Prospects and caveats of determining Earth orientation parameters from lunar laser ranging data

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Abstract

Advances in lunar laser ranging (LLR) measurements make the technique capable of determining daily corrections to Earth orientation parameters, which was discussed in some recent works. One advantage of LLR over very large baseline interferometry (VLBI) is independence of clock offsets. In this work, the recent LLR data is analyzed and applied to EOP determination; also possible caveats are discussed: the effect of incorrect EOP to the formation of LLR normal point, and the LLR range error as a source of uncertainty of the determined EOP.

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