TOOLS FOR A NEW APPROACH OF STELLAR POPULATIONS

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Over the past decade, a very considerable amount of effort in the understanding of stellar populations has gone. Because a large number of analysed data is the basis of this understanding, our efforts concerning this subject matter presented in this poster are mainly:

-Conception of spectrograph

Multiaperture spectrograph is now a reality on large telescopes. The spectrograph SFM has been achieved in the Observatoire de Marseille and is now at Calar Alto (Baranne et al., 1992). It is used on the German 3.5 m telescope. Such an instrument multiplicates by a large factor the number of observed stars.

-Numerical simulation of spectra of stars

This is an easy reality with fast computers today. Comparison with observed spectra gives the opportunity to use spectra at low resolution and low S/B ratio. An example concerning stars in the SMC and the LMC is given. We confirm in this way the previous published abundances, respectively -0.4 and -0.2 *dex* for the iron abundance of field stars in the SMC and LMC. These synthetic spectra can also be used to compute synthetic integrated light of globular clusters and spheroidal galaxies in order to interpret related observations.

-Spectroscopic data analysis

A new approach of spectra by synthetic one can be tried with the wavelet theory. This is developed to open a new way for the automatic classification of stellar spectra, and this could be an help for the realisation of a numerical spectrovelocimeter Coravel.

References

Baranne A., Blazit A., Foy R., Thévenin F.: 1992, to be published
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