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Near-seasonal periods in GNSS station time series

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The Center for Orbit Determination in Europe (CODE) is one of the global analysis centers of the Internation GNSS Service (IGS). It provides daily solutions for the orbits of the active GNSS (Global Navigation Satellite System) satellites. GPS and GLONASS satellites are included in a combined analysis. The processing includes about 200 stations from the IGS permanent tracking network. Many of them represent the IGS realization of the terrestrial reference frame.

Several series of daily station coordinates are generated with different a priori modelling of the radiation pressure of the GNSS satellites. By comparing these time series the impact of the applyed orbit models on the station coordinates is investigated. In this way, the influence of orbit models on the reference frame may be examined. Orbit modelling is one of the potential sources for systematic effects that may be detected in time series of the station coordinates obtained from GNSS data analysis.