



WMO/IOC/UNEP/ICSU
GLOBAL CLIMATE OBSERVING
SYSTEM (GCOS)

Doc. 5.2
(21.II.2011)

**3rd GRUAN Implementation-
Coordination Meeting (ICM-3)**
Queenstown, New Zealand
28 February – 4 March 2011

Session 5

Site Report: Lindenberg, Germany

(Submitted by Franz Immler)

Summary and Purpose of Document

This document contains an overview of the measurement programme at the Lindenberg site with respect to GRUAN requirements, and addresses the questions to be discussed in this session.

Lindenberg site report

Lindenberg - GRUAN operational program

- Daily radiosoundings (4x), with GC and 100% pot U and T check + GRUAN protocol using GRUAN Launch client - since 1. February 2011
- Weekly Ozone sonde (Vaisala RS92 + Science-Pump 6a ECC)
- Research launches (since September 2010)
 - CFH (+ ECC + COBALD)
 - once a month since 1.9.2009
 - from March 2011: 2 x monthly, one day and one night)
 - RS92FN will finish by the end of this year
 - 1 weekly dual launch (With GRAW DFM-09 starting this year.)
- Ancillary measurements: GPS, MR, H₂O-LIDAR, ...

GRUAN data processing in Lindenberg

- RS92 data product GRUAN: T, U wind. Starting operationally 1.3.2011 for all GRUAN sites.
- CFH stratospheric and tropospheric humidity (uncertainty estimation is pending)
- ancillary processing tools:
 - radiosonde trajectory forecast
 - Intercomparison and validation tools (RS - GPS, RS92 - CFH)

Research for GRUAN

- MTR Campaign in Nov 2010
 - Balloon wake and contamination effect.
 - Temperature reference
- FLASH -B, test of RS92 version, October 2010
- Participation in Scientific payload at CIMO 2010 YangJiang
 - 12 CFH launches with Sippican 3therm, Meisei MTR, Vaisala RR01.
- Cloud and aerosol detection, COBALD, other options are tested.
 - Detection of supercooled liquid clouds important in routine sounding.

Plans and perspectives

- Reprocess radiosonde (RS92) data from 2004
- Level 3 dataproduct: RS92 + CFH + GPS consistent H₂O Profile.