

Homogeneous formation of SLR Normal Point data

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Nowadays, the SLR Normal Points (NPs), i.e., compressed full-rate data, are generated by each SLR station, and are provided through the International Laser Ranging Service (ILRS) to the analysts for their SLR processing. However, in 2018, the ILRS requested the stations to provide also their full-rate data. This enables the analysts to generate the NPs homogeneously for all stations to reduce systematic errors. Therefore, we designed in collaboration with the Swiss Optical Ground Station and Geodynamics Observatory (SwissOGS) in Zimmerwald a NP generator offering different screening techniques, e.g., standard filter or leading-edge filter. The newly derived NPs can then be used immediately to perform weekly SLR solutions for 20 LAGEOS-1/2, where the orbits are determined in 7-day arcs together with station coordinates and other geodetic parameters. The quality of different sets of NPs is evaluated by comparing, e.g., station coordinates, Earth rotation parameters or observation residuals.