VLB ARRAY MEMO No. 29

Multiple Processor Sites for the VLB Array

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At the recent NRAO Users' Committee, the possibility of operating two Array Processing Centers was briefly discussed. The idea of having two processing centers originally arose as a result of discussions with Caltech scientists who are apparently interested in operating a "continuum only" Processing and Image construction center on the West Coast, in much the same spirit as the various proposed Regional VLA processing centers.

The advantages of operating two processor systems may be summarized as follows:

1) If the NRAO continues to operate a major VLA reduction center in Charlottesville, then Charlottesville also becomes a strong candidate for our VLBA Processing Center, and the existence of a West Coast Processing facility may be attractive to users from that area.

It is expected that the computer systems at the two Processors will be similar, although not necessarily of equivalent size. Software will be exchanged, and a real time link will facilitate transfer of computing work loads from one site to the other. A modest start to this approach has already been made with the Caltech and NRAO VAX computers.

It may be argued with some force that it would be more efficient to concentrate all of the computing facilities and personnel at one site. But science does not necessarily progress by having the most efficient organizational structure. The intangible benefits of a healthy (presumably friendly) competition and the influx of ideas from multiple concentrations of skilled scientists should not be discounted, and would diversify the scientific input, as well as allow for greater flexibility in development of software. Indeed the operation of two or more processing centers