

AUSTRALIA TELESCOPE NATIONAL FACILITY



25 FEB 1994

FILE AT 39.3/036		
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FROM:	Lister Staveley-Smith (LSTAVELE@atnf.csiro.au)
DATE:	February 23, 1994
SUBJECT:	Multibeam receiver
PAGES:	Page 1. of 2

Dear Rod,

Following a planning meeting today, I can now answer your queries.

ITEM 5: Most of the correlator to be used for the Parkes survey belongs to the LBA correlator which is due for completion soon. This cannot be moved to the Lovell. However, it might be possible to ship the 4 extra blocks which are to be constructed for the multibeam project and to leave them for a short period of time. At this stage, we unfortunately can't guarantee this, but I think there is a good chance. Each of these blocks is capable of giving 512 autocorrelation channels at 64 MHz or 1024 channels at 32 MHz. It may also be possible to ship some of the other backend equipment (samplers, conversion), but you will have to take care

of filtering to your proposed bandwidth of 32 MHz and data transmission.

ITEM 7: No other countries involved. About 50% of the Australian contribution has been approved so far. We are confident about the remainder.

ITEM 8: Measures are being taken to isolate the interference at low frequencies. No problem is expected at 1.4 GHz.

I hope that this is sufficient for your re-application, if you proceed. Our current timescale is to have the receiver on the Parkes telescope in 1996. The survey will not be completed until 1998, but there may be a gap in 1997 where equipment could be shipped. However, at the moment we are assuming that the Parkes receiver will be unusable at the Lovell because of f/D and weight constraints, so the SERC re-application should include additional costs for a second feed system and dewar. We will proceed with design and production of strip-line amplifiers this year, so perhaps these could also be used in the northern survey.

Regards,

LSW

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FAX TO: Dr. Lister Staveley-Smith
ATNF

FROM: Prof. R.D. Davies

FAX No. 010 61 2 372 4400

DATE: 14th February, 1994

Number of pages to follow: 1

Multibeam Receiver

We have had a response from the Astronomy and Astrophysics Committee of SERC saying that although the project got a high scientific rating, it just missed the cut for financial support. We have been encouraged to reapply for the deadline of 1 March 1994; we are preparing to do that.

The secretariat passed on comments on some areas which we should address in our resubmission. Several of them refer to items relating to ATNF matters as follows:-

Item 5 on the c-mail

Item 7 on the c-mail

Item 8 on the e-mail

There is another item to which you may have a reaction - I think it has been covered by the design suggestions from your antennas group. The specific question is:

Item 6 on the e-mail.

I would be grateful for a speedy reply.

Best wishes

Rod Davies

25 FEB 1994

FILE <i>AT 39.3/037</i>		
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From: Andrew le Masurier Room 2 <SADL0@ib.rl.ac.uk>
 To: rdd@jb.man.ac.uk
 Subject: 21-cm multibeam all-sky survey for neutral hydrogen

Rod,

1. You will get proper feedback on your application in time, but to help you prepare a resubmission it might be useful if I summarised the main points raised by the referees now. They were as follows:
2. Two aspects - the search for crouching giant galaxies and the low-luminosity galaxy survey - could be done trivially by Arecibo.
3. The bulk of the observing would be carried out on the Lovell from 1997. Will it be available and in a fit state?
4. The 2.5 technician years requested are not enough: will additional Jodrell effort be available?
5. A considerable amount of correlator hardware will have to be obtained by "sharing and borrowing correlators built for other purposes by ATNF", yet the receiver and correlator will be brought to Jodrell for limited periods in 1995 and 1996 and kept there from 1997. It must be clear that the correlator hardware will be available when required.
6. The Lovell focus is presumably tested only for the on-axis single feeds used so far - would it work for the larger area, multi-beam receiver proposed, particularly given the standing wave pattern in front of the horns?
7. Has the Australian contribution been approved? Are any other countries involved?
8. What will happen if the project is not completed by 1997 when the copper mine opens?

I hope this is useful.

Regards,

Andrew le Masurier

R.J. COHEN
 J.A. BATTILANA
 D. STANNARD

Multifeed Application

We have been encouraged to reapply - this project just missed the cut in the last round.

Item 2 - RJC and Mike Disney - has the committee missed the point?

Item 4 - 2.5 technicians is enough - the PDRA is also essential

Items 5,7,8 over to Lister

Items 3 & 6 - JAB - this requires a JB response.

The new application is required by end February 1994.

R. D. Davies
 14.2.94