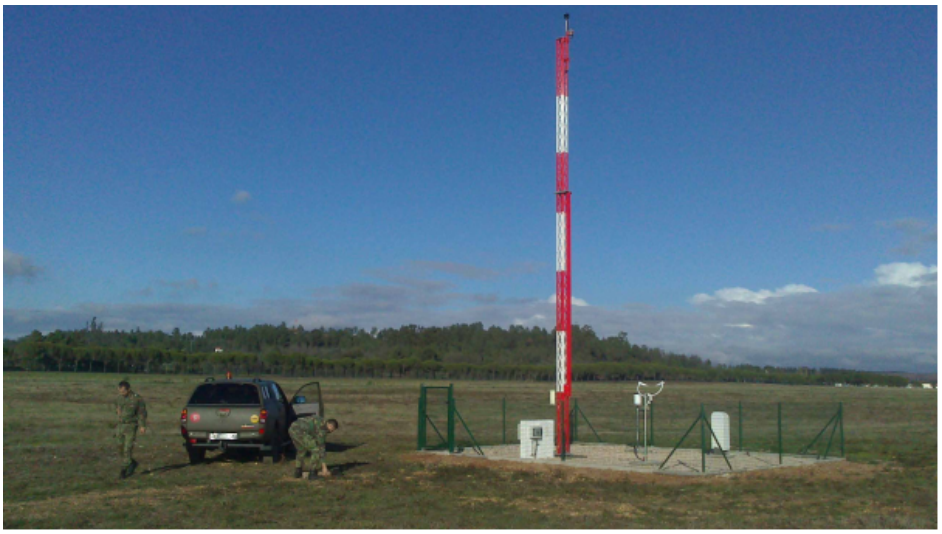
Portugal: Cloud Base and Visibility Sensors for Military Aviation

Automatic weather station to support the operation of a military air base



AUDIMOBIL recently installed an Automatic Weather Station in a Portuguese Military Air Base, to support the air operations, in accordance with ICAO and WMO recommendations for equipment and infrastructures.

The system was fitted with a set of sensors oriented for this application and can be expanded in accordance with future needs.

SENSORS AND DATA LOGGER

- Data logger Campbell Scientific CR1000
- Ceilometer Campbell Scientific CS135
- Visibility sensor Campbell Scientific CS120
- Air temperature and relative humidity Vaisala HMP155
- Barometric pressure Vaisala PTB330 (2 Class A sensors)
- Precipitation sensor R. M. Young 52203
- Wind sensor Gill WindSonic

INFRASTRUCTURE/ COMMUNICATIONS/ POWER

- Red and white painted frangible mast with ICAO Type A Obstruction Light
- 2.4 GHz radio communications with central PC
- Mains power supply with backup battery

Case Study Summary

Application
Support of military air operations

Location
Portugal

Products Used
CR1000, CS135, CS120A, CS120, CS125

Participating Organizations
Audimobil

Measured Parameters
Cloud base, visibility, temperature, relative humidity, wind speed and direction, barometric pressure, precipitation

To make it easy to read the information generated by the station, an easy reading interface was developed, with instantaneous information from several sensors, which processes this information and speeds the decision making.

Highlights:

- Graphic and numeric real-time information
- Processing of average and running totals for the last 2 and 10 minutes
- Automatic generation of METAR and SPECI codes
- Graphic and numeric historical information of the station
- Validation of the sensors information
- Station history maintenance in a file registry
- Maintenance alarms

View online at: www.campbellsci.com/portugal-cloud-visibility-military-aviation

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