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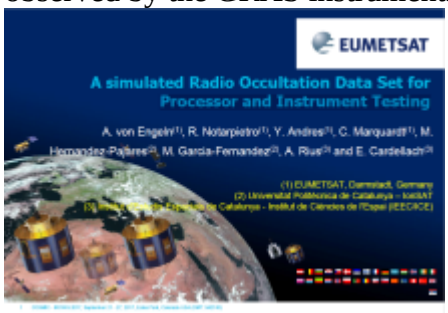
The presentation will cover two recent, new EUMETSAT products that are already available / will soon be made available. The first part introduces a 2001 to 2016 reprocessed data set and the second part covers a new daily product that provides information on where GRAS occultations are expected to be for a 14 day period.

The reprocessed data set covers the CHAMP, COSMIC and GRAS instruments. All instruments have been processed consistently within the EUMETSAT reprocessing environment, starting at level 0. The NAPEOS software is applied to provide accurate orbit information, GPS orbits and clocks are taken from the CODE/AIUB archive. NavBit information for the GRAS and COSMIC reprocessing is obtained from the UCAR archive for early data and for more recent data, from the operational GRAS Ground Support Network (run by ESA/ESOC). All data is processed to level 1B bending angles with Full Spectrum Inversion on both frequencies and for all altitudes. GRAS data has already been validated against ECMWF ERA-Interim and UCAR reprocessed GRAS, COSMIC data. This new data set provides more GRAS occultations per day than available from the reprocessed UCAR GRAS data, it also has a more complete coverage. On the bending angles, the main differences are found in the lower troposphere and will be discussed here. COSMIC and CHAMP processing is ongoing, first results of the validation should be available for this presentation. The complete reprocessed data set, including a full validation report, is currently scheduled to be made available through the EUMETSAT archive early 2018.

The occultation prediction product is generated daily and covers expected occultations of all EUMETSAT operational radio occultation missions (currently Metop-A and Metop-B) over the next 14 days. The product in addition contains information on the sub-satellite point of the Metop satellites, providing information on the expected measurements from the nadir sounding instruments. This product allows to prepare for targeted, collocated observations from e.g. radio sondes or other ground based instruments. The product is currently provided for user evaluation. Accuracy on position and time of the product is very high, where predicted and observed occultations are in agreement to a few seconds and kilometres. In general, more than 80% of the occultations predicted are actually observed by the GRAS instruments, there are however e.g. GPS manoeuvres or occultations predicted to occur close to the antenna edge of the occultation antenna which are not actually observed by the GRAS instruments.



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