

NATIONAL RADIO ASTRONOMY OBSERVATORY
Charlottesville, Virginia

November 8, 1985

To: VLBA Electronics Group
From: Dick Thompson
Subject: Electronics Meeting, November 7, 1985
Attendees: Bagri, Brundage, Campbell, D'Addario, Dill,
Koski, Lilie, Napier, Romney, Weber, Weinreb.

People from Green Bank were unable to participate because of a telephone outage. Almost the whole meeting was devoted to a discussion of the feed layout in the vertex room. This centered on a drawing by L. Walker dated 85/10/22, which shows 9 feeds on the ring, including those for 10.7 and 86 GHz. It was suggested that this arrangement results in front ends being inconveniently close together, and S. Weinreb suggested omitting the 10.7 GHz frequency altogether. However, it was also argued that even though the 10.7 GHz frequency will not be implemented on all antennas, its position is required to provide one spare space for future additional front ends. Some alleviation of the close spacing can be obtained by using sections of waveguide to vary heights of front ends that would otherwise be too close. L. D'Addario pointed out that the space provided for the 43 and 86 GHz front ends, which is equal to the space for two 'standard' (i.e. similar to 8.4 GHz) front ends would not be sufficient for two SIS front ends, unless they are built in a single dewar. However, the possibility of using quasi-optics to bring the focal points for 43 and 86 GHz to lower and more convenient positions within the vertex room was also discussed. A single lens on the feed ring could be used for both bands. This possibility would require detailed study of the rigidity of mounting points for the lens and front end as well as other points. It was concluded that at this time we should go ahead with design of the first feed cone according to the drawing of 85/10/22, since it can be made to cover foreseeable needs. No other arrangement is clearly better at this time.

Wayne Koski is issuing a memorandum on addressing requirements for the monitor and control system.

Larry D'Addario has some preliminary material on electronics packaging available for review in his area of the VAX, under a file name CVAX::UMA3:[LARRY.VLB]STANDARDS.TXT.