Interoffice

National Radio Astronomy Observatory

Very Large Array

June 18, 1982

To: John Payne

From: Frazer Owen

Subject: Wider beam throws for continuum observing with the 12 meter.

For many projects in the continuum a problem exists that the distance between the "on" source and "off" source is too small (usually 3 beamwidths). At 3 mm a beam throw of 10 arcminutes (± 5 arcminutes) would solve this problem it would be best if this could be implimented the same way as John Payne's new chopping system instead of using the subreflector in order to use the fast chopping possible with that device. If a ±5 arcminute chopper were successful an even larger beam throw would be useful (± 15 arcminutes possibly).

Many types of projects come to mind which could use such a device. Mapping extended radio galaxies or HII regions clearly need some such device. My application would be measuring the cold spots in directions of clusters of galaxies due to the scattering of the 3K background by the hot gas at a frequency of 90 GHz. But clearly observations of any extended sources could make use of it.

FO/bmg