

[궤OG-01] Characters of Perturbation in Earth's Spin Rotation

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From the most recent dataset of the earth's spin rotation, we separate different frequency components of its perturbation and analyze their characteristics. Both changes of the earth's spin and pole position are considered.

[궤OG-02] Effective Strategy for Precise Orbital and Geodetic Parameter Estimation Using SLR Observations for ILRS AAC

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In this study, we propose an effective strategy for precise orbital and geodetic parameter estimation using SLR (Satellite Laser Ranging) observations for ILRS AAC (Associate Analysis Center). The NASA/GSFC GEODYN II software and SLR normal point observations of LAGEOS-1, LAGEOS-2, ETALON-1, and ETALON-2 are utilized for precise orbital and geodetic parameter estimation. Weekly-based precise orbit determination strategy is applied to process SLR observations, and Precise Orbit Ephemeris (POE), TRF (Terrestrial Reference Frame), and EOPs (Earth Orientation Parameters) are obtained as products of ILRS AAC. For improved estimation results, selection strategies of dynamic and measurement models are experimentally figured out and configurations of various estimation parameters are also carefully chosen. The results of orbit accuracy assessment of POE and precision analysis of TRF/EOPs for each case are compared with those of existing results. Finally, we find an appropriate strategy for precise orbital and geodetic parameter estimation using SLR observations for ILRS AAC.