



Multiple stellar populations in the Globular Clusters NGC1851 and NGC6656 (M22)

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In the last years, photometric and spectroscopic evidence has demonstrated that many, maybe all the Globular Clusters (GC) host multiple stellar populations. High-resolution spectroscopy has established that, while most GCs are mono-metallic with no significant abundance spread in s -elements, in all the globulars studied to date the presence of different stellar generation is inferred by the Na-O and the C-N anticorrelations. In this context, NGC 1851 and NGC 6656 are among the most intriguing clusters. Contrary to the majority of GCs, they host two groups of stars with different s -elements abundance that are clearly associated to the two distinct sub-giant and red-giant branches detected in their color-magnitude diagrams (CMD). In the case of NGC 6656 s -rich stars are also enriched in iron and calcium. Each s -element group exhibits its own Na-O and C-N anticorrelations thus indicating the presence of sub-populations and suggesting that the parent clusters have experienced a very complex star-formation history. In this paper we summarize the properties of multiple populations in NGC 1851 and NGC 6656.

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