

extinction. We carried out observations using the Torino Five Channel Photopolarimeter attached to the 2.15-m telescope at CASLEO (Argentina).

The Stokes plane for the cluster area stars and its surroundings according with our data and that from the Klare & Neckel (1977) catalogue, respectively allowed us distinguish some foreground stars.

The Serkowski (1971) law was fitted to every star of the sample to obtain their λ_{max} and P_{max} values. Different k-values were used for stars with low and high polarization values and that fact was interpreted as high polarization values are produced by dust with uniform properties (λ_{max}) while the formers values are produced by dust, along the line of sight, with different λ_{max} associated.

Using $E(B - V)$ values from Moffat et al. (1977) and adopting $R_V = 3.2$ we plotted P_V vs. A_V for all measured stars. All of them are found below the empirical relation $P_V = 3A_V$ line, which was adopted as a maximum value for interstellar polarization.

We can note that stars in the region of Tr 27 the orientation of the polarization vectors is homogeneous and along the galactic plane direction; nearby stars have low polarization and do not follow that behavior.

As conclusion, we found high polarization values with a high spread in Tr 27 region and all polarization data follow the Serkowski law; our data analysis allow us to believe that the dust is basically near the cluster and situated in Sagittarius arm and not sparced along all line of sight, according with Bakker & Thé (1983) suggestion, their adopted distance of $d = 1.64$ kpc and the fact that dust properties studied by same authors revealed a normal extinction law.

Bakker, R. & Thé, P.S. 1983, A&AS 52, 27
 Klare, G. & Neckel, T. 1977, A&AS 27, 215
 Moffat, A.F.J., FitzGerald, M.P., & Jackson P.D., 1977, ApJ 215, 106
 Serkowski, S., 1971, in Proc IAU Symp. 52, 144

SPECTROSCOPIC STUDY OF THE SYMBIOTIC STAR HEN 1761

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Optical spectra of the symbiotic star Hen 1761 are analyzed. The observational data were obtained with

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the Z-Machine and CCD Thomson detectors and the Boller & Chivens Cassegrain spectrograph attached to the 2.15-m telescope of the CASLEO (San Juan, Argentina).

Hen 1761 presents variations in the continuum and in the emission and absorption lines along the observing runs, being the minimum time scale of variability of about one month. The relative intensities and the radial velocities of the emission lines that show greater variations are those with the higher ionization potentials, i.e., He II, [O III] and N III.

The possibility of considering the observed variations as a consequence of the orbital motion, is discussed and the orbital period would be of several years.

The spectral type of the late giant is determined from the behavior of the continuum in the spectral red region and from the intensities of the molecular bands.

Physical parameters of the hot component are estimated in base of the He I 4471/H β and He II 4686/H β ratios.

In the light of our results, the binary system Hen 1761 would consist of an M4 III component and a compact dwarf whose effective temperature, luminosity and radio are within the estimated ranges, 90000–110000 K, 21–48 L_\odot and 0.013–0.026 R_\odot respectively. More studies of Hen 1761 in higher resolution will be developed in the future.

STRANGE MATTER AND STRANGE STARS IN A NEW MODEL OF CONFINEMENT

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We study the properties and stability of strange matter at $T \geq 0$ in the quark mass-density dependent model. For the quark masses we assumed $m_u = m_d = C/n_B$ and $m_s = M_{so} + C/n_B$ where (C, M_{so}) are constants and n_B is the baryon number density. We found a wide “stability window” for the values of (C, M_{so}) and the resulting equation of state at low densities is stiffer than the one of the MIT Bag Model. At higher densities it tends to the ultra-relativistic behavior expected because of the asymptotic freedom of quarks. We find the temperature dependence of the strange matter

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