

# Multiple stellar populations in the globular cluster M3 (NGC 5272): a Strömgren perspective

Cita:

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## Abstract

We present Strömgren photometry of the Galactic Globular Cluster M3 to study its multiple generations phenomenon. The use of different colour–magnitude diagrams (CMDs) and especially of the notoriously efficient cyindex allowed us to detect a double red giant branch in the cluster CMD. After decontamination from fore- and background sources, the two sequences turned out to be equally populated. The two components also show a bimodal radial distribution well corresponding to that predicted by numerical simulations for clusters living in an intermediate dynamical evolutive state and with a population with modified chemical composition that was born more centrally concentrated than the primordial. The analysis of high-resolution spectra quantitatively demonstrates that the two detected sequences correspond to the first (Na-poor) generation and the second (Na-rich) generation, thus confirming the importance of synergy between photometry and spectroscopy.