

Interactive comment on “GOCO06s – A satellite-only global gravity field model” by Andreas Kvas et al.

Anonymous Referee #2

Received and published: 1 December 2020

The paper presents the latest global gravity field model computed by the GOCO (“Gravity Observation Combination”) project, namely the GOCO06s model based on over a billion observations acquired over 15 years from 19 satellites with different complementary observation principles. This means that all recent gravity mission data have been combined and included in the model, making it one of the best satellite-only gravity field models available. The primary data of GOCO06 are the geo-potential coefficients of the spherical harmonic series representing the Earth static gravity field, together with secular and annual variations. These data are available through the ICGEM web site. Other data accompanying the model are the coefficients of the full variance-covariance matrix of the static potential coefficients and the estimated co-seismic mass changes; these data are available through the IFG Graz web site. The paper provides valuable

C1

information for the users of the GOCO06s model, in terms of understanding both the information content and the computational strategy applied to combine the available data in the model. Besides, the paper is very well written, in good English form. Having also read the general and specific remarks and questions of Referee #1 I cannot but agree. Moreover, in my opinion the Authors have replied in a satisfactory way to all comments, explaining and rephrasing sentences where needed and adding appropriate references as requested. Therefore I have nothing else to add or request, and I recommend publication of the paper in its revised form after the comments of Referee #1.

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2020-192>, 2020.

C2