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SYSTEM (GCOS)

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HIGHLIGHTS 2011 – 2012 from CIAO Potenza GRUAN site

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Summary and Purpose of Document

This document contains CIAO operations for GRUAN, plans and perspectives and other news of interest for the GRUAN community.

HIGHLIGHTS 2011 – 2012 from CIAO Potenza GRUAN site

CIAO operations for GRUAN

- **36** once weekly best production quality radiosonde have been performed successfully until January 2012 (RS92-SGP) and uploaded on the GRUAN database. Launches have been performed once per week, all weeks, on Thursday evening, simultaneously with water vapour Raman lidar measurements, except during the occurrence of rain or snow. Now launches have been stopped because of a mandatory update of the auto-launcher system, needed to use the new VAISALA sondes, and also because of the maintenance of the manual system.
- For TT1: 2011 auto-launcher time GC25 time series have been collected for the whole period of operation and are currently under investigation by R. Kivi
- No dual launches using both the auto-launcher and the manual system have been performed due to the above mentioned maintenance and technical issues.
- Water vapour lidar measurements have been performed more than three times per week and during RS92-SGP launches.
- CIAO Potenza GPS data are routinely processed by NOAA GPS-MET network. CIAO is the only European station in the network. Data are available in near-real time at <http://gpsmet.noaa.gov/>.
- All the other routine operations/measurements are continuing.
- Microwave radiometer measurements are routinely performed according to the protocols agreed in the frame of MWRnet (including scanning). Each measurement cycle lasts 5 minutes and includes a full scan of the zenith vertical plane. Provision of errors on the neural network retrieval is currently under investigation.

Plans and perspectives

- A new Trimble GPS system (L1, L2, L5) will be available by end of 2012 (PON italian project).
- A Doppler wind lidar will be available by end of 2012 (PON italian project).
- A dedicated water vapour Raman lidar will be available by end of 2012 (PON italian project).
- The update of the auto-launcher system will be performed by end of 2012. Manual system will be repaired by the end of April.
- Request has been submitted to VAISALA for the purchase of a set of RR01 (still pending)
- A first contact with GRAW has been established for the purchase of a new radiosounding system.

Other news of interest for GRUAN community

- A paper describing CIAO facility for the atmospheric observations and its scientific activities (including GRUAN) has been published on Atmospheric Measurements Techniques (available at <http://www.atmos-meas-tech.net/4/1191/2011/amt-4-1191-2011.html>).
- Since June 2011, CIAO is equipped with a new data archive with a capacity of 42 Tb.
- CIAO new website is ready for being published (GRUAN).