stability window and the critical temperature above which there is no stable strange matter. It occurs at $T_c = 34$ MeV.

The density of zero pressure is near the predicted by the Bag Model and *not* shifted away as stated before, but at these densities the velocity of sound is $\approx 50\%$ larger in this model than in the Bag one.

We have integrated the equations of stellar structure for strange stars at $T = 0$. We found that the Mass-Radius relation is very much the same as in the Bag Model, although it extends to more massive objects.

Finally, we study the combustion of nuclear matter into strange matter. We employ for strange matter the equation of state of this paper and for nuclear matter a set of equations of state (free neutrons, Bethe-Johnson, Lattimer-Ravenhall and Walecka). It is shown that the results are very similar to the ones found employing the MIT Bag Model. However, the only equation of state which shows a noticeable dependence with temperature is the Walecka one. Moreover, contrary to the former case, Walecka equation of state is flammable in the present model.

Lugones, G., & Benvenuto, O.G. 1995, Phys.Rev.D 52, 1276
Benvenuto, O.G., & Lugones, G. 1995, Phys.Rev.D 51, 1989

CALIBRATIONS OF INFRARED DATA

Claudio M. Bevilacqua[1], Jorge R. Ducati[1], and Jandyra M. G. Fachel[2]

The catalogue of observations of stars in the UBVRIJHKLMN photometry (Ducati 1993) provides extensive data for more than 3800 objects. This allows fundamental studies on astrophysical parameters in the near infrared, with a statistical basis never attained before. From the catalogue's data we derived infrared intrinsic RIJHKLMN colors, using the technique of tracing an enveloping curve. This gave us tables of $(R-V)_0$ to $(N-V)_0$ for each luminosity class I, III and V, for spectral types O to M. Compared with the results of Johnson (1966) or Koornneef (1983), our results showed good agreement for most colors; differences should be due mostly to the far greater amount of data available to us. Color excesses could be derived for 1650 stars which have complete spectral types. For this new dataset, a multivariate analysis was performed, including cluster analysis. This allowed to derive functional relationships between all colors, in special for $(U-V)_0$, $(B-V)_0$, $(J-V)_0$, and $(K-V)_0$, where more than 1300 measurements are available for all four indices. It was thus possible to predict missing colors, if other colors are available. Cluster analysis showed that distances, spectral types and other parameters can be inferred, even when photometric data are incomplete, since the technique groups objects with similar characteristics. This was demonstrated in a cluster which contains stars farther than 20000 parsecs, together with stars of unknown distance, but with similar spectral, positional or photometric information.

Ducati, J.R. 1993, Wisconsin Astrophysics 504
Johnson, H.L. 1966, ARA&A4, 196
Koornneef, J. 1983, A&A 128, 84

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LINEAR POLARIZATION OF A GROUP OF SOUTHERN SYMBIOTIC STARS

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A polarimetric study of southern symbiotic systems was made using the five channels photopolarimeter of Torino attached to the 2.15-m telescope of CASLEO.

The results presented in this paper are referred to a group of symbiotic systems (V748 Cen, Hen 1103, KX Tra, CL Sco, FN Sgr, Hen 1761, RR Tel, CD −43.14304 and AG Peg) which were observed during 1994–1995. Some of them have no previous polarimetric data.

Evidences of intrinsic polarization are considered according to the behavior of the percentage polarization and position angle, with the wavelength. Polarimetric variations were found along the different observation runs for several stars, indicating structural changes in the distribution of circumstellar matter.

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