sdO Stars in Globular Clusters, J. Glaspey, Observatoire astronomique du mont Mégantic and the Université de Montréal.

Recently obtained spectra at moderate resolution of a blue, UV-bright star in M 22 show absorption lines of He I, He II and H I. The spectral type derived from line ratios is O6, indicating a hotter effective temperature than that implied by the available colour-index. We derive a log $T_{\text{eff}} = 4.58$, a log $g = 4.2$ and a mass of 0.44 $m_\odot$.

Comparison of this object and several previously known sdO stars with published evolutionary models indicates that cluster sdO stars have very similar masses ($\sim 0.4 m_\odot$) but have systematically lower surface gravities than field sdOs. The two groups may represent distinctly different evolutionary states.


Nine CTIO 4-m plates are combined to produce a colour-magnitude diagram for several hundred bright stars of this Magellanic-type galaxy. The plates were measured with the APM system at Cambridge and analysed with the VAX 11/780 at IOA. One bright red variable $V = 19.35$ was detected and several Cepheids were measured. A distance $\mu_0 = 26.9$ (2.4 Mpc) was obtained from the apparent magnitudes of the three brightest blue stars and the brightest red star. The mean apparent magnitudes of three bright Cepheids match very well this distance. Approximate periods can be estimated from the nine data points.

The Stellar Distribution in Puppis, B.C. Reed, St. Mary’s Univ., Halifax.

$BV$ photographic photometry and objective-prism spectral classifications have been used to study the distribution of stars and interstellar reddening in the direction $(l, b) = (245^\circ, 0^\circ)$ in the constellation Puppis.

Spectrophotometry of a sample of $\sim 3300$ B5 to M5 stars in a 7.75 square degree region to $V \sim 12.5$ reveals that interstellar absorption sets in at $r \sim 400$ pc, and rises steadily to $A_v \sim 1.6$ at $r \sim 9$ kpc. The spatial distributions of various spectral groups are consistent in number and structure with those in other Galactic-plane fields; the A2-A5 stars exhibit a density maximum at $r \sim 1.2$ kpc which may be associated with the bridge between the local and Carina spiral features, and the G-K giants appear more populous in this direction than at other Galactic longitudes.

Velocity Dispersion in Giant Extragalactic H II Regions, Robin Arsenault and Jean-René Roy, Département de physique, Université Laval.

We have measured the H$\alpha$ line profiles of 46 extragalactic H II regions with the Canada–France–Hawaii telescope. The line profiles were obtained with the scanning Fabry-Pérot spectrometer built by Roy and Arsenault at Laval University. The profiles have been deconvolved in order to obtain the velocity width in excess of thermal motions. The purpose of this research is to calibrate the relationship between the velocity width of line profiles and the linear diameter of the H II regions and, potentially to establish a relation between the velocity width and the absolute magnitude of the parent galaxy.


New $\lambda 21$ cm aperture-synthesis observations of the HII region, S142, made with the telescope at Penticton (resolution $1' \times 1'2 \times 1.3$ km s$^{-1}$ in velocity) show the radio continuum emission and