The coudé train will have push-button interchangeable mirrors at the six small mirror positions by the spring of 1981. Each turret will carry high reflectance coated mirrors for the red/near infrared, extended blue (340-500 nm), and ultraviolet (300-400 nm) spectral regions. The speed with the present red mirror train plus Reticon seems to be very good; a spectrum with signal-to-noise ratio 100 for a star with $R = 5$ at 4.8 Å/mm dispersion at Hα takes about 6 minutes. The seeing at the f/20 coudé focus is typically about 1 arc second, but there is some image motion due to turbulence in the beam. This may be reduced in future by insulating the "chimney" between the coudé (3rd) and observing (5th) floors, and attention to heat leaks in the dome. Some improvement is also expected when the red, blue, and ultraviolet coated image slicers are received. We expect then to have a fast and efficient coudé system.

Observations at the prime focus

Of the 21 observing runs for the past semester, 15 were for the prime focus. Most of these used the wide field corrector for direct photography to take advantage of the large field size (55 x 55 arc minutes) and exceptional quality of the seeing available most of the time.

On the latter point the most dramatic result was obtained by L. Thompson during his observing run at the beginning of November, with reported image sizes of 0.6 arc second.

Moffat and Shara, Hardy, and Madore were also very pleased with the results they obtained. Madore was able to obtain 40 plates of different globular clusters on 3 nights. P. Véron may have been a little disappointed in his search of active galactic nuclei, but the diameter of the images measured on his plates corresponded to images of 1.5 arc sec or less. His program involved taking short exposures (1 to 10 minutes) at the prime focus. There was concern about losing time with frequent reloading of plateholders, but this problem was solved by adding a focal screen permitting 4 fields to be taken on the same 10" x 10" plate. In this way he was able to get pictures of 80 fields in 5 nights.

This picture by Moffat and Shara is a combination of 2 plates of the same object - here only a small portion of the southwest arm of M31 - made by mixing slightly displaced, a short exposure in B and a long exposure through a narrow band filter at 4670Å. Every stellar image should appear double; that happens except for a few stars which are almost invisible on the B plate but present much brighter images on the 4670Å plate. These can be considered as Wolf-Rayet candidates.

Spectrum of M31 obtained with UV Prime spectrograph in ultraviolet. The slit, 4.2 arc minutes high, is aligned along the minor axis of the bulge. Exposure time is 2h 36m on baked Ilford film.
Four runs at the prime focus involved visitor equipment: Spectrograph UV Prime, the electronographic camera, and two C.C.D. cameras. Three of these Instruments had been used during the first semester, but had suffered from a variety of problems. They were more successful in the latest runs. Hickson et al. obtained many more CCD frames of active galaxies. Pellet and Lelièvre obtained spectra of nuclei of galaxies and quasars up to 17.5 mag. at 55 Å/mm from 3100 to 5000Å with the compact U.V. spectrograph of Lemaître. Good plates were also obtained by Picat and team with the electronographic camera, unfortunately during only one and a half nights.

The first use of the 100 x 100 C.C.D. camera built at Paris-Meudon Observatory (Fort) was beset by many problems. Nevertheless some good images with different narrow band filters up to 1 μm were obtained, in particular of the field of PKS 0454-22.