EXTENSION OF THE FK5 COORDINATE SYSTEM TO THE INFRARED FREQUENCY RANGE

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ABSTRACT. Appearance of infrared detectors and especially infrared arrays opens the practical possibility to determine the precise differential positions of stars, planets and an other objects in IR range immediately if correspondent IR reference catalogue is created. An preliminary IR reference catalogues were created already by identification of optical/IR counterparts and in this way the dynamical FK5 coordinate system were extended to infrared frequency range.

The experience of creating of first step of such IR reference catalogue at Goloseevo is described. This step of IR coordinate system was created by using the FK5 itself, two infrared catalogues - CIO D.Y.Gezari and IRAS PSC and an photometric data. In results an analog of the FK5 in infrared was created. This last catalogue may be used to conventional and probably more precise differential meridian observations in near infrared range if special IR meridian instruments equipped of correspondent special IR meridian instruments equipped of correspondent infrared detectors be developed and manufactured.

Possibilities of creating and practical using next more density steps of IR coordinate system to solving an astrometric problems are discussed.