

THE CARTE DU CIEL AND THE CATALOGUE PHOTOGRAPHIQUE PLATES OF THE BORDEAUX OBSERVATORY

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We attempt to see if the plates of the "CARTE DU CIEL" and of the "CATALOGUE PHOTOGRAPHIQUE" taken at the Bordeaux observatory at the beginning of the century can be used for astrometric purposes. We have remeasured four randomly chosen plates of the CATALOGUE PHOTOGRAPHIQUE which had fortunately been measured at the same epoch. About twenty fundamental stars were reduced for the two epochs, using either the AGK3 or the Catalogue de Raccordement established by Semirrot(1965); all measurements are related to the Equinox 1950.0. This study gives the following results:

a. No systematic error appears between the measurements of stars positions on the same plate carried out at the beginning of the century and now (figure 1 and 2)

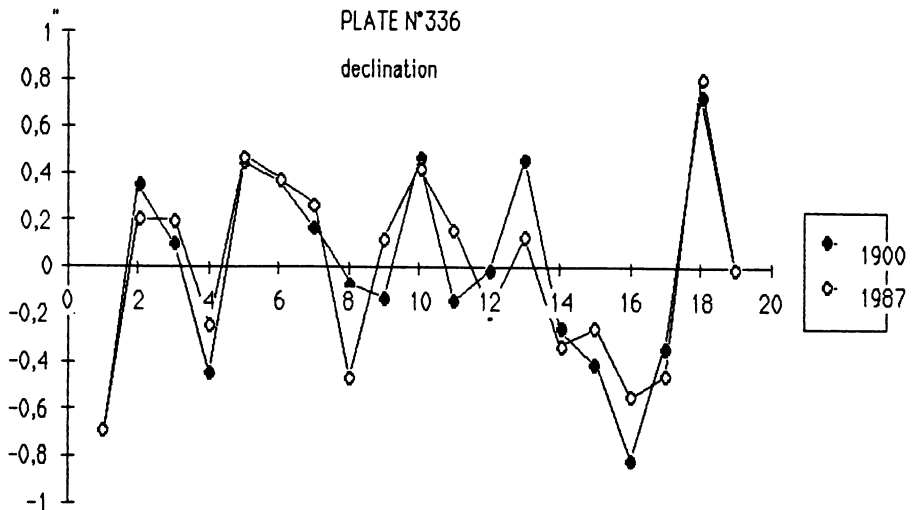


figure 1. Comparison between 1900 and 1987 measurements of the same stars on the same plate relatively to the Agk3 catalogue.

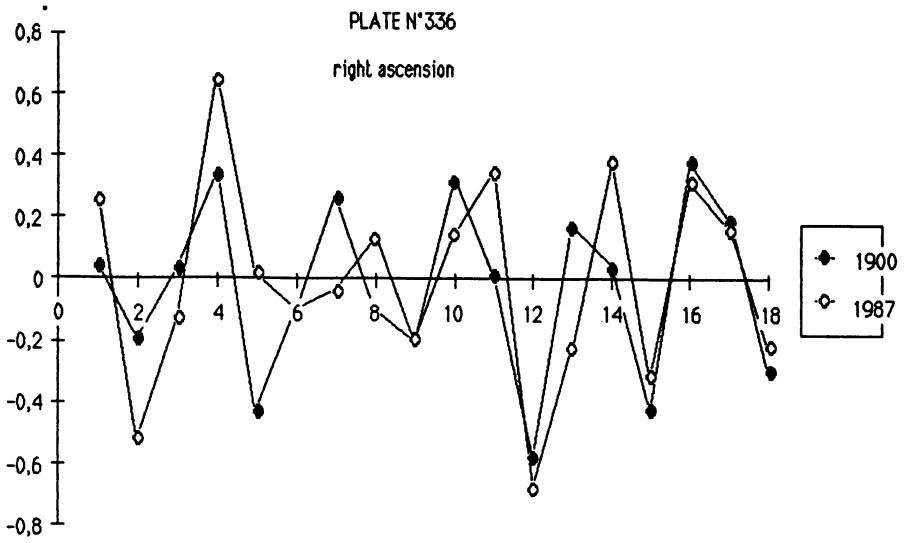


figure 2. Compararison between 1900 and 1987 measurements in right ascension.

b. The dispersion of the differences between the measurement at the two epochs are between 0"20 and 0"30 in both coordonates (figure 3 and 4).

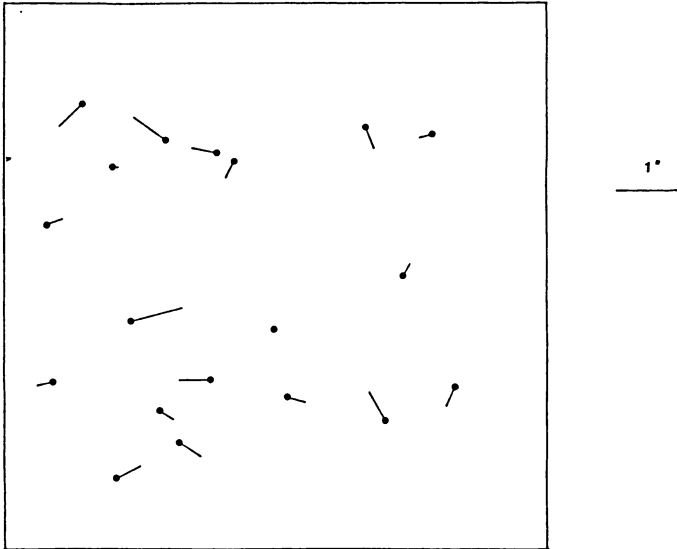


figure 3. Difference of measurement between 1900 and 1987 for plate N°

336.

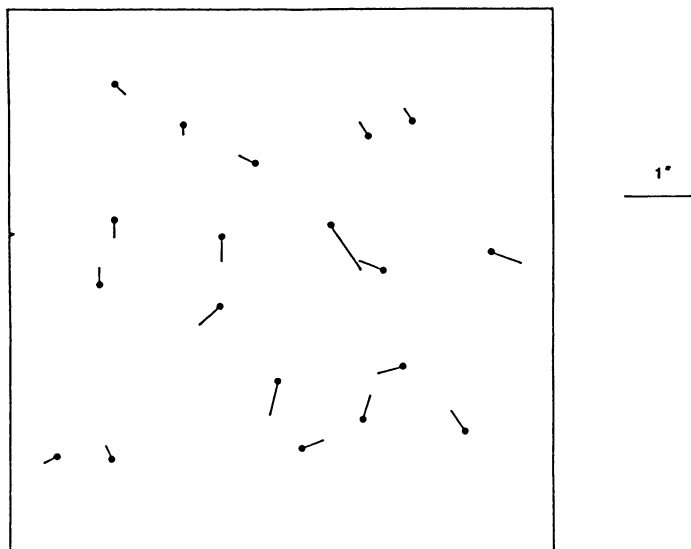


figure 4. Difference of measurement between 1900 and 1987 for the plate N° 577.

These results apparently show that, for the Bordeaux observatory, where all plates have been kept in the same conditions, the CATALOGUE PHOTOGRAPHIQUE and the CARTE DU CIEL could be used for astrometric studies.

Reference

Sémirot P., 1965, Catalogue Photographique de l' Observatoire de Bordeaux.