



## **Reducing of the edge effect while upward continuation of gravity data**

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One possibility to validate airborne and space-borne gravity data is by upward continuation of a high-quality terrestrial gravity data set given within some area. This problem is highly ill-posed if data of comparable quality is not available outside the area. Near the border, upward continued values suffer from edge effects, which limit the size of the region at aircraft or spacecraft altitude to be used for the validation. We present a new methodology for the upward continuation of a regional data set, which has been designed to minimize the edge effects. The new methodology is applied to the upward continuation of real gravity data in the Netherlands and Germany to aircraft and spacecraft altitude. We show that the method performs better than least-squares collocation, which has been used in similar studies.