Interoffice

VLB ARRAY MEMO No. 245

National Radio Astronomy Observatory

Charlottesville, Virginia

June 22, 1983

To: VLBA Members

From: M. Balister

Subject: Minutes of the VLBA Electronics Group Meeting - 6/15/83

A meeting of the VLBA Electronics Planning Group was held on June 15, 1983. Present were: L. D'Addario, M. Balister, C. Moore, R. Lacasse, W. Brundage, J. Coe, D. Weber, R. Thompson, H. Hvatum, J. Carter, H. Hinteregger, K. Kellermann, A. Whitney, A. Rogers and D. Ingles.

There was some discussion of the plans for the development and construction of receivers. Since it looks as though working on 10 frequencies in parallel is unrealistic, we have to decide which frequencies should be delayed. The decision to use masers for 22 and 43 GHz or some other device is still a difficult one to make and more time is required to seriously study the other possibilities. Consequently, the starts on these frequencies could be delayed to 1985. This would make the other eight frequencies ready by the scheduled completion date of the array in 1989. The possibility of an interim 22 GHz receiver based on the VLA FET amplifier for some of the antennas to evaluate the array at this frequency was considered desirable. The possibility of a low sensitivity receiver for 43 GHz for evaluation of the first antennas was also discussed.

Weinreb has already sent to the planning committee an initial outline of the 8 GHz VLBA front-end which could also be used at the VLA for the Voyager project.

There was discussion of the possible radio links for the two near VLA antennas. Thompson's VLBA memo #240 was discussed in some detail. There was general feeling that the link to the southerly site needed more study before a definite decision can be made as to which of the two southerly sites is the more suitable. This may include getting help from a consultant and possibly installing passive reflectors to make long-term propagation measurements. At the moment, the use of a radio link to the northerly site appears to be risky; Thompson's recommendation is to reexamine later in the light of experience with the shorter link to the southerly antenna.