

NATIONAL RADIO ASTRONOMY OBSERVATORY  
Green Bank, West Virginia

October 26, 1981

TO: H. Hvatum

FROM: K. I. Kellermann

SUBJECT: VLB Array

It is generally accepted that it is neither feasible nor necessary to have a complete "ready-to-build" design available by March 1982. On the other hand, it is necessary to have a sound proposal that will stand up to critical peer review. It is "possible" that the VLBA proposal will not result in "immediate" funding. But we should try to see that the only reason is a lack of money, and not deficiencies in the Proposal.

While we cannot specify the cost and design of a 1985 tape recording and processor system, for example, we can and must specify a realistic state-of-the-art 1981 (1982?) system. Likewise, although we will not decide on the optimum configuration, we must show that there is a satisfactory configuration that meets the design goals, and adequately reflects the practical constraints.

Considering the other commitments of everyone concerned, it will not be easy to meet our self-imposed deadline. As a start, it would be useful to have a critical review of individual Sections of the Design Study by people who were not directly involved in preparing the original study. Possible assignments could be:

Section I. Roberts

Section II. Ekers

Section III. A. Roberts  
B. Clark  
C. Hvatum/von Hoerner  
D. Fisher  
E. Weinreb  
F. Moore/Clark  
G. Escoffier/LaCasse  
H. WeinrebSection IV. A. Clark/Escoffier  
B. Clark/Ekers

Section V. Hvatum  
A. Hvatum  
B. Hvatum  
C. Balister  
D. Ekers

Section VI. Hvatum  
A1 Hvatum  
A2 Fisher  
A3 Napier  
A4 Moore  
A5 Escoffier  
A6 Weinreb  
A7 Hvatum  
A8 Hvatum  
  
B1 Escoffier/Clark  
B2 Ekers  
  
B3, B4, B5 Hvatum  
Cost Summary: Hvatum  
  
C. Hvatum  
D. Hvatum

Following this, I presume that we will try to have a meeting with the Planning Committee as soon as possible. I have not had a chance to check on how many of the proposed committee will be at the Users' Committee, but it may not be realistic to try to get everyone together on such short notice. Telephone connections can be used for those unable to attend.

Once guidelines have been set, it seems that the best way to prepare the proposal will be to set up working groups for the following areas:

Scientific Goals  
Antenna Elements  
Front End and Receivers  
Feed Systems  
Configuration  
Local Oscillator System  
Record System  
Control System  
Processor  
Post Processing  
Operation and Management

It would be the responsibility of the chairman of each group to prepare a draft of the relevant section of the Proposal. It would be useful to include a number of outside experts in some of the these groups. Less clear is whether or not it would be appropriate if some of the chairmen came from outside NRAO, particularly Caltech.

It will facilitate the task of writing the proposal if we accept the organization of the Design Study as a starting point. We can use some of the material as it stands. Other parts will have to be rewritten, or at least modified.

A possible schedule, taking into account vacations and other commitments, is given below:

- October 30: Meeting to Discuss Design Study Review
- Nov. 2-6(?): Planning Committee Meeting
- Nov. 9-25: Work of Task Groups - Meetings as necessary organized by chairmen.
- Dec. ~~11~~ 3: Design Review - Planning Committee
- Dec. 11: Define Proposal Content
- Dec. 11-23: First draft of Chapters by Working Groups
- Jan. 4: Review progress
- Jan. 11-15: Discuss Proposal with NUG and Planning Committee
- Jan. 29: Complete Draft of Proposal for Review by Director and Planning Committee
- Feb. 15-26: Prepare final draft of Proposal.