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8.5.1968 320 (a)

Leiden, November 8, 1967.

Dr. H.W. Babcock, Mount Wilson and Palomar Observatories 813 Santa Barbara Street.

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## MOUNT WILSON AND PALOMAR OBSERVATORIES 813 SANTA BARBARA STREET PASADENA, CALIFORNIA 81106

CARNEGIE INSTITUTION OF WASHINGTON

CALIFORNIA INSTITUTE OF TECHNOLOGY

December 1, 1967

Dear Jan,

Welcome on your return to Pasadena! I hope that you and Mrs. Oort had a pleasant trip and that it was not too tiring.

I shall telephone you about 8:30 Monday morning and would be glad to come by with my car.

If at any time during your stay you need some assistance with transportation or otherwise, please call on me or on Mr. Fred Woodson of the Santa Barbara Street office. My home telephone is 798–1079 and the office number is 796–4351.

Betty and I hope that you will both have dinner with us at 6:30 Wednesday evening, December 6.

Most sincerely,

Anne

Leiden, November 8, 1967. Professor J. H. Cort Sterr cyaicht to Leiden The Netherlands Dr. H.W. Babcock, Mount Wilson and Palomar Observatories Dear Dr. Cort. 813 Santa Barbara Street, Pasadena, Cal. 91106, U.S.A. reservor be a selected to be a fallend appearing them works spel plant of region to the section of the section of the section Long the state of the state of for your beginning on Thomas, Thereaster B. Noting your mixerest to finding an agreet black the will past my administrative assistant, Dear Dr. Babcock, Thank you very much for your letter of October 30. We have now booked on flight TW 407, arriving in Los Angeles at 8.58 p.m. Du.3 Meanwhile we received an invitation from Mrs. Schmidt who wanted us to stay with them during the first days. My wife has written to her in order to inquire whether they would not find it more convenient if we stayed in the Atheneum. She has asked Mrs. Schmidt to contact you about this and to make the decision herself. I also received a letter from Dr. Raimond who said he was going to meet us at the airport. Perhaps you could contact him in order to avoid unnecessary trips to the Los Angeles airport. you hard cutains at com. As regards possible use of the 200-inch telescope I would certainly not be able to use this all by myself. I have, however, discussed with Maarten Schmidt the possibility of making some observations on NGC 3115. He has probably discussed this already with you or the programme committee. Hoping to see you soon, sincerely yours,

# MOUNT WILSON AND PALOMAR OBSERVATORIES 813 SANTA BARBARA STREET PASADENA, CALIFORNIA 91106 October 30, 1967

Professor J. H. Oort Sterrewacht te Leiden Leiden The Netherlands

Dear Dr. Oort,

I was glad to receive your letter of October 25 and to learn that you plan to arrive from Washington to Pasadena on Sunday, December 3. After you have made your travel reservations, perhaps you can let me know your flight number and time of arrival so that I can meet you and your wife at the Los Angeles Airport.

We are asking the Athenaeum to save a room for you beginning on Sunday, December 3. Noting your interest in finding an apartment, I shall ask my administrative assistant, Mr. Woodson, to stand by to give you some help on this.

Please feel free to divide your time as you think best between Santa Barbara Street and the Caltech campus. As you know, Maarten Schmidt, Jesse Greenstein, and several others have their offices at Caltech and I am sure that they will be glad to see you there. Also, please let us know if you have any special wishes regarding visits to Palomar or the use of the 200-inch telescope.

We are looking forward very much to your

visit here.

Cordially yours,

H. W. Babcock

TRET FOLD

HB:WB

I am very much looking forward to my stay in Pasadena. With kindest greetings,

Sincerely yours,

STERREWACHT TE LEIDEN

Leiden, October 25, 1967.

Dr. H.W. Babcock,
Mount Wilson and Palomar
Observatories,
813 Santa Barbara Street,
Pasadena, Cal.,
U.S.A.

Dear Dr. Babcock, he Allender Faculty Club Combe

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Dear Professor Lyng

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We have now more or less fixed our schedule for the journey to the United States. My wife and I expect to fly from Washington to Pasadena on Sunday November 3. I have not yet made definite reservations and do not know the exact time of arrival.

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your visit. Clease let me ithwolf I can be of any assistance

with you and I know that we all hour forward keenly to-

I am sure that meny of the start will

Would it be possible for you to reserve a room for us at the Atheneum for, say, four days beginning Sunday evening? After that we would prefer to find and apartment, preferably one which is not too far from Santa Barbara Street.

I am very much looking forward to my stay in Pasadena. With kindest greetings,

Sincerely yours,

MOUNT WILSON AND PALOMAR OBSERVATORIES B13 SANTA BARBARA STREET PASADENA, CALIFORNIA 91106 April 28, 1967 Professor J. H. Oort Sterrewacht te Leiden Leiden Netherlands Dear Professor Oort: I was glad to learn from your letter of April 11 that the University of Leiden has officially approved of the plans for your visit to the Mount Wilson and Palomar Observatories later this year. I was also glad to note that your wife will come with you on this visit. I am sure that many of the staff will benefit from the opportunity to discuss scientific matters with you and I know that we all look forward keenly to your visit. Please let me know if I can be of any assistance in making arrangements for your stay in Pasadena. You could of course stay at the Athenaeum (Faculty Club) on the Caltech campus, or, if you prefer, we may be able to locate other accommodations for you. Cordially yours, Horare Babrock, H. W. Babcock HB:WB

#### STERREWACHT LEIDEN

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Leiden, April 11, 1967.

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Dr. H.W. Babcock, Mt. Wilson and Palomar Observatories, Ewas of agaret est 1201 East California Blvd., Pasadena 4, Cal., U.S.A.

Dear Dr. Babcock,

of February 1st and to do the that

Surgan market of one owner throw her

Observagaries next winter. Lust

Professor J. M. Ob

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Dear Professor Cort

I am happy to inform you that I have now received official permission from the University of Leiden to spend two months in Pasadena. grown an dealers and a pright be time ver and Schmidt could arrange

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foregraph your erries promise the septimination of Lone abur.

My wife and I are very much looking forward to this visit.

With kindest greetings,

sincerely yours,

Most cardinuly

#### MOUNT WILSON AND PALOMAR OBSERVATORIES

813 SANTA BARBARA STREET PASADENA, CALIFORNIA 91106

March 3, 1967

Professor J. H. Oort Sterrewacht te Leiden Leiden The Netherlands

Dear Professor Oort:

I was of course extremely glad to receive your letter of February 14 and to learn that you think it likely that you can arrange to spend some time here at the Mount Wilson and Palomar Observatories next winter. I can well understand how busy you are and how many demands there must be on your time. We shall indeed count it as a real privilege if you are able to come and we shall look forward to your arrival around the beginning of December.

Our new nebular spectrograph with image tube, which is designed for use at the Cassegrain focus of the 200-inch telescope, is nearing completion and should be undergoing its initial tests on the telescope within two or three months. Maarten Schmidt is of course closely concerned with this instrument. I hope that by the end of the summer it will be in regular use and that it will provide considerably improved capability for obtaining spectrograms of faint objects. You will be more than welcome, of course, to spend some time at Palomar if you so desire and it might be that you and Schmidt could arrange some collaboration for observations of the rotation of elliptical galaxies.

Again, let me express our pleasure in your prospective

visit.

Most cordially,

Howe Blook
H. W. Babcock

HB:WB

4, 1967.

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The second problem in which Dr. H. W. Babcock, welved as moment is that of the location | Mount Wilson and Palomar clouds we have been observing in the 21-cm line. Observatories, problem of fundamental importance 813 Santa Barbara Street, optical observations of consider PASADENA, Cal. 91106, have discussed this problem sevel. S. Almes with Dr. Münch and others, and would make a special point of rediscussing it with you and him and others in Pasadena who could be interested in it, with the hope of getting to a point where we

Dear Dr. Babcock, salistic plan de campagne.

I apologize for having delayed my answer to your letter of January 4 with the extremely attractive invitation to come to the Mount Wilson and Palomar Observatories. I feel greatly indebted to you for offering me a position as Research Associate and to President Haskins for supporting this. The prospect of another stay at your observatories attracts me enormously. It would be inspiring, and profitable for my work; I would do nothing rather than accept it at once. My only hesitation was that it would mean another burden to Oosterhoff and van de Hulst, who are already overloaded. At the time when your letter arrived I had just been away for 2,5 months, which made me hesitate to plan right away for another absence.

However, if it would not be inconvenient to you if my visit were postponed to the early winter, I think it would be possible to arrange it at this side without causing too many difficulties. I would then propose to come in the beginning of December, and to stay until about the end of January. Will you let me know whether this would be a suitable period for you? I would then still have to approach the University Administration in Leiden to obtain their definite consent.

I would, of course, be happy to give some special colloquia for the Observatory staff and students.

As regards observing there are two problems in which I have a particular interest, and which I would like to stimulate as far as possible. The first is an extension of the measures of the rotation of the elliptical galaxy NGC 3115 which I suggested as an observing programme during my stay in Pasadena in 1958 and which during that time were made by Minkowski with some weak assistance from myself. In enclose copy of a letter on this subject written to Mrs. Burbidge and Schmidt some months ago. I doubt whether I could usefully assist in any observations, but perhaps my visit could give an opportunity to make a little 200-inch time available for this programme.

2 -MINIST WILSON AND PALOMAR OBSERVATORIES SIS SANTA BARBARA STREET The second problem in which I am very much involved at the moment is that of the location in space of the high-velocity clouds we have been observing in the 21-cm line. It is a problem of fundamental importance, which can only be solved by optical observations of considerable technical difficulty. I have discussed this problem several times with Dr. Münch and others, and would make a special point of rediscussing it with you and him and others in Pasadena who could be interested in it, with the hope of getting to a point where we could outline a realistic plan de campagne. With kindest regards, tope very much that we can the firm, I believe, in 1926-were highly appreciated and are very cordially yours, with the somewhat approval of President Haskins, I am prepared to offer you a temporary appointment as dissearch Associate, with a stipleyd of \$3000, if you can come to Pasacens for a stay of his to eight weeks. Is mererect as a three she fall of this year might an preferable to you? Not be the we should greatly appreciate it if, miring the course of your stay, you could give two or three special lectures or colloquia for the Observatory staif and students. I judge that your interest in active observing would be secondary, but I am sure that there would be apportunities. if you wish, to collaborate in some observations with work considers at the 200-inch telescope. A few nights can be made were the your own use if you will let me know your wishes to advance of your With best regards, and the hope that we shall usve the plussure of seeing you here. Cordially yours, Shand Bobook B. W. Babcock

Leiden, 12 Februkey, Adequi Reds V.S. Dec. 67 MOUNT WILSON AND PALOMAR OBSERVATORIES B13 SANTA BARBARA STREET PASADENA, CALIFORNIA 91106 University of Arizona, January 4, 1967 U.S.A. Professor Jan H. Oort Director of the University Observatory Leiden The Netherlands Dear Professor Oort: I am writing to ask whether you would be interested in making a visit to the Mount Wilson and Palomar Observatories later this year. We hope very much that we can persuade you to come. Your several visits over the yearsthe first, I believe, in 1926-were highly appreciated and are well remembered by those of the staff who were here. en zijn nog vol bewondering en o With the enthusiastic approval of President Haskins, I am prepared to offer you a temporary appointment as Research Associate, with a stipend of \$3000, if you can come to Pasadena for a stay of six to eight weeks. Is it correct that the fall of this year might be preferable to you? We should greatly appreciate it if, during the course of your stay, you could give two or three special lectures or colloquia for the Observatory staff and students. I judge that your interest in active observing would be secondary, but I am sure that there would be opportunities, if you wish, to collaborate in some observations with staff members at the 200-inch telescope. A few nights can be made available for your own use if you will let me know your wishes in advance of your arrival. With best regards, and the hope that we shall have the pleasure of seeing you here. Cordially yours, Horan W. Babrock H. W. Babcock HB:WB Director

Leiden, 12 february, 1968. THE UNIVERSITY OF ARIZONA TUCSON, ARIZONA 85721 Dr. B.J. Bok, Steward Observatory, STEWARD OBSERVATORY University of Arizons, Tucson, Arizons 85721, U.S.A. January 12, 1968 Dr. Jan H. Oort Mt. Wilson and Palomar Obs. Beste Bart, ara St. Gezien de ervaringen met andere universiteiten in de Verenigde Staten denk ik dat je mijn Social Security Number nodig zult hebben en stuur het daarom onderstaand: het 1s 113-42-2011. Wij vonden ons bezoek aan Tucson bijzonder plezierig en zijn nog vol bewondering en dankbaarheid voor de mooie en gezellige lunch die je ons voorgezet hebt. Wij misten toch het vliegtuig van Dallas naar Washington, met het gevolg dat wij pas om 2 uur 's nachts in Washington aankwamen, maar wij konden de volgende dag uitslapen. Met hartelijke groeten, ook van Mieke en aan Pris, at the Kuipers to relax before dinner not later than 5:00 P.M. That evening the Mayalls will have Mieke and you out to dismer, starting at 6:30 P.M. The Kuipers will drive you over to the Mayalls. You probably know already that on Thursday, February lat, there begins at Kitt Peak a large Solar Symposium, which may require the presence of some of us. However, I expect to be free to take you and Micke to the airport on Thursday afternoon. I am sending copies of this letter to G. P. Kuiper and Nick Hayall, also to Drs. Lynds and Livingston who are in charge of the colloquium arrangements. It will be wonderful to see you both again soon. Very sincerely yours, Bax D. Bok # m. Howles Bart J. Bok, Director \*transcribed and signed in Dr. Bok's absence.



#### THE UNIVERSITY OF ARIZONA

TUCSON, ARIZONA 85721

STEWARD OBSERVATORY

January 12, 1968

Dr. Jan H. Oort Mt. Wilson and Palomar Obs. 813 Santa Barbara St. Pasadena, Calif. 91106

Dear Jan:

Just to make certain that there are no misunderstandings, I might as well put on paper the things that you said to me over the telephone a day or so ago. Mieke and you are expected to arrive on American Airlines, 2:25 P.M., on January 30. The Kuipers and I will be there to greet the two of you. You will be their guest for the next two days until you will be leaving for Washington, D. C. We are scheduling a colloquium on "High-Velocity Hydrogen Clouds" for Wednesday afternoon, 3:30 P.M., Steward Observatory. The colloquium will be preceded by coffee at 3:00 P.M. Our colloquia normally lasts 50 minutes and there is a question period to follow, which means that you should be back at the Kuipers to relax before dinner not later than 5:00 P.M. That evening the Mayalls will have Mieke and you out to dinner, starting at 6:30 P.M. The Kuipers will drive you over to the Mayalls.

You probably know already that on Thursday, February 1st, there begins at Kitt Peak a large Solar Symposium, which may require the presence of some of us. However, I expect to be free to take you and Mieke to the airport on Thursday afternoon.

I am sending copies of this letter to G. P. Kuiper and Nick Mayall, also to Drs. Lynds and Livingston who are in charge of the colloquium arrangements. It will be wonderful to see you both again soon.

Very sincerely yours,

Bax D. Bok.

\* m. Howled

Bart J. Bok, Director

BJB;mh \*transcribed and signed in Dr. Bok's absence.

cc: Kuiper
Lynds
Livingston
Mayall



## THE UNIVERSITY OF ARIZONA

TUCSON, ARIZONA 85721

STEWARD OBSERVATORY

December 4, 1967

Dr. J. H. Oort Director University Observatory Sterrewacht Leiden, Netherlands

Dear Jan:

I just received a piece of paper from Kitt Peak Observatory that mentions a proposed visit by you between January 30th and February 1. This was complete news to me, and very welcome news indeed. I just want to write to you briefly to tell you that it would give Priscilla and me very great pleasure if we could have you as our guest at our house during the time of your stay in Tucson. I expect to be in Tucson at the time of your visit and it would be wonderful to see once again quite a bit of you. I have not heard the specific reason for your visit, but, if time should permit, I would very much like to have you speak either at the Colloqium, or perhaps in a more informal manner, to our Staff and Graduate Students. I have been giving the boys and girls a really tough course on Galactic Dynamics these past few months and you would have a well-informed audience eager to listen to you. Anyhow, do let us know how your plans work out and be sure that we would love to see you. Priscilla and I hope that Mieke will be coming with you.

Very sincerely yours,

Bart J. Bok, Director

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On anyumlight reisplan gregue de de mogrifilled dat det in day greechom undt.
Severes a of 45, 8 Mayall of Feellog, un vankem hugt.

UNIVERSITY OF CALIFORNIA, SAN DIEGO Leiden, February 12, 1968. Dr. G. Burbidge, Department of Physics, University of California, DEPARTMENT OF PHYSICS BRYELLE COLLEGE P.O. Box 109, La Jolla, Cal. 92037, U.S.A. January 29, 1968 Dr. J. H. Cort Dear Geoffrey, Kitt Peak National Observatory In reply to your letter of January 29 I am sending you my social security number. This is 113-42-2011. Dear JanWe very much enjoyed our visit to La Jolla and will always remember the beautiful situation in which Margaret and you are working. bureaucracy in the so bad that we cannot pay you money unless we have your Social With best greetings, called Caltech and have been told that you have such a number. I would be grateful therefore, if you can send it to me without delsincerely yours, for this inconvenience. We very much enjoyed your visit, With best wishes from us both, Yours sincerely, Call

UNIVERSITY OF CALIFORNIA, SAN DIEGO BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO SANTA BARBARA • SANTA CRUZ DEPARTMENT OF PHYSICS REVELLE COLLEGE POST OFFICE BOX 109 LA JOLLA, CALIFORNIA 92037 January 29, 1968 Dr. J. H. Oort c/o Dr. N. U. Mayall Kitt Peak National Observatory 950 North Cherry Avenue Tucson, Arizona 85717 Dear Jan: It appears that the bureaucracy in this University is so bad that we cannot pay you money unless we have your Social Security Number. We have called Caltech and have been told that you have such a number. I would be grateful therefore, if you can send it to me without delay. I am sorry for this inconvenience. We very much enjoyed your visit. With best wishes from us both, Yours sincerely, BERRY BERR WEST FERFERE WEST TO SEE THE SEE THE Geoffrey Burbidge GB:ajc 张 \$2 \$5 .

AAN: de Hooggeleerde Heer
Prof. dr. J.H. Oort,
Sterrewacht 5,
LEIDEN.

Nummer

193515

Uw brief van 20-3-1967

LEIDEN, 7 april 1967.

O

Leiden, 11 april 1967.

Uw brief: nr.193515 dd.7-4-167

college van Curatoren
der Rijksuniversiteit
Stationsweg 46,
Leiden.

Betreft: Verblijf in Pasadena.

Ik ben U zeer erkentelijk voor Uw bereidheid om Uw goedkeuring te hechten aan een verblijf van mij in Pasadena.

Taar aanleiding van Uw desbetreffende vraag deel ik U mee dat er voor de Universiteit geen financiële consequenties aan dit bezoek verbonden zijn. U mede gaarne edurende de rblijven voor

n of er finanzijn verbonden.

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## CURATOREN DER RIJKSUNIVERSITEIT TE LEIDEN

AAN: de Hooggeleerde Heer Prof. dr. J.H. Oort, Sterrewacht 5, LEIDEN.

Nummer

193515

Uw brief van 20-3-1967 LEIDEN, 7 april 1967.

Onderwerp Verblijf in Pasadena

Naar aanleiding van uw bovenvermelde brief delen wij U mede gaarne bereid te zijn er onze goedkeuring aan te hechten dat U gedurende de maanden december 1967 en januari 1968 in Pasadena zult verblijven voor de in uw eerdergenoemde brief omschreven doeleinden.

Wij zullen het op prijs stellen nog van U te vernemen of er financiële consequenties aan dit bezoek voor onze Universiteit zijn verbonden.

> Curatoren der Rijksuniversiteit te Leiden, namens hen,

Secretaris van de Universiteit.

40745

Betreft: Uitnodiging van de Mount Wiltson en Palomar Sterrewachten.

Leiden, February 120 maart 1967

Aan het College van Curatoren der
Rijksuniversiteit
Dr. G.B. Fie Stationsweg 46,
Berkeley Ast Local de nortment,
University of California,
Berkeley, Cal. 94720,

Enige tijd geleden ontving ik van de directeur der Mt Wilson en Palomar Sterrewachten een uitnodiging om daar in de herfst van dit jaar 6 å 8 weken te kommen doorbrengen als tijdelijk "research associate".

Uiteraard trekt mij de mogelijkheid om enige tijd op dit
wereldcentrum van optische astronomie, dat tegelijkertijd een
belangrijke positie inneemt op het gebied der radiosterrekunde,
door te brengen heel sterk aan. Dit te meer daar er voor mij geen
andere verplichtingen aan verbonden zouden zijn dan naar eigen
keuze een paar colloquia over het astronomische onderzoek in Nederland
te geven, en ik das al mijn tijd zou kunnen besteden om de mij zo
sterk interesserende problemen van radiobronnen met de deskundigen
aldaar te bespreken en daar zelf aan te werken. Bovendien wordt mij
de gelegenheid geboden om in samenwerking met een der Palomarastronomen met de 200-inch reflector een onderzoek over het elliptische sterrenstelsel NGC 3115, dat ik aldaar in 1958 begonnen was,
te voltooien. Ook aan dit laatste hecht ik bijzonder grote waarde.

Toch heb ik lang geaarzeld om U te verzoeken mij verlof voor dit bezoek te verlenen, omdat ik er tegen op zie mij opnieuw voor twee maanden te onttrekken aan mijn deel van de taak om in Leiden leiding te geven aan onderzoek en studenten. Om de bezwaren hiervan zo gering mogelijk te maken heb ik aan de directie van de Mt Wilson en Palomar Sterrewachten voorgesteld om mijn eventuele verblijf naar het eind van 1967 te verschuiven, zodat de Kerstvakantie in mijn periode van afwezigheid uit Leiden zou vallen. Zoals U uit het hierbij gevoegde afschrift van een brief van de directeur der genoemde sterrewachten kunt zien, zou dit van zijn kant geen bezwaar opleveren.

Onder deze omstandigheden zou ik het bijzonder op prijs stellen indien U mij verlof zoudt willen verlenen om de maanden december 1967 en januari 1968 in Pasadena te werken.

De hoogleraar-directeur

Leiden, February 12, 1968. KITT PEAK NATIONAL OBSERVATORY Dr. G.B. Field, Berkeley Astronomy Department, University of California, Berkeley, Cal. 94720, U.S.A. 950 North Oyerry Avenue Youwen, Arbenna 85717 Dear Dr. Field, I have promised your secretary to send her my social security number. This is 113-42-2011. It was a great pleasure to meet you again and to discuss problems with the members of the Astronomy Department at Berkeley. With kind greetings, that you will sincerely yours, ik during the OBSERVATORY 8 15 SANTA BARB OUR LETTER FRIDAY JANUARY Botto, Dr. Wright Sold meeting on February 1st. metunity will nes flight #136 LETTER at 2:25 p.m., g arrangements

NITT PEAK NATIONAL OBSERVATORY ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY, INC. VERSITY OF CALIFORNIA ERSITIES OF CHICAGO AND TEXAS NA UNIVERSITY RSITY OF MICHIGAN HIO STATE UNIVERSITY SITY OF WISCONSIN ON UNIVERSITY 950 North Cherry Avenue P. O. Box 4130 Dr. Jan H. Oort Tucson, Arizona 85717 Sterrewacht Te Leiden 5 AC 602 327 - 5511 Cable Address: AURACORP, Tucson November 13, 1967 ea. CLASS OF SERVICE WESTERN UNION This is a fast message unless its deferred char-SYMBOLS acter is indicated by the W. P. MARSHALL DL = Day Letter proper symbol. TELEGRAM CHAIRMAN OF THE BOARD NL = Night Letter R. W. McFALL PRESIDENT 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 LT = International e Letter Telegram S 827P PST JAN 4 68 LB305 L OLC382 NL PD TDOL BERKELEY CALIF 4 lé PROF J H OORT le MT WILSON OBSERVATORY 813 SANTA BARBARA ST PASADENA CALIF he THANKS FOR YOUR LETTER. FRIDAY JANUARY 19TH IS BEST. WILL ANNOUNCE li YOUR TITLE. LETTER FOLLOWS GEORGE FIELD. OS WE hi Du SF1201(R2-65) -+rector

AND RA



#### KITT PEAK NATIONAL OBSERVATORY

Operated by The

ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY, INC.

Under Contract With The

National Science Foundation

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UNIVERSITY OF MICHIGAN
THE OHIO STATE UNIVERSITY
UNIVERSITY OF WISCONSIN
YALE UNIVERSITY
PRINCETON UNIVERSITY

950 North Cherry Avenue
P. O. Box 4130
Tucson, Arizona 85717
AC 602 327 - 5511
Cable Address:
AURACORP, Tucson

November 13, 1967

Dr. Jan H. Oort Sterrewacht Te Leiden 5 Leiden, Holland

Dear Dr. Oort:

In Dr. Mayall's absence let me assure you that you will be most welcome here at any time you choose to arrive. There are a number of things going on here at Kitt Peak during the dates you suggest, but that might possibly make the visit at this time more interesting for you. On January 30th, Dr. Wright and Dr. Richardson will be here from Victoria consulting on coude problems and there is a small meeting on "Calibration of Spectrograms" being held on the 31st. A special Solar meeting of the American Astronomical Society will begin on February 1st, also here in Tucson. All of us who have the opportunity will be delighted to see you.

We shall expect to meet your American Airlines flight #136 from Los Angeles, arriving here on January 30th, at 2:25 p.m., unless we are informed of a different arrival time. We will write while you are in Pasadena concerning living arrangements while you are here.

Sincerely yours,

arthur a. Hoag

Arthur A. Hoag

Acting Director

AAH:rp

cc: Dr. N.U. Mayall

NATIONAL RADIO ASTRONOMY OBSERVATORY

EDGEMONT ROAD
CHARLOTTESVILLE, VIRGINIA 22901
TELEPHONE 703 - 296 - 0211

GREEN BANK, WEST VIRGINIA 24944
TELEPHONE 304 - 456 - 2011
TWX 304 - 940 - 2481

January 19, 1968

Professor J. H. Oort Mt. Wilson and Palomar Observatories 813 Santa Barbara Street Pasadena, California 91106

Dear Professor Oort:

Thank you for sending me your travel voucher. I have sent it up to Green Bank for processing and you will be receiving a check from us shortly.

We were all very pleased that you were able to visit us. We enjoyed the discussions with you and are glad to hear you were pleased with your stay here. I hope you will be able to come again soon and, particularly, that you will be able to visit Green Bank the next time you come.

Sincerely,

W. E. Howard III

Bill Howard

WEH: fmc

Leiden, November 8, 1967. MONAL RADIO ASTRONOMY OBSERVATORY EDGEMONT ROAD CHARLOTTESVILLE, VIRGINIA 22901 TELEPHONE 703 29 Dr. W.E. Howard III, National Radio Astronomy Observatory Edgemont Road, Charlottesville, Va. 22901, U.S.A. Dear Dr. Howard, Thank you very much for your letter of October 31 and for the reservations you have made. I am afraid that my wife will not be able to accompany me to Charlottesville. Leiden, Netherlands I have booked for a flight PI 705 on November 27th arriving in Charlottesville at 3.31 p.m. and I am planning Deato leave on December 1 from Charlottesville at 3.46 p.m. I am sure I shall very much enjoy discussions with for your group in Charlottesville. 1. The Jansky Lecture is still scheduled for the second activities that week include a college Sincerely yours, of Maryland) who will be speaking to us on Friday, December 1 at 4:00 pm; and a colloquing by will be speaking on occultations of reduce some the of Virginia on the afternoon of November 30 We are looking forward work on your risks WEH! fine

#### NATIONAL RADIO ASTRONOMY OBSERVATORY

EDGEMONT ROAD
CHARLOTTESVILLE, VIRGINIA 22901
TELEPHONE 703 - 296 - 0211

GREEN BANK, WEST VIRGINIA 24944
TELEPHONE 304 - 456 - 2011
TWX 304 - 940 - 2481

October 31, 1967

Professor Jan H. Oort Sterrewacht 5, Leiden, Netherlands

Dear Professor Oort:

We have made a reservation at the Thomas Jefferson Inn for you and your wife for the nights of November 27 through December 1. The Jansky Lecture is still scheduled for November 29. Other activities that week include a colloquium by Tom Matthews (University of Maryland) who will be speaking to us on "Quasi-stellar Sources" on Friday, December 1 at 4:00 pm; and a colloquium by Mr. Joe Taylor who will be speaking on occultations of radio sources at the University of Virginia on the afternoon of November 30.

We are looking forward very much to your visit.

Sincerely yours,

William E. Howard III Associate Scientist and

Assistant to the Director

Bill Howard

WEH: fmc

#### NATIONAL RADIO ASTRONOMY OBSERVATORY

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TELEPHONE 703 - 296 - 0211

GREEN BANK, WEST VIRGINIA 24944
TELEPHONE 304 - 456 - 2011
TWX 304 - 940 - 2481

September 20, 1967

Professor Jan H. Oort Sterrewacht 5, Leiden, Netherlands

Dear Professor Oort:

In connection with your visit here in late November, the following flights are currently scheduled between Washington, D. C. and Charlottesville, Virginia:

Leave	National	Airport	6:20		Arrive	Charlottesvil	12:59	a.m.
Leave	Dulles Ai	rport	12:28	p.m.	11	11	3:31	
_ "	National	Airport	5:45	p.m.		H	6:27	-
11	11	11	9:55	-	"	"	10:37	p.m.
		· D: - 1		Arriatio	n.			

These are all via Piedmont Aviation.

Although these flights are subject to change—and the times probably will be changed by November—this will give you an idea of the number and approximate times of flights available to Charlottesville.

We are looking forward to seeing you in November.

Sincerely yours,
Bill Howard

W. E. Howard III

/fmc

short your front you NATIONAL RADIO ASTRONOMY OBSERVATORY EDGEMONT ROAD CHARLOTTESVILLE, VIRGINIA 22901 TELEPHONE 703 - 296 - 0211 POST OFFICE BOX 2 GREEN BANK, WEST VIRGINIA 24944 August 15, 1967 TWX 304 - 940 - 9481 Dr. Jan H. Oort Sterrewacht 5, Leiden, Netherlands Dear Professor Oort: Thank you very much for your letter of August 1, in which you mentioned that it will not be possible for you to give the Jansky Lecture at the time of our HII Region Symposium. We have chosen the evening of November 29 for the Lecture, and it is the feeling of our lecture committee that your second lecture subject would be somewhat more appropriate, namely "Large-scale distribution and motion of hydrogen in the Galaxy." If, for any reason, the date or topic are not satisfactory, please let me know as soon as possible. Otherwise, we intend to distribute notices about the Lecture on September 1. We are all looking forward to your visit and I hope it will be possible for you to spend a week or so at the NRAO in late November. Once your travel plans are firm, please let me know so that we can make the remaining local arrangements. Sincerely yours, Bill Howard W. E. Howard WEH: fmc OPERATED BY ASSOCIATED UNIVERSITIES, INC., UNDER CONTRACT WITH THE NATIONAL SCIENCE FOUNDATION

NATIONAL RADIO ASTRONOMY OBSERVATORY Leiden, August 1, 1967. EDGEMONT ROAD CHARLOTTESVILLE Dr. W.E. Howard III, National Radio Astronomy Observatory, POST OFFICE BOX : GREEN BANK, WEST VIRGINIA 26944
TELEPHONE 804-408-2014 Edgemont Road, Charlottesville, Va. 22901, TWX 204 - 240 - 2464 . . . U.S.A. me 23, 1967 Dear Dr. Howard, Director Sterre L have been hesitating with my answer to your letter Le of June 23. This has caused me to postpone this reply far too long. I apologize for the delay. Dear Professor Oort: It would evidently be quite attractive to combine my lecture with the HII Region Symposium, but it appears rather difficult to co-ordinate this with my further plans. The difficulty is that I have to be back in Leiden in the week beginning February 4. There is a special reason why this return date cannot be changed. I have already agreed to spend about 8 weeks in Pasadena. This period is already too brief, for, beside making a thorough study of the Palomar and Owens Valley observations on quasars and radio galaxies in general and on their interpretation in connection with the evolution of the universe, in which I have become actively interested, I wanted to try to do some observing on NGC 3115 with Schmidt. As I also want to make one or two brief visits to other Western observatories, A postponement of my departure for California to December 10 would make the schedule undesirably cramped. Therefore, I believe it would be better to stay with the initial choice of the week of November 27. As regards the subject of my lecture I would provisionally a dasuggest, either; er week. The decision may, of course, affect High-velocity hydrogen in the Galaxy I shor be looking forward to your reply. Large-scale distribution and motion of hydrogen in the Galaxy. Bill Hoursel With kindest wishes, sincerely yours, Assistant to the Director WEE/PJ Air Mail OPERATED BY ASSOCIATED UNIVERSITIES, INC., UNDER CONTRACT

### NATIONAL RADIO ASTRONOMY OBSERVATORY

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TELEPHONE 703 - 296 - 0211

GREEN BANK, WEST VIRGINIA 24944
TELEPHONE 304 - 456 - 2011
TWX 304 - 940 - 2481

June 23, 1967

Professor J. H. Oort Director Sterrewacht te Leiden Leiden, The Netherlands

Dear Professor Oort:

We are very pleased that you have accepted our invitation to give the 1967 Karl G. Jansky Lecture this fall. We can certainly choose an evening in the week beginning November 27 as you suggest, but one other possibility now arises that may appeal to you more than that date.

The NRAO, jointly with Arecibo, are sponsoring an HII Region Symposium that we hope you might be able to attend. It occurs just one week later than your suggested week, and the details are given in the accompanying letter. Would it be possible for you to come and deliver the Jansky Lecture the evening of December 8 or 9? You would then have a large audience of professional astronomers as well as the general NRAO-University of Virginia audience. I feel it would be quite worthwhile to combine the Jansky Lecture with the HII Region Symposium and, if you agree, we could make the necessary arrangements for December 8 or 9. However, please do not hesitate to ask us to stay with your initial choice of the week of November 27 if you prefer to come earlier.

I would appreciate knowing if you might be interested in the December 8 or 9 date. If so we will firm up the date; if not, we will choose a date during the earlier week. The decision may, of course, affect your choice of topic. We still hope you can spend a week or so here at the NRAO.

I shall be looking forward to your reply.

Sincerely yours,

W. E. Howard III

Associate Scientist and Assistant to the Director

Bill Howard

WEH/pj

Air Mail

## NATIONAL RADIO ASTRONOMI DESERVATORY 1967.

CHARLOTTESVILLE, VIRGINIA 22901

POST OFFICE BOX 2
BENK, WEST VIRGINIA 24944
THE STRUCK BM - 456 - 2011
TWX BM - 340 - 2481

Dr. William E. Howard III,
Chairman Jansky Lecture Committee,
National Radio Astronomy Observatory,
Edgemont Road,
Charlottesville, Va. 22901,
U.S.A.

Director Dr. Howard,

Thank you very much for your letter of April 12. I feel greatly honoured by the invitation of your Committee to given the Karl G. Jansky Lecture. I shall be pleased to accept this.

The period between October 23 and November 3 which you suggest is not very suitable for me, because I shall go to Caltech in the beginning of December, and will stay there until the end of January. I wonder whether an evening in the week beginning November 27 would be suitable. In that case I would not have to travel back and forth between Europe and the United States. I would certainly like to spend a few days with your group.

As regards the title I would prefer to postpone a decision on the exact subject until September or so. However, if for some reason it is desirable to have it at an earlier date, I can of course decide sooner.

I am looking forward to a visit to Charlottesville We would somewhat more leisure than at the last time I serievisited you and lecture title would be your choice. Some topic in galactic astronomy or 21-cm radio astronomy of 21-cm radio astronomy of priate, but we would be pleased with whatever subject you choose to treat. If you honor us by accepting, we will be pleased to pay your travel expenses between Charlottesville and Leiden, lodging and expenses while you are here, and an honorarium of \$500 for the lecture. We would suggest a lecture date on a week night between October 23 and November 3, but we can choose another date in the fall if that would prove more convenient for you.

If you accept, we would appreciate knowing the title of your lecture and the date you would prefer, so that we can proceed with some of the advance arrangements that will be necessary in order to prepare for your visit. I hope it will be possible for you to spend up to a week with us.

## NATIONAL RADIO ASTRONOMY OBSERVATORY

EDGEMONT ROAD
CHARLOTTESVILLE, VIRGINIA 22901
TELEPHONE 703 - 296 - 0211

GREEN BANK, WEST VIRGINIA 24944
TELEPHONE 304 - 456 - 2011
TWX 304 - 940 - 2481

April 12, 1967

Professor J. H. Oort Director Sterrewacht te Leiden Leiden, The Netherlands

Dear Professor Oort:

The Board of Trustees of Associated Universities, Inc. has established support for the Karl G. Jansky Lecture to be given each year at the NRAO in Charlottesville, Virginia, by a scientist usually chosen for his contributions to the field of astronomy. The NRAO Jansky Lecture Committee would like to extend to you our invitation to be the Jansky Lecturer for 1967.

The Jansky Lecture is semi-popular, broad in scope, and open to the public. For example, our last lecturer was John Bolton, who delivered an excellent introductory lecture on radio astronomy last October 28. His talk was very successful, well attended, and set the tone for future lectures in this series. He spent a week at the NRAO, visited informally among our staff, and gave us a colloquium while he was here.

We would be pleased if you would deliver the next lecture in this series. The topic and lecture title would be your choice. Some topic in galactic astronomy or 21-cm radio astronomy might be appropriate, but we would be pleased with whatever subject you choose to treat. If you honor us by accepting, we will be pleased to pay your travel expenses between Charlottesville and Leiden, lodging and expenses while you are here, and an honorarium of \$500 for the lecture. We would suggest a lecture date on a week night between October 23 and November 3, but we can choose another date in the fall if that would prove more convenient for you.

If you accept, we would appreciate knowing the title of your lecture and the date you would prefer, so that we can proceed with some of the advance arrangements that will be necessary in order to prepare for your visit. I hope it will be possible for you to spend up to a week with us.

Professor J. H. Oort -2-April 12, 1967 If you would like any further information about the Lecture, please let me know and I shall try to provide it for you. Dr. Heeschen, the NRAO staff, our Jansky Lecture Committee, and I would like to extend our sincere hope that you will be able to deliver this lecture here later this year. Sincerely yours, Bill Howard William E. Howard III, Chairman Jansky Lecture Committee WEH/jtk 

Leiden, November 9, 1967. KITT PEAK NATIONAL OBSERVATORY Operated by The Dr. G.P. Kuiper, ASSOCIATION OF UNIVERSITIES FOR RESEAR Lunar and Planetary Observatory, Under Contract With T University of Arizona, NATIONAL SCIENCE FOUNDATucson, Ariz. 85721, UNIVERSITY OF OSLEPORNIA UNIVERSITIES OF CHICAGO AND TEXAS HARVARD UNIVERSITY November 29, 1967 ITOMANA UNIVERSITY D NEVERSITY OF SHICH TOAN P.O. Box 4130 THE OHIO STATE UNIVERSITY UNIVERSITY OF WISCONSIN Tucson, Arigona 85717 YALE UNIVERSITY AC 602 327 - 5511 PRINCETON UNIVERSITY Cable Address: Beste Gerard, AURACORP, Tucson Zoals je waarschijnlijk weet zullen Mieke en ik de maanden December en Januari in Pasadena doorbrengen. Wij zouden het leuk vinden om op de terugweg Tucson te bezoeken en zowel de National Observatory als jouw Lei einstituut te bezoeken. Zouden 30 en 31 januari jou schikken? Wij zouden dan 30 januari om 2.25 aan kunnen komen met A.A. 136 en zouden 1 februari weer om 2.30 p.m. moeten vertrekken naar Dullas in Washington. Ik schrijf tegelijk met deze brief ook aan Nick Mayall. this is my first opportunity since returning Mieke en ik hopen erg dat dit bezoek zal kunnen doorgaan. Met hartelijke groeten, ook aan Sarah, the end of January. I shall do my best to be on hand and to meet your plane when you come from Los Angeles. Only an unexpected emergency call to leave Tucson at that time would prevent my welcoming you again to Tucson and this Objetvatory. Kay, of course, shares my feelings of delight about your coming, and we look forward with the greatest pleasure to seeing you again. With our very best regards and wishes, Sincerely yours, N. U. Mayall MUM: lje Britanis Lyde - Polonia On may that out in the day to have the



#### KITT PEAK NATIONAL OBSERVATORY

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ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY, INC.

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UNIVERSITY OF CALIFORNIA
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INDIANA UNIVERSITY
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THE OHIO STATE UNIVERSITY
UNIVERSITY OF WISCONSIN
YALE UNIVERSITY
PRINCETON UNIVERSITY

November 29, 1967

950 North Cherry Avenue P. O. Box 4130 Tucson, Arizona 85717 AC 602 327 - 5511 Cable Address: AURACORP, Tucson

Dr. J. H. Oort Sterrewacht Te Leiden 5 Leiden, Netherlands

Dear Jan:

This is my first opportunity since returning from Chile to write you how delighted we are to learn that you and Mieke will be able to visit Tucson next year at the end of January. I shall do my best to be on hand and to meet your plane when you come from Los Angeles. Only an unexpected emergency call to leave Tucson at that time would prevent my welcoming you again to Tucson and this Observatory. Kay, of course, shares my feelings of delight about your coming, and we look forward with the greatest pleasure to seeing you again.

With our very best regards and wishes,

Sincerely yours,

N. U. Mayall

NUM:lje

Bentw. 2 ja. - Poloman Sungadring a Bolingen

On mysellerd out on time des later 2 mides Wille

Leiden, November 9, 1967. Deiden, 9 movember 1967.

Dr. N.U. Mayall, Kitt Peak Observatory, Box 4170, Tucson, Ariz. 85717, U.S.A. 7207 Bast Gallfornie Blvd., Twoobnology,

Dear Nick,

Mieke and I will be spending December and January in Pasadena. I would very much like to use this opportunity to revisit Tucson. I wonder whether January 30 and 31 would be convenient for such a visit. At that time we would be on our return journey to Holland.

Pasadens, Cal. 97109,

STERRENACHT TE DEIDEN

If the days mentioned would be convenient to you we could come to Tucson by the American Airlines flight 136 from Los Angeles, arriving January 30 at 2.25 p.m. We would then have to leave again on February 1 at 2.30 p.m. I am also writing to Kuiper as I would like to visit his institute as well. ilets aan te doen. remaken, mear dear is

Both Mieke and I would be greatly looking forward to seeing you again.

With kindest wishes, Met hartelijke groeten.

sincerely yours,

PRINCETON, N. J.

Leiden, 9 november 1967.

Dr. E. Raimond,
Owens Valley Radio Observatory,
California Institute of
Technology,
1201 East California Blvd.,
Pasadena, Cal. 91109,
U.S.A.

Beste Ernst,

Wij hebben nu definitief geboekt op de vlucht van 3 december van Washington naar Los Angeles. Dit is vlucht TW 407 die om 20.58 in Los Angeles aankomt.

Ik kreeg net ook je brief van 31 october en dank je daar wel voor. We zullen alle problemen wel kunnen bespreken gedurende de problemen dat wij gezamenlijk in Pasadena paar dagen dat wij gezamenlijk in Pasadena zijn. Ook ons spijt het dat wij jullie niet zijn. Ook ons spijt het dat wij jullie niet niets aan te doen.

Davis is net gisteren hier aangekomen en zal op 22 november gaan promoveren.

Met hartelijke groeten,

Event am want in Winn R. is womening in interestate to 21 cay in Mark in 1 autom Tautem (hunted in 1) with At Mark many the?

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What is tige induction Richard? Lunder on him him he he has written

LYMAN SPITZER, JR.
659 LAKE DRIVE
PRINCETON, N. J.

Dec. 23, 1967

Dear Jan:

Your Christmas card, which we enjoyed so much gesterday, reminded me that here you have been in this country a month now and I have not even been in touch with you. I fear that my derelistion in this respect evidences a gross mindiration of effort on my part! I do hope I have not delayed so long that your schedule would not at this late stage permit a visit to Princeton.

and Miche will be able to stop off hore on your way both to Holland. I gother that you are leaving Passedera the end of January. Could you be persuaded to come here for a long week- end, the following and give us a colloquium? I worked you went a trustay, and give us a colloquium? On your remember, perhaps, our colloquia are normally on Tuesday. Othe days are possible, if there is no Tuesday convenient for you, but conflicte with other events many deplets the audience on other days. The astronomy in charge of our colloquia is

away for vacation at the moment, but I believe they are not outside spenkers scheduled for February. - and interned spenkers can easily be rescheduled. When will you be coming back east, and when could you conveniently manage to fit a Premieter visit into you schedule? Dank I are anxious to have you stay here with us in our new home, and I am sure that abnost any date aouth be fine for us, - until the middle of March, whe I must be in Tuesan for most of a week, and purhops Dreen also.

I hope you have a delighted Christman in Pasadera. We remembe so vividly how much we enjoyed you Christman with us some ten or more you again you again to seeing you again so I soon. February and Much in Private are not so it is attraction scanically as Haamstade in the autumn. I but we would at least offer you the warmant of welcomes.

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to your recent astronomical works. Most of my free

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Sincerely,

Lyman

tory

CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CALIFORNIA 91109 OFFICE OF THE PRESIDENT December 7, 1967 Dr. Jan H. Oort Mount Wilson Office 813 Santa Barbara Street Pasadena, California 91106 Dear Dr. Oort: This letter is to inform you that you have been granted a faculty appointment, as Research Associate in Astronomy, at the California Institute of Technology, concurrent with your stay here under the sponsorship of the Carnegie Institution, effective December 1, 1967, without stipend. This action was taken by the Institute Board of Trustees, at its meeting on April 20, 1967, upon the recommendation of the Director of the Mount Wilson and Palomar Observatories and with the approval of the Provost and the President of the Institute. With this courtesy appointment, you will be granted general faculty privileges on the campus, which include attending seminars and conferences, and the use of the libraries and facilities at the Athenaeum and gymnasium. We are happy to welcome you back to the Institute and hope you will enjoy renewing your associations here. For our records, will you kindly indicate your acceptance of this appointment on the enclosed copy of this letter and return it to the Faculty Office. Very truly yours, L. A. DuBridge President Provost cc: H. W. Babcock



## HISSINK & Co. N. V.

N.V. NIEUWE NATIONALE VERZEKERINGS SOCIÉTEIT N.V.S.

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Wy.

Wit

Algemene Bank N A.B.C. code 5 th ar

Bij beantwoording s. Servic vdH/RE Mevrouw J.M. Oort-Graadt van Roggen, Otamamanht 5

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA. CALIFORNIA 91109

OFFICE OF THE PROVOST

FH ab

enclosure

December 7, 1967

Betref

Mevrou

Dear Dr. Oort:

Naar a een aa

Zoals en C n

Wij ma binati het vl

Indien formul

In afw

24 mor

The enclosed letter supersedes that of December 5th, which you received this week. I regret very much the clerical error regarding your status at the observatories contained in the first letter and trust this will correct the records.

I hope you are enjoying your stay in Pasadena and are enjoying the many changes on the campus since your last visit. If we can be of help to you in any way while you are here, please notify this office. Again, I am sorry for the error in the original letter.

Sincerely yours,

Frances Hunghires (Mrs.) Frances Humphries Administrative Assistant

Service-kant

450

0-61125 0-133526

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aag-



### HISSINK & Co. N.V.

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Ma

W.

Bij beantwoording s.v.p. te vermelden: Service vdH/RB

Mevrouw J.M. Oort-Graadt van Roggen, Sterrewacht 5, Leiden.

AMSTERDAM-C., 1 november 1967.

Betreft: Reisverzekering.

Mevrouw,

Naar aanleiding van Uw schrijven d.d. 25 oktober j.l. doen wij U bijgaand een aanvraagformulier voor een reisverzekering toekomen.

Zoals hierop aangegeven zijn er drie mogelijkheden n.l. combinatie A, B en C met resp. f. 0,40, f. 0,60 en f. 0,80 premie per dag.

Wij maken U er nog op attent dat het vliegrisico heen en terug voor combinatie A bij de premie is inbegrepen, voor combinatie B en C moet voor het vliegrisico een toeslagpremie worden betaald van f. 1,25 resp. f.2,50.

Indien U van deze mogelijkheid gebruik wenst te maken, zien wij het aanvraagformulier gaarne ingevuld en door U ondertekend retour.

In afwachting,

Diggs mulering m 24 hov. It a met 3 dec. en van 29 jan. Hr met 3 H \$150 per prom

24 wov. t.e.n. 3 feb. \$10.80

7 + 31 + 31 + 3 = 72 d. 4 fgz. - \$57.60

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450

320 (6)

DEPARTMENT OF PHYSICS
HIGH ENERGY GROUP
THE UNIVERSITY OF MANCHESTER
MANCHESTER MI3 9PL

PGM/PC

(Physics - Ext. 34)

TELEPHONE: 061-273 333 XDODOXX

PROFESSOR P. G. MURPHY.

tions

. Pre -

17th July, 1970

Professor J. H. Oort, Director, University Observatory, LEIDEN, Netherlands.

Dear Professor Oort,

I would like to invite you to give a lecture in our Schuster Colloquium series at Manchester, on a subject of your choice. The audience would consist of postgraduate students and staff members of the physics department, who work in a variety of fields of research. We would pay all your travelling expenses from Leiden and, in addition, a fee of twenty five guineas.

The colloquia are held approximately monthly at 4.15 p.m. The best date would be Wednesday, October 21, but Wednesday, November 18 would also be possible. If a date in the autumn would not suit you, it would be possible to have the lecture in the winter term, after Christmas.

I hope you will be able to accept this invitation.

Yours sincerely,

P. G. MURPHY

Leiden, August 4, 1970.

Professor P.G. Murphy,
Department of Physics,
High Energy Group,
The University of Manchester,
Manchester. M13 9PL.
England.

Dear Professor Murphy,

With the same of the same

Thank you for your invitation to give a lecture in your Schuster Colloquium series. I shall be happy to do this; October 21st would suit me quite well, and I have therefore noted this date. November 18 would not be possible for me.

As a subject I would suggest "Galaxies and the Universe", in which I could deal with the problem of what such properties of galaxies as rotation, distribution and motions, instability phenomena in their nuclei, etc. can teach us about the properties of the universe.

of the nucleus of our Galaxy and indications of its instability" would be another possibility. You do not write about astronomers; am I right in assuming that they will also be invited to the colloquium?

Sincerely yours,

8.5.1968 320 (c)

Leiden, July 19, 1971. Continuing Education, Room 923 Campus Center, University of Massachusetts, Amherst, Mass. 01002. U.S.A. Dear Sir, Dear Sir, would you please reserve for me a single room at the Campus Center Further to my letter of June 2 I would be obliged to you if you could change my reservation at the Campus Center at the occasion of the American Astronomical Society meeting so that it would start on Sunday August 22nd instead of on the 23rd as previously requested. Yours sincerely, Yours sincerely, J.H. Oort J.H. Oort Du fin Frish him with the planet of word appears to their of the you could ching my universe at the Compan Center at the occasion I the Am Ada, Son meeting on that it would start on Sunday August 12 nd instead of on the 22 and as previously regarded.

Leiden, June 2, 1971. Continuing Education, Room 923 Campus Center, University of Massachusetts, Amherst, Mass.01002. U.S.A. Dear Sir, Would you please reserve for me a single room at the Campus Center of the University of Massachusetts for the days of the meeting of the American Astronomical Society, i.e. from the night of August 23rd up to and including the night of the 26th. If no space is available in the Campus Center I would like to have a Dormitory room. Yours sincerely, eptabol of the year charges or so explanation Entere oil un logies un de J.H. Oort hadt in 22 aug, on te autimatiser. YOUT SIGNALURE SE required on the entrance from a Dea Lin Militor, BAAS Further to my letter of June 2 I would appear to other of to som if you could change my resuration at the Compus Center at the occasion of the Am. Ash, Soc. muting so Ret it would start on Sunday August 22 nd instead of on the 23 rd as previously requested. Sincerely,

AMERICAN ASTRONOMICAL SOCIETY 211 FITZRANDOLPH ROAD PRINCETON, NEW JERSEY, 08540 609-452-3819 H. M. GURIN Executive Officer September 8, 1971 Dr. J. H. Oort Sterrewacht Leiden, Holland Dear Dr. Oort: During the processing of the abstracts which are to be included in the BULLETIN of the American Astronomical Society, it was noted that a signature for the acceptance of the page charges or an explanation for non-payment was lacking. As you know, authors or their institutions are expected to pay \$20. in partial support of publishing the abstract in the BAAS. Please affix your signature as required on the enclosed form and return it at your earliest convenience but no later than 8 October 1971 to: Editor, BAAS 211 FitzRandolph Road Princeton, N. J.08540 Sincerely yours, AM. Burn H. M. Gurin HMG:mgg Enclosure

TITLE: A High Resolution Radio Continuum Survey of M51 and NGC 5195 at 1415 MHz. D.S. Mathewson, P.C. Van der Kruit and W.N. Brouw

ABSTRACT GALLEYS AND PAGE PROOFS ARE NOT PROVIDED TO THE AUTHOR.

The abstract may include key references (parenthesized in the text) but should not exceed 300 words; also unusual symbols, long tables, and complex mathematical formulas should be avoided.

Content of abstracts should be as specific as possible, giving concise conclusions and numerical results. Abstracts which do little more than verbosely repeat the title will not be accepted.

The abstract of a paper by a scientist who is not a member of the Society must be countersigned below\* by a member. The address of the Editor of the Bulletin of the American Astronomical Society is: 211 FitzRandolph Road, Princeton, New Jersey 08540.

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We hereby agree to pay \$20 in partial support of the publication of this abstract in B.A.A.S.

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Office of the Secretary

Leiden, June 18th, 1971

Dr. Laurence W. Fredrick American Astronomical Society Leander MacCormick Observatory University of Virginia Box 3818 Charlottesville, Virginia 22903

USA Dr. J. H. Oort

Sterrewacht, Leiden, Holland

Dear Professor Obrt:

Dear Dr. Fredrick, mak you for your letter of 2 Jame 1971 conderning a paper of

the first results at the new large radio telescope; Thank you for your letter of June 8th.

With best wishes, I am

I am enclosing an abstract of the paper concerned.

. and it should arrive in my office prior to 7% June 1971. I look Forward to your reading this paper and to seeling you in Amherst. Sincerely yours,

J.H. Oort

p.o. A.M. Jacobs, secretary

it. They should submit the abstract in the peoper form for propolating

LW: vip

Legisder McCorplick Observatory University of Vinginia Box 3818 Circulatinaville, Virginia 22903 Taleshoon 703/924 7002

#### AMERICAN ASTRONOMICAL SOCIETY

Office of the Secretary

8 June 1971

Dr. J. H. Oort Sterrewacht, Leiden, Holland

Dear Professor Oort:

Thank you for your letter of 2 June 1971 concerning a paper of the first results at the new large radio telescope.

It would be entirely proper for Drs. Mathewson and van der Kruit to present a paper on the radio structure of M51, and for you to read it. They should submit the abstract in the proper form for preprinting and it should arrive in my office prior to 28 June 1971. I look forward to your reading this paper and to seeing you in Amherst.

With best wishes, I am

Sincerely yours,

Authorite
Laukence W. Fredrick
Secretary

LWF: vlp

Leander McCormick Observatory University of Virginia Box 3818 Charlottesville, Virginia 22903 Telephone 703/924-7002

Leiden, June 2, 1971. Dr. L.W. Frederick, A.A.S., Secretary, Leander McCormick Observatory, Box 3818, University Station, Charlottesville, Va. 22903. U.S.A. Dr. L.W. Frederick, Leander McCormick Observatory, University of Virginia, Prof. J. H. Cort Box 3818, Charlottesville, Va. 22903. Dear Dr. Frederick, I think it would be nice if at the meeting of the American Astronomical Society in August some of the first results obtained with our new large radio telescope in Westerbork could be presented. The most suitable subject would be the radio structure of M51. The paper would be by D.S. Mathewson and P.C. van der Kruit, who, however, will not be present. I would be glad to present it in their name if you think that it would be sultable this paper in addition to the introductory report which I had With kind regards,

sincerely yours, possible. You may submit an abstract containing up to 500 words typed to a column no widor than sincerely yours, If you submit an abstract, it should be in my office by Again, may I say that I'm delighted that you will speak to the Society and I look forward to your visit

# Office of the Secretary Prof. J. H. Oort

Leiden, May 19, 1971.

12 May 1971

Dr. L.W. Frederick, Leander McCormick Observatory, University of Virginia, Box 3818, Charlottesville, Va. 22903. U.S.A.

Sterrewacht Leiden, Holland

Dear Prof. Oort:

Dear Dr. Frederick, ad to learn that you have agreed to give a review paper at the 139th Meeting of the American

Thank you for your kindlletter of 12 May. I shall be very happy to prepare an introductory report. As a title I propose

"The Central Region of our Galaxy".

I shall try to prepare an abstract before 28 June, but
I am not sure that I shall get around to this in time, her which it would important in this case of a grand to the lime.

With kind greetings, including some of the infrared work, etc., as well as the radio studies. Your review will start at 09.30. I would appreciate receiving the title of your paper as soon as possible. You may submit an abstract containing up to 600 words typed in a column no wider than 12 centimeters.
If you submit an abstract, it should be in merely yours, 28 June 1971 at the latest.

Again, may I say that I'm delighted that you will speak to the Society and I look forward to your visit with great anticipation.

> Sincerely yourself Laurence W. Fredrick Secretary

LWF:rbj

cc: Prof. William Irvine Dr. David S. Heeschen

Leander McCormick Observatory University of Virginia Box 3815 Chorlomeralle, Vicninia 22903 Telephone 793/924-7902

#### AMERICAN ASTRONOMICAL SOCIETY

Office of the Secretary

12 May 1971

Prof. J. H. Oort Sterrewacht Leiden, Holland

Dear Prof. Oort: I am delighted to learn that you have agreed to give a review paper at the 139th Meeting of the American Astronomical Society.

I have assigned your review paper for the 25th of August 1971 and the time allotted is approximately one hour. I would suggest that you consider giving a 45 minute paper with 15 minutes for questions and answers and discussion -- principally discussion. There will be no other review papers in your session so you may consider including some of the infrared work, etc., as well as the radio studies. Your review will start at 09.30. I would appreciate receiving the title of your paper as soon as possible. You may submit an abstract containing up to 600 words typed in a column no wider than 12 centimeters. If you submit an abstract, it should be in my office by 28 June 1971 at the latest.

Again, may I say that I'm delighted that you will speak to the Society and I look forward to your visit with great anticipation.

Sincerely yours

LWF:rbj

cc: Prof. William Irvine Dr. David S. Heeschen

Leander McCormick Observatory University of Virginia Box 3818 Charlottesville, Virginia 22903 Telephone 703/924-7002

Leiden, August 13, 1971. Dr. Herbert Gursky, CHARLOTTESVILLE, VIRGIN Director Space Research Division, TELEPHONE 703-296-021 American Science and Engineering, TWX 510-587-5482 11 Carleton Street, Cambridge, Mass. 02142. POST OFFICE BOX 2 GREEN BANK, WEST VIRGINIA 24041 PECHON, ARIZONA 85717 TWX 710-938-1380 Dear Dr. Gursky, April 28, 1971 Thank you very much for your letter of July 28th with the kind invitation to visit you around the time of the Amherst meeting. I would very much have liked to do this, but unfortunately I can only arrive in the U.S. just before the meeting in Amherst and after that I have to proceed directly to New York for the Conference on Education in and History of Modern Astronomy where I promised to give an introduction. I hope that maybe some other time there will be an opportunity to visit your institute. Dear Diwith kind regards, We are very pleased that you will be able to give the review paper on the galactic center at the Amherst AAS mesincerely yours, redrick, the AAS secretary, will get in touch with you a little later about details of the meeting. I look forward very much to seeing you in Amherst. Sincerely yours, Sove Herant D. S. Heaschen DSH/pj

## NATIONAL RADIO ASTRONOMY OBSERVATORY EDGEMONT ROAD CHARLOTTESVILLE, VIRGINIA 22901 TELEPHONE 703-296-0211 TWX 510-587-5482

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TWX 710-938-1530

C/O KITT PEAK NATIONAL OBSERVATORY
P. O. BOX 4130
TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

April 28, 1971

Dr. J. H. Oort Sterrewacht te Leiden Leiden, THE NETHERLANDS

Dear Dr. Oort:

We are very pleased that you will be able to give the review paper on the galactic center at the Amherst AAS meeting. Larry Fredrick, the AAS secretary, will get in touch with you a little later about details of the meeting.

I look forward very much to seeing you in Amherst.

Sincerely yours,

Dave Neesel

D. S. Heeschen

DSH/pj

NATIONAL RADIO ASTRONOMY OBSERVATORY EDGEMONT ROAD CHARLOTTESVILLE, VIRGINIA 22901 TELEPHONE 703-296-0211 TWX 510-587-5482 Leiden, March 29, 1971. POST OFFICE NOT 2 REELN BANK WEST VIRGINIA 24044 CO KITT PEAK NATIONAL OFFICE VATORS TWE TID-SOLLING Dr. D.S. Heeschen, National Radio Astronomy Observatory, March 17, 1971 Edgemont Road, Charlottesville, Va. 22901. U.S.A. Professor J. H. Oort Sterrewacht te Leiden Leiden Dear Dr. Heeschen, Thank you for your letter of 17 March. I shall be very pleased to prepare a general introductory report on the central region of The Amour Galaxy for the meeting of the American Astronomical Society in Amherst. I do not know whether there is anything very new to report, I am wbut Isshall do my best to eprepare a general review. that session. These special might well be desirable to ask one of the infrared observers come ato report on the latest results in their domain, and possibly there a mornwould also be news to report by somebody else on molecular lines. or two invited speakers and the remainder of the session given over to contributed paWith kindesthwishession is scheduled in parallel with the special session so that everyone attending the meeting, nowadays usually several hundred people, can attend the special sessionsincerely yours, In order to emphasize your own extensive and unique contributions, I propose that you be the only principal speaker and talk for perhaps an hour or a little longer. If there are one or two individuals whose current specific work might especially complement what you would speak of, we could ask them to give reports, immediately following yours, that would be somewhat longer than the usual 10 minute contributed paper. I think that this, together with the usual contributed papers, could make a very interesting program. The AAS unfortunately has no money for either expenses or honorarium. I understand that you may be in the U.S. at this time however. I hope very much that you will accept this invitation. I'm sure that the AAS membership would welcome and appreciate your participation in the session on the galactic center. Sincerely yours, David Heret D. S. Heeschen Vice President, AAS DSH/pj OPERATED BY ASSOCIATED UNIVERSITIES, INC., UNDER CONTRACT WITH THE NATIONAL SCIENCE FOUNDATION

NATIONAL RADIO ASTRONOMY OBSERVATORY EDGEMONT ROAD

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P. O. BOX 4130
TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

March 17, 1971

Professor J. H. Oort Sterrewacht te Leiden Leiden, THE NETHERLANDS

Dear Professor Oort:

The American Astronomical Society, at its meeting in Amherst, Massachusetts August 24-27, will have a special session devoted to the galactic center. I am writing to invite you to be the principal speaker at that session.

These special sessions, on topics of current particular interest, have become a regular and popular feature of the AAS meetings. Each consists of a morning or afternoon devoted to the subject in question, with usually one or two invited speakers and the remainder of the session given over to contributed papers. No other session is scheduled in parallel with the special session so that everyone attending the meeting, nowadays usually several hundred people, can attend the special session.

In order to emphasize your own extensive and unique contributions, I propose that you be the only principal speaker and talk for perhaps an hour or a little longer. If there are one or two individuals whose current specific work might especially complement what you would speak of, we could ask them to give reports, immediately following yours, that would be somewhat longer than the usual 10 minute contributed papers. I think that this, together with the usual contributed papers, could make a very interesting program.

The AAS unfortunately has no money for either expenses or honorarium. I understand that you may be in the U.S. at this time however.

I hope very much that you will accept this invitation. I'm sure that the AAS membership would welcome and appreciate your participation in the session on the galactic center.

Sincerely yours,

D. S. Heeschen

Vice President, AAS

DSH/pj

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#### UNIVERSITY OF MARYLAND

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF PHYSICS AND ASTRONOMY

MAILING ADDRESS:
ASTRONOMY PROGRAM
UNIVERSITY OF MARYLAND
COLLEGE PARK 20742

August 16, 1971

Professor J. H. Oort President Kennedylaan 169 Oegstgeest The Netherlands

Dear Jan:

Thank you for your letter. We are very pleased to hear that you will be able to visit us at the University around September 22, and also that you will be able to stay with us. I shall contact Mrs. Rubin as you suggest to tell her of your plans and work out some joint arrangements.

Looking forward to seeing you shortly,

Yours sincerely,

Frank J. Kerr

Professor of Astronomy

FJK:1s

UNIVERSITY OF MARYLAND DEPARTMENT OF PHYSICS AND Leiden, August 9, 1971. MAILING ADDRESS ASTRONOMY PROGRAM UNIVERSITY OF MARYLAND Dr. F.J. Kerr, COLLEGE PARK 20742 Astronomy Program, University of Maryland, College Park, Maryland 20742. U.S.A. Professor J. H. Oort President Kennedylaan 169 Degstgeest The Netherlands Dear Frank, Dear Jan: Thank you for your letter of August 4th. I shall be happy to come to Washington and give a colloquium on Wednesday, September 22 and to stay a couple of days around that time in order to talk with the astronomers at the University of Maryland and at the Department of Terrestrial Magnetism. I got a letter from Mrs. Rubin the other day, inviting me to visit their institute. Perhaps you could contact her so that the colloquium could be a joint affair for the two institutes. As a title I would suggest: Some recent results on the radio structure of galaxies, obtained with the Westerbork Synthesis Radio Telescope. I would be very happy indeed to accept your invitation to stay with Maureen and you if you are this will not cause too much trouble. Looking forward to seeing you soon, incerely, sincerely yours, Frank J. Kerr Professor of Astronomy FJK: 1s 000

#### UNIVERSITY OF MARYLAND

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF PHYSICS AND ASTRONOMY

MAILING ADDRESS:
ASTRONOMY PROGRAM
UNIVERSITY OF MARYLAND
COLLEGE PARK 20742

August 4, 1971

Professor J. H. Oort President Kennedylaan 169 Oegstgeest The Netherlands

Dear Jan:

Thank you for your letter. I am glad to know that you hope to have time to visit our department while you are at Princeton. Could I suggest Wednesday, September 22, for a colloquium, as there are certainly many people here who would be very interested to hear about your recent results, and then we would be pleased for your visit to extend before or after that date, for as long as you can spare the time.

Maureen and I would like to invite you to stay with us while you are here, if you would like to do so, and of course this invitation includes Mieke, if she has any possibility of coming here too.

With best wishes to Mieke and yourself,

Yours sincerely,

Frank

Frank J. Kerr

Professor of Astronomy

FJK:1s

#### UNIVERSITY OF MARYLAND COLLEGE OF ARTS AND SCIENCES DEPARTMENT OF PHYSICS AND ASTRONOMY MAILING ADDRESS: ASTRONOMY PROGRAM UNIVERSITY OF MARYLAND

COLLEGE PARK 20742

July 14, 1971

Dr. J. H. Oort Sterrewacht 5 Leiden The Netherlands

Dear Jan:

I see from the programs of several meetings that you will be on this side of the Atlantic shortly, for at least a few weeks. Maureen and I would very much like to invite you (and Mieke, if she will be with you) to our house for dinner, if there is some suitable occasion when you will be in our vicinity. Gart is away at present, and I have just returned from vacation, so I do not know whether he has already invited you to visit the Department, but we would of course be delighted if you could manage to spend some time here.

As far as dinner is concerned, Saturday, August 21, is an evening when some other interesting people will be at our house, and we wonder if by chance you would be in this region at that time. Otherwise, I hope we can arrange something before or after the Green Bank symposium, on some date suitable to you.

Maureen joins me in sending best wishes to you and Mieke.

Yours sincerely,

Frank J. Kerr

Professor of Astronomy

FJK:1s

Leiden, July 21st, 1971.

Laiden, Sugare 2, 1971.

Dr. F.J. Kerr, Astronomy Program, University of Maryland, College Park, Maryland 20742. U.S.A.

Dear Frank,

Thank you very much for your kind letter of July 14th. Unfortunately I shall not be able to be in Washington on August 21, because I am only arriving at Amherst in the evening of August 22nd. Mieke is not coming to the Green Bank conference, but we are both planning to stay in Princeton from September 9 to October 4. I hope there will be a possibility, at least for myself, to pay a visit to your department during that time and possibly give a colloquium on some of our recent Westerbork results.

With best wishes to Maureen and yourself, like to visit

the astronomical department of the University of Haryland. If you wish I could give a colloquium, either on the central region of our Galaxy or on some recent results o'sincerely yours, the Radio Telescope at Westerbork concerning nuclear activity in galaxies in general.

pearby, plain kind regards, and we will make the necessary

ments for you and Mrs. Oort if she is sincerely yours,

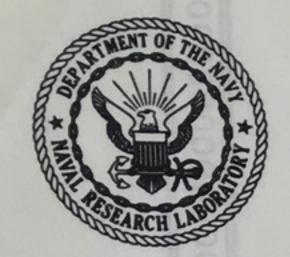
our latest work on the M31 huclear disk is to appear and A ked I am enclosing a preprint. I would appreciate any

10

Leiden, August 2, 1971. CARNEGIE INSTITUTION OF WASHINGTON BEAN BROAD BRANCH ROADDY. Wera C. Rubin, WASHINGTON D. C. 20 Department of Terrestrial Magnetism, 5241 Broad Branch Road, Washington, D.C. 20015. U.S.A. July 23, 1971 Prof. J. H. Oort Sterrewacht te Leiden Holland The Netherlands Dear Mrs. Rubin, Dear Prof Thank you very much for your letter of July 23. and the enclosed paper on the emission lines in the nuclear disk of M31, with which I am looking forward to read with intense interest. It mightwwell be possible for me to spend a few days at DTM in September. Between September 10 and October 2 I shall be the mostly in Princeton, where you can reach me at the Observatory. any tilf I come to Washington I would of course also like to visit local the astronomical department of the University of Maryland. If you wish I could give a colloquium, either on the central region of our Galaxy or on some recent results obtained with the Radio Telescope at Westerbork concerning nuclear activity in galaxies in general. With you. If you can accept this invitation, either for September or at a later date when you will be nearby, please kind regards, and we will make the necessary arrangements for you and Mrs. Oort if she is accompanying, you. Our latest work on the M31 nuclear disk is to appear shortly, and I am enclosing a preprint. I would appreciate any comments you have. With best wishes, Sincerely yours, Vera C. Rubin Vera C. ambin Preprint enclosure 000

CARNEGIE INSTITUTION OF WASHINGTON DEPARTMENT OF TERRESTRIAL MAGNETISM 5241 BROAD BRANCH ROAD, N. W. WASHINGTON, D. C. 20015 TELEPHONE: 966-0863 AREA CODE 202 July 23, 1971 Prof. J. H. Oort Sterrewacht te Leiden Holland, The Netherlands Dear Prof. Oort: I have just seen the program of the August, meeting and noted with great interest your invited paper on "The Central Region of our Galaxy". Because our recent work on M31 has led us into the central region of that galaxy, I am very interested in your talk. Unfortunately, during August I will be vacationing in the west with the family, so will not be attending the meetings. Will you have any time to spend in Washington following the Greenbank High Velocity Cloud Conference? We would be honored if you could spend a few days visiting with us at DTM as a guest of the Department of Terrestrial Magnetism. I think our varied activities in radio and optical astronomy would be of interest, and I know we would profit from discussions with you. If you can accept this invitation, either for September or at a later date when you will be nearby, please let me know, and we will make the necessary arrangements for you and Mrs. Oort if she is accompanying you. Our latest work on the M31 nuclear disk is to appear shortly, and I am enclosing a preprint. I would appreciate any comments you have. With best wishes, Sincerely yours, Vua C. Rubin Vera C. Rubin Preprint enclosure 000000

KANDIAH SHIVANANDAN COM 7126,3 SPACE SCIENCE DIVISION



#### NAVAL RESEARCH LABORATORY

WASHINGTON, D.C. 20390

IN REPLY REFER TO:

Septe 18 1971

Dear Professer Oork: DRY FOR COSMIC RAY PHYSICS

Endosed please find of your semmar at NR

I will try to contack your or Professor Kerr on Wednesday Sept 22 and make arrangements for transportation to NRL on Thursday morning. Probably I

will personally pick you up. I can be contacted either at my office (767-2749) or home (652-4536)

if any further ossistance is needed.

yens Sincoraly

K. Shinandar

and

LABORATORY FOR COSMIC RAY PHYSICS
NAVAL RESEARCH LABORATORY
WASHINGTON, D.C.

#### JOINT COLLOQUIUM

Speaker: Prof. J. H. Oort

Leiden Observatory Leiden, Holland

Subject: "RADIO STRUCTURE OF GALAXIES"

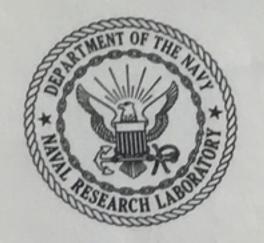
Time: 10:00\* a.m., Thursday

23 SEPTEMBER 1971

Place: Auditorium, Bldg. 222, NRL

\*Coffee at 9:30 a.m.

Persons from outside the Laboratory who are American citizens and wish to attend the meeting may obtain passes for the purpose in Building 72 by making prior telephone arrangements with the Security Office, 767-2996 (Government Tie Line 197, X2996). These passes must be countersigned by a Laboratory representative at the conclusion of the meeting.



#### NAVAL RESEARCH LABORATORY

WASHINGTON, D.C. 20390

IN REPLY REFER TO:

7126.3-27:KS:jmw

11 August 1971

Prof. J. H. Oort Leiden Observatory Sterrewacht Leiden, Holland

Dear Prof. Oort:

I am writing for Dr. Herbert Friedman, Superintendent of the Space Science Division, to extend to you an invitation to visit us at the Naval Research Laboratory. We would like you to address a joint colloquium of the E. O. Hulburt Center for Space Research and the Cosmic Ray Group which is under the Chairmanship of Dr. Maurice Shapiro.

Our colloquia are usually held on Thursdays, preferably in the morning at 10:00 a.m. for a period of 45 minutes to an hour, followed by a short question period. In the afternoon and possibly the following day, the speaker visits with the scientists in the various research groups which might be of interest to him. We shall be able to pay an honorarium of \$100.

I would very much appreciate if you could advise me as to a suitable date anytime between September 1971 and May 1972, together with a topic which we could include in our preliminary announcements.

Do 23 840

Yours sincerely,

K. Shiyanandan Kandiah Shiyanandan Code 7126.3

Telephone: Area Code 202/767-2749

Leiden, August 20, 1971. Leiden, October 22, 1971.

Mr. K. Shivanandan,
Code 7126.3,
Naval Research Laboratory,
Washington, D.C. 20390.
U.S.A.

Dear Mr. Shivanandan,

Thank you for your letter of August 11th. In principle I would be pleased to give a colloquium at the Naval Research Laboratory. I intend to be in Washington on September 22nd, when I would give a colloquium at the Astronomy Program of the University of Maryland on: Some recent results on the radio atructure of galaxies obtained with the Westerbork Radio Telescope. If you wish I could give a colloquium at your laboratory on the following day on the same general subject, or on the central region of our galaxy, about which, however, I am giving an introductory report at the Amherst meeting of the American Astronomical Society. Alternatively I could also report on recent results concerning high-velocity hydrogen, on which there will be a small conference in Green Bank in the beginning of September. Dr. Friedman could select the topic he prefers, but I would like to knowbbeforehand what he has selected. You could reach me in Princeton c/p Dr. A.H. Oort, 20 Montgomerey Avenue, Rocky Hill, N.J. 08553, where I shall be from September 2-5 and after September 9.

Yours sincerely,

Columbia University in the City of New York New York N.Y. 10027 Leiden, October 22, 1971. DEPARTMENT OF ASTRONOMY Mrs. S. Simkin, Department of Astronomy, Columbia University, New York, N.Y. 10027. U.S.A. Columbia University in the City of New York DEPARTMENT OF ASTRONOMY Dear Mrs. Simkin, October 12, 1771 Thank you very much for your letter of October 12 and the enclosed cheque. I also enjoyed my visit to Columbia and only regretted that it could not be longer. Thank you once more for the extremely nice dinmerparty which you and your husband arranged in your flat.

With kindest regards,

Since Dr. Woltjer

sincerely yours, is not accounting dypartment. before that time than Thank you again for talking to us and for being such a but night-resolution delighteful quest. schweday afternoon. I h objects. on to you when I spoke go that it was so

st 27, 1971

#### Columbia University in the City of New York

DEPARTMENT OF ASTRONOMY

New York, N. Y. 10027

October 12, 1971

Dear Professor Oort,

Your check for the colloquium

finally made its way through

The labyrinth of Columbia's

accounting department.

Thank you again for talking

to us and for being such a

delightful quest.

Anson Sembeni

belated telephone
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an honorarium, and i can make reservation

out high-resolution ednesday afternoon. I otes of M51; they are out NGC 3115 and show or the type of a objects.

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tfully,

M. Simkin

August 27, 1971

Dr. J.H. Oort
Department of Astrophysical Sciences
Princeton University
Princeton, N.J. 08540

Dear Professor Oort,

When I arrived at Columbia today, I received a belated telephone message from Professor Woltjer telling me that I should invite you to give a colloquium here while you are in the neighborhood. Since Dr. Woltjer is not planning to return until September 16, he hopes that it will be possible for you to visit sometime after that date. Columbia is not officially in session until the last week in September and you will most likely have a smaller audience if you chose to come before that time than you will if you come at a later date, so it is even possible for you to pick the size of the group to which you will lecture.

We will be able to pay you travel expenses and an honorarium, and if you would like to stay overnight in New York City I can make reservations for accommodations.

I, personally, am very anxious to hear more about high-resolution surveys of spiral galaxies which you talked about Wednesday afternoon. I could spend several hours just staring at the isophotes of M51; they are that impressive. I am also very anxious to talk about NGC 3115 and show you some of the reduction techniques I have developed for the type of spectroscopy involved in measuring rotation for such objects.

I am very sorry I did not extend this invitation to you when I spoke to you on Wednesday but at the time I did not realize that it was my job to do so.

Respectfully,

Susan M. Simkin

Princeton University Observatory Leiden, February 1, 1971. PEYTON HALL PRINCETON, NEW JERSEY 08540 June 11, 1971 Dr. H. Spinrad, Berkeley Astronomy Department, University of California, Berkeley, Cal. 94704, Dr. Jan H. Cort U.S.A. University of Leiden Leiden, Netherlands Dear Jan: Dear Dr. SSpinrad, Doreen and I were very happy to receive your letter of June 2nd and to read that the Thank you for your letter of January 18 and the enclosed reprint. This number of the Ap J has not yet arrived in Leiden. We shall certainly also observe Maffei 2. Is there any chance As that it is in any way similar to Maffei 1? If so, this would seem Septemoto me still more exciting than Maffei I alone! in high second re-I believe the have two programmes at Westerbork on elliptical galaxies; so we wI therefore hope that in half a year we shall know more about the statistics of their radio emission various symposis are still somewhat uncertain. The summer is the one time when I am free for relatively concentrated scientific research, and I am tempted to spend as much time as possible in I should like to ask your advice in another matter. From the Se September 6 to 8 a small international "seminar" will be held at whethe Green Bank on high-velocity hydrogen. It would be extremely valuable if we could interest somebody from the Lick Observatory in optical vou thobservations of these features (viz. interstellar absorption measurements). Would you yourself be interested, or, if not, could you suggest somebody at Lick who could reasonably be hoped to be of Se willing to consider an observing programme? In that case we would wish to extend an invitation to attend this small 30-35 people) conference. With best wishes, Lyman Spitzer, Jr. sincerely yours, LS: vn P.S. I should add that Martin Schwarzschild and Bob Danielson will probably not be here in September, since they expect to be away for a Stratoscope launch. It is possible, of course, that the launch may be postponed.

# Princeton University Observatory PRINCETON, NEW JERSEY 08540 June 11, 1971 Dr. Jan H. Oort University of Leiden Leiden, Netherlands Dear Jan: Doreen and I were very happy to receive your letter of June 11, 1971

Doreen and I were very happy to receive your letter of June 2nd and to read that there is a chance of your being here in late summer. All of us in the Observatory would be honored and delighted to have you occupy an office in Peyton Hall during your stay.

As regards schedules, Doreen and I may be away in late August and early September but will definitely be here after September 8th, when Princeton schools begin; as you know, Pixie is in her last year in high school here. I believe that the Seminar on High-Velocity Hydrogen ends on this same date so we would definitely be here during your stay.

My own plans in connection with these various symposia are still somewhat uncertain. The summer is the one time when I am free for relatively concentrated scientific research, and I am tempted to spend as much time as possible in Princeton. I am much attracted by the Amherst meeting and by the Seminar on High-Velocity Hydrogen, but at the moment I do not know whether I shall go to either. I am sure it would be vastly more pleasant and probably more profitable scientifically to discuss these meetings with you than actually to attend them myself!

In any case, we shall look forward eagerly to seeing you for as much of September as you can spare here in Princeton.

Sincerely yours,

Lyman Spitzer, Jr.

LS:vn

P.S. I should add that Martin Schwarzschild and Bob Danielson will probably not be here in September, since they expect to be away for a Strato-scope launch. It is possible, of course, that the launch may be post-poned.

Leiden, 3 May, 1971.

Dr. G.L. Verschuur,

Leiden, June 2, 1971.

Dr. Lyman Spitzer, J...,
Princeton University Observatory,
Princeton, N.J. 08540.
U.S.A.

National Redio Astronomy Observatory,

Dear Dr. Verschuur,

Dear Lyman, locity Hydrogen.

As you may know I have agreed to prepare an "account" on the development of Galactic Structure and Dynamics in the general period between 1920 and 1940 at the Minnaert Memorial Conference, held in New York from August 30 to September 1. I am also planning to attend the A.A.S. meeting in Amherst, where Heeschen asked me for an introductory talk on the central region of the Galaxy; and to go in the beginning/to the small conference on High-Velocity Hydrogen in Green Bank.

I must applogize for the lateness of my reaction to your circular letter

1 J Syrumh

I hope very much that Mieke will find it possible to accompany me. Though our plans are still somewhat uncertain we would certainly very much like to spend some time in Princeton after these meetings. Mieke would like that of course in the first place to be with Bram and Bineke and the grandchildren as well as with Doreen and our other good friends in Princeton, while I would enjoy, in addition, the opportunity of the various possibilities for scientific discussions with staff members and students. I wonder whether you could have space in an office available, so that I could work perhaps a few weeks at the Observatory. I could bring some data on recent work with the Westerbork telescope which you may be interested in. It would be wonderful to be again in Princeton!

As I wrote our plans are not yet quite fixed; Woltjer had suggested that I come to Columbia, but I don't think we could manage to do both things.

There is no doubt, however, that we shall in any case have a good opportunity to see each other, if, at least, you will yourself be in Princeton in September.

With love from Mieke and me to both of yout,

yours,

We were happy to learn about Lutie's marriage. We hope that you and Doreen are thoroughly happy with her new life.

Leiden, 3 May, 1971. Dr. G.L. Verschuur, National Radio Astronomy Observatory, Edgemont Road, Charlottesville, Va. 22901. U.S.A.

Dear Dr. Verschuur,

Telem: 31476

I must apologize for the lateness of my reaction to your circular letter of March 18 to the members of the Organizing Committee for the Seminar on High-Velocity Hydrogen. I should like to make the following

The prospects for a successful conference seem to be good. The main thing I am still worrying about is the small interest so far shown by optical astronomers. In the beginning of March I had an opportunity to talk with 2. Date Oke and Herbig about the problem. Both of them promised to put two stars on the programme for their observing run in April. We sent to each detailed data on two suitable condidates; I have not yet heard whether they have been able to get the spectra wanted. I would hope that if the results for the two stars look promising Herbig could still be persuaded to come to the Green Bank conference.

Some 3. Programme I feel reluctance to undertake the entire set of subjects you had allotted to me in your tentative programme. It would be more pleasant for the participants as well as for me personally if, in particular, the possible effects of interaction with the Magellanic Clouds, could be introduced by somebody else. I have not studied this problem and am very uncertain whether I shall find the time to do so before September. made to discuss general relations. May be one should we as improduction on

"connecticWithtbest wishes and intermediate-velocity a" and attach

and magnetic fields"

"possible relation between high-velocity features, ession filesests sincerely yours,

A. Participata. I am hungy that you odded Kahn to your list. I would uggest Sciena as a possible further participant. He and his pupils susporking on the theoretical grables of intersection between so intergratio wind and the Further was prelyes were I am and the state of the Dr. R.C. Street (temportrilly the leading to the Parties of the Parties of the age at atensive three of Dwingeles her toth tage live made seasons or More and termediate welcoity gas, Strong gashin to have down to the server on between explarization of reduce galapsian and high-walescopy almost to the s real, it would be most interesting; bowever, I have my yet the the soults.

Should we add somebody from the somewhole deplerated languages or Australia? I heard from Prof. wit deline the Varsavey to an the moment not working in the astronomical field

With best wishes, The Blackson but the terms of the

J.H. 0/do

Leiden, 25 nover 1970.

Telex: 31476

ww ref.

La conference

Dr. G.L. Versch National Radio onomy Observatory, Edgemont Road, Charlottesville 22901.

Dear Dr. Verschuur,

De Hooggeleerde Hoor

Thank you for your circular letters of 15th Octobend 16th November. I should like to make the following comments:

- 1. Title. I see no great objection to a general title likigh-Velocity Hydrogen.
- 2. Dates of the meeting.
  You mention/on Education and History of Modern Astronomto be organized by the A.A.S. At an earlier occasion I had been inform of a symposium on the History of Astronomy to be organized by the New R Academy of Sciences around the same time. I wonder whether it has been combined with the A.A.S. In any case one should be careful to aid overlap.
- 3. Programme.
  Would it not be desirable to plan a separate discussion observational evidence concerning the gaseous halo of the galaxy?

I note that you have listed a number of people f giving accounts of their own surveys. This is alright, but in addition aattempt should be made to discuss general relations. May be one should ve an introduction on "connection between high- and intermediate-velocity g" and also "possible relation between high-velocity features, emsion filaments and magnetic fields"

4. Participants.

I am happy that you added Kahn to your list. I would uggest Sciama as a possible further participant. He and his pupils are orking on the theoretical problem of interaction between an intergalctic wind and the galaxy.

Further suggestions are: J. van Kuilenburg (Leiden) and Dr. R.G. Strom

(temporarily at Leiden). Van Kuilenburg has made an xtensive survey at (temporarily at Leiden). Van Kuilenburg has made an xtensive survey at Dwingeloo for both negative and positive high— and itermediate—velocity gas. Strom seems to have found evidence of a connecton between depolarization of radio galaxies and high—velocity clouds. If this s real, it would be most interesting; however, I have not yet seen his rsults.

Shoud we add somebody from the Southern Hemisphere? (Argentina or Australia? I heard from Prof. v.d. Hulst that Varsavky is at the moment not working in the astronomical field).

Charle With best wishes, zen en vandaar weten bij New York dan bij was

J.H.0/do



# ruys-intraned reisagenten

De Hooggeleerde Heer Prof. J.H. Oort Pres. J.F. Kennedylaan 169 Oegstgeest

Leiden Nieuwe Rijn 7 Telefoon 01710 - 4 35 41 Telex 31564 inpas nl Telegramadres intrapassage

uw ref.

onze ref.

Leiden, 03 Aug. 171

Zeer geachte Heer Oort

Betreft: Uw reis naar de U.S.A. dd. 22 Aug.

Met referte aan Uw bezoek te onzen kantore van verleden maand delen wij U mede, dat wij zojuist bericht hebben ontvangen, dat de verbindingen tussen New York respt. Washington en Princeton N.J. niet meer per vliegtuig worden onderhouden. Uw reis is momenteel alsvolgt gereserveerd:

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Wij zullen gaarne van U vernemen, of U de reserveringen zo wilt handhaven, of dat het voor U gemakkelijker is om vanuit New York naar Charlottesville te reizen en vandaar weer terug naar New York. Princeton ligt nl. dichter bij New York dan bij Washington





De Hooggeleerde Heer Prof. J.H. Oort Oegstgeest

03 Aug. 171

Er is een dagelijkse dienst van New York naar Charlottesville vertrekkende om 10.50 van Newark Airport. Aankomst Charlottesville om 11.49, vlucht PI73. U kunt ook van La Guardia Airport vertrekken met vlucht AA402 om 11.30 naar Washingtom, aankomst om 12.28 en vandaar doorreizen met de reeds gemaakte reservering.

Van Charlottesville op 09 Sep. kunt U rechtstreeks vligen naar New York-La Guardia Airport met vlucht PI74, vertrek om 16.23 aankomst om 17.20

Voorts hebben wij het genoegen U te berichtendat wij een bedrag groot us\$.522.- via de T.W.A. vabuit Amerika hebben ontvangen, ter verrekening met Uw reiskosten.

Uw berichten aangaande de door U geweste reisroute naar Charlottesville met belangstelling tegemoet ziende tekenen wij

> hoogachtend RUYS-INTRANED

H.Th.E. Reisen

330 (d)

Leiden, June 16, 1972.

Prof.Dr. S.G. Struggen, Prof. E.B. Holmbarg. Astronomical Observatory, Вок 515. S-751 20 Uppsala, Swaden,

Dear Dr. Holmberg.

Upon our return home I should like to thank you and Mrs. Holmberg very much for your great hospitality in Uppsala. My wife and I are keeping the very best memories of our stay in Uppsala, and only wish it could have been longer.

It was also very pleasant to meet some of the younger astronomers at your Observatory. They are a fine lot.

he thought could be remaided for the collaboration with Bolleck, And Mr. On Thursdaymorning you showed me some profiles through spiral arms in different colours. There was no time then to go into the details of this investigation, which interestsme very particularly in connection with our speculations on the origin of spiral arms. I wonder whether you could give me some details on this work, or just a copy of your profiles with a legend? Have you done similar work on other spirals?

The meeting between ayaban and was, I think, an assential part of the With repeated warm thanks, preparation for this co-oper

It was extremely kind of you to come to make sincerely, by morning In Copenhagen. I was only sorry that the fact that our plana was delayed left us so little time fod a more quiet conversation.

"I hed promised to give or send you a copy of Vincent Icke's thesis, but it was not ready at the time I left Leiden, I am now sending you a gopy under separate cover.

With very best wishes,

yours ever,

Leiden, June 14, 1972.

Prof.Dr. B.G. Stomgren, Observatoriet, Østervoldgade 3, Copenhagen - K. Denmark.

Doar Par Olof,

Dear Bengt, and of the Kim plane from Copenhages to Amsterday Our plande from Göteborg was half an hour late in Copenhagen, so there was not time to telephone to you and tell you about the conversations I had with Per Olog and, in particular, with Rydbeck. Rydbeck as well as the members of his apparently very capable group gave me quite a warm welcome. From this as well as from further conversation with him I got the impression that he is now in full agreement with the project of a co-operation with Holland. he was completely prepared to let Mr. Kollberg make a maser for us, which he thought could be financed from the 1000000 Kr. which according to Per Olof's proposal would be set aside for the collaboration with Holland. And Mr. Kollberg seemed very willing to come to Holland in August or September to discuss the practical possibilities for adaption to the Dwingeloo and Westerbork telescopes. So, I think, everything is for the present well on its way. I very much hope the co-operation will become a success.

The meeting between Rydbeck and van de Hulst, van der Laan and Casse which you had organized in Copenhagen was, I think, an essential part of the which you had organized in the preparation. , I think, an essential the seasons.

It was extremely kind of you to come to meet us on that rainy morning in Copenhagen. I was only sorry that the fact that our plane was delayed left us so little time for a more quiet conversation.

I had promised to give or send you a copy of Vincent Icke's thesis, but it was not ready at the time I left Leiden. I am now sending you a copy under separate cover.

With very best wishes,

yours ever,

THE DESTRUCTION OF THE PARTY OF

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Monday evening June 12, 1972.

Dr. P.O. Lindblad,
Stockholms Observatorium,
Saltsjöbaden.
Sweden.

Dear Per Olof,

On board of the KLM plane from Copenhagen to Amsterdam I want to write a few lines to say once more how happy my wife and I have been in Saltsjöbaden. This was in such a large measure due to the manner in which you arranged everything for this trip, to the opportunity we got to live in the Observatory and by far the most to the warm and constant hospitality we got in your house.

I wish to report briefly on how I found things in Göteborg. The whole group gave me a very nice reception. On Sunday evening we had dinner in Rydbeck's house, together with Kollberg and the Hanssons. Rydbeck was most cordial. Today he took great pains in showing me the Raö Obsefvatory and he and his students (who had come to Raö especially for this purpose) gave a full account of the quite important work they have been doing. They are a very fine group!

Rydabeck was completely prepared to let Mr. Kollberg make a maser for us, which he thought could be financed from the 100000 Kr which according to your proposal would be set aside for the collaboration with Holland. And Mr. Kollberg seemed very willing to come to Holland in August or September to discuss the practical possibilities for adaption to the Dwingeloo and Westerbork telescopes. So, I think, everything is for the present well on his way. I very much hope that the co-operation will become a success. Rydbeck stressed the necessity of our acquiring the services of a first-rate low-temperature specialist. I hope this will be possible by the time the maser would come into operation.

With our one hot wirkes for you and your whole family,

Yours ever,

The state of the s

I Käöreservatet

### SEMINARIUM

Professor J.H. Oort, Leiden, kommer att vistas i Saltsjöbaden och Uppsala 2 veckor under tiden 28 maj - 11 juni. Han kommer att hålla två seminarier i Saltsjöbaden och två i Uppsala över följande ämnen och vid angivna tidpunkter (precis).

Saltsjöbaden	29/5	14.00:	High-resolution observations of bright galaxies at 1415 MHz.
Uppsala	31/5	14.15:	High-velocity hydrogen and inflow of intergalactic gas.
Uppsala	1/6	10.15:	Activity in galactic nuclei and the possible origin of spiral structure.
Saltsjöbaden	8/6	10:15:	Galaxy clusters and radio sources with long curved components.

P.O. Lindblad

E. Holmberg

Leiden, May 23, 1972.

Dr. P.O. Lindblad,
Stockholms Observatorium,
Saltsjöbaden.
Sweden.

Stockholms Observatorium, Saltsjobaden.

Sweden.

Dear Per Olof,

I have just received your letter of May 16 with the schedule for my lectures, which is entirely satisfactory.

Prof. Strömgren just telephoned that Mrs. Strömgren has gone to the United States to assist Nina who has just got a baby. Under these circumstances we decided not to return to Copenhagen from Lund, but to go directly to Stockholm on Saturday morning at 12.07 hrs, arriving in Stockholm at 18.53 hrs. I hope this change will not be too inconvenient for you.

With best greetings, 1972, kl. 14.15 med föreläsning av

sincerely yours,

On the Problem of the Origin of Spiral Structure.

Tord Elvius

Leiden, May 17, 1972. Leiden, May 19, 1972.

Dr. O. Rydbeck, Omsala Space Observatory,

Dr. P.O. Lindbbad,
Stockholms Observatorium,
Saltsjöbaden.
Sweden.

# Astronomiska Seminariet i Lund

sammanträder på Institutionens för astronomi föreläsningssal fredagen den 26 maj 1972, kl. 14.15 med föreläsning av

Professor J.H. Oort, Leiden, Nederländerna:

On the Problem of the Origin of Spiral Structure.

Tord Elvius

Leiden, Hay 17, 1972. Leiden, May 19, 1972.

Dr. O. Rydbeck,

Onsala Space Observatory, Dr. P.O. Lindboad, Stockholms Observatorium, Saltsjöbaden. Sweden.

Dear Per Olof, wry much for your latter of May 10 and for your invitation

Dear Dr. Bydback,

house for diener on Sunday evening June 11th, which we Just a line to confirm that we expect to arrive in Stockholm on Sunday evening, May 28th, by train ay 22.20 hrs. If you could make s for us for that evening.

Thank you very much for the cheque for travelling expenses which I received in good order, but which I had not expected.

lescope at Westerbork. The title is somewhat vague, We are very much looking forward to our stay in Sweden. the lecture.

> are both looking forward to seeing Onsale. With o to Mrs. Rydbeck, Sincerely yours,

burn toutsbehouted | Au cor to teated | Day wish to attend.

my him of them in Getting with a comment with your

May 16, 1972. Leiden, May 17, 1972. Dr. O. Rydbeck, Onsala Space Observatory, S-430 34 ONSALA. Sweden. Professor J.H. Cort Sterrewacht Leiden. Dear Dr. Rydbeck, Thank you very much for your letter of May 10 and for your invitation to come to your house for dinner on Sunday evening June 11th, which we would very much like to accept. We would then plan to arrive in Gothenburg by train at 16.45 hrs. I would be very much obliged if you could make hotel reservations for us for that evening. As a subject for my talk I suggest: Observations of Galaxies with the Synthesis Radio Telescope at Westerbork. The title is somewhat vague, but would leave freedom for making more specific choice of the more interesting topics during the lecture. My wife and I are both looking forward to seeing Onsala. With your dinners in a neighbouring kind greetings, also to Mrs. Rydbeck, Wednesday June 7 there is a meeting sincerely yours, of Sciences with supper that you may wish to attend. By now you should have received a check at an amount corresponding to 1.683 sw. crowns to cover your traveling expenses. No trejund det in met his of This in Geterhing we choose wille give. Sincerely yours Per Olof Lindblad can showle on debails after your micrat

STOCKHOLMS OBSERVATORIUM May 16, 1972. S-133 00 SALTSJUBADEN Professor J.H. Oort Sterrewacht Leiden. Enclosed you will find our suggestion for the schedule of your lectures. Dear Professor Oort, Holmberg is arranging a room for the two of you in Uppsala for the night May 31 - June 11. My suggestion is that you leave by plane for Gotland on Friday June 2 and return Tuesday June 6. X/You should definitely live in my mothers house there, but you might prefer to have your dinners in a neighbouring Wednesday June 7 there is a meeting with the Academy of Sciences with supper that you may wish to attend. By now you should have received a check at an amount corresponding to 1.683 sw. crowns to cover your traveling expenses. With my very best wishes, Sincerely yours Per Olof Lindblad x) We can dreiste on debaits after your averal.

PROFESSOR O. E. H. RYDBECK

# ONSALA SPACE OBSERVATORY

Operated by Research Laboratory of Electronics Chalmers University of Technology

> Professor J. H. Oort, Sterrewacht

Leiden 20401

Onsala, 1972-05-10

Dear Professor Cort,

Thank you very much for your letter which I was pleased to receive. You are most welcome to visit us. We are also glad to hear that you would care to give a talk in Gothenburg.

Since I suppose that you would like to visit the Observatory, which is located about one hour's drive south of Gothenburg, I believe it would be practical and time-saving if you arrived in Gothenburg on Sunday evening. I can pick you up at the airport, or the railroad station and drive you to a suitable hotel, or the guest-room of the Institute, which is available at the time in question.

The University would, of course, be honoured to pay you a honorarium for your talk (I believe it is approximately 348.—Sw.Cr.), which would take care of some of your expenses while in Gothenburg.

May I suggest the following schedule for your visit to Gothenburg:

Leave Gothenburg at 09,00 for the Observatory -

Arrival there about 10.00.

Lunch will be served at the Observatory at 12.00.

Return to Gothenburg 13,00.

Your talk at the Institute in Gothenburg will then be given at 14.15.

After the talk a visit to the Institute, specially the low noise electronics division, since your time is limited.

Departure for the airport at about 17.40.

If Mrs. Oort would like to do some sightseeing in Gothenburg, my wife would be glad to show her around. Since we would like to announce the title of your talk, please let me know the same.

We are all looking forward to your visit and your talk in Gothenburg.

Sincerely,

(Olof Rydbeck)

According to the SAS time table you would have to leave Arlanda airport (Stockholm) at 07.05, or 07.15 in order to be here in the morning, since the next plane leaves at 10.00 arriving at Gothenburg at 10.55, which would be too late. It is about 30 - 40 minutes drive from the airport to the Institute. There is a suitable Sunday evening plane, however. It leaves Arlanda airport at 19.00 arriving in Gothenburg at 20.00.

In case you would care to come earlier on Sunday, you would be most welcome to come to our house for dinner. We live on the sea-front near the Observatory. In such a case you could stay at the nearby good hotel, Hotel Halland, from which we would have a short and comfortable trip to the Observatory Monday morning.

Leidan, Nay 5, 1972. Leiden, May 8, 1972.

Thank you was seed for your latter of April 24th and the informati

contained in its we are prevalently planning to make the journey from

Copenhagen to Statistica of writing on Sunday afternoon, May 20th, acriving

Dr. T. Elvius, Lunds Universitet, Institutionen for Astronomi, S-222 24 LUND Sweden.

Dog Pate Mindblad.

As concerns the leasterns & quite agree to the schedule you propose

and also to the assess her the Speak Lootures. Please arrange the exact Dear Dr. Elvius, I have not yet thanked you for your letter of March 30th. I am looking forward to my visit to Lund and would propose to give a lecture on The Problem of the Origin of Spiral Structure, on Friday, May 26th at 14.15 hrs. I am planning to arrive by plane in Malmo at 11.45 hrs.

I thank you very much for your invitation to spend Friday night in your house, which I accept with great pleasure. On Saturday morning I should go back to Copenhagen for a visit with the Strömgrens, where my wife will be staying over the week-end.

With kindest greetings,

Dear Per Olofy

sincerely yours,

Leiden, May 5, 1972.

Dr. P.O. Lindblad,
Stockholms Observatorium,
Saltsjöbaden.
Sweden.

Dear Per Olof,

Thank you very much for your letter of April 24th and the information contained in it. We are provisionally planning to make the journey from Copenhagen to Stockholm by train on Sunday afternoon, May 28th, arriving in Stockholm at 22.20 hrs.

As concerns the lectures I quite agree to the schedule you propose and also to the dates for the Uppsala lectures. Please arrange the exact schedule according to your and Holmberg's own wishes. I am also writing to Rydbeck about a visit to Gothenburg and a possible colloquium I might give there on June 12 17.

We would like to have a long week-end available for a possible trip to Gotland, and my wife has just written to your mother about this. Would it be alright to wait with further arrangements for this trip until after our arrival?

Looking forward to seeing you and your family soon, and with best greetings,

sincerely yours,

STOCKHOLMS OBSERVATORIUM 9-133 DO EALYBJORADER Professor J.H. Dort Sterrewacht April 24, 1972. Laiden, Leiden, May 5, 1972. Professor O.E.H. Rydbeck, Chalmers Institute of Technology, S-402 20 Gothenburg, Sweden. Ohsala Dear Professor Cort, Dear Dr. Rydbeck,

My wife and I shall be coming to Sweden between May 26 and June 12,

high time I shall give some colloquia, mostly in Saltsjöbaden during which time I shall give some colloquia, mostly in Saltsjöbbdden e I shall gar. By air you can get there quickly to visi Loquia, mosta to Gottland would be over the If this would be convenient to you I would also like to visit your institute, as I have never been there before. A possible day for this would be Monday, June 12th on our way back from Stockholm to Holland.f If you wish I could also give a talk on some of the recent radio results of Westerbork. As I have to be in Leiden for a Ph.D of one of our astronomers We would have to leave Gothenburg by plane at 18.40 on Mondag evening. Looking forward to this possible opportunity of seeing some of your work at Gothenburg, nourg, of March 15 in Uppsale, If it is agreeable to you we would then like to have numbers 1 and 4 in Saltsjöbaden. If you prefer not to give four different lectures, you may choose to repeat one of the Uppsala lectures here instead A "lecture" may well last up to 1 hour. We hope to hear as such as possible about all the remaining interesting subjects in private conversation. It seems that Uppsala would prefer to have you staying those for two days in the period May Mo-Jone 1. We are all looking forward to your visit here. With my very best greetings, Sincerely yours, Fer Olof Lindblad & Thief

## STOCKHOLMS OBSERVATORIUM S-133 00 SALTSJUBADEN

April 24, 1972.

Professor J.H. Oort Sterrewacht Leiden.

Dear Professor Oort,

Many thanks for your letter of March 27. We will expect you to arrive by train from Copenhagen to Stockholm on May 28th, and we suppose that you want to leave Stockholm for Gothenburgh by train or plane on Sunday, June 11th. I suppose that the best way to squeeze in a trip to Gotland would be over the week-end around June 3-4. By air you can get there quickly. The boat scedule runs as follows:

from Nynäshamn	24:00 13:30	to Visby	daily ex saturdays saturdays
from Visby	17:30 8:00	to Nynäshamn	daily ex saturdays saturdays

There is no local transportation on Gotland so early in the season (except by school-bus), so a taxi or a rented car is the best way to get around.

From Holmberg I hear that he wanted to have lectures 2 and 5 of your letter of March 15 in Uppsala. If it is agreeable to you we would then like to have numbers 1 and 4 in Saltsjöbaden. If you prefer not to give four different lectures, you may choose to repeat one of the Uppsala lectures here instead. A "lecture" may well last up to 1 hour. We hope to hear as much as possible about all the remaining interesting subjects in private conversation.

It seems that Uppsala would prefer to have you staying there for two days in the period May 30-June 1.

We are all looking forward to your visit here.

With my very best greetings,

Sincerely yours,

Per Olof Lindblad M. Küsel

secretary

# INSTITUTIONEN FÖR ASTRONOMI 124460 S-222 24 LUND Sweden

Lund, 1972-03-30

Professor J.H. Oort Sterrewacht te Leiden L e i d e n Nederländerna

Dear Professor Oort;

Thank you so much for your promise to come to give a lecture at the Observatory in Lund on Friday May 26. We have just asked the University to reserve a couple of "professor lectures salary" for this occasion (abt. 600 sw Cr together).

Please send me a fortnight before, the title of your lecture. Our usual time for such lectures is at 14.15, but it can be changed if your flight-schedule makes this necessary.

I often arrange so that visitors like you live over-night in my flat as my quests; there is ample place as a room is reserved for quest, usally from my family. Aina is in America until June, and no other family member is expected here at that time. If you prefer to live in a hotel, I will arrange it, but hope you will stay with me.

With best greetings yours sincerely

mord Elvius

STOCKHOLMS OBSERVATORIUM G-122 OF SALTSJORADEN March 23, 1972 Leiden, March 27, 1972. Dr. P.O. Lindblad, Stockholms Observatorium, Saltsjöbaden. Sweden. Professor J H Cort Sterrewacht Leiden Holland. Dear Per Olof, I have just received your letter of March 23. I was sorry that you could not come to Hamburg. I hope that you are quite well again. I discussed possible lectures with Holmberg and Elvius. As regards Lund and Copenhagen I have provisionally arranged that I could give a lecture in Lund on May 26th and then spend Saturday, May 27, in Copenhagen and travel by train to Stockholm on the 28th. Bengt Strömgren encouraged me to visit Rydbeck's institute. I could perhaps best do this on Monday, Thee 12th and then return to Leiden in the evening. In that case it would only remain to arrange the lectures in Uppsala and Stockholm. Holmberg said that the students would find it difficult to travel to Salsjöbaden from Uppsala. Therefore I could well duplicate one or two of the lectures. In this case I would have no objection to giving one or two more lectures if such would seem desirable to you. Gotland by that date. Also there is a dinner at the Academy of Science on June 7 that I would like you to attend We are very much looking forward to our visit and also to the possibility of visiting Gottland. giving you a too hectic schedule remains to be seen. With best greetings to you and your family, With my very best regards,

STOCKHOLMS OBSERVATORIUM S-133 00 SALTSJOBADEN

March 23, 1972.

Professor J H Oort Sterrewacht Leiden Holland.

Dear Professor Oort,

Many thanks for your letter of March 15. I am very happy that you and Mrs Oort find it possible to pay us a visit at the end of May and beginning of June. My mother is very excited at the prospect of showing you her house on Gotland.

The titles of your lectures are very exciting and I will discuss with Erik Holmberg the appropriate planning for a series of 3 or 4 lectures. Then I will write again to you about the detailed planning of your travel.

My sister and her family plan to arrive from the US on June 11, so I guess my mother wants to be back from Gotland by that date. Also there is a dinner at the Academy of Science on June 7 that I would like you to attend as a member of the Academy. How all this can be combined with your plan for Copenhagen, Lund and Göteborg without giving you a too hectic schedule remains to be seen. With my very best regards,

Sincerely yours,

Per Olof/Lindblad

Leiden, March 15, 1972. Dr. P.O. Lindblad, Stockholms Observatorium, Salsjobaden. Thora are two other subjects the Sweden a suggest in case there would be a special interest in there, vis. Dynamics of the E7-30 galaxy NGC 3115" and "Structure and dynamics of the Sysdes". On the latter subjects Her Pels and I have just completed the discussion of the survey for fainter members that was made many Dear Per Olof, Thank you very much for your letter. The latter part of May and the beginning of June would fit our plans very well. My wife would come also, and we would very much like to accept your offer to stay in the Observatory apartment in Saltsjöbaden. We would be looking forward to seeing your mother, and, perhaps, even to visiting her house on Gottland, which we have been hoping to visit already for several years. I wonder whether an excursion for a few days would be at all possible. We would plan to leave Leiden on May 26, and would in principle like to spend about two or two and a half weeks in Scandinavia. Unfortunately I have to be in Leiden for the "promotie" of Icke on June 13 and therefore would have to leave Scandinavia in the evening of June 12. And on the beginning side we are restricted by a family festival on May 24. I should like to use the opportunity to pay a visit for one day to Copenhagen, Lund and Göteborg either at the beginning or on the way back, but I do not yet see how I could combine all three. As regards lectures I would propose a choice between the following subjects: 1. High-resolution observations of bright galaxies at 1415 MRz. 2. Activity in galactic nuclei and the possible origin of spiral structure. 3. The central region of the Galactic System. 4. Galaxy clusters and radio sources. with long curved components. 5. High-velocity hydrogen and inflow of intergalactic gas. No. 3 is a large subject. If the "lectures" you refer to are about 45 minutes, like ordinary academic lectures here, it might bewwell to spread this over two lectures. I would prefer not to give more than 3 or 4 different lectures in the Stockholm-Uppsala region. Perhaps you could some time let me know what subjects you and the Uppsala astronomers would prefer, and on what days you would wish to arrange them. Lund: The People of Spine Studen

STOCKHOLMS OBSERVATORIUM B-133 DO SALTEJONADEN Fabruary 24, 1972. There are two other subjects that I can suggest in case there would be a special interest in these, viz. "Dynamics of the E7-So galaxy NGC 3115" and "Structure and dynamics of the Hyades". On the latter subjects Mrs Pels and I have just completed the discussion of the survey for fainter members that was made many years ago by Mr Pels. Looking forward to seeing you in Sweden, and prior to that in Hamburg, yours most sincerely, Dear Professor Oort, Many thanks for your letter of February 16. After a discussion with Holmberg and Elvius we have agreed that the later half of May up to the first week of June would be the best period for your visit here. The climate also ought to be agreeable by that time. We would like you to stay here as long as you possibly can, and I would be happy for an indication from you whether the above period is suitable and roughly how much time you can spare for us. We would like you to give some lectures to be divided between Saltsjöbaden and Uppsala. The actual number and the subjects are your choice, but people will essily commute between Saltsjöbaden and Uppsela, so that the audience in the two places will to a large extent be the same. We take it for granted that Mrs Oort will be with you. While in Saltsjöbaden we suggest that you stay in the observatory guest flat. We are all very much looking forward to your visit here. With my very best greetings, Sincerely your Per Olof Lindblad cc. prof. Holmberg prof. Elvius

# STOCKHOLMS OBSERVATORIUM S-133 00 SALTSJUBADEN

February 24, 1972.

Professor J H Oort Sterrewacht LEIDEN.

Dear Professor Oort,

Many thanks for your letter of February 16. After a discussion with Holmberg and Elvius we have agreed that the later half of May up to the first week of June would be the best period for your visit here. The climate also ought to be agreeable by that time.

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With my very best greetings,

Sincerely yours

Per Olof Lindblad

cc. prof. Holmberg prof. Elvius

00 LUNDS UNIVERSITY TIONEN FOR ASIA \$-202.24 LUNG Leiden, February 16, 1972. Dr. P.O. Lindblad, Stockholms Observatorium, Saltsjöbaden. Sweden. Dear Per Olof, I have just received a letter from Dr. Elvius who asks whether I could give one or two lectures in Lund if I would be visiting Sweden in the Spring. I wonder whether you have meanwhile made any more definite plans for such a visit. I shall be in Italy during the first half of April, but otherwise I have no definite obligations, except half of April, but otherwise I have to give a lecture here on May 13. With best greetings, th best greeting, sincerely yours, that leavenes by discommon as were that wine the people at the

Professor J. H. Oort Sterrewacht Leiden Nederländerna

Dear Professor Oort,

Erik Holmberg and Per Olof Lindblad have informed me that they have invited you to come to Uppsala and Saltsjöbaden during the spring.

In Lund we are, or course, much interested to know if it would be possible for you to stay over here, when moving from or to the Stockholm area. We would estimate very much to have one or two lectures by you, and I am sure that also the people at the Physics Institue here are eager to attend them.

Can you already tell me the approximate time of your visit to Sweden?

With best greetings

yours sincerely

Tord Elvius

Nieum my Prof. 1. Wes Pain Zumble Norrlandsg. 34D S-752 29 Uppsala 17 December 1971 Marth allenger

VETENSKAPS-SOCIETETEN Royal Society of Sciences Sit Lorsgates 1 8-752 20 UPPSALA, SWEDEN

Leiden, 23 december 1971.

Prof. Dr. J. Oort President Rennedylaan 169 Oegatgeest , Holland

Prof.Dr. A. Wallenquist, Norrlandsgatan 34D, S-752 29 UPPSALA.

Zweden. Zeer geachte Professor

Het was zeer verheugend te vernemen dat U het volgend jaar van plan bent om naar Zweden te komen en o.a. een lezing in Uppsala denkt to houden .- Ik weet ver-

der niets van Uw plannen af en weet dus niet wanner Zeer Geachte Dr. Wallenquist,

Vriendelijk dank voor Uw brief van 17 december.

Mijn plannen voor de reis naar Zweden zijn op het ogenblik nog vaag, waarschijnlijk zal dit echter in het voorjaar gebeuren. Ik vind het een beetje moeilijk om mij in dit stadium te binden aan een voordracht voor Uw Societeit, maar wil daar graag op terugkomen tegen de tijd dat mijn reisplannen iets verder gevorderd zijn.

Met zeer vriendelijke groeten, ook aan Uw vrouw en goede wensen voor de Kersttijd en het nieuwe jaar ag ( altijd op Vrijdagent) 4

Februari , 3 Maart, 7 April on 12 Mei. - Batuurlijk kunnen wij indien U in begin Juni komt een extra vergad ering hebben by op de 2 of 9 Juni. Maar misschien gaat het belemaal niet in U reisplannen. Wanneer zij definitief uitgevormd zijn hoor ik zeker wel Met hartelijke groeten aan U en Mevrouw en de besie wensen voor een prettig Kerstmis en een voorspoedig Nieuw Jaar ook namens mijo vrouw, verblijf ik gaarne,

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"Mich "mytilled" contin on role den legging op de Amielant to

honden , on 4 going him will-· plansten ostatiett mid wijegen

# KUNGL. VETENSKAPS-SOCIETETEN

Royal Society of Sciences
S:t Larsgatan 1
S-752 20 UPPSALA, SWEDEN

Prof. A. Wallenquist Norrlandsg. 34D S-752 29 Uppsala 17 December 1971

Prof. Dr. J.Oort President Kennedylaan 169 Oegstgeest, Holland

Zeer geachte Professor Oort:-

Het was zeer verheugend te vernemen dat U het volgend jaar van plan bent om naar Zweden te komen en o.a. een lezing in Uppsala denkt te houden. - Ik weet verder niets van Uw plannen af en weet dus niet wanner U komt, maar veroderstel dat U in de lente wilt komen.

Indien het mogelijk voor U is om ook een lezing te houden op de Koninklijke Societeit van Wetenschappen in Uppsla, waarvan U een buitenlands lid bent, zouden wij dit zeer op prijs stellen. Onze preliminaire datas voor de vergaderingen van de Societeit gedurende de lente zijn: Vrijdag (altijd op Vrijdagen!) 4 Februari, 3 Maart, 7 April en 12 Mei. – Natuurlijk kunnen wij indien U in begin Juni komt een extra vergadering hebben bv op de 2 of 9 Juni. Maar misschien gaat het helemaal niet in U reisplannen. Wanneer zij definitief uitgevormd zijn hoor ik zeker wel iets van U?

Met hartelijke groeten aan U en Mevrouw en de beste wensen voor een prettig Kerstmis en een voorspoedig Nieuw Jaar ook namens mijn vrouw,

verblijf ik gaarne,

Uw

Marl allengunt

P.S. U moet U eenter

miet "ropplieht" voelen om ook

een lessing op de Sociebed te

honden, en 4 mag un nedsptansten volsteelt miet wij eigen!



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NORDITA INSTITUT FOR TEORETISE AFOMFYSIK Danmark - Finland - Island - Norge - Swarge BUDGDAMSVEL 17 DE STOR KETBERGIAVN & DANMARK FELEGRAM: NORDITA KEBENHAVN April 18, 1973 TELEFON: (01) TRIA 1618 Leiden, April 27, 1973. Prof. Dr. B. Strömgren, Nordita, Blegdamsvej 17, Copenhagen. Denmark. Dear Jan, Dear Bengt, Thank you very much for your letter. We are quite touched by the extreme kindness with which Sigrid and you want to make our stay in Copenhagen as pleasant as possible. We shall be very happy to accept your and Sigrid's invitation to stay in your house, although we are worrying about the inconvenience we must be causing you. weeks beginning May 4 is very convenient for We expect to arrive in Copenhagen on Friday morning, May 4, at 10.15 hrs. by flight KL 171. been announced for It will be quite convenient for me to give a talk on Thursday, May 10, as you suggested. As a title I would suggest: High-Velocity Gas Within and Around the Galaxy. be changed if you wish. Signed and I should like to meet you and Miche at Kantrup airport. It would be most amvenient if you were to arrive at Hastrup in the morning of May 4 rather than mi the afternoon, for I would like to 3" \*1 to Brosfelde for a colloquium on the afternoon We have booked for an apartment for you but have found that it is not easy to rent a nice one for such a short time. So, if armed in the evening of May 4 by train, there is no problem. NORDITA NORDISK INSTITUT FOR TEORETISK ATOMFYSIK
Danmark · Finland · Island · Norge · Sverige

BLEGDAMSVEJ 17

DK-2100 KØBENHAVN Ø DANMARK

TELEGRAM: NORDITA KØBENHAVN

TELEFON: (01) TRIA 1616

April 18, 1973

Dear Jan,

We are all very much looking forward to your stay here at Nordita. The period of three weeks beginning May 4 is very convenient for us. Your first lecture has been announced for Wednesday, May 9, at 4. p.m., but that can be changed if you wish.

Signed and I should like to meet you and Micke at Kastrup airport. It would be most convenient if you were to arrive at Kastrup in the manning of May 4 rather than in the afternoon, for I would like to go to Brorfelde for a colloquium in the afternoon.

We have looked for an apartment for you but have found that it is not easy to rent a nice one for such a short time. So, if

\*\*NIf you arrive in the evening of May 4 by train, there is no problem.

Leiden, April

Prof. Dr. B. Et.
Hordita,
Blegdameyed 17
Gopenhagen.
Denmark.

r your letter. We are que he which Sigrid and you we leasant as possible. We nd Sigrid's invitation wormying about the ince

1 Copeniagen on Friday m

entent for me to give a aggested. As a title I was ad Around the Galaxy.

Yours ever,

you do not find it incorroement, we would like very much to have you stay with us. On the first floor there is a guestroom with bathroom, that I believe you remember, and in addition a room for a study and living room that would be yours during the stay. Signed thinks that perhaps it would be micest for you and Miehe to be undependent in the morning, so that you might wish to prepare your own breakfast in the downsteins hitchen. Probably you and I avoight leave together for Nordita, when you would have an office. I usually have bunch there in the Cafeteria, and you might eiter to have hunch there is too. We shall make special arrangements for your 11 a.m. coffee!

They alternative would be that you stayed in a nearby hatel so that you both could still enjoy our house and garden. But the other arrangement would be particularly nice for us, and I do hope that you would find it convenient. I must admit that you would find it convenient. I must admit that there is sometimes loud disturbance at our lardsterry house, namely, an hour in the late afternoon and sometimes on week ends when the three grandohildren visit.

Signid joins me in sending worm regards to you and Miche.

As ever

Bengt

DITA NOR

HAVN Ø DANMARK RDITA KØBENHAVN RIA 1818

ofessor Jan Ocerrewacht

Dear Bengt,

I had produced the time of y for our space be quite convaccompany me be less conversuitable for to the autumn fustralia and at Maroch middle of Sep

One of the with you is the which has now with our Wester

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Lear Jan, if only for a sanged from

# NORDITA

# NORDISK INSTITUT FOR TEORETISK ATOMFYSIK

Danmark - Finland - Island - Norge - Sverige

BLEGDAMSVEJ 17 DK-2100 KØBENHAVN Ø DANMARK TELEGRAM: NORDITA KØBENHAVN TELEFON: (01) TRIA 1616

Leiden, March 27, 1973.

Prof. Dr. B.G. Strömgren, Observatoriet, Østervoldgade 3, Copenhagen - K. Denmark.

Professor Jan Oort Sterrewacht DEIDEN

Dear Bengt,

I had promised to let you know when I could propose new Dear dates for the planned visit to Nordita. As I mentioned at the time of your visit to the Netherlands as foreign adviser for our space programmes, the first three weeks of May would be quite convenient for me. Mieke could then certainly accompany me for about two weeks. Later in the spring would be less convenient. If the period in May would be less suitable for you and your group we might postpone the visit to the autumn. Micke and I are now planning to go to australia and will attend both the symposium at Canberra and at Maroohhydore, so we shall not be back before the middle of September. Nordita will cover the expenses connected with your

One of the problems I should much like to discuss with you is the birth of stars in the spiral density wave, which has now become of renewed interest in connection rule with our Westerbork results.

With our warm greetings to Sigrid and yourself,

Yours

Bengt Strömgren

dear Jan, It was son good to see you and Miske. if only for a short time. I very much hope that you can accept fine inistation, for meet November, very As ever

Bargh

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**BLEGDAMSVEJ 17** DK-2100 KØBENHAVN Ø DANMARK TELEGRAM: NORDITA KØBENHAVN TELEFON: (01) TRIA 1616

June 15, 1972

Professor Jan Oort Sterrewacht LEIDEN

Dear Jan,

On behalf of Nordita I want to confirm our hearty invitation to come for a visit to our Institute in the autumn of 1972. We hope very much that you will be able to stay here for 3 weeks, if possible longer than that.

Nordita will cover the expenses connected with your travel and stay in Copenhagen according to the enclosed rules.

Looking forward to seeing you again,

Yours

Bengt Strömgren

Lear Jan. It was son good to see you and Micke. if only for a short time. I very much hope that you son accept this invitation, for next November, say.

As ever

Leiden, August 4, 1972.

Prof.Dr. B. Stromgren, Nordita, Blegdamsvej 17, <u>DK-2400</u> Copenhagen Ø, Denmark.

Dear Bengt,

I feel unhappy to have waited so long with my answer to your extremely attractive invitation to spend some weeks in Copenhagen in the autumn.

The reason why I have waited is because, as you know, making quick decisions has never been one of my strong points! (and this has not improved with the years). But it was mainly that I have taken up more things than I am able to finish and I began to feel somewhat oppressed by this. In addition there is the Westerbork telescope which is now producing data at a fast rate. Although I am no longer officially connected with the Stichting (except through its programme committee) I feel that I have a responsibility for the project and some obligkation to help making the Westerbork workf fully successful. Which means quite a lot of work, especially since the number of astronomers in Leiden and Groningen who have experience about galaxies is quite small;

I have waited to see how this work would develop before deciding about a longer absence in the autumn. It now appears that there is such an extensive task for our small group, in particular in connection with the 21-cm line work; that I feel I should not leave just in the period when this must be discussed. And this is the sort ofkwork one; geannot do elsewhere, because it naturally requires constant consultation with those who are involved in the reductions.

One reason why I have hesitated so long is that I felt so much attracted by the idea of spending a period in Copenhagen and of getting the opportunity to discuss some of the theoretical problems with youl I don't know whether there could be another possibility later to consider?

With love from Mieke and me to Sigrid and yourself,

yours,