

Comparison between VLBI and other space geodetic techniques for determining Earth orientation parameters

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Abstract

Very Long Baseline Interferometry (VLBI) is the only space geodetic technique capable of providing the complete set of Earth Orientation Parameters (EOP) required for the accurate transformation between celestial and terrestrial reference frames. This study aims to generate long EOP time series (2001-2022) with the Vienna VLBI and Satellite Software (VieVS) with various parameters and settings, such as the representations of EOP with piecewise linear offsets, estimation time intervals, and the handling of station and source constraints. As part of the study, different space geodetic techniques will be compared and combined at the solution level to analyse and produce a single time series of the EOP and Length of Day (LOD). The study will focus on the comparison of EOP obtained from VGOS sessions and S/X sessions.

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