

*Geochemistry, Geophysics, Geosystems*

Supporting Information for

**Moho Depths of Antarctica: Comparison of Seismic, Gravity, and Isostatic Results**

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**Additional Supporting Information (Files uploaded separately)**

2018GC008111\_Seismic\_Moho\_depth\_points\_AN1.txt:  
 Seismic Moho depth points AN1

2018GC008111\_Seismic\_Moho\_depth\_points\_ANT.txt:  
 Seismic Moho depth points ANT

2018GC008111\_Seismic\_Moho\_depth\_points\_combined.txt  
 Seismic Moho depth points combined

2018GC008111\_Moho\_depth\_inverted\_with\_AN1\_depth\_points.grd  
 Moho depth inverted with AN1 depth points

2018GC008111\_Moho\_depth\_inverted\_with\_ANT\_depth\_points.grd  
 Moho depth inverted with ANT depth points

2018GC008111\_Moho\_depth\_inverted\_with\_combined\_depth\_points.grd  
 Moho depth inverted with combined depth points

**Data file description**

Three separate data sets have been used in the Moho depth gravity inversion. The method is described in the manuscript (ch. 3.1 “Moho depth inversion from gravity – Methodology”). The plain text tables contain locations of seismic stations in geographical coordinates and the according Moho depth estimate. The netCDF/GMT grid files contain the Moho depth resulting from the gravity inversion using the respective seismic point set as constraint. The maps in Figure 6 in the manuscript correspond to the grid files. The point sets have been originally compiled by An et al. (2015) (AN1 set) and Baranov & Morelli (2013) (ANT set).

**References**

An, M., Wiens, D. A., Zhao, Y., Feng, M., Nyblade, A. A., Kanao, M., … Lévêque, J.-J. (2015). S-velocity model and inferred Moho topography beneath the Antarctic Plate from Rayleigh waves. *Journal of Geophysical Research: Solid Earth*, *120*(1), 359–383. <https://doi.org/10.1002/2014JB011332>

Baranov, A., & Morelli, A. (2013). The Moho depth map of the Antarctica region. *Tectonophysics*, *609*, 299–313. <http://dx.doi.org/10.1016/j.tecto.2012.12.023>