

Selenocentric reference coordinates net in the dynamic system

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Abstract

© Published under licence by IOP Publishing Ltd. In this work, the selenocentric dynamic reference net was developed for the first time in the field of selendesy in order to address problems with space navigation. Three tasks were addressed in this research: a) the analysis of the mathematical model of the orthogonal coordinate transformation accuracy; b) the identification of the basic dynamic reference system objects with ones that are contained in reducing catalogues; and c) the extension of the base points net of the basic dynamic reference system. The result was a dynamic coordinate system summary that contains 1162 objects. The correlation analysis of this net was carried out and was found to coincide with modern dynamic coordinate systems that have been obtained. This selenocentric reference catalogue covers the full visible area of the Moon.

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