



Ground Support Network for Operational Radio Occultation Missions

R. Zandbergen (1), W. Enderle (1), C. Marquardt (2), and F. Wollenweber (2)

(1) European Space Operations Centre, Darmstadt, Germany, (2) EUMETSAT, Darmstadt, Germany

The EUMETSAT/ESA Metop/EPS GRAS radio occultation mission stands out for its operational nature. From the beginning, EUMETSAT has decided to rely on an operational system for provision of the auxiliary GPS products that are needed in the occultation processing. This system is the GRAS Ground Support Network (GSN), operated in the Navigation Facility of ESOC in Darmstadt, which was first presented at EGU in 2008.

The GRAS GSN is driven primarily by timeliness, availability and accuracy requirements. The performance of the GSN, measured on a monthly basis, has not only consistently met these requirements since the start of its operations, but has also been improved through several system enhancements.

Currently, an additional service is being delivered on an experimental basis, consisting of a near-real time Navigation Bit Stream product, which will allow the processing of open-loop data, further increasing the scientific return of the GRAS instrument, or any other radio occultation mission using this data.

This paper will present the GRAS GSN in its current configuration, and demonstrate its excellent performance in terms of accuracy, availability and timeliness. The application of the bit stream data will be shown. Some future evolution perspectives of the GRAS GSN will also be addressed. It will be demonstrated that the GRAS GSN has the potential of serving also other present and future radio occultation missions.