

## **GRUAN Task Team on Ancillary Measurements**

### **A Task Team of AOPC Working Group on GRUAN (WG-GRUAN)**

#### **Terms of reference**

June 7, 2014

#### **Background**

The GCOS/WCRP Atmospheric Observation Panel for Climate (AOPC) Working Group on the GCOS Reference Upper Air Network (GRUAN) was established in 2006 in recognition of the importance of initiating reference-quality observations of atmospheric column properties, in particular temperature and water vapour, from the surface into the stratosphere to enhance the monitoring and understanding of climate variability and change. A GRUAN Implementation Plan was published in July 2009 covering the period until 2013. At the second Implementation and Coordination Meeting held in Payerne, Switzerland in March 2010 the Working Group, Lead Centre and initial sites agreed to the instigation of a number of task teams.

The task team on Ancillary measurements exists to define protocols, sampling strategies and required metadata for respective suites of ancillary ground and satellite measurements routinely collected and archived at GRUAN sites. Ancillary in this respect is defined as measurements at a given GRUAN site that do not fall under the set of required observations from all sites, for example the reference radiosonde. Ancillary in this sense also includes required respective instrument calibration, inter-validation strategies and results and all metadata pertinent to the deployed equipment and associated measurement suites. These shall be compiled utilizing best measurement practices as defined through associated measurement international expert team representation in this group. Practices and protocols for respective measurement suites as defined by this group shall constitute guidelines for respective site and measurement certification.

#### **Duties**

Under the auspices of the WG-GRUAN the task team was established to:

- Interface with other expert teams (such as NDACC, EMERGE, etc.);
- Evaluate the data products (uncertainty budget etc.) and bring in missing knowledge;
- Inventory potential instruments (and interface with other GRUAN-Task Teams if needed);
- Establish campaign rationales for the validation of data from multiple platforms;
- Establish a system for the routine collection and display of data from multiple platforms;
- Develop guidance on the type and number of data and associated metadata needed to be stored from the instruments, as needed;
- Draw conclusions on the suitability of the deployed equipment and advise accordingly the GRUAN Task Team on Sites; and
- Report to WG-GRUAN on all above duties

#### **Reporting and governance**

- The task team shall be run by at least one and preferably two co-chairs and they should use as primary points of contact the co-chair of WG-GRUAN and Head of the GRUAN Lead Centre as deemed appropriate.
- The task team co-chairs shall report on a six-monthly basis in February and August to the WG-GRUAN a brief written progress report which will also be posted as part of official documentation relating to GRUAN. These reports will be discussed on a phone conference between WG-GRUAN the Lead Centre and all task teams with representation from at least one co-chair from this task team.
- At least one task team co-chair and potentially additional task team members shall attend, as deemed appropriate and affordable, the annual ICMs to report in person on progress.
- The task team will be expected to respond to all reasonable formal requests for advice from the WG-GRUAN, Lead Centre, other task teams or sites made on an ad-hoc basis in a timely manner. Guidance on what constitutes reasonable can be solicited from WG-GRUAN as required.
- As part of their inventory duty, the task team will be expected to interact with the GRUAN task team on Sites

## **Operation**

- The task team will largely coordinate by email and teleconference and take advantage of other meetings where a quorum is in attendance to undertake in person meetings. It is expected that teleconferences between all task team members will be undertaken at a minimum 6-monthly frequency.
- Task team chairs will seek funding for dedicated meetings if deemed appropriate.
- The task team will exist until such time as its duties are deemed to have been completed by the WG-GRUAN
- Task team terms of reference and membership will be revised periodically, coincident with revisions to the WG-GRUAN ToR or if requested by either party, by the task team members in consultation with WG-GRUAN.

## **Annex**

### **Membership roster valid June 7, 2014:**

Thierry Leblanc (NASA/JPL), co-chair

Tony Reale (NOAA/NESDIS), co-chair

Alexander Haefele (Meteoswiss-Payerne): Microwave, Lidar, GRUAN-Payerne

Nik Kämpfer (Univ. Bern): Microwave

Jim Hannigan (NCAR): FTIR

Matthias Schneider (KIT/IMK-ASF and AEMET): FTIR

Mark Schroder, (DWD): Satellite/data processing

Michael Sommer (DWD): Satellite/data processing

John Dykema (Harvard University: Site Atmospheric State Best Estimate (SASBE))

Jonathan Gero (DOE-ARM): AERI

