COST-G gravity field models: application in SLR orbit determination

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The Combination Service for Time-variable Gravity fields (COST-G), as a product center of the International Gravity Field Service (IGFS) of the International Association of Geodesy (IAG), provides monthly GRACE, GRACE-FO and Swarm gravity fields that are combined from the contributions of the associated analysis centers and partner analysis centers worldwide. To support operational Precise Orbit Determination (POD) of Low Earth Orbiters (LEO), where the GRACE-FO monthly gravity fields cannot meet the latency requirements, COST-G is providing a Fitted Signal Model (FSM) that allows for the prediction of temporal gravity field variations. The COST-G FSM is updated quarterly with the latest GRACE-FO data and therefore is always based on the most recent gravity fields available. We will present the COST-G FSM and its application for the daily SLR routine processing of LAGEOS/ETALON, as well as LARES orbit determination.