To: R. Ekers

From: B. Clark

Subj: Spectral line pipeline

Date: May 14, 1982

     I've given quite a bit of thought to your suggestion that perhaps we should immediately push pipeline development toward spectral line. It is not as bleak a possibility as I at first thought. If we did this, I would devote my time to Modcomp work, and leave most of the 11 development to Bob Duquet. I would tackle the Modcomp work in stages of about three months effort. I list the stages below, and the dates that might be accomplished, under the assumption that I do very little in 11's, and that all the other correlator work in the Modcomps waits for Ken Sowinski.

     1.)   Modcomp internal changes to make the environment more suitable. No change in functionality (except possibly to make it unnecessary to reload between line and continuum systems). Completion about September 1.

     2.)   Moving the integration from Cora to Integrator Hardware. This will make room in Cora's memory for the Pigeonholer, and also allow increasing the permitted channel baselines to about 8000. Hardware changes required. Completion about December 1.

     3.)   Converting visibilities to floating point format. The buffers will thus hold more data. This will permit increasing the permitted channel baselines to about 16000. Hardware changes required. Completion about March 1, 1983

     4.)   Bringing up Corbin. Increasing to 32000 channel baselines. Completion about June 1, 1983.

     5.)   Implementing pigeonholing-on-the-fly as data flows through the machine, rather than waiting for buffers. Should boost throughput to about 8000 channel baselines per second. Something might have to be done about the Boss tape drive so that the rate is probably only about 7000 channel baselines per second. (Jesus Christ, did I specify the VLBA correlator at 100,000 channel baselines per second?) Completion about September 1, 1983.

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