

POSTERS

1.1 DEVELOPMENTS IN GROUND-BASED ASTROMETRIC TECHNIQUES AND LARGE CATALOGUES

THE NEW CATALOGUE OF POSITIONS AND PROPER MOTIONS OF 5115 BRIGHT STARS COMPILED AS THE RESULT OF THE INTERNATIONAL "BRIGHT STARS" PROGRAM

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ABSTRACT. At Kyiv University Observatory, in accordance with IAU resolution, the Combined Catalogue of Positions and Proper Motions of 5115 Bright Stars in the FK5 system for Epoch and Equinox J2000.0 (BSC, see reference) has been compiled using 20 source catalogues obtained within the framework of 'Bright Stars' International Program. The source catalogs are Bordeaux-66, Bucharest-65, Bucharest-68, Belgrade-79, Cape-68, Kharkiv-70n, Kharkiv-70s, Kyiv-66, Kyiv-73, El Leoncito-70, Moscow-76, Mykolaiv-65, Perth-70, Perth-75, Santiago-65, Santiago-67, Strasbourg-65, Tashkent-64, Tokyo-68, Washington-66. The BSC accumulates around 30,000 source catalogue positions observed within 1960-1980. The standard errors of BSC do not exceed 0.1 arcsec and 0.25 arcsec/cy for positions and proper motions, respectively. The systematic differences between BSC and FK5 in positions for the mean BSC epoch 1970 as a rule do not exceed several hundredths of arcsec. A comparison of the BSC with the PPM catalogue indicates that in the latter the accuracy of positions and proper motions of the ordinary bright stars is slightly worse than that of average values given by the authors of the PPM. It is important to note that the comparison of the BSC with PPM for various star subsets shows deviations of both the HPS bright star system and the rest of the PPM bright stars, on the one hand, from the stars of the FK5 Extension contained in the PPM on the other hand. To examine the BSC proper motion system the stellar astronomy constants and correction to precession have been determined using the BSC proper motions. The parameters obtained agree with the standard ones. But the Oort constants are slightly smaller than those of standard.

The BSC catalogue as a whole is acceptable for astrometry usage with respect to both accidental and systematic accuracy.

Reference

Molotaj, A.A., Tel'nyuk-Adamchuk, V.V., Chernega, N.A., Kanivec', N.D. (1992) 'Compiled Catalogue of Positions and Proper Motions of 5115 Bright Stars for Epoch and Equinox J2000.0'. Kiev, Zovnishtorgvydav Publisher. 132 p.