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Título: Survey of Young Stellar Clusters in the North Hemisphere

Nombre (Autor que presenta): M. TERESA

Apellidos (Autor que presenta): COSTADO DIOS

Apellidos y nombre de los autores: ALFARO E.J., DELGADO, A.A., DJUPVIK, A.A., MICHEL, R.

Resumen:

Five years ago, the Stellar Systems Group of the IAA began an observational programme of young stellar clusters containing massive stars, whose main objective is the characterization of their stellar population using optical (UBVRI+ H α) and NIR (JHK) photometry. With these data, we can obtain the physical parameters of the clusters and determine the mass function of the cluster members, their spatial distribution by mass range, as well as a census of populations at different masses and evolutionary states for two distinct environments: a) isolated clusters, and b) clusters contained within a larger star-forming region. So far, we have observed around 20 clusters, which are at different stages of analysis. The optical data were secured from the 1.5m telescope at Sierra Nevada Observatory (OSN), while the NIR data were taken using the Nordic Optical Telescope (NOT) at Roque de los Muchachos Observatory. The last year, we began the optical observations of the survey with a larger field of view (13' size) at the 0.9m telescope (OSN). The analysis of the set of standard stars observed along the whole project enabled us to determine a reliable estimation of the atmospheric extinction as well as to analyze the stability of the photometric transformations at OSN to calibrate the data. In this poster, we present the results of the calibration analysis and the preliminary study for a subsample of the clusters.