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Status of IGS repro3 activities at GFZ

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Based on a large network of continuously operated GNSS tracking stations, the International GNSS Service (IGS) has a valuable contribution to the realization of the International Terrestrial Reference System. In order to provide the highest accurate and consistent solution, the IGS refined the strategy and the set of associated models for the ongoing third reprocessing campaign. Beyond updated background models, a major improvement is the combined reprocessing of three GNSS, namely GPS, GLONASS, and Galileo. Furthermore, signal-specific receiving antenna calibrations for Galileo and scale-free transmission phase center positions are applied. These modifications will allow exciting new investigations based on the delivered products. Hosting an IGS Analysis Center and an Analysis Center of the IGS Tide Gauge Benchmark Monitoring Project (TIGA), GFZ will contribute with two solutions to the IGS reprocessing efforts.

In this contribution, we will present the first outcomes of the ongoing preparations and preliminary results of the GFZ reprocessing activities. In the first part, we will present selected results of dedicated tests with a special focus on correction models and parametrization options. Secondly, we will present the initial results of the AC solution as a basis to discuss also further applications of the derived products (e.g., orbits, Earth rotation parameters). Finally, the first results of our TIGA-related reprocessing will be presented which are based on the previously discussed orbits and satellite clocks.