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Oral
The major objective of the GRACE Follow On (FO) mission with it’s two satellites GF1 and GF2 is to obtain precise global and high-resolution models for both the static and the time variable components of the Earth's gravity field. Additional goal is the continuation of the GPS radio occultation (RO) measurements from the predecessor GRACE, successfully performed between 2006 and 2017.

The GRACE RO data are part of the overall RO dataset consisting of several missions provided by different centres since the pioneering GPS/MET mission in 1995/97.

Beside climate applications GRACE-FO data will be also used for the assimilation in numerical weather forecast models of the leading weather service centres.

Since mid-2019 rising occultations from GF1 are available while setting radio occultations from GF2 are still disabled. After several on-board software updates and raw data reader improvements about 280 daily GF1 radio occultations are continuously available since March 2020.

Currently GF1 radio occultation data are processed on the basis of different measured observables: For different GPS satellites combinations of L1CA/L2P, L1CA/L2C, or L1CA/L5 amplitude and phase measurements are available.

In this study first results of GF1 processing is presented. Bending angle, refractivity, and temperature data are compared with ECMWF operational analyses and ERA5 data. The quality of the different measured variables is evaluated. In addition GRACE-FO data are compared with co-located COSMIC-2 radio occultations.
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