SPECTRAL SYNTHESIS OF THE INTEGRATED SPECTRUM OF THE GALACTIC BULGE

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We present preliminary results of the population synthesis of the Galactic Bulge using different techniques. The observations, taken with CTIO's 4m CS, cover the range 3600Å to 10000Å. The integrated spectrum includes light from stars in the line-of-sight. For the synthesis, we used first a program that we developed (Couture & Hardy (1993), and Hardy et al. (1994)) along with three libraries, one of composite population spectra, (Jablonka et al. (1990) and Bica (1988)), one of stellar spectra (Pickles (1985)), and one of equivalent widths measured on the integrated spectra of coeval populations (Bica and Alloin (1986a), (1986b) and (1987)). Results obtained with the spectra were inconclusive. With the equivalent widths, we found indication of the presence of a young and rich population (1 Myr and $[Z/Z_{\odot}] = +0.3$), but no old population or poor globular cluster-like population. Further tests are needed to evaluate the extent of the contamination from disk giants and its impact on the synthesis results. We also used Bica and Alloin's optimization program (Bica (1988)) with their library of equivalent witdhs. The contributions are spread over many groups but mainly intermediate-age, above-solar metallicity groups and old and poor groups. In all cases, no old metal-rich population was detected.

References

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