Canada-France-Hawaii Telescope. Of these, 12 objects have visible counterparts on the Palomar Sky Survey near-infrared (NIR, 7550–8850 Å) or red (E) prints, and 7 of these are visible on the blue (O) prints. For such cool objects to be visible at blue wavelengths suggests that they are emission-line sources. In this paper, we show the identification charts made from the NIR or E prints for these 7 objects. Further optical observations are planned to understand the nature of these objects.

Search for parent-molecule line-emission from Comet Halley with a high-resolution astronomical infrared Fourier-transform spectrometer, David A. Naylor, Arvid A. Schultz, Department of Physics, University of Lethbridge, Alberta, T. Alan Clark, Department of Physics, University of Calgary, Alberta.

Preliminary results from the first astronomical tests of a newly developed infrared Fourier transform spectrometer will be presented. In mid-May, the spectrometer will be used at the Cassegrain focus of the Infrared Telescope Facility on Mauna Kea, Hawaii to conduct a search for parent-molecule line emission from Comet Halley at wavelengths between 5 and 20 microns. Preliminary analysis of these results including an estimate of the spectrometer sensitivity will be presented.


Star counts in the old open cluster NGC 2420 are presented. They are based on extensive plate photometry for 9429 stars in a 1°4 by 1°4 area centred on the cluster. This provides a statistically complete data base from which star counts may be obtained with a very well determined field star density.

The maximum distance from the cluster centre at which cluster members have been detected is 22 arc minutes, and the number of cluster members inside this radius is roughly 700. These numbers are much larger than one would expect from a simple visual inspection of the plate. A lower limit to the cluster’s mass is 1000 solar masses.

Chi-squared fits to the cluster’s projected density distribution show that it is consistent with the empirical model of King (1962, Astron. J. 67, 471). The tidal radius is larger than theoretical estimates, but is poorly constrained by the observations.

There appears to be mass segregation in the cluster (i.e., the massive stars are more centrally concentrated than the less massive stars), but it is not statistically significant. Similar situations exist in other old open clusters.

The cluster’s mass function is consistent with a power law with exponent similar to that of the Salpeter mass function. However, the observed mass range is small, and, as a result, the exponent is not well determined.

Galactic Radio Patrol: Progress and New Horizons, P.C. Gregory, Physics Dept., U.B.C., Vancouver, B.C.

The first phase of the galactic radio patrol was carried out from 1977 to 1984 with the N.R.A.O. 91-m telescope at a wavelength of 6 cm. During this period the region l = 40° to 220° and |b| ≤ 2° was repeatedly surveyed for transient and highly variable radio sources, providing variability information on time scales ranging from a few days to several years. The data are archived at U.B.C. and two catalogues of compact sources with variability information have been published (Gregory & Taylor, 1986, Astron. J., submitted; Taylor & Gregory, 1983, Astron. J. 88, 1984).

A major new phase of the patrol will begin in 1986–87, which will exploit several new developments in instrumentation and analysis. (1) A new 7 feed, 14 channel, 6-cm receiver will enable simultaneous observations of 7 sky tracks in place of the current single track and with increased sensitivity. Part of

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