



Regional gravity modelling over Japan using wavelets

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The launch of the current and forthcoming satellite gravity missions stresses the need for regional gravity models merging surface, high resolution datasets with the lower resolution, satellite-derived information. Such enhanced regional models are useful for many geodetic and geophysical applications. Wavelets on the sphere are a promising tool for that purpose. Here we show that they can be used to derive a refined gravity model over Japan using a compilation of surface data combined with global information. In order to handle the large surface data flow, we apply in the computation process a data reduction method with prescribed model error tolerance, based on local approximations of the wavelets (Minchev et al., 2006). We show here our preliminary results over Japan.