GLOBAL REDUCTION OF FUNDAMENTAL ASTRO-METRIC DATA: COMPUTATION OF STAR CATALOGUE[1]

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ABSTRACT: The global reduction procedure (Benevides-Soares and Clauzet, 1984) can be applied at low cost to long series of astrolabe and transit circle observations. This procedure makes efficient use of the whole available data and provides realistic estimates of the observational accuracy, since long period components of anomalous refraction and image motion are fully included in the solution. The method was applied to a two year series of astrolabe observations made at the University of São Paulo "Abrahão de Moraes" Observatory at Valinhos in order to compute star coordinate errors, as well as systematic differences astrolabe-catalogue.

Results are compared to the standard technique solution for the same observacional data.

To be published in *Astronomy and Astrophysics*.

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