

THE INSTITUTE FOR ADVANCED STUDY

Historical Studies - Social Science Library

ITEMS REMOVED : STROMGREN, BENGT

1) Berngt Stromgren, "Stellar Models for Main-Sequence Stars and Subdwarfs," reprinted from Stars and Stellar Systems, Vol. XIII, University of Chicago Press, 1965.

October 1, 1982

Dr. Bengt Strömngren
Gamle Carlsbergvej 15
DK 2500 Copenhagen
Denmark

Dear Dr. Strömngren:

Recently, in clearing out some miscellaneous materials stored in the basement of Fuld Hall, we came across a set of looseleaf notebooks, roughly from 1965 to 1977, containing correspondence connected with your professional life and your time at the Institute. A cursory glance at several of the notebooks indicates that there is nothing within them of a deeply personal or private nature. I am writing to inquire whether or not you wish to have them, and if you do not, whether or not you would object to my contributing them to the archives connected with the development of modern science established at the American Philosophical Society. Unless you object, I should like to take the latter step for there they would be properly protected and entered into the assets of that great institution, a part of whose recent interests has been to collect the papers of distinguished scientists of this epoch for future archival purposes.

I remember with great pleasure my brief visit to you shortly after I assumed the Directorship here. I hope this letter finds you and your family in good health. Additionally, I would hope that your travels might bring you this way again for we would very much welcome your visit.

Looking forward to your reply, I am,

Sincerely yours,

Harry Woolf

Hotel d'Angleterre

Kgs. Nytorv 34
1050 Copenhagen K
Denmark
Phone: (01) 12 00 95
Telex: 5877
Cables: Angleterre
Giro: 7 64 60

August 11, 1971



Dear Carl:

Welcome to Copenhagen. Sigrid and I are delighted that you are here, and we very much hope that you and Annette can have dinner with us tonight at 7 p.m.

I wonder if you would call us when you have checked in, the telephone number is 31 12 25. I should like to come to the hotel and take you to our home, say, at 6:45 p.m. if that is convenient to you.

Looking forward so much to seeing you,

Sincerely,

Bengt

Bengt Strömgen
Gamle Carlsbergvej 15
2500 Valby
Copenhagen

13 July 1971

Dear Carl:

Many thanks for your letter of July 8. I was delighted to learn that you and Annette will be in Copenhagen August 11-13. Sigrid and I hope very much that you will visit us on this occasion. We expect to be in Copenhagen, and I shall try to get in touch with you at the Hotel D'Angleterre after your arrival.

Looking forward very much to seeing you, and with warmest regards,

Sincerely,

Bengt

Bengt Strömgen

Dr. Carl Kaysen, Director
The Institute for Advanced Study
Princeton, New Jersey 08540
U. S. A.

July 8, 1971

Dear Bengt:

Annette and I are planning to spend a few days in Copenhagen on our way to Sweden where I will be giving some lectures. We will be in Copenhagen from August 11-13, as well as for two days at the beginning of our trip on the 31st of July and the 1st of August. If you and Sigrid are in Copenhagen then, we would love to have an opportunity to see you. We will stay at the Hotel D'Angleterre.

With warmest greetings,

Cordially,

Carl Kaysen

Dr. Bengt Strömngren
House of Honor
Copenhagen
Denmark

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY 08540

Telephone-609-924-4400

THE DIRECTOR

September 11, 1968

Memorandum for the Record

I had a conversation with Professor Strömgren in which we discussed completion of the work that Otto Struve started as a member. The manuscript is now being finished by Margarita Hack, and she wishes to arrange its publication by the Astronomical Observatory Trieste which will pay a part of the costs with the Institute to cover the rest of the cost which will be in the order of \$1500. I agreed to view the request sympathetically and discuss it with the Faculty of Natural Sciences. He will write. — never heard.

C.K.

March 12, 1968

Dear Carol:

Thank you for letting Dr. Kaysen know of Prof. Strömngren's expected visit at the Institute on April 5. Unfortunately, he will be out of town on a commitment he cannot avoid, and he has asked, therefore, that you say his "hello" to Prof. Strömngren and mention also how very disappointed he is that circumstances make it impossible for them to see each other on this trip. Hope there will be another!

Sincerely,

Ruth Bortell

Mrs. Carol Nielsen
Institute for Advanced Study

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY 08540

SCHOOL OF HISTORICAL STUDIES

March 8, 1968

Dr. Carl Kaysen, Director
Institute for Advanced Study

Dear Dr. Kaysen:

You might like to know that Professor Strömberg will be in Princeton on April 5th. Although he will be spending three weeks in this country, that is the only day on which he will be here.

Sincerely,

Carol
Carol Nielsen

Dr. Bengt Strömgen has resigned from his professorship at the Institute for Advanced Study in Princeton to accept an appointment by the Royal Danish Academy of Sciences and Letters to be the occupant of the House of Honor, known to many physicists during the period of thirty years when it was the home of Niels Bohr. Dr. Strömgen will also be Professor of Astrophysics at Copenhagen University. Because he is now leaving the United States Dr. Strömgen resigned as President of the American Astronomical Society at the end of the Society's meeting last June.

July 1, 1967

NOTE: This is an informal release that was sent to Physics Today

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY 08540

SCHOOL OF NATURAL SCIENCES

30 June 1967

Dr. Carl Kaysen
The Institute for Advanced Study
Princeton, New Jersey

Dear Carl:

On leaving the Institute for Advanced Study I wish to express to you and to the members of the Institute faculty my feelings of deep gratitude. During the years I have been connected with the Institute I have enjoyed the most excellent conditions for my work. The spirit of the Institute and the association with my colleagues meant more to me than I can express in a letter.

I feel very grateful to you for your many kindnesses during the last year. It has been a privilege to participate in the discussions with you of problems concerning the School of Natural Sciences and to hear about your plans for the future work at the Institute.

I wish to tell you how very much Sigrid and I hope that you and your wife will visit us in Copenhagen.

With warm regards,

Sincerely,

Bengt

Bengt Strömberg

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY 08540

SCHOOL OF NATURAL SCIENCES

Dr. Kayser

You may like to have this
as a souvenir.

Freeman.

Bengt and Sigrid Stromgren
Remarks for farewell lunch, by F. J. Dyson,
April 11, 1967

I am not making a speech but only a few words to wish our friends Bengt and Sigrid Stromgren bon voyage and to express our sorrow at their leaving. We were enormously lucky to get Bengt here in the first place. He is about the only astronomer there is who is unchallengeably first-rate both as a theorist and an observer. He was able to attract to the Institute a steady flow of visiting astronomers of both kinds, and so to keep alive a stream of research that was at the same time deep and in contact with reality. I always admired particularly the little electronic gadget that stood for a long time in his office in Fuld Hall, a machine for measuring the colors of stars with speed and accuracy. In this age of big machines it takes a real genius to do important experimental research on top of an office table.

Now that Bengt is leaving, we have learned the hard way how irreplaceable he is. Looking at possible replacements for him, we find that almost all astronomers other than Bengt can be divided into three classes. Class one are specialists, expert in some narrow field but lacking Bengt's breadth. Class two are wonderfully broad, always ready with a television interview or a new theory of creation. Class three are professors at Princeton University. After much deliberation in which Bengt himself participated, we have not been able to find any adequate replacement for him. This means that the astronomy group here will temporarily collapse and the Institute will be much the poorer.

A little over a year ago we first heard that the Carlsberg house in Copenhagen was being offered to Bengt. As most of you certainly know, this house is traditionally given to the most eminent living Dane, and the first

occupant was the great physicist Niels Bohr. As soon as we heard of this offer we knew that we had lost Bengt. If you are Danish, this is not something that you say no to. And of course Denmark had the good sense to offer, with the house, opportunities for Bengt's future work at least as good as anything we could give him here. While the United States dawdles, the European Southern Observatory, of which Denmark is a founding member, is going ahead with the building of a first-rate observing facility in Chile. So in a few years' time Bengt will be making his annual observing pilgrimage to Cerro La Silla instead of to Kitt Peak, enjoying the best seeing conditions on earth under the astronomically richest part of the sky.

When I look around at the astronomical community of today there is nobody comparable to Bengt. Perhaps to find somebody like him in mind and character we have to go back to William Herschel, who became famous by discovering the planet Uranus but then went on to make in his later years a far greater discovery, the galaxy. In a life of Herschel I see that in 1813, at the age of 76, he was engaged in developing an entirely new method of star-gauging, to measure the population of stars in various parts of the sky. At 79 he published his great paper "Astronomical Observations and Experiments Tending to Investigate the Local Arrangement of the Celestial Bodies in Space, and to Determine the Extent and Condition of the Milky Way." His sister Caroline Herschel, his constant companion throughout his life, was in excellent spirits at the age of 81 when her nephew reported "She is fresh and funny at ten or eleven p.m., and sings old hymns, nay even dances to the great delight of all who see her." Reading these descriptions of William and Caroline, I think we have a fairly accurate picture of how Bengt and Sigrid will be, after they have lived in the Carlsberg house for twenty years.

We all wish them long and fruitful years in their new home, and we hope to be able to give them a warm welcome here frequently enough so that we shall not lose touch with them. Let us drink a good-bye toast to Bengt and Sigrid.

Bengt Strömngren, born 21 January 1908 in Gothenburg, Sweden.
M. Sc., Copenhagen University, 1927. Ph.D., Copenhagen University,
1929.

Lecturer, Copenhagen University, 1932. Assistant Professor,
University of Chicago, 1936. Associate Professor, University of
Chicago, 1937. Professor, Copenhagen University, 1938. Director,
Copenhagen University Observatory, 1940. Professor, University of
Chicago, 1951. Distinguished Service Professor, University of
Chicago, 1952. Director, Yerkes and McDonald Observatories, 1951-57.
Professor, The Institute for Advanced Study, Princeton, 1957. Visit-
ing Professor, University of Chicago, 1948. Special Lecturer, University
of London, 1949. Visiting Professor, California Institute of Technology,
1950. Visiting Professor, Princeton University, 1950.

Member, Royal Danish Academy of Sciences and Letters, Danish Academy
of Technical Science, Royal Swedish Academy of Sciences, Societe Royale des
Sciences de Liege, Acad. Coimbra, Physiographic Soc. Lund, Koninklijke
Nederlandse Akademie van Wetenschappen, Royal Academy of Sciences Upsala,
American Academy of Arts and Sciences.

General Secretary, International Astronomical Union, 1948-52.
Member Executive Committee, International Council of Scientific Unions,
1948-52.

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gas, Ap. J. 103, 242, 1948.
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Johnson), Ap.J. 121, 611, 1955.

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The Hertzsprung-Russell diagram, *Third Berkeley Symposium*, Vol. 3, 49, 1956.

Also a number of other papers mainly in *Astron. Nachr.*, *Monthly Not. R.A.S.*, and *Z. f. Ap.*

Lehrbuch der Astronomie (with Elis Strömngren), Springer, Berlin 1933.

Laerebog i Astronomi (with Elis Strömngren), Gyldendal Norsk Forlag, 2. ed., Oslo 1945.

The Composition of Stars and their Ages, The Halley Lecture for 1958, delivered at Oxford on May 27.

Final Report to the National Science Foundation on grant NSF-G 10285, Investigation of age, space velocity and chemical composition for A and F stars.

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Problems of Internal Constitution and Kinematics of Main-Sequence Stars, *Quarterly Journal of the Royal Astronomical Society*, Vol. 4, pp. 8-36, 1963.

An Introduction to Astrophysics, Notes of a Lecture Series, The Institute of Advanced Study, fall, 1957, notes taken by Jeremy Bernstein.

Abstract, The distribution of A and F stars within 100 parsec in the mass-age diagram.

PRINCETON UNIVERSITY
Department of Astrophysical Sciences

Atomic and Molecular Physics Seminar

SPEAKER: Dr. Richard C. Henry
Institute for Advanced Study

DATE: Thursday, February 16, 1967

TIME: 3:00 P.M.

PLACE: Lecture Hall, Peyton Hall

SUBJECT: Photometry of the Calcium K Line in A-Type Stars

cc:*Mr. Morgan
Mrs. Gorman

December 19, 1966

Mr. Richard Henry
* c/o Peterson
Great Road
Princeton, New Jersey 08540

Dear Mr. Henry:

On the recommendation of Professor Strömgren, I am pleased formally to offer you an appointment in the School of Natural Sciences of the Institute for Advanced Study for the period January 1-10, 1967, as Research Associate of Professor Strömgren. We can make available to you a salary of \$200 for that time.

Sincerely yours,

Carl Kaysen

*Note to Mr. Morgan: The salary of \$200 is to be paid out of the current ONR contract.

*Delivered to Mr. Henry by Prof. Strömgren 10-20-66

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY 08540

SCHOOL OF NATURAL SCIENCES

December 16, 1966

Dr. Carl Kaysen
The Institute for Advanced Study

Dear Carl:

Mr. Richard Henry who worked as my Assistant during the period July-October 1966 is completing his work for the Ph. D at Princeton University this month and will be available for an appointment of brief duration in January to assist me with observations at Kitt Peak National Observatory during one observing period.

I should be grateful to you if you would arrange to have Mr. Henry appointed Research Associate for the period January 1-10, with a salary of \$200.00 for the period, the salary to be paid out of my current ONR contract.

Sincerely,

Bengt

Bengt Strömngren

BS:eg

*cf. Peterson, Great Road
Princeton*

cc Professor Strömberg
Mr. Morgan
Mrs. Barnett
Mrs. Gorman

22 April 1966

Dear Mr. Henry:

On the recommendation of Professor Strömberg, I am pleased formally to offer you a position, as Assistant to Professor Strömberg, for four months, July through October, 1966. We can make available to you a salary of \$1,500 for that period.

With all good wishes,

Robert Oppenheimer

Mr. Richard Henry
Kitt Peak National Observatory
950 North Cherry Avenue
Tucson, Arizona 85717

Mr. Richard Henry
Kitt Peak National Observatory
950 North Cherry Avenue
TUCSON, ARIZONA 85717

Dr. GUISA CAYREL-DE-STROBEL
Observatoire de Paris, Section d'Astrophysique
MEUDON (SEINE et OISE) FRANCE

cc to: Prof. Dyson
Prof. Regge
Prof. Yang

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY 08540

SCHOOL OF NATURAL SCIENCES

15 April 1966

Dear Robert:

I am herewith bringing up a question that I had expected to be able to discuss with you and Freeman, after Freeman's return. Since I will be leaving for Leiden on April 22, I thought it was best to start considering it now.

In the Physics faculty meeting when we discussed the grant for Goldberger it was decided that we would all contribute from the Assistant's salaries toward this grant. I believe that we would come out right if my part were to be \$4,000, which would leave \$3,000 for Assistant's salaries.

In planning for next year's work I find that it would help me a great deal if I could count on some assistance in the discussion of the observational material gathered at Kitt Peak National Observatory; I would like to finish as much of this work as possible before leaving Princeton in 1967.

Mr. R. Henry, a graduate student (in his last year) in the Department of Astrophysical Sciences at Princeton University, would be able to work for me for 4 months, July - October, 1966. I believe that a salary of \$1,500 for the 4 months would be about right.

Mrs. G. Cayrel will accompany her husband when he comes to the Institute as a member in September, 1966. Mrs. Cayrel has published very nice papers in spectroscopy, in particular on determinations of abundances, and has worked effectively in Greenstein's group when the Cayrel's were in Pasadena. I know that she would welcome an opportunity to collaborate with me in the discussion of the Kitt Peak photometric material. I should be happy if she could be appointed as Assistant for 2 months, October and November, 1966, at a total salary of \$1,500.

The ONR contract that was applied for may come through in September or October and would then make it possible to complete the observational work at Kitt Peak according to plan.

Sincerely,

Bengt

To : Dr. Oppenheimer

From: Bengt Strömngren



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THE OHIO STATE UNIVERSITY
PRINCETON UNIVERSITY
UNIVERSITY OF WISCONSIN
YALE UNIVERSITY

950 NORTH CHERRY AVENUE
P.O. Box 4130
TUCSON, ARIZONA 85717
AC 602 327-6655
CABLE ADDRESS:
AURACORP, TUCSON

~~Mrs. Gorman~~ Est
~~Mrs. Underwood~~
pls return

June 1, 1966

Dear Prof. Oppenheimer:

I am pleased to accept the position of assistant I have been offered for July - Oct 1966.

I will be returning to Princeton later this month. I expect I will continue to locate myself in the University Observatory while in Princeton.

Yours sincerely,

Richard C. Henry

14 October 1966

Dear Bengt:

Thank you for your formal letter of resignation of 12 October. As I must, I accept your resignation with regret. Although distance will inevitably make our relation less intimate, I trust that it will continue to be as warm and friendly as ever, both institutionally and personally.

Cordially,

Carl Kaysen

Professor Bengt Strömberg
The Institute for Advanced Study

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY 08540

SCHOOL OF NATURAL SCIENCES

12 October 1966

Dr. Carl Kaysen
Institute for Advanced Study
Princeton, New Jersey

Dear Carl:

As you know, I decided some months ago to leave the Institute for Advanced Study in order to accept an appointment offered by the Danish Academy of Sciences and Letters. Herewith I am asking you to accept my resignation from the Institute professorship effective June 30, 1967.

During the years of my connection with the Institute for Advanced Study I have enjoyed exceptionally good conditions for my work. On this occasion I wish to express my feelings of deep gratitude.

Sincerely,

Bengt

Bengt Strömberg

11/29 4:30 p.m.

Dr. Herwig called to ask when he might expect to receive a trip report ~~on~~ relative to the U. of Texas Astronomy Dept. He is planning to call you back in the morning, and asked me to see if I could find out the answer to this in case you were not in the office when he called.

Dear Carol: I plan to send the report off
tomorrow, Tuesday.

carol

B.S.

11/18/65

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Mr. Tarnoff's secretary called to enquire if you had yet sent off corrected galleys to the William Byrd Press. She said there was no need to call her back, unless there would be a delay in returning the galleys.

C.

Mrs. Eleanor Guthrie
IBM White Plains
914 WH 9-1900
Ext. 5173

AEROGRAMME
LUCHTPOSTBLAD

3-OKTOBER-
FEESTEN
LEIDEN



Mrs. Carol Nielsen

Institute for Advanced Study

PRINCETON, NEW JERSEY

08540

U. S. A.

PAR AVION / PER LUCHTPOST

EXPÉDITEUR / AFZENDER: B. Strömgen

p.t. Sterrennacht
Leiden
Holland

NIETS INSLUITEN!

GEEN ADRESSTROKEN, SLUITZEGELS, PLAKBAND, ENZ. GEBRUIKEN.
INDIEN ZULKS TOCH GESCHIEDT, DAN WORDT DEZE BRIEF
PER BOOT/TREIN VERZONDEN

Pt. Storrowacht, Leiden, Holland
September 19, 1966

Dear Carol:

Thank you for your letters. Just a few lines to tell you that we expect to arrive at Kennedy Airport 4:15 PM (KLM 641) on Saturday, September 24. So September 20 should be the last day you forward mail to me this time around.

I leave again Sunday, September 25, in the afternoon to go to the meeting at Yale University, and I should be back in Princeton again on Tuesday afternoon. I wonder if you could leave a telephone number by which I could reach you Sunday morning, or my office desk perhaps.

We have had a very nice and most interesting time in Holland, but now we are looking forward very much to being back in Princeton soon.

With all good wishes,

Sincerely

Bengt Strömgren

Bengt Strömgen

8 September 1966

cc Professor Strömgen
Mr. Morgan
Mrs. Gorman

Dear Mr. Gibson:

Thanks for your note of September 5th, which I am forwarding to Dr. Strömgen for his information. There are no further administrative arrangements for you to make, except for you to let us know where you wish your stipend to be sent.

Sincerely yours,

Carl Kaysen

Mr. James Gibson
Van Vleck Observatory
Box H Wesleyan Station
Middletown, Connecticut 06457

Van Vleck Observatory
Box H Wesleyan Station
Middletown, Connecticut 06457
1966 September 5

Mr. Carl Kaysen
The Institute for Advanced Study
Princeton, New Jersey 08540

Dear Mr. Kaysen:

Thank you for your letter of 30 August. I am pleased to accept the position offered, and look forward to working with Dr. Stromgren.

My activities may be somewhat restricted this week by the shot schedule for a solar eclipse expedition, and by repairs to my car after a breakdown. If the administrative aspects of this appointment can be expedited by my handling some of the paper work from here, please send along the necessary forms. I would also appreciate a briefing on travel to Kitt Peak for an observing run which Dr. Stromgren and I had discussed when I last saw him. If there should be reason to contact me by telephone, I can only be reached through the Observatory: area code 203 347-4421, ext. 303.

It was my understanding that my work under this appointment should start with that observing run at Kitt Peak early in the month. At this time it appears that this eclipse expedition may require an unexpectedly large amount of my time during the next two months. If this should be the case, so that I could not observe at Kitt Peak during these months, I will be agreeable to such revision of the dates of the appointment as may seem advisable to you and Dr. Stromgren.

Yours sincerely,



James Gibson

Prof. Strömberg

cc Professor Strömberg
Mr. Morgan
Mrs. Barnett
Mrs. Gorman

30 August 1966

Dear Mr. Gibson:

On the recommendation of Professor Strömberg, I am pleased formally to offer you a position as Research Associate to Professor Strömberg, for the period of September 1, 1966 through June, 1967, with a salary of \$700 per month for that period.

With all good wishes,

Carl Kaysen

Mr. James Gibson
Van Vleck Observatory
Box H Wesleyan Station
Middletown, Connecticut 06547

NOTE TO MR. MORGAN: A contract has been proposed to OHR to support salary and travel expenses. We have received assurance of its acceptance. Until the contract is received, sometime in October, please reimburse Mr. Gibson from regular funds of the School of Natural Sciences.

*Copy to Prof. Strömberg
Leiden*

31 August 1966

Dear Strömngren:

Thank you for your letter of 29 August. I am happy to go ahead with the appointment of Mr. James Gibson as Research Associate, at the salary of \$700 per month, for the period you recommend. I attach a copy of my letter of appointment to him.

Sincerely yours,

Carl Kaysen

Professor Bengt Strömngren
Sterrewacht
Leiden
The Netherlands

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY 08540

SCHOOL OF NATURAL SCIENCES

29 August 1966

Dr. Carl Kaysen, Director
Institute for Advanced Study
Princeton, New Jersey

Dear Dr. Kaysen:

I am writing to you regarding the appointment of a Research Associate who would collaborate with me during the next ten months and whose salary would be paid out of an ONR contract in support of "Investigations of Problems of Star Formation."

A proposal for ONR support of the research in question was submitted in March 1966. I enclose a Xerox copy of an ONR letter in which it is stated that the starting date of the contract would probably be in October 1966, but that the contract could be back-dated to make it possible to start the project earlier. However, the contractor would have to assume the risk for all funds spent prior to final execution of the contract.

I would like to have Mr. James Gibson (Van Vleck Observatory, Box H Wesleyan Station, Middletown, Connecticut 06457) appointed as Research Associate. Mr. Gibson has cooperated with me quite effectively on a previous ONR project. He would be available for an appointment beginning September 1, 1966, and since it is desirable to complete the project by June 30, 1967, I should be very grateful if the Institute would assume the risk involved in appointing Mr. Gibson effective September 1, 1966.

Mr. James Gibson received an A.B. degree (Mathematics), University of California, Berkeley, September 1952. He has held positions with the U. S. Naval Observatory and the Van Vleck Observatory of Wesleyan University. He was born June 9, 1928, in Ellensburg, Washington, and his Social Security No. is 535-26-3315. Most of Mr. Gibson's work on the project would be carried out at the Kitt Peak National Observatory, Tucson, Arizona. The contract provides for the travel expenses that would arise in this connection.

Dr. Carl Kaysen

Page 2

I believe that a salary of \$700 per month would be in order.

Sincerely yours,

Bengt Strömgen
Bengt Strömgen

Copy to Professor Strömgen, Leiden

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

August 18, 1965

Dear Robert:

I attach a copy of a letter from Dr. Hoag, Associate Director of the Stellar Division of Kitt Peak National Observatory. The KPNO Contributions mentioned in the letter are a nice series consisting mostly of reprints from journals; I attach a sample.

I would like to tell Dr. Hoag that it would be nice to have the publication based on the Russell lecture included in the KPNO contributions, but before I write him I would like to discuss the question with you.

Sincerely,

Bengt

Re send OK



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YALE UNIVERSITY

950 NORTH CHERRY AVENUE
P.O. BOX 4130
TUCSON, ARIZONA 85717
EAST 7-6655

August 16, 1965

Dr. Bengt G. Strömngren
Institute for Advanced Study
Princeton, New Jersey

Dear Dr. Strömngren:

I learned from Dr. Crawford that you will be with us here at Kitt Peak in December. We look forward to your visit with pleasure.

May I say again how much I enjoyed your Henry Norris Russell lecture in Ann Arbor. I still wish I had had a concession for uvby filters outside the front door after the lecture. May I be so presumptuous as to suggest that you consider publishing the lecture as a Kitt Peak National Observatory Contribution if you have not already made other arrangements. I realize that a significant amount of observational material cited in this paper was not obtained with Kitt Peak facilities, yet the work of Crawford, Perry, Kelsall and Cameron would perhaps justify our participation. As you perhaps know, the Observatory will pay one-half of the page charges for publication reprinted in the Contribution series as well as supplying the entire support for general distribution and extra reprints. If you would consider this possibility seriously, we would be greatly pleased.

Sincerely yours,

A. A. Hoag

AAH:ms

cc: Dr. N. U. Mayall
Dr. D. L. Crawford

For Strömgen

DOMESTIC SERVICE	
Check the class of service desired; otherwise this message will be sent as a fast telegram	
TELEGRAM	
DAY LETTER	
NIGHT LETTER	

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WESTERN UNION

TELEGRAM

W. P. MARSHALL, PRESIDENT

1206 (4-55)

INTERNATIONAL SERVICE	
Check the class of service desired; otherwise the message will be sent at the full rate	
FULL RATE	
LETTER TELEGRAM	
SHORE SHIP	

NO. WDS.-CL. OF SVC.	PD. OR COLL.	CASH NO.	CHARGE TO THE ACCOUNT OF	TIME FILED

Send the following message, subject to the terms on back hereof, which are hereby agreed to

22 August 1966

from Paris

American Embassy in Paris urgently needs DSP-66 form to deliver visa for Mrs. Cayrel before boarding on September 9 stop In reference your letter of April 22 offering a position as Assistant of Professor Stromgren to Mrs. Cayrel for October and November 1966.

Cayrel

given to RB 8/22

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

W. P. MARSHALL
CHAIRMAN OF THE BOARD

WESTERN UNION
TELEGRAM

R. W. McFALL
PRESIDENT

SYMBOLS

DL = Day Letter

NL = Night Letter

LT = International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination

1106A EDT AUG 20 66 PA065 BB324
B CDD263 VIA RCA ZCZC WUB0256 RDF1823
URNX HL FRPA 054
PARIS TELEPHONE DE HEUDON 54 20 1200
LT

INSTITUTE FOR ADVANCE STUDY OFFICE OF THE
DIRECTOR PRINCETON NEW JERSEY

AMERICAN EMBASSY IN PARIS URGENTLY NEEDS DSP-66 FORM TO DELIVER
VISA FOR MRS CAYREL BEFORE BOARDING ON SEPTEMBER NINE STOP
IN REFERENCE YOUR LETTER OF APRIL TWENTYTWO OFFERING A POSITION
AS ASSISTANT OF PROF. STROMGREN TO MRS CAYREL FOR OCTOBER
AND NOVEMBER 1966

CAYREL

COL LT ADVANCE OF THE DIRECTOR IRPT OF THE DIRECTOR DSP-66
1966

TELEPHONE No. _____

TELEPHONED TO *C.N.*

TIME _____

BY *[Signature]*

ATTEMPTS }
TO }
NUMBER } _____

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY 08540

p. t. Sternwacht, Leiden

SCHOOL OF NATURAL SCIENCES

August 24, 1966

Dear Carol:

Thank you for taking care of my mail. The letter you worried about did arrive by airmail. With regard to the information that came from the Office of the Provost at Yale, you did quite right in keeping it in Princeton.

I enclose a draft of a letter to Dr. Kayser. Would you type it for me, and give the letter to Verna, with a Xerox copy to Mr. Morgan. Since the matter is somewhat urgent, Dr. Kayser could perhaps be reached by telephone for a decision on the question.

The IAU Symposium is beginning tomorrow, so I am in Noordwijk for a week now, but I will visit Leiden regularly (10 miles from here), so there is no need to change the forwarding address.

All good wishes,

Sincerely

Bengt Strömgren

P.S. I enclose two sheets with my signature in addition to those you already have

B. Strömgen
THE INSTITUTE FOR ADVANCED STUDY
SCHOOL OF NATURAL SCIENCES
PRINCETON, NEW JERSEY 08540

*p.t. Hotel "De Baak"
Noordwijk, Holland*



Mrs. Carol Nielsen

Institute for Advanced Study

PRINCETON, NEW JERSEY 08540

U.S.A.

VIA AIR MAIL

LUCHTPOST
~~~~~

Note to Mr. Morgan:

A contract has been proposed to ONR to support salary and travel between Tucson and Princeton. We have received assurance of its acceptance. Until the contract is received, sometime in October, please reimburse ~~Mr.~~^{Mrs.} Gibson from regular funds of the School of Natural Sciences.

^{or} Research Associate
^ for the period of September 1966 through June 1967,
with a salary of \$700 for that period.

Original + 6 Xerox copies

(1)

Dr. Carl Kayser, Director
Institute for Advanced Study
Princeton, New Jersey

Dear Dr. Kayser:

I am writing to you regarding the appointment of a Research Associate who would collaborate with me during the ~~spring~~ next ten months and whose salary would be paid out of an ONR contract in support of "Investigations of Problems of Star Formation".

A proposal for ONR support of the research in question was submitted in March 1966. I enclose a Xerox copy of ^{an ONR} ~~the~~ letter ~~in~~ in which it is stated that the starting date of the contract would probably be in October 1966, but that the contract could be back-dated to ~~October~~ make it possible to start the project earlier. However, ~~the~~ the contractor ~~see~~ would have to assume the risk for all funds spent prior to final execution of the contract

JAMES
GIBSON

I ~~would~~ would like to have Mr. ~~James~~ James Gibson appointed ~~at~~ (Van Vleck Observatory, ~~Box~~ Box H Wesleyan Station, Middletown, Connecticut 06457) appointed

as Research Associate. Mr. Gibson has cooperated with me quite effectively on a previous ~~project~~ ^{ONR} project. He would be available ^(for an appointment) ~~beginning~~ beginning September 1, 1966, and since it is desirable to complete the project by June 30, 1967, I should be ^{very} ~~so~~ grateful if the Institute would assume the risk involved in appointing Mr. Gibson effective September 1, 1966.

Mr. James Gibson received an A.B. ~~Math~~ degree (Mathematics), University of California, Berkeley, September 1952. He has held positions with the U.S. Naval Observatory and the Van Vleck Observatory of Wesleyan University. He was born June 9, 1928, in Ellensburg, Washington, and his Social Security No. is 535-26-3315. Most of Mr. Gibson's work ^{on the project}

I ~~do~~ believe that a salary of \$700.00 per month would be in order.

Sincerely yours

Bengt Strömgen

would be carried out at the Kitt Peak National Observatory, Tucson, Arizona. The ~~contract~~ contract provides for the travel expenses that would arise in this connection.

Jac Strömberg

cc Mr. Morgan
Mrs. Barnett
Mrs. Gorman
Professor Strömberg
→ 22 April 1966

Dear Mrs. Cayrel:

On the recommendation of Professor Strömberg, I am pleased formally to offer you a position, as Assistant to Professor Strömberg, for the months of October and November, 1966, with a salary of \$1,500 for that period.

With all good wishes,

Robert Oppenheimer

GIUSA

Dr. Guisa Cayrel-de-Strobel
Observatoire de Paris
Section d'Astrophysique
Meudon (Seine et Oise)
France

NOTE TO MRS. BARNETT: Mrs. Cayrel will be accompanying her husband, who is a member for 1966-1967.

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY 08540

SCHOOL OF NATURAL SCIENCES

15 April 1966

Dear Robert:

I am herewith bringing up a question that I had expected to be able to discuss with you and Freeman, after Freeman's return. Since I will be leaving for Leiden on April 22, I thought it was best to start considering it now.

In the Physics faculty meeting when we discussed the grant for Goldberger it was decided that we would all contribute from the Assistant's salaries toward this grant. I believe that we would come out right if my part were to be \$4,000, which would leave \$3,000 for Assistant's salaries.

In planning for next year's work I find that it would help me a great deal if I could count on some assistance in the discussion of the observational material gathered at Kitt Peak National Observatory; I would like to finish as much of this work as possible before leaving Princeton in 1967.

Mr. R. Henry, a graduate student (in his last year) in the Department of Astrophysical Sciences at Princeton University, would be able to work for me for 4 months, July - October, 1966. I believe that a salary of \$1,500 for the 4 months would be about right.

Mrs. G. Cayrel will accompany her husband when he comes to the Institute as a member in September, 1966. Mrs. Cayrel has published very nice papers in spectroscopy, in particular on determinations of abundances, and has worked effectively in Greenstein's group when the Cayrel's were in Pasadena. I know that she would welcome an opportunity to collaborate with me in the discussion of the Kitt Peak photometric material. I should be happy if she could be appointed as Assistant for 2 months, October and November, 1966, at a total salary of \$1,500.

The ONR contract that was applied for may come through in September or October and would then make it possible to complete the observational work at Kitt Peak according to plan.

Sincerely,

Bengt

To : Dr. Oppenheimer

From: Bengt Strömngren

Copies to Professors Dyson, Regge, Yang

Prof. Dyson

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY 08540

SCHOOL OF NATURAL SCIENCES

15 April 1966

Dear Robert:

I am herewith bringing up a question that I had expected to be able to discuss with you and Freeman, after Freeman's return. Since I will be leaving for Leiden on April 22, I thought it was best to start considering it now.

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The ONR contract that was applied for may come through in September or October and would then make it possible to complete the observational work at Kitt Peak according to plan.

Sincerely,

Bengt

To : Dr. Oppenheimer

From: Bengt Strömgren

fac Strömgen

DOMESTIC SERVICE	
Check the class of service desired; otherwise this message will be sent as a fast telegram	
TELEGRAM	
DAY LETTER	
NIGHT LETTER	

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WESTERN UNION

TELEGRAM

1206 (4-55)

W. P. MARSHALL, PRESIDENT

INTERNATIONAL SERVICE	
Check the class of service desired; otherwise the message will be sent at the full rate	
FULL RATE	
LETTER TELEGRAM	
SHORE-SHIP	

NO. WDS.-CL. OF SVC.	PD. OR COLL.	CASH NO.	CHARGE TO THE ACCOUNT OF	TIME FILED

Send the following message, subject to the terms on back hereof, which are hereby agreed to

from Heidelberg, received 6/21/66

Please wire Professor Strömgen's present address. Many thanks in advance.

Dr. Goetze
Springer Verlag
Heidelberg

prepaid reply \$3.37
(12 words, of which 4
for address)

Reply sent 6/21/66: To: Dr. Goetze, Springer Verlag, Heidelberg
Professor Strömgen at Sterrewacht, Leiden, Netherlands.
(signed) Nielsen.

C O P Y

cc for RO

Jac Strömberg

21 April 1966

Dr. John S. Toll, President
New York State University at Stony Brook
Stony Brook, Long Island, New York

Dear Dr. Toll:

I wish to thank you sincerely for calling me on the telephone the other day to discuss the possibility of my joining the New York State University at Stony Brook as Adjunct Professor.

Herewith I would like to confirm by letter that I am most interested in this possibility. As I mentioned to you, I might not be able to come to Stony Brook every year, but most years it should be possible for me to spend 1 month at Stony Brook, and occasionally a somewhat longer time.

It has been extremely interesting for me to learn about the plans for the future at Stony Brook. I am very much impressed with the possibilities, in particular also for Astronomy and Astrophysics.

I am preparing a letter to Dr. Oliver Schaeffer concerning questions of astronomical and astrophysical research equipment, and staff. Since I leave Princeton for Leiden tomorrow, I shall send the letter from over there, presumably next week.

I enclose a biography, thinking that it might be of help in connection with your recommendation to the Albany legislature.

My address during the next months is Sterrewacht 5, Leiden, Netherlands. I shall be back in Princeton next September. My plans for the future are not yet quite definite as far as the timing is concerned, but it is likely that the date of my resignation from the professorship at the Institute for Advanced Study will be June 30, 1967.

With all good wishes,

Sincerely,

Bengt Strömberg

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY 08540

Confidential
~~CONFIDENTIAL~~

SCHOOL OF MATHEMATICS

January 27, 1966

Dear Robert:

Upon Niels Bohr's death the Board of Directors of the Carlsberg Foundation, and the Danish Academy, named the former Director of the Danish Museum of Antiquities, Professor Brøndsted, to be the occupant of the honorary mansion. A few months ago Professor Brøndsted died. According to custom, the next occupant is going to be a scientist.

Christian Möller, who as you know is the secretary of the Academy, has written me a private letter regarding this question. In the letter, which I received today, he informs me that the members of the Board of Directors of the Carlsberg Foundation are unanimously for nominating me to be the occupant of the honorary mansion. However, a formal letter of invitation would only be sent to me if there were a reasonably good chance that I would accept. Therefore, the chairman of the Board of Directors had asked Christian Möller to write to me informally. In case I accepted, I would be appointed to a new chair of Astronomy at Copenhagen University.

As you will understand I am deeply moved by this development. It raises very many questions. I should send a reply not later than March so that the members of the Danish Academy can make their final decision before the summer adjournment.

Sincerely,

Bengt

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

October 8, 1965

Dear Robert:

I like the second draft of the minutes of the meeting of the Faculty in Physics held on October 7, 1965, a little better than the first. However, I would be glad to go along with the first draft if that one should appear to be the best choice.

The reason I like the second draft best is, of course, that it emphasizes the important step of a unanimous recommendation of a professorship for Murray Gell-Mann.

It was most encouraging to learn that Gell-Mann would in all probability accept the offer. I have the feeling that we should not wait a long time for Princeton University to make up its mind on the question of the dual appointments, but if the University acts quickly, I am of course all for this arrangement. I think it would

be very fine if Goldberger's close relations
with the Institute were formalized in
this way.

The "startling news", particularly as far
as Goldberger was concerned, interested me
very much. Could we talk about this
some time in the near future.

I think that it is just marvelous that
there is now a very good chance that
Gell-Mann, Adler and Dashen will
join the Institute.

Sincerely,

Bengt

To: Robert Oppenheimer
From: Bengt Strömberg

9 August 1965

Mrs. Mildred Shapley Matthews
2121 Glen Springs Road
Pasadena, California 91107

Dear Mrs. Matthews:

Thank you for your letter of July 31, 1965.
It reminded me of the period three years ago when
you helped me in such an excellent way.

It happens that I have just finished a number
of investigations and am not embarking on any new
ones that would require a sponsored project until
some time next year. Therefore, I cannot right
now offer you a job. However, I shall make
inquiries in your behalf around Princeton, and I
shall write you again soon.

With all good wishes,

Sincerely yours,

Bengt Strömberg

BS/en

Mildred Shapley Matthews
2121 Glen Springs Road
Pasadena 91107 California

July 31, 1965

Professor Bengt Strömberg
The Institute for Advanced Study
School of Mathematics
Princeton, New Jersey

Dear Professor Strömberg:

I hope I am not like the "bad penny that always comes back" but I am looking for a repeat job opportunity at Princeton or elsewhere in the vicinity. I wish to remain on the east coast for the next five or six months so as to be within weekend visiting range of my old parents and young daughter.

Would you have any job possibilities for me or know of anyone who might have? It would be my good fortune if you had another "card game" that needed doing, or some other job I could handle. I am both in need and eager to work. I should like to start on something soon.

Very sincerely yours,

Mildred S. Matthews

Mildred S. Matthews

30 August 1965

Dr. Arthur A. Hoag
Associate Director, Stellar Division
Kitt Peak National Observatory
950 North Cherry Avenue
Tucson, Arizona 85717

Dear Dr. Hoag:

Thank you for your very kind letter of August 16, 1965. I should be very happy if my Henry Norris Russell Lecture were published as a Kitt Peak National Observatory Contribution. I expect to have the manuscript ready for submission to the *Astronomical Journal* in about six weeks, and at that time I shall write you again on this matter.

KPNO has come to play a great role in my research work, not only because of the excellent facilities and fine working conditions, but also through the cooperation and encouragement of my colleagues there.

Since the number of my papers appearing as KPNO Contributions might over the years be considerable, I have discussed the question with Dr. Robert Oppenheimer who assured me that he thought that this would be entirely satisfactory from the point of view of The Institute for Advanced Study.

I am looking forward very much to seeing you again fairly soon, presumably at the time of the next meeting of the 150-inch Telescope Advisory Committee.

Sincerely,

Bengt Strömngren

cc: Dr. N. U. Mayall
Dr. D. L. Crawford

cc for R.S.

6 December 1965

Dr. Stefan Temesvary
Dudley Observatory
140 South Lake Avenue
Albany, New York

Dear Stefan:

I wish to thank you and your colleagues most sincerely for having thought of me in connection with the plans for the future development of your Department of Astronomy and the Dudley Observatory, and particularly for your inquiry as to whether I would be willing to accept an Albert Einstein Professorship at your University if it should be offered to me.

Through my conversations with you and with Dr. Curtis Hemenway I have become familiar with some of the ambitious plans for expansion of your Department of Astronomy and the Observatory beyond the fine development that has taken place during the last few years. It would be challenging and most interesting, and I am sure very gratifying, to participate in these efforts on the splendid terms that you have described to me. However, I have reached the conclusion that I should inform you now that I would not be able to accept. As you know, I have excellent conditions for my work here, and I feel that I should not make this very great change in my scientific life.

In expressing my gratitude to you and to Dr. Hemenway I send sincere good wishes for the success of the important venture. I shall regard it as a privilege if we can continue scientific cooperation and consultation.

With kindest personal regards,

Sincerely,

Bengt Strömberg

BS/cn

9 September 1965

Memorandum to Mr. Morgan:

This will authorize payment to Dr. C. Perry of \$666.66, salary for the months of July and August, 1965, during which time he worked as assistant for Professor Strömgen. This should be charged to Professor Strömgen's Assistant Fund.

Robert Oppenheimer

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

8 September 1965

Dear Robert:

During the year that ended June 30, 1965, Dr. C. Perry was working half-time as my assistant at Kitt Peak National Observatory and received a salary of \$333.33 per month from The Institute for Advanced Study. He was also employed half-time by the Kitt Peak National Observatory.

During a visit to Kitt Peak National Observatory last winter I discussed the question of Dr. Perry's employment beyond June 30, 1965, with Dr. D. L. Crawford of the Stellar Division of Kitt Peak National Observatory. It appeared then that Dr. Perry would have finished the work for me that he was engaged in by June 30, 1965, and that he would be leaving KPNO on that date or soon after to take up another position.

However, I have recently learned from Dr. Crawford that Dr. Perry continued his work on my programs beyond June 30, 1965. He will be leaving to work at Mount Stromlo Observatory in Australia sometime in October.

Dr. Crawford did not ask that the Institute for Advanced Study continue Dr. Perry's half-time salary beyond June 30, 1965, but he said that it would be welcome if this were done for the months of July and August, 1965.

Since Dr. Perry was working on a two-year observing and reduction program for me, it is not surprising that he needed time beyond the originally contemplated termination date to complete it. Under the circumstances, I think it would be desirable that the Institute for Advanced Study pay him a salary of \$333.33 for each of the months of July and August, 1965, if it is possible to make the arrangements for this. I should be grateful if this could be done.

Since we decided at our last meeting of the Physics Faculty to use the salary for my assistant 1965-66 toward the grant-in-aid for Dr. M. Greenberg, a modification of that decision would be required to take care of the assistant salary to Perry. However, I believe that nearly all of the grant to M. Greenberg would be

- 2 -

covered even if \$666.66 were paid to C. Perry.

I am very sorry that I became aware of the situation regarding C. Perry only at this late date.

Sincerely,

Bengt

BS/cn

To: Dr. Robert Oppenheimer

From: Bengt Strömgen

cc: Prof. Strömngren
Mr. Morgan ✓

May 25, 1964

Dear Dr. Perry:

On the recommendation of Professor Strömngren, I am glad to
appoint you his assistant for the year beginning July 1, 1964
with a salary of \$4,000.

With good wishes,

Sincerely,

Robert Oppenheimer

Dr. Charles L. Perry
Kitt Peak National Observatory
950 North Cherry Avenue
Tucson, Arizona

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

March 18, 1965

Dear Robert:

Attached is the correspondence with P. Ledoux regarding the International Liège Symposium in 1966. I should very much like to discuss with you questions of subjects to be emphasized and people who should be invited.

I also enclose for your information a few letters concerning other matters.

Sincerely,

Bengt

To: Robert Oppenheimer
From: Bengt Strömberg

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

November 17, 1964

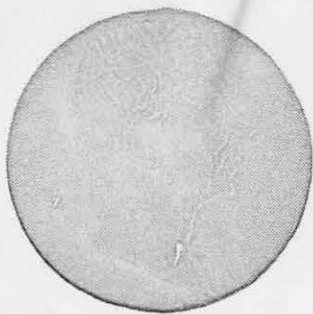
Dear Robert:

I received a letter today from the president of the Danish Society for the Advancement of Science telling that I had been awarded the H.C. Ørsted gold medal of the Society.

The medal is normally presented at a meeting of the Society in the period October - April, however, the letter says that since I have to travel for other arrangements can be made if necessary.

Sincerely,

Bengt



SELSKABET
FOR NATURLÆRENS UDBREDELSE

Stiftet 1824 af H. C. Ørsted

ADR.: DANMARKS TEKNISKE HØJSKOLE
ØSTER VOLDGADE 10, OPG. II, 1. KØBENHAVN K
TELEFON BYEN 7602

INDMELDELSER OG HENVENDELSER TIL SELSKABET SENDES TIL OVENSTÅENDE ADRESSE

København, d. 9.11.1964.

Hr. professor, dr.phil. Bengt Strømgren
Institute for Advanced Study,
Princeton,
New Jersey,
U.S.A.

Kære professor Strømgren.

Selskabets direktion har enstemmigt vedtaget at anmode Dem om at vise selskabet den ære at modtage den i 1908 af selskabet indstiftede H.C. Ørsted medaille i guld med tilhørende pengepræmie.

Af vedtægterne for medaillens bortgivelse skal blot citeres følgende stykke:

"Har direktionen besluttet at bortgive en præmie til en person og sikret sig, at denne vil modtage præmien, skal direktionen i et af selskabets almindelige møder lade dette kundgøre tillige med en kort fremstilling af præmietagerens adkomst til præmien, og præmietageren må ved samme lejlighed give en oversigt over det arbejde, for hvilket præmien er blevet tildelt."

H.C. Ørsted medaillen er tidligere givet til følgende:

1909	S.P.L. Sørensen	1928	J.N. Brønsted
1912	C. Christiansen	1941	K. Linderstrøm-Lang
1916	Martin Knudsen	1952	A. Langseth
1924	Niels Bohr	1959	J.A. Christiansen
1928	P.O. Pedersen	1959	Paul Bergsøe
1928	Niels Bjerrum		

Overrækkelsen af medaillen skal som ovenfor citeret finde sted i et af selskabets almindelige møder. Selskabets mødesæson er normalt Okto-

b.v.

Selskabets direktion: Professor, dr. C. Faurholt, rektor, dr. E. Knuth-Winterfeldt, professor H. Højgaard Jensen, professor, dr. A. Touborg Jensen, afdelingsleder, dr. K. G. Hansen. Selskabets sekretær og kasserer: Ingeniørdocent H. Rahbek.

I selskabets direktion endvidere: Civilingeniør H. Stevenius-Nielsen.

ber-april, og møderne afholdes normalt på onsdage; men på grund af den store afstand mellem U.S.A. og Danmark bør afvigelse herfra ikke være udelukket.

Møder med overrækkelse af H.C. Ørsted medaillen har en særlig festlig karakter blandt andet derved, at selskabets protektor Kongen plejer at deltage foruden gæster, der af medallemodtageren eller af selskabets direktion ønskes indbudt.

Selskabets direktion tænker sig, at overrækkelse af medaillen kan finde sted, når De i anden anledning kommer til Danmark, og håber, at en sådan mulighed vil forekomme i løbet af 1965.

Med venlig hilsen,

Deres



Carl Faurholt

December 23, 1963

Dr. Lyman Spitzer
Department of Astrophysical Sciences
265 Fitz-Randolph
Princeton University
Princeton, New Jersey

Dear Lyman:

Many thanks for your good letter regarding Jan Oort. It was most helpful, both to me and to the Vetlesen Award Committee.

Let me tell you what happened at the meeting of the Committee on December 17. The members of the Committee unanimously agreed that achievement in the broad field of astronomy and astrophysics could be recognized through the award of the Vetlesen Prize. However, the Committee then decided to give the Award for 1964 for achievement in geology.

My own impression is that it is quite likely that Jan Oort will get the Prize next time, that is, for 1966.

Sincerely,

Bengt Strömgren

BS/agh

YALE UNIVERSITY
NEW HAVEN CONNECTICUT

OFFICE OF THE PRESIDENT

February 12, 1964

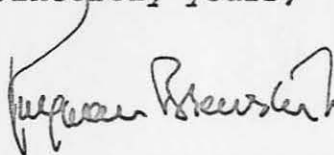
Professor Bengt Strömberg
The Institute for Advanced Study
School of Mathematics
Princeton, New Jersey

Dear Professor Strömberg:

I appreciate your speedy and thoughtful note, although I am of course disappointed that you rule yourself out as a possible director of Yale's efforts in Astronomy.

I greatly enjoyed our talk and benefited significantly from your advice and comment. I hope we may meet again before too long.

Sincerely yours,



KB:jmt

February 7, 1964

Dr. Kingman Brewster, Jr., President
Yale University
New Haven, Connecticut

Dear Dr. Brewster:

I am very happy to have had the opportunity to meet you and to learn from you about plans for the future regarding the Department of Astronomy of Yale University.

I was greatly impressed by the possibilities as you described them. Indeed, if the present high standards in Celestial Mechanics and Astrometry can be preserved and if the planned strong expansion in other fields of Astronomy, particularly theoretical Astrophysics, can be accomplished, Yale University would have an outstanding Department of Astronomy.

It would be extremely interesting and undoubtedly a source of great satisfaction to participate in this new venture. I was moved when you asked me to join the Yale University Faculty, and I feel most grateful to you for having offered me this fine opportunity. However, as I mentioned to you, I have ideal conditions for my research work here at the Institute for Advanced Study, and I have come to the conclusion that I ought to tell you right away that I prefer to remain here at the Institute.

Again with many thanks, I am,

Sincerely yours,

Bengt Strömberg

:ah

Shönigren

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

January 24, 1964

Dear Robert:

I have just read your memorandum to the faculty, and I was happy to learn that the invitation to Blagitt was approved. Also, I was glad to receive the good news about the faculty salaries; an awkward problem has been solved and the position of the Institute has been strengthened. And of course not only that, I for one am very grateful to you for all you have done these years to make it still better to be a professor here.

Sincerely,

Bengt

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

October 29, 1963

Dear Robert:

The Danish State Radio has decided to try to do something similar to what the BBC has been accomplishing through the Reith lectures, although on a more modest scale. A prize will be awarded to a scientist who will give a series of six radio lectures. The prize is to be called the Rosenhjør prize after a man who helped develop the cultural programs of the Danish State Radio. The announcement of the first award will be made in Denmark on November 22 when Mr. Rosenhjør turns 80. I have been asked to accept the prize and have agreed.

The lectures will be broadcast next spring and The Voice of America offices in New York will help make the tapes.

Sincerely,

Bengt

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

We wish to invite you to take part in a conference on Stellar Evolution, to be held on November 13-15, 1963, at the NASA Goddard Institute for Space Studies, Room 431, 475 Riverside Drive, New York 27, N.Y., telephone UNiversity 6-3600. Dr. Robert Jastrow and members of the Institute will be hosts. Attendance is by invitation only, in order to facilitate a lively and productive discussion.

The conference is in its early stages of planning. The final program will depend upon the interests of the scientists attending, but in order to guide the preparation of this program, we wish to suggest that the following topics would be appropriate for discussion. Please let us know if you have material on any of these topics that you would like to present.

A) Physics of Stellar Interiors

Convection - E. Spiegel
Opacity - A.N. Cox
Energy Generation - H. Reeves
Neutrinos - H.Y. Chiu

(We envisage these as being review papers which the above people are being invited to give.)

- B) The Contraction Phase
- C) Evolution during the Main Sequence phase and from the Main Sequence
- D) Observational Evidence
- E) Stellar Variability
- F) Mass Loss

- 2 -

- G) Helium Flash
- H) White Dwarfs
- I) Supernova Stage
- J) Supermassive Stars
- K) Element Formation related to Stellar Evolution

We hope that those participants who can will be able to take care of their travel expenses through their own institutions or contracts. For those who cannot, some financial assistance may be available through the Goddard Institute for Space Studies. Please address inquiries regarding travel support and accommodations to Dr. Robert Jastrow at the address of the Institute above, and communicate with Prof. Bengt Strömgren, Institute for Advanced Study, Princeton, N.J. (telephone 609-WA 4-4400) in all matters relating to the program, with a copy to Dr. A.G.W. Cameron at the Institute for Space Studies.

We hope very much that you will attend and would appreciate an early reply to Princeton with a copy to New York.

Yours sincerely,

Bengt Strömgren

Bengt Strömgren

A.G.W. Cameron

A.G.W. Cameron
(Institute for Space Studies)

12 February 1963

Dr. Malvin Ruderman
Department of Physics
New York University
Washington Square
New York 3, New York

Dear Dr. Ruderman:

Herewith I should like to ask you if you would be willing to speak to our Theoretical Astrophysics Seminar at the Institute for Advanced Study. A talk by you on neutrino emission from stellar interiors would be of particular interest to us.

The Theoretical Astrophysics Seminars are usually held on Mondays, at 4:15 p.m. It would fit in very well with our schedule if you would be willing to address the Seminar on Monday, February 25.

The group in Astrophysics at the Institute is small, but for our seminars the group is usually joined by the astronomers at Princeton University Observatory, and I am sure that some of the physicists at the Institute would also come for a talk by you on an astrophysics subject.

The Institute would be glad to pay an honorarium of \$75.

With kind regards,

Sincerely,

Bengt Strömberg

OSSERVATORIO ASTRONOMIC
MERATE (COMO) ITALIA

Sept. 19, 1962

Dear Dr. Oppenheimer,

Dr. Struve has suggested that I write to you and to Dr. Spitzer for the possibility of some sort of part-time position this fall. I am fortunate to find myself in the Princeton community from October first to the end of the year, staying with Dr. Hack who will be at the Institute during this interval.

For some time I have been engaged here in Merate, Italy, writing a biography of my father. Now with my mind and my desk clear of the Shapley biography, I am embarking on a new ambitious project, the writing of a book on Women in Astronomy. Actually I have been preparing for this work for some time; now I am beginning to sort through the large amount of material that has come in from some hundred letters I have written to women all over the world. This new project has attracted much attention, and an enthusiasm matching my own. I am confident of finding financial support for this volume eventually if not at once. However, in any case I am also hoping for some part-time work that will give me income but at the same time enough free time to push ahead significantly on my "women" project. Perhaps you or your office would give me some guidance when I come to call.

My sincere thanks for anything that you can do, and should you have any advice or suggestions to offer on my proposed historical volume, I should be most grateful to receive them.

Very sincerely yours,

Mildred Shapley Matthews

Mrs.

Mildred Shapley Matthews

Cocktail party please
done

M. will work
for Prof Strömgren

Yac. Strömberg

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

p.t. Copenhagen

25 September 1962

Dear Verna:

Many thanks for your letter. Just a few lines to tell you that I am leaving Copenhagen on Friday, September 28, at 6 PM and expect to arrive at Tellerød Airport the same evening at 9:30 PM. I will come to the Institute Saturday

morning.

We are having a fine and profitable time here at Copenhagen Observatory with a high-speed electronic computer all to ourselves.

Kindest regards,

Sincerely,

Bengt

P.S. Any mail that might possibly arrive here after my departure will be returned to me in Princeton.

Fac Strömgen

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Send the following message, subject to the terms on back hereof, which are hereby agreed to

to V. Hobson, from Copenhagen, received 9/28/62

Departure postponed one day. Arrive Saturday night. Best regards.

Bengt Strömgen

June 13, 1962

Professor Bengt Strömberg
The Institute for Advanced Study

Dear Professor Strömberg:

Dr. Oppenheimer has asked me to write you about your pension arrangements. At the meeting of the Board of Trustees held in Princeton on April 6 and 7, the Board voted to increase faculty salaries to \$25,000 and increase the minimum guaranteed pension through TIAA-CREF to \$15,000.

The standard 5% contribution by the professor matched by a 5% contribution by the Institute for the balance of your tenure as an active professor will not produce the minimum guarantee, and the Institute is therefore adding \$243.82 to the monthly payments in your behalf to TIAA-CREF. Previous additional payments on your policy were \$21.65 per month.

You should know also that the Major Medical contract with TIAA has been modified to reduce the deductible after Blue Cross from \$200 to \$100.

Cordially yours,

Minot C. Morgan, Jr.
General Manager

MCM:lw

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

6 June 1962

Dr. Robert Oppenheimer
Institute for Advanced Study

Dear Robert:

I would like to tell you about my travel plans for this summer. I expect to leave Princeton for Copenhagen on July 5 and to remain in Denmark until September 27 except for a week in August when I am going to England to participate in a conference on stellar evolution and galactic clusters, August 7 - 10. During the whole period July 5 - September 27 mail will reach me if addressed to: Observatoriet, Østervaldgade 3, Copenhagen K.

During my stay in Denmark I expect to have the optics for a spectrograph-photometer (to be used at Kitt Peak National Observatory) installed by the mechanical and optical shops of Copenhagen Observatory. Later on the Copenhagen Observatory shops hope to build a similar instrument for use on one of their reflectors. During August Anders Reiz and I plan to finish the manuscript of a chapter on stellar interior models for the Compendium on Stars and Stellar Systems which we are writing together. In September I am going to give a series of lectures at Copenhagen University.

The conference in England (at Greenwich Observatory) should be interesting. It will be fairly small, and among the participants will be four or five astronomers from Cal Tech and Lick.

After my return September 28 I expect to stay here in Princeton until October 9 when I would leave for about four days in England in connection with the Darwin lecture.

With regard to my travel expenses July - October, 1962, I should be grateful to you if you would arrange to have a travel advance in the amount of \$1,400 paid to me out of my Institute travel account on or about July 1, when the balance in the account will be \$1,419.50 and thus sufficient.

Sincerely,

Bengt

Bengt Strömgen

Re ok'd
carbon -
given to MCM

July 12, 1962

Dear Professor Strömberg,

Greetings from a very warm and quiet Princeton.

We are today just getting your material mailed off to you. After quite a bit of thought and a conference with Mrs. Slown, I decided to send everything to you via air (printed matter) except the very large volume, which is being sent via surface mail. This means that you will receive all but the volume in a few days; the volume will take about 3 weeks. I hope this will be satisfactory.

Yesterday I spoke with Miss Zeiders who said that she did receive the manuscript.

My vacation plans are now becoming clear. If this works around the arrival and completion of your manuscripts, I will probably leave for vacation on Monday, July 23 and return to Princeton on Monday, August 13 and stay until possibly Friday, September 7.

Hoping that both you and Mrs. Strömberg are having an enjoyable time,

Bonnie



Dr. T. KITT PEAK NATIONAL OBSERVATORY
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PRINCETON UNIVERSITY
UNIVERSITY OF WISCONSIN
YALE UNIVERSITY

May 16, 1962

950 NORTH CHERRY AVENUE
TUCSON, ARIZONA
EAST 7-6655
P. O. Box 4130

Dear Bonnie:

Many thanks for forwarding my mail and for sending the cards. The package has arrived. I do not need the circular mirror after all since one is being made for me here, so please do not look for it any further.

I do need, however, my Social Security number, and I wonder if you could get it from Mrs. Barnett and send the information to me.

I had a very good observing run on Kitt Peak, with 75 per cent clear nights. My next run is toward the end of the month.

The temperatures in Tucson are regularly in the 90's but it is not humid, and really quite pleasant.

I hope everything is well with you.

With kind regards,

Sincerely,

Bengt Strömgren

389 30 0427

Mrs. Bonnie Jeffers

CROSS REFERENCE

FILE: *Faculty - Strömgen*

RE:

LETTER DATED:

SEE: *Int. Gen. -
Astrophysics Conference
Publications of Proceedings*

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

28 April 1962

Dear Bonnie:

On my desk is some material that I would like to have mailed to Tucson. There is no particular hurry about it.

Also, would you type another batch of the letter to Dr. Page (which is on top of the material on my desk) and airmail to me. Many thanks.

Sincerely,

Bengt Strömberg

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

21 March 1962

Dear Robert:

I would like to show you the attached letter from C. C. Lin. There is no decision to be made at this time, but there may be within a few months.

When C. C. Lin brought up the matter in a tentative way last winter I told him that I was quite interested, but that my work at MIT would in any case have to be limited to the months outside our term here, and that I would not be able to undertake it unless I felt I could reduce the extent of my co-operation with

NASA and with the Institute for Space Studies.

I should very much like to talk with you
about the question and have your thoughts and
advice on the matter.

Sincerely,

Bengt

To: Dr. Robert Oppenheimer
From: Bengt Strömberg

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

22 January 1962

Dear Robert:

As you will see from the enclosed letter from the Foreign Secretary of the Royal Astronomical Society I have been asked to give the 1962 George Darwin Lecture. With regard to the suggested dates for the lecture, either May 11 or October 12 would be best from my point of view.

Since I have previously made arrangements to be at Kitt Peak National Observatory in May, and in Denmark during August and September I would actually prefer October 12, on the way back from Denmark. I should very much like to talk with you about this question. I do not like to be away during the first two weeks of our term here, on the other hand the schedule works out in a better way if I choose October 12 as the day for the lecture.

Sincerely,

Bengt

Bengt Strömngren

Dr. Robert Oppenheimer

28 September 1961

Dr. N. U. Mayall, Director
Kitt Peak National Observatory
950 North Cherry Avenue
Tucson, Arizona

Dear Nick:

I was happy to participate in the meeting of the 150-inch Telescope Committee. The meeting was certainly a very interesting one.

I would like to write you regarding some of the points on which I commented during the discussion, and on a few other points the possible importance of which occurred to me after the meeting.

First, I wish to state that I believe that an AURA 150-inch telescope would contribute enormously to the advancement of astronomy, and that it would become an instrument of very great importance to astronomers in this country:

1. I think that it is clear that a number of problems in observational astronomy which are in the center of interest can now only be tackled with the help of the Palomar 200-inch and Lick 120-inch telescopes, and that as a consequence progress in many fields is a good deal slower than we would like. The addition of the 150-inch should certainly help in this respect since there would be a sufficient number of competent astronomers ready to take advantage of the new possibilities. 2. I am of the opinion that the rapid progress in the art of building astronomical telescopes and auxiliary equipment makes it desirable to start the construction of new major telescopes in this country at intervals of not more than, say, fifteen years. 3. I am much impressed with the potential and possibilities for further development of the KPNO, and I am sure that particularly an AURA 150-inch would very significantly stimulate the growth of astronomy in the United States.

With regard to research programs for the 150-inch, I referred at the meeting to the importance of extending the limit of distance penetration in optical astronomy so as to gain in galactic research a much greater volume of overlap of optical and radio astronomy information. I mentioned in particular that I thought that it would be desirable to press photographic UBV photometry to reach as faint stars as possible, and to extend its scope considerably in terms of area in the sky and the number of stars investigated. Advances in the field of automation of the measuring and reduction work in photographic astrophotometry should make it possible to take full advantage of a 150-inch telescope in this respect.

Dr. H. U. Mayall

- 2 -

28 September 1961

On the questions of optical parameters of the 150-inch telescope I agree with the suggestions made by Dr. Bowen. In particular I am strongly in favor of the proposed Cassegrain combination with an aperture ratio of about 1:9 and a field that is approximately 30' in diameter. As Dr. Bowen explained this leads to an optimum range of the aperture ratio of the primary mirror of 1:2.5 to 1:3.0. I am mildly in favor of 1:3.0 provided the increase in the cost of the mounting and the dome with an increase in tube length is not uncomfortably great. With regard to the optical properties of the Cassegrain combination, it would appear very desirable to have a coma-free field, and to maintain high transparency down to 3400\AA in case this is achieved through the use of a corrector system.

Dr. Bowen's suggestion that the primary focus be designed for direct photography of fields of, say, 1' in diameter struck me as very important. It is certainly true that there is a need for a powerful survey instrument of long focal length. The optical design referred to by Dr. Bowen looks very promising; there seems to be no doubt that a much better state of correction is obtainable with a lens corrector when the primary mirror is allowed to depart from the parabolic figure than when the combination paraboloid-lens corrector is adopted. It would seem desirable to investigate in some detail as soon as possible the problem that was discussed in this connection, namely, whether or not good field correction can be obtained both at the primary and the Cassegrain focus with the same figure of the primary mirror.

It appears desirable to have good ultraviolet transparency also for the primary-focus field, but the requirement is perhaps less important here than for the Cassegrain-focus field.

I would like to mention a point that, as far as I recall, was not mentioned at the meeting. It would undoubtedly increase the usefulness of the 150-inch telescope if slitless spectra of small and moderate dispersion could be obtained for a field at least 10' in diameter, preferably 30' in diameter or perhaps even 1'. I would think that the possibilities of both the primary and the Cassegrain focus should be looked into in this connection, and that one should investigate the properties of slitless spectrographs with transmission gratings as well as systems utilizing prisms, or prism combinations like the one used by Fehrenback in his objective-prism radial velocity work. For the Cassegrain focus converging-beam systems might be investigated along with collimated-beam systems. The experience already gained at Lick Observatory in this general area should of course be of considerable help.

Most of the discussion of direct photography at the primary and Cassegrain focus, respectively, would seem to apply to work with slitless spectra. Some attention should probably be given to the possible use of filters (glass or interference) to reduce crowding of the spectra, cf. the results obtained by Seyfert with the Arthur Dyer Observatory Baker-Schmidt telescope.

At the meeting I suggested that it would be desirable to aim at completion of the construction of the 150-inch in six years. Such early completion may not be possible, but I still think that one should press rather hard in the direction of rapid completion. What I have in mind is not a relatively very expensive crash-program type of schedule which I am sure should be avoided.

C O P Y

Dr. N. U. Mayall

- 3 -

28 September 1961

However, considering the various suggestions that were made at the meeting, I believe that the merits and possible disadvantages of the following ways of reducing the construction time should be investigated in some detail.

1. To consider the 150-inch, not as an experimental forerunner of the X-inch, but as an instrument to be designed largely according to the experience already available through the construction of the 200-inch, the 120-inch, the KPNO 84-inch, and the KPNO remote control 36-inch.
2. To start the site survey as soon as possible, and to determine whether or not there is a site for the 150-inch on Kitt Peak that has as good, or nearly as good seeing conditions as the sites of the 200-inch and the 120-inch. We already know that sky transparency and sky darkness are very satisfactory at Kitt Peak. If there is assurance on the seeing to the extent just mentioned, then a strong case can be made for not looking any further for a site for the 150-inch.
3. To order the discs and start preparations for the optical shop work as soon as ideas on the optical parameters of the instrument are definite. To choose pyrex glass for the 150-inch disc unless it appears quite certain that the choice of quartz would not lead to long delays.
4. To start the design work without waiting for the results of the site survey.
5. To carry out the work on the optical components, on the mounting, the dome, and on auxiliary instruments concurrently.

Sincerely,

Bengt Strömngren

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

26 October 1961

Dear Robert:

I thought you might be interested
in reading the annual report of the
visiting committee of the National
Radio Astronomical Observatory.

Since I have only one copy of the
report I should like to have it back
some time when it is convenient.

Sincerely,

Bengt

Done
10/27

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

4 October 1961

Dear Robert:

Here is a photostat copy of the list of seminars and courses at the Institute for Space Studies. I thought you might like to look at it.

Also attached is a copy of the letter of appointment I have received from Columbia University in connection with the course I will be giving.

Sincerely,

Bengt

INSTITUTE FOR SPACE STUDIES

SEMINARS

ORIGIN OF THE SOLAR SYSTEM. Professor H. C. Urey, University of California at San Diego. *Thursdays at 11:00 a.m. beginning October 5.*

Properties of the sun, moon and planets. Lines of evidence on the origin of the solar system, as derived from the study of the moon and the meteorites. Implications of current theories on the formation of stars and the early evolution of the sun. Models for the origin of the solar system.

PLANETARY FLUID DYNAMICS. Professor Jule Charney, Massachusetts Institute of Technology. *Alternate Wednesdays at 4:00 p.m. beginning October 11.*

These lectures will deal with convectively driven circulations of large scale in rotating planetary fluids, and especially with circulations in the earth's troposphere, stratosphere, and oceans. There will be some discussion of the atmospheres of other planets. Topics will include: dynamics and stability of circular vortices; cyclogenesis; interaction between the lower and upper atmospheres; and the theory of turbulent circulations in rotating fluids.

TURBULENCE AND CONVECTIVE TRANSPORT. Professors R. Kraichnan and E. Spiegel, Institute for Mathematical Sciences, New York University. *Alternate Wednesdays at 4:00 p.m. beginning October 18.*

Qualitative description of turbulent flows in nature and the laboratory. Origin of turbulence; thermal and shear instabilities. Connection between kinetic theory and theories of turbulence. Equations of motion for macroscopic distribution functions. Dynamical equations for isotropic turbulence. Kolmogoroff and Heisenberg theories. Analytical approaches. Convective transport. Mixing length theories. Malkus theory. Turbulence in ionized gases. Geophysical and astrophysical applications.

On November 3 a seminar on relativity and gravitation will begin under the direction of Professor R. H. Dicke of Princeton University.

The following courses in Columbia University are directly related to the research program of the Institute for Space Studies.

Geology G8900x. Upper Atmosphere Physics. Professor Robert Jastrow. *Hours to be arranged at preliminary meeting on Thursday, Sept. 28, at 12:30 p.m. in Room 612, Schermerhorn.*

Theoretical conditions determining atmospheric structure. Topics to include: Origin and evolution of the atmospheres of the planets; radiative transfer in planetary atmospheres; photochemical processes; ionospheric physics; solar terrestrial relations; theory of geomagnetically trapped particles; introduction to plasma physics with applications to the interplanetary plasma.

Astronomy G9001x. Advanced Topics in Astrophysics. Professor Bengt Strömgen. (2) *Fridays, 10:00 a.m.-12:00 noon beginning October 6.*

Brief introductory survey of physics of stellar interiors. Current problems in stellar evolution, including nucleosynthesis. Convective transport in stellar atmospheres and interiors. Supernova explosions. Formation of proto-stars out of interstellar matter.

475 RIVERSIDE DRIVE
NEW YORK, N. Y.

Columbia University
in the City of New York

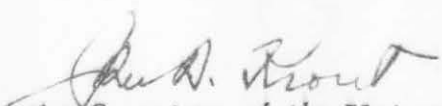
October 2, 1961

Bengt Georg Daniel Stromgren

By direction of the Trustees of Columbia University, I have the honor to inform you of your appointment as

Visiting Professor of Astronomy
in Columbia University under the terms noted below. This appointment is made, in accordance with the provisions of the Charter, during the pleasure of the Trustees.

Please signify your acceptance.


for the Secretary of the University

Annual Salary: No salary
(payable monthly)

Period of Appointment: September 1, 1961 - February 28, 1962

22 June 1961

Dr. Hugh L. Dryden
Deputy Administrator
National Aeronautics and Space Administration
1520 H Street Northwest
Washington 25, D.C.

Dear Dr. Dryden:

Thank you for your kind letter of 21 June 1961
inviting me to continue as consultant to the Astronomy
Subcommittee of the Space Sciences Steering Committee
through 30 June 1962. I am happy to accept the invitation.

Sincerely,

Bengt Strömngren

The Institute for Advanced Study
Princeton, New Jersey

Proposal to
The Air Force Office of
Scientific Research
for a contract in support of
A Conference on Problems of
the Distribution and Motion
of Interstellar Matter in
Galaxies, to be held at the
Institute for Advanced Study,
April 10 - 20, 1961.

Funds requested: \$8,500.00

Prepared by: _____

Bengt Strömgren, Professor
Institute for Advanced Study

Approved: _____

Robert Oppenheimer, Director
Institute for Advanced Study

The problems of the distribution and motion of interstellar matter in galaxies are being studied intensively by a number of astronomers and astrophysicists. Work based on results of optical astronomy which led to the conclusion that a considerable fraction of the total mass of our galaxy is present in the form of interstellar matter has been followed by work in the field of radio astronomy through which a picture of the distribution of interstellar matter in our galaxy has been constructed. It has been firmly established that interstellar matter near the galactic plane is concentrated in spiral arms. On the basis of these results problems of the formation of stars out of interstellar matter as well as problems of the distribution and motion of relatively young stars in our galaxy have been tackled anew.

During the last few years new clues, important to the solution of the problem of galactic spiral arms, have been found by J. H. Oort and his collaborators who established the fact that an inner spiral arm located between the sun and the galactic center is expanding with relatively high velocity, and found that this motion of interstellar matter must be part of a circulation pattern of huge proportions. Studies of the non-thermal radio emission from interstellar matter of very low density present in the halo of our galaxy have led to important conclusions. The problems of the center of our galaxy, which appears to have a very high concentration of mass within a radius of a few parsec, are being intensively investigated. The questions of the dynamics and in particular the magneto-hydrodynamics of galactic interstellar matter are tackled from various points of view. Related problems pertaining to cosmic radiation are under investigation. Extensive studies of interstellar matter in other galaxies are also being carried out and have already thrown important light on the problems of evolution of galaxies, and the questions of their classification.

It would appear that a conference on problems of distribution and motion of interstellar matter in galaxies could serve a very useful purpose. The problems might be discussed in a very effective way if a group of 15-20 astronomers and astrophysicists, particularly experts in the field, were brought together for a period of, say, ten days.

During the next academic year the following astronomers and astrophysicists who are experts and are working on the problems in question, will be in residence at the Institute for Advanced Study as members of the Institute: D. Osterbrock, Otto Struve and L. Woltjer. Also, J. H. Oort will be at the

Institute in April, 1961, as special lecturer. It would therefore be advantageous to hold such a conference at the Institute during April, 1961.

I have discussed the idea with my colleagues in physics at the Institute for Advanced Study and with a number of astronomers and astrophysicists who are now particularly active in studies of problems of interstellar matter, and I have been very much encouraged by their response.

If the conference were to be held in April, 1961, as planned, the following astronomers, astrophysicists, and physicists would be willing to participate in the conference:

A. Blaauw, Groningen University
G. Burbidge, University of Chicago
M. Burbidge, University of Chicago
G. Field, Princeton University
C. C. Lin, M. I. T.
N. U. Mayall, Kitt Peak National Observatory
J. H. Oort, Leiden University
D. Osterbrock, University of Wisconsin
Martin Schwarzschild, Princeton University
Lyman Spitzer, Jr., Princeton University
Bengt Strömgen, Institute for Advanced Study, Princeton
Otto Struve, Green Bank National Radio Observatory
L. Woltjer, Leiden University

It is hoped that L. Biermann, Munich, T. Gold, Cornell University, R. Lüst, Munich, G. Münch, Mt. Wilson and Palomar Observatories, and a few other astronomers and astrophysicists might also participate. The physicists at the Institute for Advanced Study, R. Oppenheimer, F. Dyson, T. D. Lee, A. Pais, and F. Yang would participate in some of the meetings of the conference.

J. H. Oort would be willing to act as Chairman of the conference.

During the period of the proposed conference, April 10-20, a number of papers would be presented and discussed, but ample time would be reserved for informal discussions. It is hoped that the conference would further the formulation of new research programs in optical astronomy as well as radio astronomy.

Arrangements would be made for the preparation of a report covering the papers presented and the discussion. It is expected that mimeographed copies of the report would be ready within a few months from the time of the conference.

The Institute for Advanced Study is ready to be host to the planned conference. Apartments in the Institute housing project would be made available to the participants, and arrangements would be made for meals in the Institute cafeteria.

It is herewith proposed that the Air Force Office of Scientific Research support the planned conference through a contract which would make it possible 1. to pay the travel expenses and suitable per diems for the participants, and 2. to have a report of the conference prepared in mimeographed form.

The proposed contract budget is as follows:

Travel expenses for 5 participants from Europe (if transportation by MATS would be available this item could be correspondingly reduced)	\$3,500.00
Travel expenses for 8 U.S. participants outside Princeton	\$1,500.00
Per diems	\$1,500.00
Preparation of report, and miscellaneous expenses	<u>\$1,000.00</u>
	\$7,500.00
	Overhead
	<u>\$1,000.00</u>
	<u>\$8,500.00</u>

Strömberg

THE UNIVERSITY OF ROCHESTER
COLLEGE OF ARTS AND SCIENCE
RIVER CAMPUS STATION
ROCHESTER 20, NEW YORK

DEPARTMENT OF PHYSICS
AND ASTRONOMY

April 11, 1961

Mrs. Wilder Hobson
Institute for Advanced Study
Office of the Director
Princeton, New Jersey:

Dear Mrs. Hobson:

Thank you for the material on Professor Strömberg.
I know it will be helpful to us. We appreciate very
much your prompt assistance in this matter.

Yours truly,



William A. Jamison
Executive Secretary

WAJ/sb

THE INSTITUTE FOR ADVANCED STUDY
Theoretical Astrophysics Seminar

Monday, March 27, 4:15 p.m. - Seminar Room, E Bldg.

Dr. Bengt Strömgren, IAS

will speak on

"Calculation of emitted spectrum as a function
of age for main-sequence stars"

2 February 1961

Dr. Grayson Kirk, President
Columbia University
New York 27, N.Y.

Dear Dr. Kirk:

Thank you for your kind letter of January 26, 1961.
I am very happy to accept the invitation to be a member
of the Award Committee for the nomination of future
recipients of The Vetlesen Prize.

Sincerely yours,

Bengt Strömberg

Fac Strömgren

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

13 January 1961

Dear Robert:

You might like to read the
attached letter from Jacques Barzun.

The decision of NASA to which
Barzun refers is, I think, a wise
one. I have discussed the question with
Robert Jastrow, and I would like very
much to tell you what I know
about the plans. I am sure Jastrow
would be very grateful to you for
advice regarding the new venture.

Sincerely,
Bengt

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

25 January 1961

Dear Robert:

I called Jastrow's secretary and asked her to change the sentence regarding the appointments of Irving and myself. This was done, and the announcement will be worded as on the attached sheet.

Sincerely,
Bengt

Dr. Robert Oppenheimer

Strömberg

25 January 1961

The staff of the Institute for Space Study will work in close association with members of faculties of universities in the New York City area. The regular scientific staff will be supplemented by scientific appointments on a part-time consulting basis. Such appointments have been accepted by Professor Maurice Ewing of Columbia University and Professor Bengt Strömberg of the Institute for Advanced Study in Princeton. It is expected that these initial appointments will be supplemented by additional arrangements with university scientists in the New York City area.

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

31 December 1960

Dear Verna:

I am leaving tomorrow for Wisconsin and Tucson, Arizona, and I expect to be back on 11 January.

The attached manuscript is by Su-Shu Huang. May I ask you to make the arrangements to have it mimeographed? If Bonnie is going to do the stencil work it might be best if she talks to Huang before she starts. Huang will write in the equations.

Also attached is a letter to Dr. Oppenheimer in connection with my expenses attending the AAS meeting in New York.

With all best wishes,

Sincerely,

Bengt Strömberg

C O P Y

Fae

Strömngren

15 December 1960

Dr. Malcolm P. Savedoff
Department of Physics and Astronomy
River Campus Station
The University of Rochester
Rochester 20, N. Y.

Dear Malcolm:

Thank you very much for your kind invitation to be a Visiting Lecturer at the University of Rochester for one week next spring. I am happy to accept the invitation and am looking forward very much to this stay at the University of Rochester, and in particular to the opportunity of discussing a number of problems with you and your colleagues.

The time that would suit me best is the week beginning April 24, 1961. Would that be suitable from your point of view?

With all best wishes,

Sincerely,

Bengt Strömngren

2 November 1960

Dr. Daniel M. Popper
Department of Astronomy
University of California
Los Angeles 24, California

Dear Dr. Popper:

I wish to thank you very much for your letter of 4 October, 1960. During the past few weeks I have considered your question whether I would be interested in joining your Department of Astronomy.

Herewith I would like to tell you that I should not wish to accept such an offer, much as I appreciate the challenge and the opportunities. I have wonderful conditions for my research work here and would not wish to leave.

I hope very much that you will be successful in your efforts to strengthen and expand the Department of Astronomy at UCLA. I am grateful to you for thinking of me in this connection.

It would have been very nice indeed if I could have visited you during my last stay in California. However, I was working on the observing and the preparations for the observing, practically all the time. I remember my visit in 1950 with great pleasure.

With best personal regards,

Sincerely yours,

Bengt Strömberg

COPY

Fac Strömberg

Mount Wilson and Palomar Observatories
813 Santa Barbara Street
Pasadena, California
September 5, 1960

Mr. Charles F. Dunbar, Secretary
Associated Universities, Inc.
Upton, L. I., N. Y.

Dear Mr. Dunbar:

Thank you for your letter of August 9, 1960. Herewith I wish to inform you that I should be happy to serve on the Radio Astronomy Advisory Committee.

I am at present working at Mount Palomar Observatory and expect to be ~~back~~ in Princeton on September 27.

Thank you for the copy of the annual report of the National Radio Astronomy Observatory which I have read with great interest.

Sincerely yours,

Bengt Strömberg

Fac. Strömberg

JPVIX343 JP795/PS137 PRINCETON NJER 107/105 22 254P 1/51/50=
LT DR ROBERT ÖPPENHEIMER HAWSNEST BAY STJOHNSVIRGINISLANDS=
QUOTE HAVE BEEN ASKED IF I WOULD BE WILLING TO BECOME
SECRETARY GENERAL OF THE INTERNATIONAL COUNCIL OF SCIENTIFIC
UNIONS FOR PERIOD 1961-64 AM INCLINED TO DECLINE IN ORDER TO
RESERVE ALL MY TIME FOR RESEARCH UNLESS YOU FEEL THAT MY
ACCEPTANCE WOULD==

1961-64 +

TOD GL/DRL

1960 JUL 23 AM 8 04

ALL AMERICA CABLES
AND RADIO INC
ST THOMAS

JPVIX343 JP795/PS137 LT DR ROB 2/56/55=

FURTHER THE INTEREST OF THE INSTITUTE SHOULD BE VERY GRATEFUL
TO HEAR FROM YOU BENGT STROMGREN UNQUOTE AFOSR PROPOSES
GRANTING DOLLARS 70,000.00 FOR TWO YEARS FOR PHYSICS

AT EARLY CONCURRENCS THERE TERMS WHICH STROMGREN SAYS

COMPLY IN YOUR NAME PACKAGE MAILED TODAY

ALL MATTERS ALL WELL LOVE=

1960 JUL 23 AM 8 05

ALL AMERICA CABLES
AND RAYCO INC
ST THOMAS

FAC. Strömgen

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

23 July 1960

Dear Robert:

I was sorry to disturb you with the telegram sent yesterday, but the matter is somewhat urgent as I should send a reply to ICSU within a week or two.

It was nice to be asked to be General Secretary of ICSU for the next three years, but I am somewhat reluctant to give up the opportunity I now have to do research nearly all the time. It is true that there is an Administrative Secretariat and a Treasurer who relieve the ICSU Secretary of much routine work. Nevertheless the job does take an amount of time which is not negligible. I therefore am inclined to tell ICSU that I would not be willing to be a candidate for the post.

On the other hand there is no doubt that ICSU has become an organization of considerable importance and that the General Secretary has the possibility of doing interesting and useful work for international scientific cooperation. If you should feel that it would be good for the Institute if I accepted, then I would gladly do it.

My visit to Leiden was most interesting. Oort and Wolterj discussed with me their plans for an optical search for the

galactic center. Now that the position is very accurately known from the radio-astronomical work it seems possible to find the center in H α even through 12 magnitudes of absorption, or more.

We agreed that an attempt should be made this fall with my 2-channel photometer at Kitt Peak. My collaborator David Crawford will do the observing and if the instrumentation is ready in September I may go down there for a few days from Mount Palomar to work with him. There are some difficulties in connection with foreground H α emission, but we will see.

The stay in Denmark was also very fine. I made arrangements for instrument construction at the shops of the new Observatory, and saw many friends and colleagues. We also had a very nice time in our summer cottage. Sigrid and Ole are still there.

I left the summer cottage Thursday morning at 8 A.M. and arrived at the home here in Princeton at 8 P.M. Tomorrow I will leave for Mount Palomar.

With kindest regards to you and Kitty,

Sincerely,

Bengt

Dr. Robert Oppenheimer

Strömngren

Conseil International des Unions Scientifiques - International Council of Scientific Unions

President: SIR RUDOLPH PETERS, Cambridge

Treasurer: COL. E. HERBAYS, Brussels

Secretary General: DR. N. HERLOFSON, Stockholm

Administrative Secretariat:

~~Palais Noordeinde~~

~~THE HAGUE~~

~~Netherlands~~

June 30, 1960.

Strictly confidential

Dear Professor Strömngren,

The Bureau of the International Council of Scientific Unions at its recent meeting in Moscow considered the nomination of candidates for the new Bureau 1961-64, to be elected by the ICSU General Assembly in London in September 1961.

Following a unanimous decision by the ICSU Bureau I am now writing to ask you to accept nomination as candidate for the position of Secretary General of ICSU for the period 1961-64. It is the view of the Bureau that your personal capacity and your experience in international cooperation would be of the greatest value for the progress of ICSU affairs.

In strict confidence I enclose the complete list of nominees for the period 1961-64. The various persons are being approached now, and in order not to prejudice the final issue, this list is only known to the 8 members of the present ICSU Bureau and to Professor Lindblad.

The enclosed ICSU Year Book 1960 gives the composition of the present Bureau, and other information. You will recall that astronomers have for a long time held the positions as Secretaries General, with Stratton's long tenure of office and Spencer Jones in the period 1956-58.

The ICSU now has a permanent secretariat in the Hague, which takes care of the regular work and the execution of ICSU policy, thus relieving the Secretary General of a great administrative burden. The Secretary General receives sufficient funds for personal secretarial assistance - by way of illustration, I need about \$ 800 per year in Swedish currency.

I shall be glad to give any further information which you may want. Also, you may feel quite free to consult Dr. L.V. Berkner, the ICSU Past President, at Associated Universities, 10 Columbus Circle, New York, who is

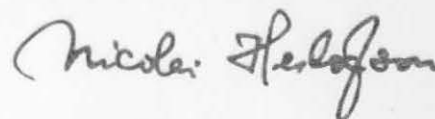
fully acquainted with the selection of the new ICSU Bureau.

As a personal note I should like to add that if you so wish, you can always count on my cooperation in dealing, say, with matters requiring personal attendance in Europe at times when this may be inconvenient for you. In any case, I believe that you will not find the distance across the Atlantic inconveniently long in our jet-plane age.

I am looking forward to hearing from you, and, like my colleagues in the Bureau, hope to receive your acceptance.

With kind regards,

Yours sincerely,



Nicolai Herlofson
Secretary General ICSU
Royal Institute of Technology
Stockholm 70, Sweden

Enclosure

Strictly confidential

Proposed Bureau 1961-64.

S. Hörstadius	President	Sweden	Biology
W.A. Engelhardt	Vice-President	U.S.S.R.	Biochemistry
S. Kaya	Vice-President	Japan	Physics
Sir Rudolph Peters	Retiring President	United Kingdom	Biochemistry
B. Strömngren	Secretary General	U.S.A.	Astronomy
J. van Mieghem	Treasurer	Belgium	Geophysics
G. Laclavère	Elected member	France	Geophysics
L.G.O. Huxley	Elected member	Australia	Scientific Radio

Fec Strömgren

pa.t.

MOUNT WILSON AND PALOMAR OBSERVATORIES

CARNEGIE INSTITUTION OF WASHINGTON
CALIFORNIA INSTITUTE OF TECHNOLOGY

August 14, 1960

813 SANTA BARBARA STREET
PASADENA, CALIFORNIA

Dear Robert:

I have spent some time here in Pasadena in between observing periods and had quite a few interesting discussions. Tomorrow I am going back to Mount Palomar.

Many thanks for your telegram regarding the ICSU secretaryship. After I had received the message there was no doubt in my mind, and I sent a telegram to Herlofson followed by a letter telling that I declined.

With the same mail I am sending^{*} a draft of a proposal to the Air Force for a contract in support of the planned conference at the Institute next April. I should be grateful to you if you would read the draft and make any changes to improve it.

I hope that you and Kitty had a wonderful time in the Virgin Islands.

Sigrid and Ed are still in Denmark and enjoying their stay.

Kindest regards,

Sincerely,

Bengt

Dr. Robert Oppenheimer

* To Mrs. Edger-ton

8 April 1960

Dear Bengt:

There is no reason why you should not yourself receive the consulting fees from NASA, or, for that matter, for any work which is consistent with and helpful to your own interests and the work that you have under way at the Institute. We are not Chicago.

Very sincerely,

Robert Oppenheimer

Professor Bengt Strömgen

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

7 April 1960

Dear Robert:

During this term I have received \$180 from the National Aeronautics and Space Administration (consultant's fee for two days). Should the amount be paid to the Institute or withheld from next month's salary?

Sincerely,

Bengt

Bengt Strömngren

Dr. Robert Oppenheimer

17 July 1959

Dear Professor Strömberg:

I should have forwarded mail to you before this. The fact is I have been so very busy that I forgot; and now you will not get this until you arrive at Lick. I very much hope that this will not cause any difficulties.

Dr. Osawa is here, and I called to tell him that I had found his letter to you from Tokyo. He said there was nothing urgent in it, and that I should just forward it. He said he is comfortably settled, and all is going well.

Dr. Oppenheimer approved the ONR proposal without change.

Dr. Eichner (sp?) came in to deliver an instrument, which he said he should have returned earlier. We put it in your office. If you would like it at Lick, will you let us know?

I managed to do Dr. Woltjer's lecture notes, and also a short paper (No. V in his series) before he left. We will send you copies when they are run off.

Marianne will be back Monday. I shall tell her that you will be sending your paper for multilithing.

Hope you and your family are having a good holiday. There is an article in today's Times about the Lick 120-inch reflector. It does sound exciting.

With best wishes to you and Mrs. Strömberg, and again my apologies,

Mrs. Wilder Hobson
Secretary to the Director

Professor Bengt Strömberg
c/o Lick Observatory
Mount Hamilton, California

Professor Strömngren would like to have his first class mail forwarded to him three times a week, in a covering envelope.

I have instructed the post office to deliver his Portico Lane mail to the Institute.

Forwarding addresses.

10 July - 17 July % Mr. J. J. Campbell, 1201 Trignon, Green Bay, Wisconsin
27 July - 24 September Lick Observatory, Mount Hamilton, California
Labor 1-3409, San Jose, Cal.

Dr. K. Osawa arrives in Princeton July 13. He will be in building
E, in the same office that Wolfjer and Kahn have been in. He will
need a desk calculator. Dr. Oppenheimer was sure that no one
else would need the desk calculator now in the seminar room,
and he said that Osawa could use it either in his office, or in the
seminar room if he preferred an air-conditioned room.

The envelope addressed to Osawa contains material that he will
need in his work.

6 July 1959

B. P.

Prof. Strömberg

26 August 1959

The American Embassy
Consular Section
Østerbrogade 24
Copenhagen Ø, Denmark

Gentlemen:

This is to certify that Professor Bengt Strömberg, who is sending you an affidavit of support for Mr. Ole Moeller, is a permanent member of the Faculty of the Institute for Advanced Study.

Yours sincerely,

Robert Oppenheimer

Prof. S. called from Mount Hamilton about this.

9 June 1959

Dr. Ira S. Bowen, Director
Mount Wilson and Palomar Observatories
813 Santa Barbara Street
Pasadena, California

Dear Dr. Bowen:

First I wish to thank you sincerely for your kindness during my recent stay in Pasadena. I was most happy to have an opportunity to discuss with you in detail the possibilities of obtaining time for my observing programs with Mount Wilson and Palomar instruments during the next years.

Following your suggestion I am herewith sending a formal request for observing time during the summer months of 1960.

In a letter of 6 May 1959 to Jesse Greenstein, of which I believe you have a carbon, I have described in a general way the two research programs for which I would hope to get observing time with the instruments of Mount Wilson and Palomar Observatory, and also indicated the times with the various instruments that would be needed for the programs. I had in mind that the observations would be carried out during the years 1960, 1961, and 1962.

Below I am outlining a program for observing in 1960 which would be part of the two general programs described in the letter just referred to.

I. The general program: It is intended to carry out photoelectric narrow-band photometry and UBV photometry for 3000 A2 - F5 stars brighter than visual magnitude 7^m and north of declination - 20°. The H β index l and the Balmer discontinuity index c will be determined through the narrow-band photometry, and from these the absolute magnitude and an age estimate will be derived. Spectroscopic distances will be derived and combined with the proper motions and radial velocities to yield space velocities. The stars will be divided into age groups, on the basis of the narrow-band photometry, and the space velocity distribution analyzed for each age group. It is expected that sections of spiral arms active in star formation can be traced in this way, and possibly charted as a function of time. The combination of the UBV and narrow-band photometry will yield an index of chemical composition, particularly for the F. stars.

During the period July 15 - September 30, 1960, I would hope to obtain photoelectric narrow-band photometry for one-third of the program stars, i. e. for about 1000 stars. This would require about 300 hours of observing with the 20-inch reflector of Mount-Palomar Observatory. I believe that about 45 nights with the Mount Palomar 20-inch reflector would be adequate, i. e. one-half of the nights during the period July 15 - September 30, 1960. Moonlight nights can be utilized. If my H β photometer for simultaneous measures with an H β filter and a comparison filter can be mounted on the 20-inch (the weight is about 70 pounds), then practically all the clear hours during the 45 nights can be utilized. On the other hand, if this should not

Dr. Ira S. Bowen

- 2 -

June 9, 1959

prove possible, then all the narrow-band photometry would have to be carried out through successive filter-measures, and photometric weather would be required. In that case perhaps only 600-700 stars could be obtained with the 20-inch reflector in 1960.

2. The general program: It is intended to establish a list of unevolved (i. e. main-sequence) population II halo stars in the spectral range F0 - G8. The survey would cover an area of approximately ²⁰⁰⁰⁰ in high galactic latitudes ($|b| > 50^\circ$) to the limit, magnitude $m_D = 15^m$. The method will be one that I have successfully applied to an area of 4.95×4.95 which includes Bergeford Eichfeld 92. The stars are picked out through their ultraviolet excess. First, photographic photometry in the ultraviolet and the green is obtained. Next, photoelectric UVV photometry is carried out for approximately 1 per cent of the stars having the highest ultraviolet green ratio. In addition, for statistical and calibration purposes, photoelectric UVV photometry is carried out for small suitably selected samples of stars for which the ultraviolet-green ratio is somewhat lower. Through this procedure most of the main-sequence population II halo stars are found, and statistical corrections for incompleteness can be applied. The distribution function of the ultraviolet excess, and the correlation of ultraviolet excess and distance from the galactic plane can be derived for the population of stars with ultraviolet excesses in the range from the maximum value (about 0.2) to about one-half of this value. For this range of ultraviolet excess, the relative frequency of the stars near the galactic plane is so low that a special search effort like the one described is necessary in order to establish adequate samples.

It is further intended to extend the study - for main-sequence F0 - G8 stars - of the distribution function of the ultraviolet excess, and the correlation of ultraviolet excess and distance from the galactic plane to the stellar population with ultraviolet excess in the range from zero to one-half the maximum value, i. e. the population I and the disc population. Because the number of stars per unit volume near the galactic plane is much higher for these populations, it is here sufficient to study samples of stars brighter than about visual magnitude 9^m . The first step is to obtain photoelectric UVV photometry for a sample of about 4000 F and G stars in the Henry Draper catalogue brighter than visual magnitude 9^m . This will be followed by narrow-band photometry to determine the indices I , c and m for the stars in the B - V range 0.30 to 0.65 as well as $m_{\lambda 4226}$ and G band indices for the B - V range 0.60 to 0.75 .

The ultimate aim of these investigations is to contribute to the study of the correlation of age, chemical composition at formation, and space distribution of galactic stars, with a particular view to testing the hypothesis that the relative heavy-element content of the interstellar matter of our galaxy has been increasing with time as a consequence of transmutation of the elements in stars followed by dissipation of stellar matter into interstellar space.

During the period July 15 - September 30, 1960, I would like to obtain about 25 plates with the 48-inch Schmidt telescope of Mount Palomar Observatory, each with one ultraviolet and one green exposure reaching approximately $m_D = 16^m$ for F and G stars. The plates would cover a region approximately between 23^h and 2^h right ascension and $+10^\circ$ and -5° declination. Also 3 plates with one ultraviolet and one yellow exposure reaching the same limit would be desirable. Two periods in August and September, 1960, of 5 second-half nights each during new moon to first

Dr. Ira S. Bowen

- 3 -

June 9, 1959

quarter should be adequate. These plates would probably yield about 1000 stars for further photoelectric UBV photometry, to be carried out during 1961.

During the period July 15 - September 30, 1960, I should finally wish to get some experience with my narrow-band H β photometer attached to the 60-inch reflector of Mount Wilson Observatory. One observing run of 4 or 5 nights with the 60-inch in September, 1960, would be quite valuable. I would use it for H β photometry of about 300 F stars of the F and G star program of stars brighter than visual magnitude 9^h mentioned above.

Referring to the description of the programs I should herewith like to request time with the Mount Wilson and Palomar instruments as follows.

Instrument	Time	Purpose
Mount Palomar 20-inch reflector.	45 nights during the period July 15 - September 30, 1960. Moonlit nights adequate.	Photoelectric <u>UBV</u> and narrow-band photometry of 1000 A and F stars brighter than visual magnitude 7 ^m .
Mount Palomar 48-inch Schmidt telescope.	10 dark second-half nights during August and September, 1960.	25 plates each with one ultraviolet and one green exposure reaching $m_p = 16^m$ for F and G stars, area 23 ^h to 2 ^h , + 16 ^o to -5 ^o . 5 plates each with one ultraviolet and one yellow exposure reaching the same limit.
Mount Wilson 60-inch reflector.	4 or 5 nights in September, 1960.	Photoelectric H β -index photometry for 500 F stars brighter than $m_v = 9$.

I should be very grateful to you and to the Observatory Council for considering this request. I hope that this letter and my letter of 6 May 1959 to Jesse Greenstein describe the proposed programs in sufficient detail, but I would of course be happy to send further information if you should desire it. I enclose five reprints in which the procedures of the photoelectric narrow-band photometry referred to above are described and discussed. I also enclose a diagram that illustrates the procedure of finding unevolved ultraviolet-excess halo stars through photographic ultra-violet-green photometry followed by photoelectric UBV photometry.

Sincerely yours,

Bengt Strömgen

Fac

Strömgen

6 May 1959

Dr. Jesse L. Greenstein
Mount Wilson and Palomar Observatories
1201 E. California Street
Pasadena 4, California

Dear Jesse:

It has taken me longer than I first thought to work out the research program for which I would hope to get observing time with the instruments of Mount Wilson and Palomar Observatories, but I believe that I am now ready to discuss the questions with you and with Dr. Bowen.

Let me first say that I am thinking of observing time during the April-October periods of 1960 and 1961. This coming season David Crawford and I have May 10 - June 30 with the 36-inch at McDonald Observatory, and I have accepted a Morrison Research Associateship at Lick Observatory expecting to work there in August and September. If it seems reasonable to you and to Dr. Bowen I would like to include April-October 1962 in the discussion also.

I am leaving for McDonald Observatory on May 13 and will stay there until about May 18. I then plan to go to Lick Observatory to be there during the Regional Meeting May 22-25. If it suits you and Dr. Bowen I would like very much to spend one or two days in Pasadena for discussions of the questions regarding the observing program. The days just before the Regional Meeting, May 19-20, or May 20-21, would of course be very convenient for me. I shall try to reach you on the telephone early next week to find out if this would be suitable.

Since I last wrote to you our McDonald Observations of July-August 1958, and December 1958-January 1959 have been reduced, and it is now almost certain that the observing for the B8-B9 star program (UBV and H β photometry of 3000 B8 and B9 stars in the Henry Draper catalogue brighter than 8^m.5 and north of -20°) can be completed during the May 10 - June 30 period at McDonald.

I have been working lately on questions of age and space velocity for the stars younger than about 1 billion years. The stars investigated were A, F and K stars brighter than 5^m.5 for which good absolute magnitudes (and therefore good distances and space velocities) as well as age estimates were available from my photoelectric narrow-band photometry. The results are very encouraging.

I have therefore worked out a program of investigation of age and space velocity for about 3000 A and F stars (A2 - F5, brighter than 7^m visual, and north of -20°) on the basis of narrow-band photometry. I hope to be able to divide the stars which are in the age range 0 - 10⁹ years into 5 - 10 age groups and determine the change with age of the space velocity distribution. From the preliminary results there is little doubt that the velocity distribution for stars of a given age group will be very uneven and reflect the time and space distribution of spiral arm sections active in star production.

Dr. Jesse L. Greenstein

- 2 -

6 May 1959

Furthermore I hope to investigate chemical composition variations through the narrow-band index m for stars in the strategic B - V range $0^m_{35} - 0^m_{45}$ where the total strength of absorption lines is still high enough for the index to be a sensitive measure of chemical composition while the ages of the great majority of the stars are small enough that the secular change of composition with age is practically negligible.

As I told you at the IAU meeting last August I have been working also on problems connected with the population II halo stars, particularly the unevolved main-sequence stars of this population. I have investigated the possibility of picking out such stars through their ultraviolet excess. For this purpose a plate was taken for me with the big Bergedorf Schmidt telescope which has ultraviolet and green images side by side. The area chosen was 4.95×4.95 including Bergedorf Eichfeld 92. The exposures were so chosen that the images would be nearly equally strong for population I A3 - G0 stars. Photographic photometry was carried out for about 4000 stars brighter than about $m_p = 15^m$. On the basis of the measures all stars with an ultraviolet excess of more than about a quarter of a magnitude were selected for further photoelectric photometry, about 40 altogether. For 13 of these stars (13. - 15. magnitude) Crawford and I obtained photoelectric UBV photometry last December. Two stars, which had very high ultraviolet excesses, easily noticeable without photometry, proved to be Humason-Zwicky stars (at the top of your (U - B), (B - V) diagram in *Physikalisches Handbuch*), while the other stars have the characteristics of population II halo stars. This is illustrated by the enclosed (U - B) - (B - V) diagram.

Encouraged by this result I have worked out a program for investigation of unevolved population II halo stars (F0 - G8 main-sequence stars). According to the program a number of Schmidt telescope plates with ultraviolet and green images are to be taken in high galactic latitudes ($|b| > 50^\circ$). Samples for photoelectric UBV photometry are to be selected from the stars that are relatively strong in the ultraviolet. In this way it should be possible to establish an extensive and statistically well-defined list of unevolved population II halo stars down to the 15. magnitude in high galactic latitude, and to investigate ultraviolet excess and distance from the galactic plane, and the correlation of these quantities. Through model stellar atmosphere calculations carried out at the Institute for Advanced Study I hope to be able to calibrate the ultraviolet excess (and other similar indices) in terms of the metal-hydrogen ratio.

The color-range of the unevolved population II halo stars that I wish to investigate is B - V approximately $+0^m_{30}$ to $+0^m_{75}$. For B - V $+0^m_{30}$ to about $+0^m_{45}$ I would like to investigate the question of the gap in the (U - B) - (B - V) diagram between the population I and the population II halo stars caused by the effects of evolution of the intermediate age disc population. For B - V up to about $+0.60$ or $+0.65$ the $H\beta$ index will be very useful for age discrimination. From B - V $+0.65$ to $+0.75$ evolutionary effects should be small, assuming that luminosity class IV subgiants can be eliminated from the sample of main-sequence stars to be studied.

I should add that it will probably be advisable, and quite feasible, to construct an instrument for semi-automatic scanning of the Schmidt telescope plates with ultraviolet-green image pairs in order to find the small fraction of stars with relatively strong ultraviolet images. Until such an instrument is available, however, the Schmidt plates would be evaluated in the same way as the Bergedorf Schmidt plate that I have already referred to.

The reduction work and the theoretical work in these programs can all be carried out at the Institute for Advanced Study. However, a considerable amount of observing

Dr. Jesse L. Greenstein

- 3 -

6 May 1959

time with suitable instruments is of course needed. I would summarize the requirements as follows.

Type of photometry	Stars	Instrument	Estimated number of instrument hours
Photoelectric narrow-band photometry and UBV photometry	3000 A ₂ -F ₅ stars brighter than 7 ^m visual	Mount Wilson 60-inch	300
		Mount Palomar 20-inch	600
Photographic U G (and possibly red) photometry of approximately 2000 square degrees in high galactic latitude	Limiting magnitude 16 ^m photographic	Mount Palomar 48-inch Schmidt	100
Photoelectric U B V photometry of stars in high galactic latitude selected according to photographic U G photometry	3000 stars 12 ^m -16 ^m photographic	Mount Wilson 60-inch or 100-inch	600
Photoelectric narrow-band photometry and U B V photometry	4000 F and G stars brighter than 9 ^m visual	Mount Wilson 60-inch	400
		Mount Palomar 20-inch	800

For carrying out these programs I hope to get two projects, an NSF project for the work on the young stars, and an ONA project for work on the old stars. The projects should provide the funds for auxiliary instruments (some are already available) for time with electronic computers for reductions and theoretical calculations, and for the salaries of two Research Associates.

I would hope that some of the observing could be done at the AURA Observatory by David Crawford after he goes there January 1, 1960. This would be particularly important with a view to the winter month observations. If this hope materializes, then the number of hours with the Mount Wilson and Palomar reflectors would of course be correspondingly reduced.

The program could perhaps be finished in two years, but three years is probably a better estimate. I should emphasize that I believe that a significant contribution would have been made even if only 40 - 50 per cent of the program as outlined were actually completed.

I hope that this rough outline of my plans can help get our discussion started. I should be most grateful to you and to Dr. Bowen if you would consider this, and we could talk it over in Pasadena.

With all best wishes,

Sincerely,

Bengt Strömgren

Fac Strömgren

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

21 April 1959

Dear Robert,

Thank you for your letter with the good news that the Trustees have fixed the salary of the Institute professors at \$22,500 a year. I feel very grateful both to the Trustees and to you. It must be a source of great satisfaction to you that you were so successful in your efforts.

Sincerely,

Bengt

cc Mr. Morgan

20 April 1959

Dear Professor Strömberg:

The Trustees of the Institute, meeting on April 18th, have fixed your salary, and that of your colleagues, at \$22,500 a year, starting July 1, 1959.

I am glad to tell you the good news.

Very sincerely,

Robert Oppenheimer

Professor Bengt Strömberg
The Institute for Advanced Study

Fac Strömberg

4 December 1958

Dear Bengt:

Your proposal to pay \$300 salary to Mr. Schmedler Nielsen in Copenhagen for assistance in the measurement of photographic plates is quite satisfactory to me. We both know that this is an exceptional procedure, and that we are resorting to it to see whether we would be warranted in a differently funded and longer term undertaking.

Very sincerely,

Robert Oppenheimer

Professor Bengt Strömberg
The Institute for Advanced Study

NOTE TO MR. MORGAN: Charge Prof. Strömberg's Assistant Fund.
Copy to Mr. Morgan

Nielsen's address is Copenhagen Observatory, Copenhagen K, Denmark

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

4 December 1958

SCHOOL OF MATHEMATICS

Dr. Robert Oppenheimer
The Institute for Advanced Study

Dear Robert:

Some time ago we discussed the possibility of the use of part of my assistance fund toward salary of an assistant working for me at Copenhagen Observatory. We agreed that, although it would in general be preferable to pay this type of salary out of special project funds, there might be situations during the initial period of research programs when it would be desirable to rely on the assistance fund.

I would like to ask you now if you think it would be possible and proper to pay a total salary of \$300 to a Mr. Schmedler Nielsen, Copenhagen Observatory, for assistance in the measurements of photographic plates taken for the purpose of finding faint halo F stars in high galactic latitudes from their ultraviolet excess (due to very low metal content). I made the first measurements on this program myself (at Columbia in New York), and during my stay at Copenhagen Observatory last summer I taught Mr. Nielsen how to make them with the microphotometer of the Copenhagen Observatory.

I am confident that it will be possible to decide whether or not to apply for a special grant (NSF or ONR) for a project along these lines on a larger scale when one more photographic plate has been measured, and when the halo F star "candidates" suggested by the photographic photometry have been accurately examined through photoelectric photometry at McDonald Observatory December 1958-January 1959, and April 1959.

In the meantime it would be a great help if the \$300 salary to Mr. Schneider Nielsen could be paid out of the assistance fund.

Sincerely,

Bengt

Bengt Strömberg

November 20, 1958

Memo to Mr. Kinot C. Morgan

Residence for Mr. and Mrs. B. Strömberg on lot No. 7

Estimated cost (approximate figures).

Contract with H. G. Houghton, Builder	\$43,500
Architect's fee	4,300
Cost of improved lot	7,500
Landscaping	1,000
	<hr/>
	\$56,300

Appliances (refrigerator, oven, washer and dryer)	\$ 1,200
Built-in furniture for study	900
Wall-to-wall carpeting	900
	<hr/>
	\$ 3,000

Proposed division of cost (\$56,300)	
Mortgage 80 per cent	45,040
Owner's contribution	
20 per cent	11,260

Owner's contribution to \$ 56,300	\$11,260
Other	3,000
Total	<hr/>
	\$14,260

Owner's contribution to date:	
To Institute for Advanced Study toward Mr. Houghton's bills	\$ 5,000
To Architect	3,141
For built-in-furniture for study	900
	<hr/>
	\$ 9,041

Fac Strömberg

20 November 1958

Professor R.E. Marshak
Department of Physics and Astronomy
The University of Rochester
River Campus Station
Rochester 20, New York

Dear Professor Marshak:

Thank you for your very kind letter of November 17, 1958. I shall be happy to serve as a member of the Advisory Board for the new series, Interscience Monographs and Texts on Physics and Astronomy. I am looking forward to discussing with you from time to time questions that might come up concerning new topics and authors.

With best wishes,

Sincerely yours,

Bengt Strömberg

COPY

Strömngren

6 October 1958

Dr. Emil Klein, President
Rittenhouse Astronomical Society
The Franklin Institute
Philadelphia 3, Pennsylvania

Dear Dr. Klein:

Thank you for your letter of October 3, 1958, informing me that it is the Society's wish to bestow upon me the Rittenhouse Medal at a Joint Meeting with the Franklin Institute in Philadelphia on April 1, 1959.

I feel greatly honored and shall be most happy to accept the award in 1959. I will of course plan to be at the meeting on April 1, 1959, and should be most pleased to have the opportunity to speak to the members of the Society and the Franklin Institute on that occasion.

I wish to express my gratitude to you and the other officers of the Rittenhouse Astronomical Society.

Very sincerely yours,

Bengt Strömngren

Fae Strömgen

MOUNT WILSON AND PALOMAR OBSERVATORIES

CARNEGIE INSTITUTION OF WASHINGTON
CALIFORNIA INSTITUTE OF TECHNOLOGY

1201 EAST CALIFORNIA STREET
PASADENA, CALIFORNIA
October 6, 1958

Dr. Bengt Strömgen
Institute for Advanced Studies
Princeton, New Jersey

Dear Dr. Strömgen:

I have just had an opportunity to talk with Dr. Bowen about the subject we discussed in Moscow, the possibility that you might want to visit Pasadena for some fairly extended stays. He is most enthusiastic about the idea, and feels that the Observatory would greatly benefit by having you here. We would certainly extend every hospitality we could, to make your visits pleasant and successful.

As you know some years ago we instituted the Guest Investigator system, which is described in the enclosed sheet. Under this arrangement we have had many short term visitors, who have come out to do specific problems, or we have had people like Otto Struve who comes down about every other month for fairly substantial observing programs, and has been doing so since soon after he came to Berkeley. Some of our visitors have stayed up to two, three or six months, and part in the observing at about the level of the regular staff members. The general plan is to ask for a definite proposal for the program, with an estimate of the minimum amount of time required to make it successful. After approval by the Observatory Council this time is reserved; ~~and~~ in addition I might say very often much more time than the minimum is provided, as it is available, depending on the scheduling of the various visitors and permanent staff. Normally these programs have been submitted on a year to year basis, but if you were to plan to come here in a fairly regular fashion, which I hope might happen, it is fairly clear that while we would not make formal promises for a very long period, it would be realistic to assume that regular observers are the most efficient, and that they would receive definite priorities. I would not be surprised if we were able to make some kind of commitment on a two or three year basis.

The next question that would arise would be the nature of the equipment that you would require. Your multicolor photoelectric work, if done consecutively with different narrow band filters, could be presumably adapted with minimum change to our normal photoelectric equipment available for all telescopes and uses. We have in addition the low-dispersion low-resolution spectral scanner, and we have under development a high-resolution spectral scanner for the 100-inch coude. Your equipment with multicolor observations on the spectrum itself in the coude would presumably take a

October 6, 1958

Institute for Advanced Studies
Princeton, New Jersey

larger mechanical development effort, and I do not know whether you have this equipment available to bring with you, or whether new equipment needs to be constructed. We are rather short handed on help for electronic equipment construction, but I assume that you have most of this already, or could develop it if needed.

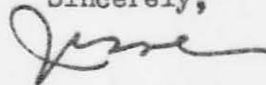
My hope is that you will seriously consider planning to visit us for whatever length of stay you can, for the next few years. In order to bring this up to Dr. Bowen and the Observatory Committee, it would be necessary for you to write Dr. Bowen asking whether you could have Guest Investigator privileges, for the carrying out of whatever programs you are most interested in, and for any reasonable period of observing that is needed. It is our custom not to give very long runs at the telescopes to any one observer, although runs of a week or so at the 60-inch are fairly common. (That is we do not assign whole months as was done at McDonald). The proposal to Dr. Bowen could be quite informal, but should include the general scientific program, the specific instrumentation needs, and an estimate of time required.

I need not say how delighted we would be personally to have you out here, and how much we could learn from you. As I said, outside the Observatory framework, but at Caltech, it might be possible to find a small fund for some lectures, to pay any extraordinary expenses of your trip here, not covered by other funds. This would take some prior planning, but I know we would benefit from it.

The final decision on Guest Investigator applications is made by the Observatory Committee, which will meet in the next few weeks sometime, so that it would be worthwhile your taking the time to submit some of the data asked for above, so that we could get this question considered at the earliest possible date.

With best personal regards,

Sincerely,



Jesse L. Greenstein

JLG/e

Strömgen

9 September 1958

Mr. Minot C. Morgan
The Institute for Advanced Study
Princeton, New Jersey

Dear Mr. Morgan:

I enclose a check for \$5,000.00 made out to the Institute for Advanced Study toward payment of lot No. 7 and the house that is being constructed on this lot by H.G. Houghton and Sons, Builders.

I have to date paid the architect, Mr. Charles K. Agle, \$3,141.50, and I expect to pay approximately an additional \$1,000 to the architect and about \$1,000 for landscaping. These payments would bring my own total contribution to approximately \$10,000. In view of this, would it be satisfactory if my next contribution toward the payments to H.G. Houghton and Sons were made at the time of the last payment to this firm?

According to my contract of 9 May 1958 with H.G. Houghton and Sons the last payment (\$8,270.60) is to be made at the completion of the whole job. The four payments to be made prior to the last one amount to \$33,082.40 altogether.

Sincerely yours,

Bengt Strömgen

cc. Dr. Robert Oppenheimer ✓
Mr. Henry M. Stratton

DOMESTIC SERVICE	
Check the class of service desired; otherwise this message will be sent as a full rate telegram	
FULL RATE TELEGRAM	<input type="checkbox"/>
DAY LETTER	<input type="checkbox"/>
NIGHT LETTER	<input type="checkbox"/>

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WESTERN UNION

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W. P. MARSHALL, PRESIDENT

INTERNATIONAL SERVICE	
Check the class of service desired; otherwise the message will be sent at the full rate	
FULL RATE	<input type="checkbox"/>
LETTER TELEGRAM	<input type="checkbox"/>
SHIP RADIOGRAM	<input type="checkbox"/>

NO. WDS.-CL. OF SVC.	PD. OR COLL.	CASH NO.	CHARGE TO THE ACCOUNT OF	TIME FILED

Send the following message, subject to the terms on back hereof, which are hereby agreed to

to Mrs. Edgerton from Copenhagen, 9/5/58

Expect to return Princeton Sunday September 7.

Strömngren

p.t. KØBENHAVNS UNIVERSITETS
ASTRONOMISKE OBSERVATORIUM

ØSTERVOLDGADE 3, K.

KØBENHAVN, den 10. August 1958

Dear Marianne:

Would you be kind enough to mail the enclosed letter. I will be leaving for the IAU meeting in Moscow tomorrow and expect to be back in Copenhagen on August 21, and in Princeton on September 5.

Sincerely,

Bengt Strömberg

p.t. KØBENHAVNS UNIVERSITETS
ASTRONOMISKE OBSERVATORIUM

ØSTERVOLDGADE 8, K.

KØBENHAVN, den

August 11, 1958

Dear Marianne:

Would you stamp and mail these
letters for me. They are all private, and
the postage should be charged to my
account. Many thanks.

Sincerely,

Bengt Strömberg

KØBENHAVNS UNIVERSITETS
ASTRONOMISKE OBSERVATORIUM

ØSTERVOLDGADE 3, K.

KØBENHAVN, ~~DEN~~

July 24, 1958.

Mrs. Marianne Edgerton
The Institute for Advanced Study
Princeton, New Jersey
U.S.A.

Dear Marianne:

Many thanks for your letter and for taking good care of my mail. I think it would be best if you sent the bills here as there is no difficulty connected with paying by check drawn on the Princeton bank from here.

We are very much enjoying a few weeks at our summer cottage in North Sealand. The weather is cool, I hope that the summer in Princeton is nice and not too hot now. Mr. Holt has sent us a number of pictures showing the progress on our house.

Kindest regards.

Sincerely

Bengt Strömgen

Bengt Strömgen

22 April 1958

Mr. Minot Morgan, Jr.
The Institute for Advanced Study

Dear Mr. Morgan:

It was very kind of you to ask me to express my opinion regarding the Portico next to the Institute lot on which we expect to build.

First, I wish to say that Mrs. Strömgren and I would be sorry if the Portico remained in its present form. Even a modified Portico with the immediate surroundings landscaped would, we think, not fit very well with the planned houses of faculty members, including our own.

With regard to the timing, I would like to state the following. In case the Institute should prefer to wait another year, say, before taking the Portico down I would not object, if there is assurance that the removal would not disturb our lot and the access to it. However, I would of course be happy to see the Portico taken down as soon as possible and before we move into our houses.

Sincerely yours,

Bengt Strömgren

Strömberg

October 28, 1957

Mr. Alexander Leitch
Secretary of the University
Princeton University
Princeton, New Jersey

Dear Mr. Leitch:

Thank you for your letter of October 25, 1957.
I was very happy to learn that I have been
appointed Visiting Lecturer, with the rank of
Professor, from October 1, 1957, to June 30, 1958.

Very truly yours,

Bengt Strömberg

October 9, 1957

Dr. Lyman Spitzer, Jr.
Princeton University Observatory
Princeton, N.J.

Dear Lyman:

It was most kind of you to offer me the opportunity of testing photoelectric photometry equipment at the Princeton University Observatory from time to time as the need arises in connection with my present NSF project. I have mentioned to Dr. Robert Oppenheimer that you had suggested to formalize the arrangement through a Princeton University appointment as Visiting Lecturer with the rank of professor, without any duties. Dr. Oppenheimer felt that this would be quite satisfactory from the point of view of the Institute for Advanced Study.

I enclose the bibliographic data that you requested in this connection.

With best wishes,

Sincerely,

Bengt Strömberg

Strömgren

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

9 April 1962

Dear Robert:

You might like to glance at the attached letter. Since it is in Danish, let me tell you that it is from the prorector of Copenhagen University and says that I have been awarded the Ole Rømer Medal and a prize of 10,000 Danish Crowns.

Sincerely,

Bengt

Strömgren

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

26 March 1962

Dear Robert:

C. C. Lin called today regarding the invitation to come to M.I.T. I told Lin that I would be happy to come for 2-3 months next year after 15 April, but that I felt that I could not commit myself for the following years for a period as long as that. I mentioned that I could indeed reduce my collaboration with NASA and with

the Institute for Space Studies enough to make ~~such~~ a program at M.I.T. possible, but that it was of great importance to me to continue my observational work at Palomar and particularly Kitt Peak National Observatory; and that I therefore could not come for more than shorter visits in the years after 1963.

Lin told me that the invitation would be worked out accordingly.

Sincerely,

Bengt

To: Dr. Robert Oppenheimer
From: Bengt Strömgen

THE UNIVERSITY OF CHICAGO
YERKES OBSERVATORY
WILLIAMS BAY, WIS.

September 1, 1957

Dear Dr. Oppenheimer:

Just a few lines to tell you that I expect to arrive in Princeton with Mrs. Strömgen and Ole on Friday, September 6. I have informed Mrs. Barnett that we hope to move into the apartment that day.

I was happy to receive your letter concerning the retirement age.

With best wishes,

Sincerely,

Bengt Strömgen

Fae Strömberg

THE W. J. McDONALD OBSERVATORY
OF
THE UNIVERSITY OF TEXAS
FORT DAVIS, TEXAS

August 2, 1957

OPERATED JOINTLY BY
THE UNIVERSITY OF CHICAGO AND
THE UNIVERSITY OF TEXAS

Dear Mrs. Hobson:

Thank you so much for sending me the clipping from The Princeton Packet. I am at present at McDonald Observatory for an observing session and will return to Yerkes Observatory early next week.

Mrs. Strömberg and I are eagerly looking forward to our going to Princeton.

With kind regards,

Sincerely yours,

Bengt Strömberg

15 August 1957

Dear Professor Strömgren:

Your warm letter was sent on to me at St. John; thank you very much. Just last night we came home and found your package; the silver plate is extremely beautiful, and we are both very happy to have it, and very grateful to you.

It is a pleasant thought that you will all be here within a month, and I look forward to seeing you then.

Very sincerely,

Professor B. Strömgren
Yerkes Observatory
Williams Bay
Wisconsin

Strömngren

17 July 1957

Dear Professor Strömngren:

This note is to let you know that your package to Mrs. Oppenheimer has arrived. The Oppenheimers are in the Caribbean for the summer, and will not be back until late August. I thought in the meantime you would want to know that it had arrived safely.

Looking forward to seeing you and your family in September,

Sincerely,

(Mrs. Wilder Hobson)
Secretary to the Director

Professor B. Strömngren
Yerkes Observatory
Williams Bay
Wisconsin

Copy to Mrs. Oppenheimer

Fac Strömberg

BENGT STROMGREN
WILLIAMS BAY, WISCONSIN

July 8, 1957

Dear Mrs. Oppenheimer:

Herewith I wish to send you sincere thanks for your great kindness and hospitality during my last visit to Princeton. It was so kind of you to invite me to stay with you, and during the following weeks of travel in Europe I often thought of the hours spent with you and your husband in your charming home.

While in Copenhagen I had an opportunity to visit the Just silver shop, and I found a silver tray which may not be an exact match for the one you have, but which I hope you will like. I am mailing it to you, and with it go our very best thanks for all your kindness both during my two visits to Princeton, and when Mrs. Strömberg, Ole and I were there last April.

I had a very interesting and pleasant stay in Europe. The meeting in Rome was particularly good.

In Copenhagen I saw Niels Bohr and Mrs. Bohr.

They were very well. I was happy to
hear that Niels Bohr will be in Princeton
part of the time during his next visit to
this country.

With best wishes,

Sincerely,

Bengt Strömberg

Strömberg

29 May 1957

Dear Professor Strömberg:

It is with pleasure that I can write to you that the Trustees of the Institute have agreed to advance the age of retirement for members of the Faculty to the June 30th following their 70th birthday.

When you are next in Princeton, I should be glad to discuss with you the financial provisions for retirement, which may prove slightly more generous and flexible than those described by me in my letter of appointment.

Very sincerely,

Robert Oppenheimer

Professor B. Strömberg
Yerkes Observatory
Williams Bay, Wisconsin

2 copies: 1. Please hold
2. Please forward

Fac Strömngren

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

OFFICE OF THE DIRECTOR

20 March 1957

Dear Dr. Strömngren:

Your good letter of March 18th arrived this morning; I was very glad indeed to have it. We are looking forward to your visit with Mrs. Strömngren early in April, if you can manage it. Two points raised in your letter call for an answer that you should have in writing.

The first has to do with the date at which your appointment here could take effect. In principle, this could be any time at all. Our academic year starts on the first of July, and the corresponding semester is from about the first of October until Christmas. The calendar year has a semester running from about mid-January to early April. If you expect to be able to settle here in the autumn, roughly at the time that our semester begins, then your appointment would naturally have an official beginning as of July first. If you do not think that you can get here much before the New Year, then it would be natural to start on January first. If an intermediate date would suit you better, there is no reason why we cannot accept that.

The other question has to do with your relations with the Copenhagen Observatory. I know that the decision you face is a real and a substantive one, in that your base of operations cannot be both in Copenhagen and in Princeton; but to the extent to which the University of Copenhagen and you may find it desirable, we would like you to feel free to maintain a connection there.

With all good wishes,

Robert Oppenheimer

Dr. Bengt Strömngren
Yerkes Observatory
Williams Bay, Wisconsin

FOR RELEASE 9 P.M., THURSDAY, MAY 30, 1957.

The Institute for Advanced Study announces the appointment of four new members to its Faculty: Dr. Armand Borel, Professor of Mathematics at the Federal Institute of Technology of Zurich; Dr. Bengt Strömgen, Director of the Yerkes, McDonald and Royal Copenhagen Observatories, and Sewell Avery Distinguished Service Professor at the University of Chicago; and Dr. André Weil, Professor of Mathematics at the University of Chicago, have been named Professors in the School of Mathematics. Dr. Millard Meiss, Professor of Fine Arts in the William Hayes Fogg Art Museum at Harvard University, has been named Professor in the School of Historical Studies.

The Institute for Advanced Study
Princeton, New Jersey

Strömgen

13 May 1957

Dear Martin:

Today we had word of Strömgen's formal acceptance. They will be moving here in the autumn. I am grateful for your help in this, and confident in the future.

Very sincerely,

Robert Oppenheimer

Dr. M. Schwarzschild
Astronomy Department
Princeton University
Princeton, New Jersey

NOTE: same letter to Dr. L. Spitzer

Strömberg

THE UNIVERSITY OF CHICAGO

YERKES OBSERVATORY
WILLIAMS BAY, WIS.

May 10, 1957

Dr. Robert Oppenheimer, Director
The Institute for Advanced Study
Princeton, New Jersey

Dear Dr. Oppenheimer:

Herewith I would like to inform you that I wish to accept the offer of a Professorship in the School of Mathematics at the Institute for Advanced Study. I have made arrangements so that it will be possible for me to leave Yerkes Observatory around September 1, 1957, and the appointment might have an official beginning as of July 1, 1957, as you suggested in your letter of March 20.

I wish to tell you how happy Mrs. Strömberg and I were to visit Princeton a month ago. All I learnt during this visit went to confirm the impression that conditions at the Institute for Advanced Study would be ideal.

Since we last met, I have given much thought to the question which you know was the most important to me. I now feel that it should be possible for me to make the right use of the wonderful opportunities that the appointment at the Institute for Advanced Study offers, and I am looking forward with the greatest anticipation to my work in Princeton.

When I returned from our visit to Princeton, I found a letter from Chancellor Kimpton asking me to see him before I made the final decision regarding the offer. I have seen Mr. Kimpton who most generously offered conditions of work that might be equally favorable as those in Princeton. However I am sure that I would nevertheless prefer the appointment at the Institute for Advanced Study.

I have not yet informed the Rektor of Copenhagen University, but I shall have an opportunity to do so very soon as I fly from New York to Copenhagen to go to the Rome meeting on May 16. However, I have written to a close friend in Copenhagen, Professor Nörlund, and I intend to write to Niels Bohr. I should be grateful to you if you would withhold any official announcements for about a week, so that the University of Chicago and Copenhagen University can be formally informed first.

If possible, I would very much like to see you before I go to Europe. If it is convenient to you, I could see you in Princeton either in the evening of Wednesday, May 15, or Thursday morning, May 16. My plane leaves New York at 4 P.M. on May 16.

May 10, 1957
Page two

I have considered the question of an invitation to an astrophysicist to come to the Institute for a year as a member, and I would be happy to have an opportunity to discuss it with you. Also, now that the approximate time of our moving to Princeton is known, it might perhaps be possible to make arrangements for an apartment.

After our visit to Princeton, Mrs. Strömgen and I have become more convinced that it would be best for us if we rented an Institute apartment to begin with, and then next year took advantage of the most generous offer to build our own house on one of the new Institute lots. I would be very happy if we could discuss this question also.

If May 15, or May 16, is not convenient to you, I might perhaps see you when I return from Europe on June 29. I shall try to call you Monday to learn what would be your preference.

With sincere thanks and all good wishes,

Sincerely,

Bengt Strömgen

Bengt Strömgen

BS:bp

BENGT STROMGREN
WILLIAMS BAY, WISCONSIN

March 30, 1957

watch for Taverna
bill

Dear Dr. Oppenheimer:

Many thanks for your telephone call and for your letter of March 20. I was very happy to have the additional information.

Mrs. Strömgen and I should like to visit Princeton on Friday and Saturday, April 5 and 6, if this is convenient to you. I shall try to call you Tuesday morning to find out if these are suitable days.

It is not quite certain that Mrs. Strömgen will be able to go with me. Two days ago we became grandparents, and although our daughter and the baby are doing fine, it may become necessary for Mrs. Strömgen to remain here.

With very best wishes,

Sincerely,

arr Thurs 4th by car

in pm Drs., Mrs. & 15-yr
old son.

Bengt Strömgen

Make reservations at Taverna
for double & single, nights 4th & 5th

Strömberg

THE UNIVERSITY OF CHICAGO

YERKES OBSERVATORY

WILLIAMS BAY, WIS.

March 18, 1957

Dr. Robert Oppenheimer, Director
The Institute for Advanced Study
Princeton, New Jersey

Dear Dr. Oppenheimer:

I was most happy to receive your letter of February 19, 1957. I am deeply grateful to have received the offer of a Professorship in the School of Mathematics at the Institute for Advanced Study. Herewith I wish to express my sincere thanks to you and to those who have participated in the invitation.

This is a wonderful offer, and your letter has been most helpful in my effort to reach a decision. I feel practically certain now that I wish to accept the offer.

Before I formally accept the offer, I should inform The University of Chicago and the Copenhagen Observatory. As you know, I have at the present time no duties and obligations at the Copenhagen Observatory, but my chair there has been kept open, and I could return next year if I wished. The main reason why I have felt it difficult to make the decision is that it meant a definite choice with regard to my connection with Copenhagen University.

There are still a number of questions that I should very much like to discuss with you. They concern the date when my appointment at the Institute of Advanced Study would begin, and questions connected with our settling in Princeton. If it is convenient to you, Mrs. Strömberg and I should very much like to visit Princeton some time in April. There are actually many problems we have in mind, such as the question of a house or an apartment, and the question of a suitable school for our boy.

On this occasion, I also wish to thank you for your great kindness during my visit in Princeton last December. What you told me then enabled me to see more clearly now what my future duties and opportunities would be in Princeton.

Very sincerely,

Bengt Strömberg

Bengt Strömberg

BS:bp

Strömberg

20 March 1957

Dear Dr. Strömberg:

Your good letter of March 18th arrived this morning; I was very glad indeed to have it. We are looking forward to your visit with Mrs. Strömberg early in April, if you can manage it. Two points raised in your letter call for an answer that you should have in writing.

The first has to do with the date at which your appointment here could take effect. In principle, this could be any time at all. Our academic year starts on the first of July, and the corresponding semester is from about the first of October until Christmas. The calendar year has a semester running from about mid-January to early April. If you expect to be able to settle here in the autumn, roughly at the time that our semester begins, then your appointment would naturally have an official beginning as of July first. If you do not think that you can get here much before the New Year, then it would be natural to start on January first. If an intermediate date would suit you better, there is no reason why we cannot accept that.

The other question has to do with your relations with the Copenhagen Observatory. I know that the decision you face is a real and a substantive one, in that your base of operations cannot be both in Copenhagen and in Princeton; but to the extent to which the University of Copenhagen and you may find it desirable, we would like you to feel free to maintain a connection there.

With all good wishes,

Robert Oppenheimer

Dr. Bengt Strömberg
Yerkes Observatory
Williams Bay, Wisconsin

16 March 1957

Dear Madam:

We sent the original of the enclosed letter to Dr. Strömgen in Austin, and a copy to Fort Davis, on February 19th. Since we have not heard of its receipt, we were afraid that perhaps it was lost on Dr. Strömgen's travels. We are therefore enclosing another copy.

Very truly yours,

Velma A. Mumper
Office of the Director

Secretary to
Dr. Bengt Strömgen
Yerkes Observatory
Williams Bay, Wisconsin

Strömberg whereabouts:

Until March 17th, essentially at McDonald Observatory.

Feb. 19-22 at University of Texas, Austin *Hotel Commodore Perry*

Feb. 24-26, National Astronomical Observatory, 221 East Camelback Road, Phoenix, Ariz.

Feb. 27- back at McDonald *Obs, Fort Davis Trip*

19 February 1957

Dear Dr. Strömberg:

It is a pleasure, and indeed a great honor, to offer you a Professorship in the School of Mathematics at the Institute for Advanced Study. In so doing, I also express the earnest desires of your colleagues on the Institute's Faculty, and the cordial hopes of its Trustees.

It is perhaps appropriate that I write to you briefly about what this appointment means, since the Institute is not in all respects like a university or an observatory, and you may not know its ways completely. Some of your questions may be answered by the elementary descriptive booklet that I enclose; some I should attempt to answer in this letter. I am clear that in so doing I shall not answer all questions that may be important to you, and I would welcome an opportunity, either by further correspondence or in consultation, to tell you what you want to know.

A Professor's duties at the Institute involve, in the first instance, only the prosecution of his own work, with such collaboration with colleagues here and throughout the world as may be fruitful. Apart from this, as a member of the Faculty, we would ask you to assist in the selection of members in astronomy, physics, and related subjects, and in the consideration of all additions to the Faculty, and all appointments with long term at the Institute. Although we regard these duties as a matter of conscience, they are not in fact very arduous. They do make it desirable that the Faculty be in Princeton for a good part of our two terms, running from about October first to mid-December, and from about mid-January to early April. Where the course of a man's work or other compelling reasons make residence in Princeton inappropriate, we have found it possible to grant a leave of absence.

As a Professor at the Institute, your salary would be \$18,000 a year. You would have available a fund for scholarly assistance; should you not require an assistant, the money so budgeted may be used by you as a grant for a member in whose work you are interested. Members of the Faculty have an allowance of a thousand dollars a year for travel for professional purposes; this is cumulative up to a total of \$3,000. At present, the age of retirement for an active professorship—as a Professor Emeritus you would be a permanent member of the Institute and have

- 2 -

continuing support for your work—is sixty-eight. At present, also, we follow the usual practice of contributing five per cent of your salary per annum to the purchase of a T.I.A.A. policy, provided you are willing to contribute an equal amount. These matters having to do with retirement and pension are now under study by the Trustees; such changes as they may make will surely not be unfavorable for members of the Faculty.

It is my hope, and it is shared by those who have participated in this invitation, and above all by those who best know you, that you will find this Institute and this position a good base for your future work and life; and that we may help to contribute to their fulfilment.

Very sincerely,

Robert Oppenheimer

Dr. Bengt Strömberg
Yerkes Observatory
Williams Bay, Wisconsin

enclosure

orig sent to Hotel Commodore Perry, Austin, Texas
copy sent to McDonald Observatory, Fort Davis, Texas

200 49

VOTE ON APPOINTMENT OF BENGT STRÖM^HBERG AS
 PROFESSOR IN SCHOOL OF MATHEMATICS

NAME	VOTE		DATED	DATE RECEIVED
	Approved	Disapproved		
Dr. John F. Fulton	X		none	15 Feb. 57
Perrin C. Galpin	X		14 Feb. 57	15 Feb. 57
Lloyd K. Garrison	X		21 Feb. 57	22 Feb. 57
Gen. E. S. Greenbaum	X		Feb. 15, 1957	18 Feb. 57
Harold K. Hochschild	X		none	15 Feb. 57
Hon. H. H. Lehman	X		19 Feb. 57	21 Feb. 57
Samuel D. Leidesdorf	X		19 Feb. 57	20 Feb. 57
Wilmarth S. Lewis	X		14 Feb. 57	15 Feb. 57
Harold F. Linder	X		18 Feb. 57	19 Feb. 57
Herbert H. Maass	X		14 Feb. 57	19 Feb. 57
^{Sidney} Sidney A. Mitchell	X		Feb. 14, 1957	15 Feb. 57
L. J. Rosenwald	X		Feb. 16, 1957	18 Feb. 57
Michael Schaap	X		Feb. 15, 57	18 Feb. 57
Adm. L. L. Strauss	X		Feb. 15, 57	18 Feb. 57

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömngren as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve (✓) yes
disapprove ()
comment: _____

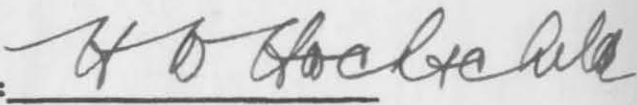
Signed: *Minot C. Morgan, Jr.*
Date 14 Feb 1956

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömberg as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve (X)
~~disapprove~~ ()
comment: _____

Signed: 

Date _____

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömngren as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve (✓)

disapprove ()

comment: _____

Signed: Amundson

Date Feb 14, 1957.

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömberg as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve (✓)

disapprove ()

comment: _____

Signed: W. H. A. L. Lewis

Date 14 Feb. 1957

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömberg as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve (X)
disapprove ()
comment: _____

Signed: John F. Fulton

Date _____

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömberg as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve

disapprove

comment: _____

Signed: Edward H. Snodgrass

Date Feb. 15/57

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömngren as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve (✓)
disapprove ()
comment: _____

Signed: Michael Hoag

Date Feb. 15/57

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömngren as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve (✓)
~~disapprove~~ (—)
comment: none

Signed: Levin K. Strauss

Date 15/feb/57

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömngren as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve (✓)
disapprove ()
comment: _____

Signed: _____

Date _____

L. S. Rosenthal
2/16/57

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömberg as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve ()
disapprove ()
comment: _____

Signed: *Minot C. Morgan, Jr.*

Date *Feb 14, 1957*

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

18th Feb, 1957

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömngren as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve (✓)
disapprove ()
comment: _____

Signed: Arthur T. Anderson

Date 2/18/57

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömberg as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve (✓)
disapprove ()
comment: _____

Signed: _____

Date _____

S. J. Ledderhof
2/9/57

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömngren as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve (✓)
disapprove ()
comment: _____

Signed: _____

Date _____

Herbert Lehman
Feb 19/1957

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

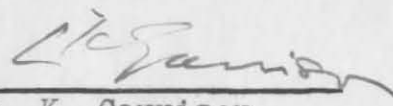
Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömngren as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve

~~disapprove~~

comment: _____

Signed: 

L. K. Garrison

Date February 21, 1957

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

OFFICE OF THE DIRECTOR

12 February 1957

urgent

Memorandum to the Board of Trustees:

On January 23rd the Professors of Physics met with the School of Mathematics to propose the name of Bengt Strömngren, now Director of the Yerkes and McDonald Observatories, and Distinguished Service Professor at the University of Chicago, as a Professor in the School of Mathematics at the Institute. The School unanimously concurred in this recommendation, the arguments for which are set forth in the enclosed note.

On January 24th the School presented the nomination to the Institute's Faculty. The Professors of Physics expressed themselves to the effect that there was no other step they could now take that would be as healthy for the future of physics at the Institute. The matter lay over until February 12th, at which time the Faculty unanimously recommended to the Trustees that this appointment be authorized.*

At a meeting of the Executive Committee of the Trustees in New York on January 22nd, it was agreed that this nomination could be sent to the members of the Board by mail, and that their views could be recorded by mail ballot. A ballot is enclosed.

Robert Oppenheimer

Robert Oppenheimer

* Professor Thompson has heard the nomination, and received the documentation; he left in haste shortly after the first Faculty meeting, and has not recorded an opinion.

enclosures

The following have informed vh by telephone that they wish to be recorded as voting for the Strömberg appointment:

Professor Alföldi

Professor Dyson

Professor Montgomery

Professor Selberg

Professor Beurling

The following has given his affirmative vote by letter to the Director:

Professor Kennan

The following did not vote:

Professor Thompson

The following informed vh by telephone that he would vote with the majority:

Professor Woodward

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Feb. 11, 1957.

SCHOOL OF HISTORICAL STUDIES

Dr. Oppenheimer:

I greatly regret the necessity of being absent from this Faculty Meeting; but to forego this visit to Yale would be to delay ~~for~~ by three weeks the final ~~of~~ editing of my second volume, and the pressure of the deadlines is relentless.

I have read with much interest the proposal for the appointment of Bengt Strömberg as Professor in the School of Mathematics. The arguments with which it is supported seem to me cogent and persuasive. There would be nothing I could add to the discussion other than to welcome the broadening, in the range of inquiry, represented in the Institute's faculty, which this appointment will bring.

May I take this means of casting my vote in favor of the appointment?

George F. Kerman

BENGT STROMGREN
WILLIAMS BAY, WISCONSIN

January 10, 1957

Dear Mrs. Oppenheimer:

I hope that you and your husband had a very wonderful trip to St. Croix. During the last weeks I have often thought of the lovely evening in your beautiful home. I enjoyed it so much, and I wish to thank you most sincerely for your hospitality and kindness.

With very best wishes,

Sincerely yours,

Bengt Strömgen

3 January 1957

Dear Dr. Cort:

This is to acknowledge your letter of December 18th, which has arrived during Dr. Oppenheimer's absence for a few weeks in the Caribbean. He and the other members of our Faculty in Physics will very much appreciate your helpful comments about Dr. Strömngren.

Very sincerely,

(Mrs. Wilder Hobson)
Secretary to the Director

Dr. Jan Cort
Department of Astronomy
University of Leyden
Leyden, Netherlands

STERREWACHT TE LEIDEN²¹

December 18, 1956.

Dr R. Oppenheimer,
The Institute for advanced Study,
Office of the Director,
Princeton, New Jersey,
U. S. A.

make plate

Dear Dr Oppenheimer,

There would seem to be little need for me to say much in praise of Professor Strömngren in addition to what you will no doubt have learned from Professors Schwarzschild and Spitzer.

I have the highest esteem for Strömngren. I believe that there is no other astronomer whose knowledge extends so deeply into so broad a field. He is extremely versatile, but at the same time always attempts to get to the bottom of things. He might as well be classed among the best theoretical astronomers as among those genuinely and deeply interested in the problems of practical astronomy.

This ^{broad interest} is evident from his work, which covers subjects ranging from theoretical astrophysics to such very practical problems as getting accurate measurements of stellar spectral classes and intrinsic luminosities. In the latter subject he has done a most interesting and first-rate pioneering job.

He has, moreover, a keen sense for selecting and concentrating on problems of fundamental nature.

To illustrate the varied nature of his work I should like to mention his studies of the Minor Planet Nemausa, for the purpose of improving the fundamental system of stellar declinations, and his initiative to equip the new Copenhagen Observatory with a modern meridian circle as one of its principal instruments. He has given much personal attention to the details of the plans for this instrument.

I can only say that I am sorry you are going to keep him in America. We have wished a long time that he might come back to Western Europe.

Don't hesitate to let me know if I can be of further service to you in this matter.

Yours very sincerely,

J.K. Oort.

3 January 1957

Dear Dr. Bowen:

This is to acknowledge your letter of December 24th, which has arrived during Dr. Oppenheimer's absence for a few weeks in the Caribbean. He and the other members of our Faculty in Physics will very much appreciate your helpful comments about Dr. Strömberg.

Very sincerely,

(Mrs. Wilder Hobson)
Secretary to the Director

Dr. I. S. Bowen
813 Santa Barbara Street
Pasadena 4, California

MOUNT WILSON AND PALOMAR OBSERVATORIES 38

CARNEGIE INSTITUTION OF WASHINGTON 34
CALIFORNIA INSTITUTE OF TECHNOLOGY 34

813 SANTA BARBARA STREET
PASADENA 4, CALIFORNIA

December 24, 1956

make plate

Dr. Robert Oppenheimer
The Institute for Advanced Study
Princeton, New Jersey

Dear Robert:

First let me say that I have had relatively little first hand contact with Dr. Stromgren except for serving on two or three committees with him. Before coming to this country Dr. Stromgren did brilliant and very sound theoretical work in astrophysics. There is not much question that he would rank among the half dozen top men in theoretical astrophysics today. On coming to Yerkes Observatory a few years ago he switched quite largely to observational work and has spent a substantial amount of time in developing elaborate equipment for the rapid study of color intensity curves in stars and other objects. Because of the inevitable delay caused by a major switch in field and by the time required to build and perfect equipment for a large observational project Stromgren's actual output of papers since coming to this country has been relatively small.

There is no question but that Dr. Stromgren would be a strong and effective addition to the staff of The Institute for Advanced Study. The main question may be whether he will wish to give up his observational program before he has had an opportunity to "cash in" on the large amount of effort he has already expended on the development of special equipment. Some guest investigator arrangement might however be set up which would permit him to continue these observations however.

The above is not as explicit a statement as I should like to make but is about as definite as is justified in view of my limited contact with Dr. Stromgren.

With best regards,

Sincerely yours,

Ihe
I. S. Bowen

IB:WB

3 January 1957

Dear Dr. Spitzer:

This is to acknowledge your letter of December 18th, which has arrived during Dr. Oppenheimer's absence for a few weeks in the Caribbean. He and the other members of our Faculty in Physics will very much appreciate your helpful comments about Dr. Strömberg.

Very sincerely,

(Mrs. Wilder Hobson)
Secretary to the Director

Dr. Lyman Spitzer, Jr.
Princeton University Observatory
Princeton, New Jersey

PRINCETON UNIVERSITY OBSERVATORY
PRINCETON NEW JERSEY

14 Prospect Avenue

December 18, 1956

make plate

Dr. Robert C. Oppenheimer
Institute for Advanced Study
Princeton, New Jersey

Dear Dr. Oppenheimer:

It is a great pleasure to send to you my very high recommendation of Bengt Stroemgren for possible appointment as Professor at the Institute.

Stroemgren's work has consistently been characterised by his concentration on the central problems of his time and by his imaginative, methodical and conclusive resolution of these problems. He has worked in the fields of stellar atmospheres, stellar interiors and interstellar matter, the three main divisions of theoretical astrophysics, and in all these fields his contributions have been basic for later work.

One of his chief interests has been the composition of matter. He was the first to reverse the trend established by Eddington and to show that matter inside the stars was probably mostly hydrogen. In the field of star atmospheres he has pioneered in the development of precise methods for solving the equations of the problem and in applying these methods to a determination of the hydrogen - metals ratio. His theoretical analysis of data on interstellar line intensities provides the best available results on the composition of the interstellar gas.

His work is always characterised by a combination of elegance with keen physical understanding, I believe I would have more confidence in a result obtained by Stroemgren than in the conclusions obtained by any other astronomer today. It was a paper by Stroemgren written some twenty years ago that drew me into astrophysics and out of the field of nuclear physics in which I had planned to specialise.

His recent observational work is entirely characteristic of his approach. His studies of interstellar matter convinced him that the limited accuracy of spectral classification, obtained with conventional photographic methods, was a limiting factor in further progress, and that photoelectric methods held out the promise of vastly increased accuracy.

-2-

Dr. Robert Oppenheimer

December 18, 1956

He plunged into this field, which had previously been quite unfamiliar to him, selected the instrumental techniques best suited for his purpose, developed the equipment, and is now using it to obtain results more accurate by one order of magnitude than any previously available.

From a personal standpoint Bengt Strömberg combines courtliness of manner with great strength of character. I believe that he represents the best European tradition of the cultured scholar.

Very sincerely yours,



Lyman Spitzer, Jr.

LS/ajd

3 January 1957

Dear Dr. Schwarzschild:

This is to acknowledge your letter of December 19th, which has arrived during Dr. Oppenheimer's absence for a few weeks in the Caribbean. He and the other members of our Faculty in Physics will very much appreciate your helpful comments about Dr. Strömgen.

Very sincerely,

(Mrs. Wilder Hobson)
Secretary to the Director

Dr. Martin Schwarzschild
Princeton University Observatory
Princeton, New Jersey

PRINCETON UNIVERSITY OBSERVATORY
PRINCETON NEW JERSEY

14 Prospect Avenue

December 19, 1956

Dr. Robert Oppenheimer
Institute for Advanced Studies
Princeton, New Jersey

Dear Dr. Oppenheimer:

You asked me to write you my feelings regarding Dr. Bengt Stroemgren's contributions and abilities in astrophysical research, which I do herewith with great enthusiasm.

Perhaps the most rare and outstanding phenomenon in Dr. Stroemgren's research seems to me his lack of waste of time and energy on problems of second rank. From time to time it appears he surveys astrophysics in its broadest sense and selects for his next research with great deliberateness and detachment a central problem to which he sticks with great persistence for a number of years - thus far never without final outstanding success.

None of the major fields of theoretical astrophysics have remained without a vital contribution from Stroemgren during his past work. In my own field of speciality, the stellar interior, Stroemgren's biggest step has been the introduction of hydrogen as the most abundant element, initially against the then overwhelming authority of Eddington in this field - a vitally necessary preparatory step for the introduction of nuclear processes into the stellar interior.

Dr. Stroemgren may not, I suspect, quite have the fast and sure physical insight of Dr. Spitzer or the unusual mathematical facility of Dr. Chandrasekhar, or the pioneering instinct of some of the great observational astronomers. He seems however to combine enough of all these qualities coupled with a persistence that is nearly stubbornness, and independence of mind which sometimes appears surprising in view of his great friendliness and considerateness that his research becomes like a steam-roller certain of success.

It is, I think, a natural consequence of Stroemgren's approach and technique in research that at times in his lectures or in discussions Dr. Stroemgren does not appear

-2-

Dr. Robert Oppenheimer

December 19, 1956

outstandingly stimulating. But on the basis of the same characteristics I think one can say of Dr. Stroemgren with greater sureness than of many of us, that he will continue to provide for himself or for a group around him a backbone of highly competent research on central problems in astrophysics.

I feel that it would be a great gain for astronomy in Princeton if Dr. Stroemgren were to come here.

Very sincerely,

Martin.

Martin Schwarzschild

MS/ajd

18 December 1956

Dear Professor Struve:

Thank you for your wonderful letter of December 14th. It tells us just what we need to know, and will be most helpful.

Very sincerely,

Robert Oppenheimer

Professor Otto Struve
Berkeley Astronomical Department
University of California
Berkeley 4, California

UNIVERSITY OF CALIFORNIA

BERKELEY ASTRONOMICAL DEPARTMENT
(LEUSCHNER OBSERVATORY)
BERKELEY 4, CALIFORNIA

December 14, 1958

Dear Professor Oppenheimer:

I regard Bengt Strömberg as one of the greatest astrophysicists of all time, and as perhaps the best astrophysicist of the present generation. He is inferior to Chandrasekhar in mathematical skill, but he has a better physical insight; and he deals with problems that are of immediate practical value.

Perhaps I should mention that I consider him to be my closest astronomical friend, and perhaps I am prejudiced in his favor, but at least I am trying to be objective in my evaluation of his scientific accomplishments.

His astronomical work started at a very early age: he was exceptionally

2
gifted as a child, and his father,
Elof Strömberg in Copenhagen, induced
him to devote some time to
to the problem of using electrical
and electronic devices to improve
the accuracy of measurements of
star-transits with meridian-
type instruments. His interest in
this field culminated a few
months ago in the installation of
a modern meridian circle at the
new Copenhagen observatory.

Strömberg's interest in astrophysics
was probably sparked by the
lectures of Bohr and others. He
has published numerous papers on
the transfer of radiation through
an stellar atmosphere (one of the
most important contributions on
this topic appeared in the "Fortschritte
für his father which was published

UNIVERSITY OF CALIFORNIA

BERKELEY ASTRONOMICAL DEPARTMENT
(LEUSCHNER OBSERVATORY)
BERKELEY 4, CALIFORNIA

during the war, and is not often found in astronomical libraries in this country).

Even more important were Strömberg's early contributions to the problem of stellar evolution. He was the first to suggest that the evolutionary tracks of stars in the H-R (Hertzsprung - Russell) diagram may be inferred from observations of the luminosities and surface temperatures of stars in galactic clusters, and he gave the correct theoretical interpretation of these tracks even before the source of stellar energies was known.

In 1937 I invited Strömberg to join the astronomy department of

The University of Chicago -- at
first as professor on the Chicago
campus and later as astronomer
at the Yerkes Observatory. His con-
tributions during the two years
he spent with us were numerous.
I remember especially a study
of the peculiar double star
 ϵ Aurigae - which was published
 ϵ Aurigae jointly by Kuiper, Strömgren and
myself. Strömgren showed theo-
retically that the ionization of
the outer "skin" of a cool eclips-
ing star in front of a hot star
(of spectral class F) is produced by
the radiation of the hot star; and
that the continuous opacity of
ionized gas in this "skin" produced
the observed decrease in the
brightness of the system during
"total eclipse". This work later led

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to the discovery of $H II$ and $H I$
regions of interstellar gas --
an advance of enormous importance
which forms the basis of all
modern investigations of interstellar
gas clouds, including those of
Spitzer, and of the radio-astro-
nomers (the regions emitting the 21-cm
line of H in the gas clouds are
usually Strömgren's $H I$ regions).

Strömgren returned to Denmark
before the war, and he became
his father's successor as the director
of the Copenhagen Observatory.

After I had decided to resign
the directorship of the Yerkes and
McDonald Observatories in 1950
President R. M. Hutchins of the University

of Chicago asked me to recommend
an extraneous as my successor.
I unhesitatingly recommended Strömberg
you, and he was appointed to
take my place. Unfortunately,
this appointment was not regard-
ed favorably by Chandrasekhar: that
was a surprise to me because
I had known that they were
very close friends, first when
Chandra worked at Copenhagen
under Bohr, and later when Strömberg
was in America before the war.
Strömberg's recent decision to resign
as director was partly caused by
the opposition which he encountered
on the part of Chandrasekhar and
partly Ruiper. I must say that
in some respects Strömberg is not
a good administrator: he finds it
difficult to make decisions, and he

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tends to participate in important
decisions almost indefinitely.
His more scientific work at Yerkes
and McDonald in recent years
has been mostly concerned with
observational problems. He has developed
photographic techniques with inter-
ference filters in order to deter-
mine with high accuracy the
surface temperatures (or spectral types)
of the stars, their luminosities, and
the amount of interstellar reddening.
The results are important, but
I have had the feeling that he
is far better qualified as a theoretician
than as an observer.

Bunt has told me that the director-
ship of the Copernicus Observatory (from which

he resigned a few years ago) ~~he~~ is being held open for him if he should decide to return to Europe. I believe it would be a tremendous loss for American science if he should become so completely disillusioned here as to want to go home. A few years ago Mrs. Strömberg urged him to return to Denmark, but now that one of his daughters is married to an American, and her other two children are pretty thoroughly Americanized, she would probably prefer to remain in this country.

Strömberg is not a particularly good lecturer, and some of his lectures at scientific meetings tended to be too long and slightly dull. But he has had a great deal of experience in teaching; I remember that when I spent some months in Copenhagen

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in 1946 he was giving regular lectures
at the Bohr Institute.

A few months ago I started thinking
about the possibility of asking Strömgen
to join the faculty of the University of
California. But I have taken no
formal steps in that direction, and
I fear the administration would
be reluctant to offer him the
kind of salary he would probably
expect. I hope you will make him
an offer.

Very sincerely yours,

Oliver Sereno

13 December 1956

In confidence

Dear Dr. Oort:

The Institute for Advanced Study is giving earnest and favorable consideration to the appointment of Bengt Strömgren as professor. We have some reason to think that this would be helpful to him in the further development of his scientific career. We would be most grateful to you for a frank and comprehensive evaluation of Strömgren's contributions to astronomy and astrophysics, and his qualities as a scientist and scholar.

We would appreciate very much your willingness to write to us.

Very sincerely,

Robert Oppenheimer

Dr. Jan Oort
Department of Astronomy
University of Leyden
Leyden, Netherlands

NOTE: Same letter to Dr. Otto Struve, Department of Astronomy, University of California, Berkeley, California; Dr. I. A. Bowen, California Institute of Technology, Pasadena, California; Dr. Lyman Spitzer, Department of Astronomy, Princeton University, Princeton, New Jersey; Dr. Martin Schwarzschild, Department of Astronomy, Princeton University. RO hand note on last 2: "to remind you"

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

SCHOOL OF MATHEMATICS

November 9, 1956

To: Dr. F. J. Dyson
Dr. J. R. Oppenheimer
Dr. C. N. Yang

I have written to Phil Morrison to ask him in a general sort of way to give me his impressions about Stroemgren and v. d. Hulst. Enclosed you will find the relevant part of his replying letter.

Concerning the Cambridge School, I may quote from a discussion with Schwarzschild where both he and I took the view that if the Institute would like to make an appointment in astrophysics it should be one of the greatest solidity. On this basis we ruled out the Cambridge School which is more speculative, also more stimulating perhaps, but certainly not the way to start.

In the category so defined there are, according to S., only 3 names: Stroemgren, v. d. Hulst, Schlüter (Göttingen). Schwarzschild then commented as follows:

About Stroemgren: basic contributions in the physics of the stellar interior, the stellar atmosphere and of interstellar space. He is always solid. He goes in great and careful detail, up to the point where it can get boring. He is very self-contained. It would be hard to say how much stimulus he would provide to others. His silence, publicationwise, in the most recent period may be entirely due to a heavy administrative burden and also to occupation with experimentation. This makes it even harder than usual to say how productive he is or will be.

About v. d. Hulst: much younger, but much the same type as Stroemgren. He has not published much in the last few years, but this may again be due to obligations of scientific administration.

Much of what I say is, of course, a paraphrasing of what Robert told us to begin with.

AP:jk
Enclosure

Bram

"... 1) Re v. d. Hulst:

I know him personally and by reputation. He is a vigorous, enthusiastic, and hard-working guy. He has solved some of the hardest calculational problems going (sphere scatter, super-Alfven waves), and has also had original and key ideas - like that of the 21 cm. line. I regard him as one of the best theoretical astrophysicists going. Moreover, he is immersed in hydromagnetics, where the immediate future seems to me to lie.

2) Re B. Ström["]gren:

I have never seen him, but I have inquired about him, and, of course, I know his work. No doubt of it, for a decade or more (1935-48) he made major contributions to stellar interior theory, atmosphere and spectroscopy, etc. Whatever he touched was done brilliantly. His last paper I know of, on interstellar gas, was path-breaking, and still basic. But since 1948 I don't know of one thing he has done, though he has perhaps stimulated some work by students. It is up to you to find out why. He is reported to be good in interaction with the brewers.

These remarks cannot do more than confirm your feelings; perhaps for that they are useful. Just to offer the idea, don't forget the Cambridge School (Hoyle, Bondi, Gold) ..."

August 11.

Dear Robert,

while reading
Stromgrens review article in Erg. Ex. Nat. - it was
a pleasure to read it - another name in astrophysics
came to my mind. I should have thought of it
before. Anyway - it is van der Hulst.

He is in his mid-thirties,
I would guess. He studied in Utrecht with Minnaert.
Soon thereafter he got in close contact with Oort.
Kramers knew him well too. At that time he did
work on the problem of interstellar dust. I seem
to remember that his thesis (which is in my office)
is on diffraction and related topics. His recent work
on radio astronomic questions is of course widely
known. Didnt he get some medal or other from the
US Nat. Ac. Sci.?

I know him personally
from the Dutch days. My contact with him was

never really close. But from what I saw of him
he seemed to be a pleasant person. ^{I don't know where} he is now.

All this letter amounts to is to mention
his name to you. I can't say as yet whether I
would have preference either way regarding
Stroemgren "versus" N/d Hulot.

If you think it is of interest to see what
he has done, I can do some detective work as that
is the week of August 20, most of which I intend
to spend in Brookhaven.

Hope you and Kitty are keeping well—

as ever

Bram

Zemach - }
Hofstadter - }

B. Strömgen

~~Books and Specially Important Articles are Starred~~

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4a



See next page

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Strömgen

(1) Personal

Bengt Georg Daniel Strömgen is 49 years old. After getting his degree in Copenhagen, he held the posts of lecturer (1933) and then professor (1938) at the University there. In 1940 he succeeded his father, Elis Strömgen, as director of the Copenhagen Observatory. After the war he became the director of the Yerkes and Macdonald Observatories (1951) and was appointed Sewell Avery distinguished service professor at the University of Chicago (1952). At various times he has held visiting professorships in London, Princeton and at Cal Tech. He is a member of various national academies (Danish, Swedish, Dutch) and of other learned societies. He is married and has three grown up children. He is (to best of knowledge) Danish citizen.

(2) Scientific

As far as theoretical work goes, three major and path breaking contributions:

- A. Stellar Interiors. Theoretical deduction that they are composed principally of hydrogen. This went against the generally accepted view of the time (early '30's). In particular, against the authority of Eddington.
- B. Stellar Atmosphere. He first derived the correct hydrogen to metals ratios in the solar atmosphere by ingenious handling of known equations.
- C. Interstellar Matter. He was the first to recognize that hydrogen is ionized in the relatively hot regions of interstellar space which since are called "Strömgen Spheres." In addition, major contributions in the fields of design and experiment. Thus he designed a new meridian circle for the Copenhagen Observatory. This piece of apparatus is considered to be one of the two best of its kind in the world.

Most recently, ~~revised~~^{fin} photometric work, showing the existence of more parameters in the HR-diagram. According to astrophysicists this work promises to lead to major experimental contributions concerning the genesis of star populations.

Strömngren

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

OFFICE OF THE DIRECTOR

12 February 1957

urgent

Memorandum to the Board of Trustees:

On January 23rd the Professors of Physics met with the School of Mathematics to propose the name of Bengt Strömngren, now Director of the Yerkes and McDonald Observatories, and Distinguished Service Professor at the University of Chicago, as a Professor in the School of Mathematics at the Institute. The School unanimously concurred in this recommendation, the arguments for which are set forth in the enclosed note.

On January 24th the School presented the nomination to the Institute's Faculty. The Professors of Physics expressed themselves to the effect that there was no other step they could now take that would be as healthy for the future of physics at the Institute. The matter lay over until February 12th, at which time the Faculty unanimously recommended to the Trustees that this appointment be authorized.*

At a meeting of the Executive Committee of the Trustees in New York on January 22nd, it was agreed that this nomination could be sent to the members of the Board by mail, and that their views could be recorded by mail ballot. A ballot is enclosed.

Robert Oppenheimer

Robert Oppenheimer

* Professor Thompson has heard the nomination, and received the documentation; he left in haste shortly after the first Faculty meeting, and has not recorded an opinion.

enclosures : *ballot*
addressed envelope
Strömngren statement
letters

THE INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY

Mr. Minot C. Morgan, Jr.
Assistant Secretary
Board of Trustees
The Institute for Advanced Study
Princeton, New Jersey

With regard to the appointment of Bengt
Strömberg as Professor in the School of Mathematics
of the Institute for Advanced Study, as outlined in
the Director's memorandum of 12 February 1957, I

approve ()

disapprove ()

comment: _____

Signed: _____

Date _____

BENGT STRÖMGREN

The Report of the Faculty-Trustee Study Committee of 1956 discusses the situation in physics at the Institute for Advanced Study in part in the following terms:

"The physicists at the Institute have concentrated to a very great extent on the deep and difficult problems of particle physics. In the last decade there has been much progress, and much brilliant and beautiful work on the theoretical side of this problem. But your Committee has been told that the problems that lie ahead appear very deep indeed, that it is not clear by what means they will be solved, that it is not clear to what extent experimental clues may be required for their solution; and that a continuing effort, concentrated entirely on these questions, does not appear adequate as an Institute program. For one thing it gives too narrow a range of problems for the younger members, by setting a style which discourages them from studies in other parts of physical theory where progress may not be so difficult. For another, it deprives the Institute of the interest and vitality that branches of science now flourishing could bring. And for another, it does not do justice to the possibility that the methods now applied in other parts of physical theory may be relevant and even necessary if progress is to be made toward finding the basic principles, now unsuspected, which describe the order of the atomic world. Thus the physicists desire to add to their Faculty, in such fields as astrophysics, fluid dynamics and chemical physics. They have informed us that they are now considering possible candidates."

A number of considerations have led us to the view that the best step we can now take in carrying out this program is the appointment of Bengt Strömngren as Professor in the School of Mathematics. One of these considerations relates to the present state of astrophysics; rapid and profound advances have left the field with a multitude of unanswered questions, and the prospect of greatly increased understanding in the rather near future, based for the most part on theoretical work. For another thing, Dr. Strömngren, one of the world's great astrophysicists, has recently resigned as Director of the Royal Copenhagen Observatory, and has submitted his resignation of the directorship of the Yerkes Observatory and the McDonald Observatory, to become effective shortly. The status of his work indicates, and conversations with him confirm the possibility, that a chair at the Institute might be an appropriate and welcome base for his future work, which he expects to be largely of a theoretical character.

Bengt Georg Daniel Strömngren was born 49 years ago in Sweden. Until the Second World War he lived and worked in Denmark. He took his degree in Copenhagen, was appointed Lecturer in 1933, and Professor in 1938 at the University of Copenhagen. In 1940 he succeeded his father, Elis Strömngren, as Director of the Royal Copenhagen Observatory. After the war he came to this country, and in 1951 became Director of the Yerkes Observatory in Williams Bay, Wisconsin, and concurrently of the McDonald Observatory in Fort Davis, Texas. At the same time, he was appointed Sewell Avery Distinguished Service Professor at the University of Chicago. He has been Visiting Professor in London, Princeton, and Pasadena. He is a member of many national academies of science: the Royal Danish Academy of Sciences, Royal Astronomical Society, Société Royale des Sciences de

Liège, American Astronomical Society (hon.), Academia Coimbra, Royal Swedish Academy of Sciences, Koninklijke Nederlandse Akademie van Wetenschappen, and several others. He is married, and has three adult children. We believe him to be a citizen of Denmark.

Strömngren's work in astrophysics has been both observational and theoretical. It has been characteristic of him that he has entered successively four rather disparate fields in astrophysics, worked successfully to create a revolutionary clarification in each, and then departed for other greener pastures. His first work was the theory of stellar interiors. He discovered that by all odds the most abundant material in stars is hydrogen, and thereby laid the basis for a consistent description of stellar structure, and the nuclear reactions which provide the energy for stars. His second major field was the theory of stellar atmospheres, where again he was able to show, by great insight into the physical situations obtaining in the atmospheres of stars, the preponderant abundance of hydrogen, and obtain a correct value for the ratio of the abundance of hydrogen to metals such as iron. His third great theoretical enterprise consisted of a recognition and theoretical description of the relatively hot regions of interstellar space, where hydrogen is ionized--regions that are now known as Strömngren spheres.

Throughout his association with the Copenhagen, Yerkes and McDonald Observatories, he has originated and contributed to the design of equipment for precision observation. His most recent observational program is now bearing fruit. By a refinement and extension of sophisticated photometric methods he has been able to make a survey, far more extended than was possible in the past, of stellar spectral distributions. From this he has

been led to conclude that the properties of a star are not uniquely determined by its mass and age, but that stars formed at different times and places had different initial chemical compositions. This result is of cardinal importance not only for astrophysics, but for the theory of evolution of the stars, and for cosmology. One has the impression that Strömngren is now interested in understanding these matters more completely.

The attached letters give a rather varied but vivid impression of the regard in which Strömngren is held by his colleagues.

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BENGT STRÖMGREN

The Report of the Faculty-Trustee Study Committee of 1956 discusses the situation in physics at the Institute for Advanced Study in part in the following terms:

"The physicists at the Institute have concentrated to a very great extent on the deep and difficult problems of particle physics. In the last decade there has been much progress, and much brilliant and beautiful work on the theoretical side of this problem. But your Committee has been told that the problems that lie ahead appear very deep indeed, that it is not clear by what means they will be solved, that it is not clear to what extent experimental clues may be required for their solution; and that a continuing effort, concentrated entirely on these questions, does not appear adequate as an Institute program. For one thing it gives too narrow a range of problems for the younger members, by setting a style which discourages them from studies in other parts of physical theory where progress may not be so difficult. For another, it deprives the Institute of the interest and vitality that branches of science now flourishing could bring. And for another, it does not do justice to the possibility that the methods now applied in other parts of physical theory may be relevant and even necessary if progress is to be made toward finding the basic principles, now unsuspected, which describe the order of the atomic world. Thus the physicists desire to add to their Faculty, in such fields as astrophysics, fluid dynamics and chemical physics. They have informed us that they are now considering possible candidates."

A number of considerations have led us to the view that the best step we can now take in carrying out this program is the appointment of Bengt Strömngren as Professor in the School of Mathematics. One of these considerations relates to the present state of astrophysics; rapid and profound advances have left the field with a multitude of unanswered questions, and the prospect of greatly increased understanding in the rather near future, based for the most part on theoretical work. For another thing, Dr. Strömngren, one of the world's great astrophysicists, has recently resigned as Director of the Royal Copenhagen Observatory, and has submitted his resignation of the directorship of the Yerkes Observatory and the McDonald Observatory, to become effective shortly. The status of his work indicates, and conversations with him confirm the possibility, that a chair at the Institute might be an appropriate and welcome base for his future work, which he expects to be largely of a theoretical character.

Bengt Georg Daniel Strömngren was born 49 years ago in Sweden. Until the Second World War he lived and worked in Denmark. He took his degree in Copenhagen, was appointed Lecturer in 1933, and Professor in 1938 at the University of Copenhagen. In 1940 he succeeded his father, Elis Strömngren, as Director of the Royal Copenhagen Observatory. After the war he came to this country, and in 1951 became Director of the Yerkes Observatory in Williams Bay, Wisconsin, and concurrently of the McDonald Observatory in Fort Davis, Texas. At the same time, he was appointed Sewell Avery Distinguished Service Professor at the University of Chicago. He has been Visiting Professor in London, Princeton, and Pasadena. He is a member of many national academies of science: the Royal Danish Academy of Sciences, Royal Astronomical Society, Société Royale des Sciences de

Liège, American Astronomical Society (hon.), Academia Coimbra, Royal Swedish Academy of Sciences, Koninklijke Nederlandse Akademie van Wetenschappen, and several others. He is married, and has three adult children. We believe him to be a citizen of Denmark.

Strömngren's work in astrophysics has been both observational and theoretical. It has been characteristic of him that he has entered successively four rather disparate fields in astrophysics, worked successfully to create a revolutionary clarification in each, and then departed for other greener pastures. His first work was the theory of stellar interiors. He discovered that by all odds the most abundant material in stars is hydrogen, and thereby laid the basis for a consistent description of stellar structure, and the nuclear reactions which provide the energy for stars. His second major field was the theory of stellar atmospheres, where again he was able to show, by great insight into the physical situations obtaining in the atmospheres of stars, the preponderant abundance of hydrogen, and obtain a correct value for the ratio of the abundance of hydrogen to metals such as iron. His third great theoretical enterprise consisted of a recognition and theoretical description of the relatively hot regions of interstellar space, where hydrogen is ionized--regions that are now known as Strömngren spheres.

Throughout his association with the Copenhagen, Yerkes and McDonald Observatories, he has originated and contributed to the design of equipment for precision observation. His most recent observational program is now bearing fruit. By a refinement and extension of sophisticated photometric methods he has been able to make a survey, far more extended than was possible in the past, of stellar spectral distributions. From this he has

been led to conclude that the properties of a star are not uniquely determined by its mass and age, but that stars formed at different times and places had different initial chemical compositions. This result is of cardinal importance not only for astrophysics, but for the theory of evolution of the stars, and for cosmology. One has the impression that Strömngren is now interested in understanding these matters more completely.

The attached letters give a rather varied but vivid impression of the regard in which Strömngren is held by his colleagues.

C O P Y

MOUNT WILSON AND PALOMAR OBSERVATORIES

CARNEGIE INSTITUTION OF WASHINGTON
CALIFORNIA INSTITUTE OF TECHNOLOGY

813 Santa Barbara Street
Pasadena 4, California

December 24, 1956

Dr. Robert Oppenheimer
The Institute for Advanced Study
Princeton, New Jersey

Dear Robert:

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There is no question but that Dr. Stromgren would be a strong and effective addition to the staff of The Institute for Advanced Study. The main question may be whether he will wish to give up his observational program before he has had an opportunity to "cash in" on the large amount of effort he has already expended on the development of special equipment. Some guest investigator arrangement might however be set up which would permit him to continue these observations however.

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With best regards,

Sincerely yours,

/s/Ike
I. S. Bowen

IB:WB

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STERREWACHT TE LEIDEN

December 18, 1956.

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Dear Dr Oppenheimer,

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This broad interest is evident from his work, which covers subjects ranging from theoretical astrophysics to such very practical problems as getting accurate measurements of stellar spectral classes and intrinsic luminosities. In the latter subject he has done a most interesting and first-rate pioneering job.

He has, moreover, a keen sense for selecting and concentrating on problems of fundamental nature.

To illustrate the varied nature of his work I should like to mention his studies of the Minor Planet Nemausa, for the purpose of improving the fundamental system of stellar declinations, and his initiative to equip the new Copenhagen Observatory with a modern meridian circle as one of its principal instruments. He has given much personal attention to the details of the plans for this instrument.

I can only say that I am sorry you are going to keep him in America. We have wished a long time that he might come back to Western Europe.

Don't hesitate to let me know if I can be of further service to you in this matter.

Yours very sincerely,

/s/J. H. Oort.

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December 19, 1956

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It is, I think, a natural consequence of Stroemgren's approach and technique in research that at times in his lectures or in discussions Dr. Stroemgren does not appear outstandingly stimulating. But on the basis

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I feel that it would be a great gain for astronomy in Princeton if Dr. Stroemgren were to come here.

Very sincerely,

/s/Martin.
Martin Schwarzschild

MS/ajd

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One of his chief interests has been the composition of matter. He was the first to reverse the trend established by Eddington and to show that matter inside the stars was probably mostly hydrogen. In the field of star atmospheres he has pioneered in the development of precise methods for solving the equations of the problem and in applying these methods to a determination of the hydrogen - metals ratio. His theoretical analysis of data on interstellar line intensities provides the best available results on the composition of the interstellar gas.

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From a personal standpoint Bengt Stroemgren combines courtliness of manner with great strength of character. I believe that he represents the best European tradition of the cultured scholar.

Very sincerely yours,

/s/Lyman
Lyman Spitzer, Jr.

LS/ajd

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(Leuschner Observatory)
Berkeley 4, California

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Dear Professor Oppenheimer:

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Perhaps I should mention that I consider him to be my closest astronomical friend, and perhaps I am prejudiced in his favor, but at least I am trying to be objective in my evaluation of his scientific accomplishments.

His astronomical work started at a very early age: he was exceptionally gifted as a child, and his father, Elis Strömngren in Copenhagen, induced him to devote some time to the problem of using electrical and electronic devices to improve the accuracy of measurements of star-transits with meridian-type instruments. His interest in this field culminated a few months ago in the installation of a modern meridian circle at the new Copenhagen observatory.

Strömngren's interest in astrophysics was probably sparked by the lectures of Bohr and others. He has published numerous papers on the transfer of radiation through a stellar atmosphere (one of the most important contributions on this topic appeared in the "Festschrift" for his father which was published during the war, and is not often found in astronomical libraries in this country).

Even more important were Strömngren's early contributions to the problem of stellar evolution. He was the first to suggest that the evolutionary traces of the stars in the H-R (Hertzsprung-Russell) diagram may be inferred from observations of the brightness and surface temperatures of stars in galactic clusters, and he gave the correct theoretical interpretation of these traces even before the source of stellar energies was known.

In 1937 I invited Strömngren to join the astronomy department of the University of Chicago--at first as professor on the Chicago campus and later as astronomer at the Yerkes Observatory. His contributions during the

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two years he spent with us were enormous. I remember especially a study of the peculiar double star ϵ Aurigae -- which was published jointly by Kuiper, Strömberg and myself. Strömberg showed theoretically that the ionization of the outer "skin" of a cool eclipsing star in front of a hot star (of spectral class F) is produced by the radiation of the hot star; and that the continuous opacity of ionized gas in that "skin" produced the observed decrease in the brightness of the system during "total eclipse". This work later led to the discovery of H II and H I regions of interstellar gas--an advance of enormous importance which forms the basis of all modern investigations of interstellar gas clouds, including those of Spitzer, and of the radio-astronomers (the regions emitting the 21-mc line of H in the gas cloud are essentially Strömberg's H I regions).

Strömberg returned to Denmark before the war, and he became his father's successor as the director of the Copenhagen Observatory.

After I had decided to resign the directorship of the Yerkes and McDonald Observatories in 1950 President R. M. Hutchins of the University of Chicago asked me to recommend an astronomer as my successor. I unhesitatingly recommended Strömberg, and he was appointed to take my place. Unfortunately, this appointment was not regarded favorably by Chandrasekhar: this was a surprise to me because I had known that they were very close friends, first when Chandra worked at Copenhagen under Bohr, and later when Strömberg was in America before the war. Strömberg's recent decision to resign as director was partly caused by the opposition which he encountered on the part of Chandrasekhar and partly Kuiper. I must say that in some respects Strömberg is not a good administrator: he finds it difficult to make decisions, and he tends to postpone important actions almost indefinitely. His own scientific work at Yerkes and McDonald in recent years has been mostly concerned with observational problems. He has developed photo-electric techniques with interference filters in order to determine with high accuracy the surface temperatures (or spectral types) of the stars, their luminosities, and the amount of interstellar reddening. The results are important, but I have had the feeling that he is far better qualified as a theoretician than as an observer.

Bengt has told me that the directorship of the Copenhagen Observatory (from which he resigned a few years ago) is being held open for him if he should decide to return to Europe. I believe it would be a tremendous loss for American science if he should become so completely disillusioned here as to want to go back. A few years ago Mrs. Strömberg urged him to return to Denmark, but now that one of his daughters is married to an American, and his other two children are pretty thoroughly Americanized, she would probably prefer to remain in this country.

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Strömngren is not a particularly good lecturer, and some of his lectures at scientific meetings tended to be too long and slightly dull. But he has had a great deal of experience in teaching: I remember that when I spent some months in Copenhagen in 1946 he was giving regular lectures at the Bohr institute.

A few weeks ago I started thinking about the possibility of asking Strömngren to join the faculty of the University of California. But I have taken no formal steps in this direction, and I fear the administration would be reluctant to offer him the kind of salary he would probably expect. I hope you will make him an offer.

Very sincerely yours,

/s/ Otto Struve

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two years he spent with us were enormous. I remember especially a study of the peculiar double star ϵ Aurigae -- which was published jointly by Kuiper, Strömngren and myself. Strömngren showed theoretically that the ionization of the outer "skin" of a cool eclipsing star in front of a hot star (of spectral class F) is produced by the radiation of the hot star; and that the continuous opacity of ionized gas in that "skin" produced the observed decrease in the brightness of the system during "total eclipse". This work later led to the discovery of H II and H I regions of interstellar gas--an advance of enormous importance which forms the basis of all modern investigations of interstellar gas clouds, including those of Spitzer, and of the radio-astronomers (the regions emitting the 21-mc line of H in the gas cloud are essentially Strömngren's H I regions).

Strömngren returned to Denmark before the war, and he became his father's successor as the director of the Copenhagen Observatory.

After I had decided to resign the directorship of the Yerkes and McDonald Observatories in 1950 President R. M. Hutchins of the University of Chicago asked me to recommend an astronomer as my successor. I unhesitatingly recommended Strömngren, and he was appointed to take my place. Unfortunately, this appointment was not regarded favorably by Chandrasekhar: this was a surprise to me because I had known that they were very close friends, first when Chandra worked at Copenhagen under Bohr, and later when Strömngren was in America before the war. Strömngren's recent decision to resign as director was partly caused by the opposition which he encountered on the part of Chandrasekhar and partly Kuiper. I must say that in some respects Strömngren is not a good administrator: he finds it difficult to make decisions, and he tends to postpone important actions almost indefinitely. His own scientific work at Yerkes and McDonald in recent years has been mostly concerned with observational problems. He has developed photo-electric techniques with interference filters in order to determine with high accuracy the surface temperatures (or spectral types) of the stars, their luminosities, and the amount of interstellar reddening. The results are important, but I have had the feeling that he is far better qualified as a theoretician than as an observer.

Bengt has told me that the directorship of the Copenhagen Observatory (from which he resigned a few years ago) is being held open for him if he should decide to return to Europe. I believe it would be a tremendous loss for American science if he should become so completely disillusioned here as to want to go back. A few years ago Mrs. Strömngren urged him to return to Denmark, but now that one of his daughters is married to an American, and his other two children are pretty thoroughly Americanized, she would probably prefer to remain in this country.

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Strömngren is not a particularly good lecturer, and some of his lectures at scientific meetings tended to be too long and slightly dull. But he has had a great deal of experience in teaching: I remember that when I spent some months in Copenhagen in 1946 he was giving regular lectures at the Bohr institute.

A few weeks ago I started thinking about the possibility of asking Strömngren to join the faculty of the University of California. But I have taken no formal steps in this direction, and I fear the administration would be reluctant to offer him the kind of salary he would probably expect. I hope you will make him an offer.

Very sincerely yours,

/s/ Otto Struve