A Global SLR-only Reference Frame

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The current official ILRS products provide a time series of station positions and EOP, leaving the estimation of velocities under the umbrella of the ITRF realization.

The goal of this work is to present a global Reference Frame for the ILRS network stations obtained using only the ASI solutions contributed to the ILRS official products.

The analysis has been performed using almost 30 years of data (1993 to 2022) collected from the operational weekly loose-constrained SINEX products.

The estimates from the historical series were obtained through the Globk software, part of the Gamit/Globk software, natively built for GPS analysis but adjustable for a multi-technique analysis.

We present the approach used through the Globk, describing the workflow, the configurations, and the results of the comparison with respect to the newest ITRF2020 Reference Frame, showing a good agreement.

The quality of the results could initiate a discussion within the Analysis Standing Committee leading to the generation of an internal ILRS reference frame to be updated more frequently than the ITRF.