World Meteorological Organization
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Secrétariat
7 bis, avenue de la Paix – Case postale 2300 – CH 1211 Genève 2 – Suisse
Tél.: +41 (0) 22 730 81 11 – Fax: +41 (0) 22 730 81 81
wmo@wmo.int – www.wmo.int

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Form for
Regular Reporting of CIMO Testbeds and Lead Centres

(expand the cells as required to properly reflect your activities)

Terms of Reference for CIMO Testbeds and Lead Centres are available under:
ttp://www.wmo.int/pages/prog/www/IMOP/Testbeds-and-LC.html

Name of Testbed / Lead Centre	**Lindenberg Meteorological Observatory – Richard-Aßmann-Observatory (Deutscher Wetterdienst – DWD, German Meteorological Service)**
Location of Testbed / Lead Centre	**Lindenberg / Germany**

Contact Person for the Testbed	
Courtesy Title	Mr Dr
Family name	**Beyrich**
First name	**Frank**
Full Postal Address	**Am Observatorium 12** **15848 Tauche – OT Lindenberg**
Country	**Germany**
Tel. number(s)	**+49 69 80625780**
Fax number(s)	**+49 69 80625710**
Email(s)	**frank.beyrich@dwd.de**
Has contact person changed in last 2 years?	Yes
If yes, who was the previous contact person?	Dr Franz Berger

Report on Activities

Main activities that TB carried out in the last 2 years for which results are already available:

- Assessment of the performance of a Halo Photonics Streamline IR Doppler lidar configured as an operational optical (laser) wind profiler
- Definition of reference quality standard data processing procedures for Vaisala RS92 radiosonde

Main activities that TB carried out in the last 2 years for which results will soon be available:

- CeiLiNex-2015 laser ceilometer intercomparison campaign (operation of 12 laser ceilometers, 6 different types from 3 manufacturers) for cloud detection and aerosol profiling
- Climate chamber / radiation error characterization of Meisei, Modem and Graw radiosondes

Which guidance documents/standard procedures were developed during the last 2 years (please include full reference and web-link if available)?

- None

Which IOM reports / peer-reviewed publications were published in the last 2 years (please include full reference and web-link if available)?

- Päschke, E., R. Leinweber, R., V. Lehmann, 2015: An assessment of the performance of a 1.5 µm Doppler lidar for operational vertical wind profiling based on a 1-year trial. *Atmos. Meas. Tech.* **8**, 2251-2266, DOI: 10.5194/amt-8-2251-2015
- Dirksen, R.J., M. Sommer, F. J. Immler, D. F. Hurst, R. Kivi, H. Vömel, 2014: Reference quality upper-air measurements: GRUAN data processing for the Vaisala RS92 radiosonde. *Atmos. Meas. Tech.* **7,** 4463–4490, doi:10.5194/amt-7-4463-2014
- Bühl, J., R. Leinweber, U. Görsdorf, M. Radenz, A. Ansmann; V. Lehmann, 2015: Combined vertical-velocity observations with Doppler lidar, cloud radar and wind profiler. *Atmos. Meas. Tech*. **8**, 3527-3536, doi: 10.5194/amt-8-3527-2015
- Illingworth, A.J., D. Cimini, C. Gaffard, M. Haeffelin, V. Lehmann, U. Löhnert, E. J. O'Connor, and D. Ruffieux, 2015: Exploiting Existing Ground-Based Remote Sensing Networks to Improve High-Resolution Weather Forecasts. *Bull. Amer. Meteor. Soc.*, **96**, 2107–2125. doi: http://dx.doi.org/10.1175/BAMS-D-13-00283.1
- Görsdorf, U., V. Lehmann, M. Bauer-Pfundstein, G. Peters, D. Vavriv, V. Vinogradov, V. Volkov, 2015: A 35-GHz Polarimetric Doppler Radar for Long-Term Observations of Cloud Parameters—Description of System and Data Processing. *J. Atmos. Oceanic Technol.*, **32**, 675–690. doi: http://dx.doi.org/10.1175/JTECH-D-14-00066.1

Title(s) of IOM report(s) presently being developed by your Testbed:
(please specify level of development: draft, ready for review, …)

- none

Has your Testbed collaborated with one or more CIMO Expert Teams in developing guidance material? Yes

If yes, with which CIMO Expert Team(s)?

CIMO ET-ORST (B.1), CBS ET-SBO

Capacity Building and Training Activities

Which capacity building/training activities have been carried out by the Testbed in the last 2 years?

- Seminar on operation and quality control of ceilometer measurements with scientists from Czech Globe site Kresin u Pacova (operated by CHMI and CAS)

Has your testbed developed a twinning activity / special relationship with a companion station/site from a developing country? No

If yes, with which station/site?

Does not apply

Is your Testbed/Lead Centre making an oral/poster presentation at this year's TECO? Yes / No
(If yes, please specify Title(s) and Author(s) of the presentation(s))

- Intended, decision TBD in response to the call for papers

Recent Changes in Circumstance

Have there been any recent changes in your Test Bed capabilities? If so, please specify:

- No relevant changes

Have there been any recent changes in your Test Bed infrastructure? If so, please specify:

- Establishment of a new laboratory building for laser-optical vertical profiling
- New experimental set up to measure the time lag of humidity sensors on radiosondes at temperatures down to -75 degC.

Have there been any recent changes in your staffing? If so, please specify, and advise whether replacement staff have the required competencies:

- Several changes in scientific and technical staff over the past two years, new staff members carefully selected to obey the competences needed for running testbed / lead centre tasks at high standard

Future Plans

What are your plans for the next two years?

- Assessment of the new Vaisala RS41 radiosonde according to the GRUAN procedures
- Assessment of different types of photometers to determine AOD and IWV
- Testing of newly available ground-based remote sensing systems for thermodynamic profiling
- Drafting of a chapter on operational radar wind profiling for CIMO guide

Is your Testbed/Lead Centre able to continue in the role of a Test Bed/Lead Centre during the coming two years?	**Yes**

Other relevant information (other activities of special interest to CIMO, etc…)

- none

02.03.2016 — **Date**

Frank Beyrich — **Name of Person Filling the Form**