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A parallax program was started in July, 1980, using a CCD detector at the prime focus of the KPNO 4m telescope. The results obtained to date indicate that the centroids of stellar images can be measured to accuracies of 0.25 microns or better from each 2 minute exposure on stars of about 17th magnitude with a filter of 800 Angstroms width centered at 6500 Angstroms (the scale of the KPNO 4m with the doublet corrector is 19.60 milli-arc-seconds per micron). The current CCD, a Fairchild CCD 211, is of relatively low quantum efficiency, about 8%. The integration times become prohibitively short on 15th magnitude and brighter stars. This technology seems quite attractive for the observation of astrometric binaries, as accuracies of about 3 milli-arc-seconds are obtained with only 12 minutes of telescope time, and there is no special set-up required for each field. If time permits, some comments will be made about some preliminary astrometric tests of a 3-phase TI 800 x 800 CCD performed in January, 1981, in collaboration with Roger Lynds of the Space Telescope Wide Field Camera Team.

DISCUSSION

MONET: Concerning chips, the TI's are nice. They are thin, so they don't get cosmic rays, they are wrinkled, they have beautiful low noise, but they don't have any red response. The RCA's are thin, on a substrate (so they should be flat), but I have yet to do a hands-on sky test. The RCA is a little bit noisier - about 50 electrons. The Fairchilds have marvelous geometrical stability, but they are thick, so they gather cosmic rays. However, with a two-minute exposure you can deal with the small number of cosmic rays without a huge amount of processing.