World Meteorological Organization
Organisation météorologique mondiale

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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 Lead Centre	
Courtesy Title	Mr Dr
Family name	**Beyrich**
First name	**Frank**
Full Postal Address	**Am Observatorium 12** **15848 Tauche – OT Lindenberg**
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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 LC carried out in the last 2 years for which results are already available:

- Assessment of operational performance and definition of calibration and data processing procedures for optical scintillometers

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

- Assessment of different methods for the determination of cloud cover using radiation sensors, ceilometers, cloud radar, Nubiscope
- Assessment of different methods for the determination of sunshine duration using pyranometers

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)?

- Van Kesteren, B., F. Beyrich, O.K. Hartogensis, A.C. van den Kroonenberg, 2014: The effect of a new calibration procedure on the measurement accuracy of Scintec's displaced-beam laser scintillometer. *Boundary-Layer Meteorol.* **151**, 257–271, DOI 10.1007/s10546-013-9891-1
- Van Kesteren, B., F. Beyrich, O. K. Hartogensis, M. Braam, 2015: Long-term evaluation of the Scintec boundary-layer scintillometer and the Wageningen large-aperture scintillometer: Implications for scintillometer users. *Boundary-Layer Meteorol.* **156**, 303–323, DOI 10.1007/s10546-015-0023-y
- Chen, Y.; L. Huizhi; A. Junling; U. Görsdorf; F. Berger, 2015: A field experiment on the small-scale variability of rainfall based on a network of micro rain radars and rain gauges. *J. Appl. Meteorol. Climatol.* **54**, 243-255, doi: 10.1175/JAMC-D-13-0210.01

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

- none

Has your Lead Centre 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 Lead Centre in the last 2 years?

- Seminar on operation and quality control of micrometeorological / boundary layer measurements with six scientists from Czech Globe site Kresin u Pacova (operated by CHMI and CAS)
- Lecture and on-site training in scintillometer operation and data interpretation for scientists from Portugal and Czech Republic.

Has your Lead Centre 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 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 Lead Centre's capabilities? If so, please specify:

- No relevant changes

Have there been any recent changes in your Lead Centre's 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?

- Derivation of fog characteristics from ground-based remote sensing (in particular scanning cloud radar)
- Derivation of turbulence parameters / mixing height from IR Doppler lidars
- Automatic detection and quantitative characterization of low-level clouds (derivation of cloud cover and cloud base height / ceiling) from a combination of ground-based remote sensing instruments (nubiscope + ceilometer + Doppler lidar)
- Testing of the operational capabilities of a microwave scintillometer

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**