GRAS GSN near-real-time data processing

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The ESA/EUMETSAT Metop satellites, Europe's first operational meteorological satellites in polar orbit, will carry a GPS Receiver for Atmospheric Sounding (GRAS). This instrument will deliver data from which atmospheric temperature, pressure and humidity profiles, based on the radio occultation's of the GPS signals, may be derived.

The GRAS Ground Support Network (GSN), implemented and to be operated by the Navigation Support Office at ESOC, will provide support data to the MetOp ground segment at EUMETSAT, to process the sounding data into near-real-time atmospheric products, and to perform MetOp precise orbit determination. It will provide, among others, precise GPS orbits and ground and satellite clock offsets, with stringent requirements on availability and timeliness.

The first Metop launch is expected in June 2006, when the GSN system will become operational.

This project presents an example of the application of the know-how and experience accumulated over many years of active participation in the IGS.