



## **The new GRACE AOD1B Product Release 06: Product Details and Initial Validation**

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The GRACE satellites, orbiting the Earth at very low altitudes, are affected by rapid changes in the Earth's gravity field caused by mass redistribution in atmosphere and oceans. To avoid temporal aliasing of such high-frequency variability into the final monthly-mean gravity fields, those effects are typically modeled during the numerical orbit integration by applying the 6-hourly GRACE Atmosphere and Ocean De-Aliasing Level-1B (AOD1B) a priori model.

In preparation of the next GRACE gravity field re-processing planned by the GRACE Science Data System for the second half of the year 2016, a new version of AOD1B is currently calculated. The data-set is based on 3-hourly surface pressure anomalies from ECMWF that have been mapped to a common reference orography by means of ECMWF's mean sea level pressure diagnostic. Atmospheric tides as well as the corresponding oceanic response at the S1, S2, and M2 frequencies and its annual modulations have been removed in order to retain the non-tidal variability only. The data-set is expanded into spherical harmonics complete up to degree and order 180.

AOD1B RL06 will be available since 1976 in order to allow for the consistent reprocessing of all SLR observations to LAGEOS, and of all relevant satellite altimetry missions. The processing of the whole 40-years-long time-series is expected to be complete in May 2016, and we will present in this talk the current status of our efforts including some preliminary validation of the oceanic component against in situ ocean bottom pressure observations.