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Comparison of recent geopotential models for synthesizing modulus of gravity vector

Case study: southern coast of Iran

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Recent progresses in the field of satellite altimetry, Satellite , airborne and surface gravimetry data have led to the production of high resolution geopotential models. These models which have been computed based on accurate gravity data, are valuable sources for computation medium and long spectrum of the gravity field. Due to the variety of the geopotential models, the accuracy of these models must be verified in synthesizing the gravity functional so that one can select the best geopotential model for a region of interest. In this paper 4 models EGM96, PGM2000A, GGM01S, GPM98CR are compared in the synthesizing modulus of gravity vector. The modulus of gravity vector implied by the models are compared with modulus of gravity vector in the test area. The numerical results show the model GPM98CR is the best global model in the synthesizing modulus of gravity vector in the test area.