

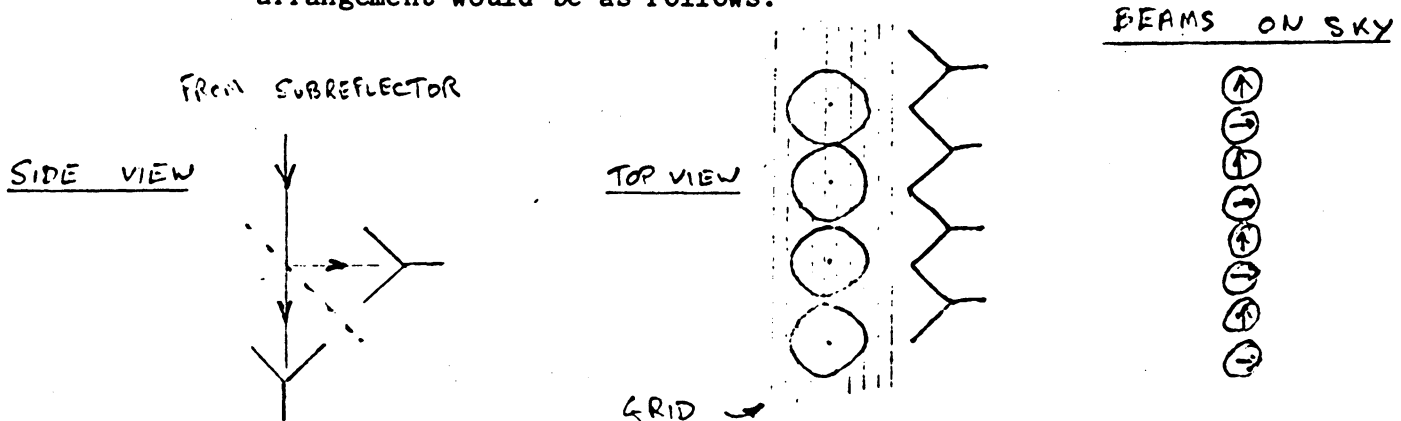
NATIONAL RADIO ASTRONOMY OBSERVATORY
Charlottesville, Virginia 22903

September 25, 1984

MEMORANDUM:

TO: J. Payne
FROM: M. Balister
SUBJECT: 8-Beam Receiver

At the last Users' meeting and also at the URSI meeting in Florence, it was proposed that the first generation focal plane array receiver could take the form of a linear array. In order to obtain close to overlapping beam spacing, it has been suggested that alternately polarized beams would be acceptable. Since we are currently working on a 8-channel spectral line receiver, it would seem reasonable to look at the possibility of a 8-beam receiver. I assume that 230 GHz would be the frequency of choice; also, we have John Archer's mini dewar design for this frequency. Unfortunately, we may not have sufficient bandwidth out of our proposed correlator since the total available bandwidth we are talking about at the moment is 8 x 300 MHz. A possible physical arrangement would be as follows:



We also need to consider rotation of the receiver or beams so that they remain fixed in sky position with respect to the central beams during tracking of a source.

Why don't you think about this and discuss with Bob Brown. Maybe we can come up with a proposal for the RE plan.

cc: ✓ B. Brown
S. Weinreb