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Sesión Científica: La vía láctea y sus componentes

Título: Ground-based multicolour photometry of NGC 6811

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Resumen:

NGC 6811 is one of the four open clusters in the field of view of the Kepler space mission. Among its members there are several known pulsating A-F stars of the Delta Scuti, Gamma Doradus, and hybrid type, which makes this cluster a very interesting object to study its pulsational content.

During the summers of 2013 and 2014 we performed an extensive observational campaign using the 1.5 m telescope at the Sierra Nevada Observatory and multicolour photometry. New pulsating variables candidates are detected in this work. We fulfilled a frequency analysis for the known variables, with very good agreement with previous results. By using Stromgren photometry we were able to obtain the main physical parameters of the stars such as temperature, surface gravity, metallicity and luminosity. We have also determined the corresponding frequency phase-shifts and amplitude ratios between different filters as a first step to identify the pulsational modes of the variables.