

Dynamical method for the analysis of the sistematic errors in stelar catalogs

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The recent introduction of the new reference frame and the new star catalogues Tycho, Hipparcos, G.S.C., etc. give special interest to the study of the possible existence of systematic errors among them and between each catalogue and the reference frame.

This last process may be approached by several methods like the analysis of the residuals given by the O-C (Observation minus Calculus) errors of the minor planets. These errors are partly due to the reference and partly to an inaccurate determination of the initial constants.

In this paper a method to approximate the residual function is developed. This method is exact till second order (included) and it allows to develop more precise equations to determinate the signal and the initial constants.