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Notes on the MMA/LSA Receiver Meeting — 18 March 1998

Many engineers involved in the MMA or hoping to be involved in the LSA were present at the 1998 Space THz Symposium held in Pasadena on 17-19 March. After several discussions among small groups, Karl Jacobs (U. Koln) suggested that all those interested meet for a general discussion of receiver development issues. This document attempts to summarize the discussion. A list of participants is appended.

The present planning for the LSA aims at a decision by the end of 1999 on whether the project will be funded. All funding to the European participants would be through ESO. They do not plan to have an initial development phase but will combine the development and production phases.

The European groups are just now beginning to consider their possible roles in the LSA. The two attached draft documents from Karl Jacobs give his assessment of the various receiver development options and brief descriptions from the different groups of the work they might do.

There was some discussion of how to make the transition between development and production of a component. Most of those present were more interested in development than production, as might be expected from this group. It was agreed that much of the production and assembly work was too specialized to be sent out to industry — the numbers of components required are large by our standards, but minuscule by industrial standards, and it would not be cost-effective to train people in industry specially for such small runs. It was suggested that the more straightforward procedures might be sent out to industry, with components being returned to the developers for the non-standard phases. Peter Zimmermann (from industry, Radiometer Physics) vehemently opposed this idea, feeling it would greatly complicate the work.

It was suggested that one or more production centers be established to relieve the university groups of this phase of the work. However, that this would require specialists from the development groups to move to the production center(s) for a considerable time — probably 3-6 months — to transfer technology which might be difficult for university people.

The Dutch are virtually assured of immediate internal LSA funding to expand the Nb fabrication facility at U. of Groningen and the receiver development lab at SRON. They expect a new Nb fabrication lab and personnel dedicated to LSA work, and SRON will get an additional 4.5 people for 5 years for LSA receiver work. It was not clear how the Dutch will coordinate with the other LSA groups.

The Canadians will decide by 2000 whether to contribute \$30M to the MMA or SKA.

Karl Jacobs pointed out that several of the groups that were potential LSA participants, including his own and the French, have substantial commitments to ongoing projects and may find it difficult to participate in the LSA.

Larry D'Addario wanted a clear definition of the various tasks — mixers, internal IF, external IF, etc. He suggested scheduled U.S./European teleconferences with no more than ten participants, and that minutes of the meetings be announced by e-mail to an open mailing list.

Please note: Karl Jacobs requests feedback on his feasibility study (attached). Please send comments to him by April 10.

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31 March 1998
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Participants at the 18 March 1998 meeting

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Subject: good news

Date: Sat, 7 Mar 1998 16:02:03 +0100

From: Ewine van Dishoeck <ewine@strw.LeidenUniv.nl>

To: pvandenb@NRAO.EDU, rbrown@NRAO.EDU

Dear Paul and Bob,

We just heard the good news that our Dutch national proposal (NOVA) is ranked no. 1 for funding out of all 36 proposals! The detailed budget still needs to be negotiated with the universities and the minister of education, but we do not expect significant cuts. We will know the official outcome by April 22.

This would be a good time to start making some more detailed plans for the MMA/LSA receiver development. I have asked Thijs de Graauw and Teun Klapwijk already to look into possible dates around May for a visit by Tony Kerr and John Webber; I will let you know as soon as I hear more.

Hope the meeting of the WG chairs went well; how did the presentations to the NSF go?

With best wishes,

Ewine