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voor Wetenschappelijk
Onderzoek

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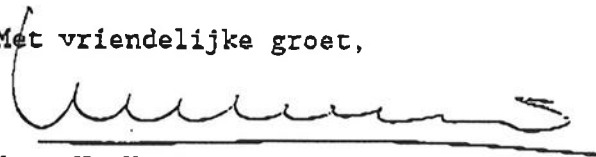
Betreft

IRAM-samenwerking

Geacht bestuur,

NWO heeft van de kant van de Max-Planck-Gesellschaft een uiteenzetting ontvangen omtrent de Europese samenwerking op millimetergebied, in het bijzonder in IRAM. Kopie van de betreffende brief doe ik U hierbij toekomen. Aangezien mijn voormalige collega van de MPG een reactie van NWO-zijde vraagt, verzoek ik U in een korte notitie uiteen te zetten wat Uw opvattingen zijn omtrent de IRAM-samenwerking en welke perspectieven die voor de Nederlandse astronomie biedt. Ik dank U hartelijk voor Uw medewerking, zeker als deze op korte termijn kan worden verleend.

Met vriendelijke groet,


drs. W. Hutter,
algemeen directeur

kopie aan:

Butcher

Boland

Van den Heuvel

c.c. GB-E

**MAX-PLANCK-GESELLSCHAFT
ZUR FÖRDERUNG DER WISSENSCHAFTEN E.V.
GENERALVERWALTUNG**

Der Generalsekretär i. R.

Max-Planck-Gesellschaft Postfach 10 10 62, 80084 München

Dr. R. J. van Duinen
President
Netherlands Organization for Scientific Research
P.O. Box 93 138

NL-2509 AC Den Haag

80539 München, 16.01.1996

Bearbeiter: v. Sta./Ro./Co.
Unser Zeichen: 2-IRAM/MMA
Tel.-Durchwahl: (089) 21 08-1510
Telefonzentrale: (089) 21 08-0
Telefax: (089) 21 08-1500
Dienstgebäude: Königinstraße 19
Dok.: STA002.DOC

Dear Dr. van Duinen,

I would like to turn to you with a topic that concerns radioastronomy at millimeter wavelengths, a field that is of highest scientific interest both in your country and ours.

The Max-Planck-Gesellschaft, together with the French Centre National de la Recherche Scientifique and the Spanish Instituto Geografico Nacional supports this field through IRAM (Institut de Radio Astronomie Millimetrique) which has its headquarters in Grenoble and operates two observatories. One is located on the Pico Veleta at 2950 m above sea level in the Sierra Nevada/Spain where a 30 m-diameter antenna has been installed. The other observatory is located in the French Alps, near Gap, at an altitude of 2500 m where an interferometer has been built with presently four 15 m-diameter antennas to which a fifth one will be added within the next few months.

The IRAM facilities, including the two observatories, represent an initial investment of about 100 million German marks. I am enclosing IRAM's 1994 Annual Report which illustrates the current scope of activities, carried out by the scientific communities in the IRAM memberstates but involving also scientists from many other countries. A significant fraction of the total observing time is indeed granted to foreign projects.

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IRAM is headed by a governing board. I will continue to act on this board on behalf of the Max-Planck-Gesellschaft despite my recent retirement from the office of Secretary General of the Max-Planck-Gesellschaft. My successor there is Dr. Barbara Bludau.

Professor Dr. Michael Grewing, IRAM's director, has informed us about the desire of Dutch astronomers to play an even more active and significant role in today's and tomorrow's radioastronomical research at millimetre wavelengths. He has also informed us about the specific proposal to participate in existing and future facilities of the United States. The latter concerns the MMA project, an interferometer with a total collecting area of 2000 m² for which a site in the southern hemisphere at an altitude of 5500 m in Chile is being discussed. The total estimated cost of this project is 200 million US \$, of which 150 million US \$ will come from the NSF. Other partners are sought for the remainder.

While the American MMA project is undoubtedly well advanced in that the scientific aims, technical requirements and a funding scheme for at least the major part of its cost are relatively well defined since several years, it is also true that in the European context one has started to plan for an even bigger millimetre array, the "Large Southern Array" (LSA) with a collecting area of 10,000 m². As you undoubtedly know, details of this project are currently being worked out under a Memorandum of Understanding jointly signed by IRAM, ESO, the Onsala Space Observatory and the NFRA. One idea is to present this project for European funding in the post-VLT-funding era.

Noting that there is also a strong interest in the Japanese radioastronomical community to build a large millimetre array in the southern hemisphere, several future scenarios can be envisaged, including one of truly international collaboration in which the MMA, the LSA and the Japanese project would all be collocated. This would allow to fully exploit their complementarity and also to use them as one single instrument where scientifically required.

For Europe to be a strong partner in this, it seems necessary that all European support in this field is coordinated as much as possible, right from the beginning.

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However, even in the best of circumstances, a big future millimetre array project will take 10 to 15 years to be completed. Because of this very long timescale, I want to underline some thoughts expressed in a recent letter by Professor Grewing to a number of Dutch colleagues of which you find a copy enclosed. In this letter Prof. Grewing attempts to set straight some of the misconceptions or misunderstandings about IRAM that are contained in the proposal that you have in your hands. At the same time, however, he suggests that an intermediate solution on the part of Dutch radioastronomy (until the start of a future large array) could be achieved by considering a participation at IRAM.

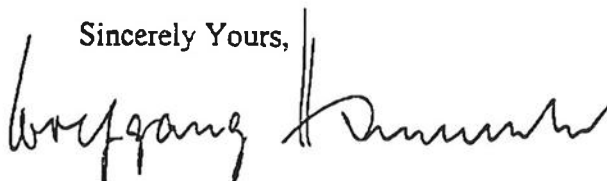
Speaking for the Max-Planck-Gesellschaft as the German partner in IRAM, I can say that we would look favourably upon such a development but would, of course, want to discuss the matter with our French and Spanish partner at IRAM before proceeding any further.

Therefore, I would be very grateful if you could inform me of the current situation of this whole issue from your organization's point of view, and if you could perhaps give me your advice if, or rather how - in your opinion - the matter I have brought up could be promoted. Please do not regard my letter as unwelcome interference in affairs which Dutch astronomers themselves can judge in a better way. In view of the similar orientation of the interests of all European radioastronomers it would be preferable to find a joint European solution, concerning the realization of a large array project.

I would be grateful, too, if I could hear from you as soon as possible.

With my best regards and my best wishes for the New Year,

Sincerely Yours,



Dr. Wolfgang Hasenclever