



## **The combined satellite gravity field model GOCO05s**

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The main objective of the GOCO (“Gravity Observation Combination“) project is to compute high-accuracy and high-resolution static global gravity field models based on data of the dedicated satellite gravity missions CHAMP, GRACE, and GOCE, SLR data and kinematic orbits from different Low Earth Orbiters.

For the computation of the new model GOCO05s more than 800,000,000 observations from 15 satellites are used to estimate about 122,000 gravity field parameters. GOCO05s consists not only of a static field up to degree and order 200, but the temporal variations of the gravity field are modeled as well. These are represented as regularized trend and annual signal.

The main focus in the GOCO combination process is on the proper handling of the stochastic behavior of the data. Therefore, the resulting accuracy information in terms of a full variance covariance matrix is quite realistic and also published with the solution.