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## Lorentzian' analysis of the accuracy of modern catalogues of stellar positions

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### Abstract

© Published under licence by IOP Publishing Ltd. There is a new approach for the estimation of the position accuracy and proper motions of the stars in astrometric catalogues by comparison of the stars' positions in the researched and Hipparcos catalogues in different periods, but under a standard equinox. To verify this method was carried out the analysis of the star positions and proper motions UCAC2, PPM, ACRS, Tycho-2, ACT, TRC, FON and Tycho catalogues. As a result of this study was obtained that the accuracy of positions and proper motions of the stars in Tycho-2 and UCAC2 catalogues are approximately equal. The results of the comparison are represented graphically.

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