

UPPER AIR OBSERVATIONS

QUALITY THROUGH INNOVATION AND DESIGN

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Energy, Water, Environment.
Global Sustainable Solutions.

07 Upper Air Observations

It is well known that the information about the vertical profile of the atmosphere is essential for understanding atmospheric conditions and accurate weather forecasting.



ENEA Grupo® supplies to national weather services, universities and military forces advanced radiosondes and upperair sounding systems for measuring atmospheric conditions from ground level up to the lower stratosphere, integrating also Automatic Meteorological Stations as ground reference. The radiosondes are designed to meet the specifications of the U.S. National Weather Service and the World Meteorological Organization.

403 MHz GPS Sounding Systems

- GEO-Met-3150: Low cost and ultra-portable for boundary layer and reduced range soundings
- GEO-Met-3050A: Compact, high performance, full-range sounding system for field research
- GEO-Met-3100M: Completely redesigned military sounding system for fixed and mobile applications
- GEO-Met-3200: Fixed installation synoptic system for maximum sounding range

Radiosondes and UAV Sensors

- GEO-Met-1: A complete family of 403 and 1680 MHz GPS and RDF Radiosondes
- GEO-Met-1-RS: Research Radiosonde for Ozone and Auxiliary Sensor Integration
- GEO-Met-X: PTU and Atmospheric Chemistry Sensors for UAV Integration

Additionally GEONICA offer others the following upper-air measuring products:



Micro Rain Radar MRR

The Micro-Rain-Radar MRR at 24 GHz is a unique meteorological radar profiler for Doppler spectra of hydrometeors in height ranges 15 m ... 6000 m. The high resolution in time and height enables the MRR to monitor the genesis of frozen hydrometeors, the melting zone (bright band) and the formation of rain drops. With the derived rain rate the MRR offers a calibration of weather radar. The MRR has been adapted even for monitoring of avalanches and volcanos..

Doppler SODAR

The Doppler SODAR measures vertical profiles of wind and turbulence, monitors inversion layers and derives stability classes in height ranges 15 m ... ≥ 1000 m.

RASS System

The Doppler SODAR system can be extended by radar components to a RASS system for vertical profiling of temperatures, temperature gradients and inversion layers synchronously with the SODAR profiling.

Cloud Ceilometer

The cloud ceilometer is a stand-alone instrument designed for fixed and mobile installations where accurate and reliable cloud height information is required. The design is based on the LIDAR principle.