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The Geomed2 project: estimating the geoid and the DOT in the Mediterranean area

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The Geomed2 project aims at estimating the best possible geoid over the entire Mediterranean area, i.e. in the area 30 < lat. < 48 -10 < lon. < 40, on a 2'× 2' geographical grid.
Different data types have been considered as well as different methods for computing the geoid. Collocation, Fast-collocation, Stokes-Wong&Gore and the KTH methods have been applied to gravity data that have been gridded on a regular 2'× 2' grid in the computation area. When required, the low frequency components of the gravity field have been modelled using the EIGEN-6c4 to d/o 1000 and different methods for RTC reduction have been tested. The estimated geoids have been then compared with altimeter data in order to obtain different estimates of the Mean Dynamic Topography (MDT), which in turn allowed the definition of the currents pattern in the Mediterranean Sea. The results obtained using the different methods are presented and discussed.