect in September of this year.

We have invited a number of physicists and astrophysicists to give introductory reviews on various subjects in connection with atomic spectroscopy. In principle the following scientists have accepted our invitation to speak: Dr. D.H. Menzel, Harvard Observatory, Dr. I.I. Rabi, Columbia University, Dr. C. Struve, Yerkes Observatory, Dr. D.A. Jackson, Clarendon Laboratory, Dr. B. Edlen, University of Lund, Dr. L. Vegard, University of Oslo, Dr. B. Strömberg, University of Copenhagen and Dr. D. Chalonge, Astrophysical Institute Paris. Other foreign and Netherlands scientists have been invited as well.


Moreover we intend to invite a number of other distinguished foreign scientists who are interested in this field of research to be our guests during the conference. They will not be requested to give a lecture, but might join in the discussions. In this way the first international scientific meeting in Holland after the war will acquire a more general importance for the reestablishment of scientific contact also between those physicists and astrophysicists who are not spectroscopists in the restricted sense of the word.

We shall be obliged if you will do us the honour of being our guest during the conference. With subvention of the Government and of the City of Amsterdam we are prepared to pay your stay in this country during the conference.

Probably the conference will be held from September 17th. to September 22nd., but these dates are not yet quite certain.

We really hope that you are willing and able to accept our invitation and looking forward to an early reply, we remain,

Yours sincerely,



(Dr. S.R. de Groot)  
Second Secretary of the  
"Nederlandse Natuurkundige Vereniging".

Sir Kariamanikkan Krishnan  
c/o Royal Institution  
21, Albemarle Street  
London, W 1.

Zeeman Laboratory, Muidergracht 4, Amsterdam, August 19<sup>th</sup>.

To the speakers and guests on the Zeeman congress.

The Zeeman congress organized by the "Nederlandse Natuurkundige Vereniging" with the subvention of the Netherlands Government and of the City of Amsterdam is going to take place from September 17<sup>th</sup> to September 22<sup>nd</sup> in the Physical Laboratory of the University of Amsterdam, 6, Muidergracht. Also the Zeeman Laboratory of the University of Amsterdam, 4, Muidergracht will be placed at the disposal of the members of the congress. The opening session will probably be held September 17<sup>th</sup> at 10 a.m.

In the general sessions a number of introductory lectures on different problems related with atomic spectroscopy will be discussed. Apart from these general sessions a number more or less informal meetings will be organized where others problems and special topics may be discussed. It is probable that more than one of those latter meetings will take place at the same time so that the congress splits itself into sections. It is hoped that a number of the guests and other members of the congress are willing to expose some of their results and problems in those meetings. In order to enable the congress committee to obtain a survey of the items to be discussed and to divide the time available in a reasonable way the members who are willing to give a short address are requested to announce their subject at as early a date as possible to the congress committee.

The speakers are invited to hand the text of their lectures (e.g. 6-10 pages) at the beginning of the congress to the congress committee. This text and a review of the discussions will be published in the proceedings of the congress in which also communications made in the informal meetings may be inserted.

It is hoped to organize a few excursions and receptions to which also the ladies accompanying the foreign members are invited.

The following introductory lectures will be given:

A.G. Shenstone: Some remaining problems in the analysis of spectra.

D.C. Jackson: Zeeman effect and hyper fine structure.

F. Edlén: Spectra of highly ionized atoms.

F. Bloch: Spectroscopy with radio waves.

L. Vegard: Spectroscopy of the higher atmosphere.

B. Stromgren: The solar spectrum and the model of the solar atmosphere.

D. Chalonge: The opacity of the atmosphere of the sun and the negative hydrogen ion.

D.H. Menzel: The constitution of giant stars.

O. Struve: The effect of dilated radiation in astronomical spectra.

A. Pannekoek: Line spectra of  $\delta$  Cephei.

while also a few Netherlands physicists will speak.

The following foreign guests have been announced already:

D. Barbier (France), J. Cabannes (France), J. Brochard (France), J.A. Carroll (Great Britain), P. Fleury (France), S. Freed (U.S.A.), P. Jacquinet (France), Sir Kariamannikhan Krishnan (India), H. Kuhn (Great Britain), O. Laporte (U.S.A.), H.L. van der Linden (Belgium), E. Miescher (Switzerland), M. V. Migeotte (Belgium), E.A. Milne (Great Britain), H.H. Plaskett (Great Britain), E. Rasmussen (Denmark), N. Ryde (Sweden), F.J.M. Stratton (Great Britain), P. Swings (Belgium), S. Tolansky (Great Britain), F. Twyman (Great Britain), M. Waldmeier (Switzerland)

while other scientists among whom:

J. Dufay (France), A. Kastler (France), J. E. Mack (U.S.A.), W. Pauli (Switzerland), E. Schrödinger (Ireland), H. Wergeland (Norway) and R. Wildt (U.S.A.) perhaps will attend. Representatives of a few national Physical Societies have also been invited.

The foreign speakers and guests are requested to tell other foreign scientists that might be interested that they are very welcome as members of the congress. In general those members will be supposed to pay their own expenses but the congress committee should be informed in due time and then may be able to give advice and assistance.

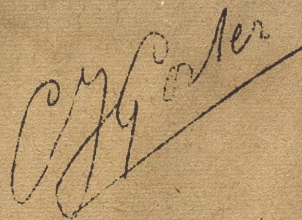
It is hoped to lodge most of the speakers and guests in Netherlands families. Moreover they will receive a fixed sum for meals and small expenses during the congress. In general it will not be possible to contribute to the board and lodging of the wives accompanying speakers and guests but in any case the wives should be announced at an early date to the congress committee.

The hour and place of arrival in Amsterdam should be announced in advance as well to the congress committee as to the Dutch host in so far as his name and address have been communicated.

It is hoped to send soon a more complete program.

For the congress committee,

yours sincerely,



Sir. Karanamikke

Krishnan c/o Royal Institution

The Electrical Committee  
of Order - Disorder Alloys.

21. Albemarle Street

London. W.I.

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

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 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 P. Edlén (Lund): spectra of highly ionized atoms.
- 12.30 Lunch
- 14.15 Sectional meetings in the Physical Laboratory and the Zeeman Laboratory.
- ~~16.45~~ <sup>Tea. 16.30 - in this lab.</sup> 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 (Oudemanshuispoort).
- 12.30 Lunch
- 13.30 Visit to Utrecht, <sup>FOR</sup> Leyden or Delft (for Foreign Members).

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. Oort	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: La probléme 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<sup>line</sup>

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.

Ph. 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, Vijgendam, 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.

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