VLB ARRAY MEMO No. 604

National Radio Astronomy Observatory
Socorro, New Mexico

Aug. 19, 1987

To: Computer Coordination Group
From: Craig Walker
Subject: Review of Computer Coordination meeting, Aug 18, 1987

The meeting was attended by Benson, Broadwell, Burns, Clark, Cotton, Pearson, Romney, Stetten, and Walker

Cotton reviewed the status of the post-processing software. The continuum calibration software is working and being used for VLA and VLBI data. Polarization calibration in the style of the DEC10 program is now available. The more general solution that Fred Schwab was working on has proven difficult and is not yet available. Phil Diamond is working on bandpass calibration in the VLA style using calibrators. That should be in the OCT15 release. Spectral line calibration using autocorrelation spectra in the VLBI style will come later. Eric Greisen has written a TV flagging program but debugging is not finished. The programs have been developed on the VAX but most of the use has been on the CONVEX in Charlottesville.

Clark reviewed the status of the monitor and control software. It is being used to drive the Pie Town antenna and seems to work, although some debugging is still needed. The operator screens are being modified. There are some areas where progress is stalled while the group waits for hardware. The VLBA tape recorder and formatter have not been delivered by Haystack and work on the control of those units is on hold. Some other items are also missing. Meanwhile, delay in the production of the X25 interface board by Motorola is delaying work on the interface between the MicroVAX and the site computer (Motorola). There are a few months of work that can be done without the board and it may be possible to do limited remote operation using phone lines. The earliest that the board can be expected is December and it may be later.

All of the Motorola cpu's for the station computers have been purchased to take advantage of a bulk purchase price break. The purchase of other parts of the machines will wait until they are needed.

Work on databases has stalled while a more observatory wide look is taken at the problem. Something needs to be done to get this back on track.

Romney reviewed the status of the computers related to the correlator. The group would like to buy a Motorola 68020 machine soon for development. The cost is expected to be near

$20,000. The group expects to borrow software from both AIPS and from the M/C group. There was some discussion of streaming tape drives. Both the M/C group and Caltech, who have them attached to MicroVAXs, are happy with them. The switching between the slow stop-start mode and streaming mode is handled in a way transparent to the user.

Clark is starting to think about the real time fringe checker and wanted people's thoughts. He has calculated the tradeoffs between an FX and an XF style correlator and has decided that, for the small number of channels that are likely to be needed in the fringe checker, XF is the way to go. He suggests that, when it is necessary to search a wide delay range (rare), that a very strong source (eg. water maser) be observed to minimized the amount of data that needs to be transmitted and correlated.

Clark suggests that the geometry routines used in the fringe checker be the same as those used on the correlator. This keeps the results on the two machines the same and provides an environment for working on the geometry routines that does not require disturbing the correlator for testing. He expects to need the geometry routines in 5-6 months. Romney thought that this fits with the Correlator schedule.

There was some discussion of the effects of 2 and 3 level fringe rotation, compute times, and duties of the fringe checker.

Finally, there was a short discussion about how frequent these meetings should be and it was decided to keep having them every two months (sorry, Bill).