

PROVISIONAL VALUES OF INTERNAL GROUP CORRECTIONS
FOR THE VL3 ASTROLABE CATALOGUE

L.B.F. Clauzet and M.E. Mattos

Instituto Astronômico e Geofísico, U.S.P., Brasil

ABSTRACT. The 45° zenith distance, observing programme for the third astrolabe catalogue at Valinhos (VL3), which is part of a major southern general astrolabe catalogue, have been completed in an amount of 15 to 20 observations of each group. After a preliminary reduction, corrections in zenith distance are derived for each star with respect to the mean of the group where it was observed. By applying these internal group corrections to the computed zenith distance, a re-reduction of the groups, gives the definitive solution of the observations. These mean residuals are mainly due to individual errors in the catalogue position, but a part of them may be also due to systematic effects in both the catalogue and instrument. We analyse in this paper, by means of the mean residuals and the corresponding standard deviation of mean weight (mean error), the dependence of instrumental factors, such as azimuth and magnitude and also the systematic errors of the catalogue. The results are compared with those of the VL1 and VL2 catalogues.

Since these observations are made in 45° of zenith distance, a carefully analysis of the refraction is underway and these results must be understood as provisionals.

Key words: ASTROMETRY — CATALOGUES

L.B.F. Clauzet and M.E. Mattos: Instituto Astronômico e Geofísico, Universidade de São Paulo, Caixa Postal 30627, 01051 São Paulo SP, Brasi.