



TI: The DNSC07A ocean-wide altimetry-derived gravity anomaly field

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DNSC07 is a new global ocean wide satellite altimetry derived gravity field computed at the Danish National Space Center (DTU- Denmark) with a spatial resolution of 1 arc-minute by 1 arc-minute covering all marine regions of the world including the Arctic Ocean up to the North Pole. DNSC07A was derived using satellite altimetry from the ERS-1 and GEOSAT geodetic missions, retracked using a highly advanced expert based system of multiple retrackers. This enables accurate ranging to both the open ocean surface and to all ice-covered regions within the +/- 82° of latitude coverage of the ERS satellites. Augmenting these data with ICESat data and with gravity anomalies from the Arctic Gravity Project (ArcGP) enables the continuation of the gravity anomaly field all the way up to the North Pole. The DNSC07A altimetry-derived gravity anomaly field was derived with respect to a very high degree (2160) Earth Gravitational Model designated PGM07B and a consistent mean Dynamic Ocean Topography model designated DOT07A, derived jointly by NGA and its contractor SGT, Inc.. Compared to other pre-existing altimetry-derived gravity anomaly fields like KMS02, DNSC07A