Task Team on Radiosonde

- Progress Report for June 2017-April 2018 -

Masatomo Fujiwara (Hokkaido Univ., Japan),
Christoph von Rohden (GRUAN LC, DWD, Germany),
and the Task Team Radiosonde members

The Team will

- Provide guidelines for the GRUAN on how to obtain the best possible, reference quality data from radiosoundings
- Evaluate radiosonde data products on the basis of the GRUAN specifications

ICM-10, Potsdam, Germany, 23-27 April 2018

Members

- Member changes, etc.
  - **Christoph von Rohden** became a co-chair in September 2017 (as the replacement of Rolf Philipona).
- 10 members currently.
- Seeking more members (e.g., the radiosonde experts from the GRUAN sites) !!

Name	Affiliation	Status
Masatomo Fujiwara	Hokkaido University, Japan	Co-chair
Christoph von Rohden	GRUAN Lead Centre, DWD, Germany	Co-chair
Frank Schmidlin	NASA Retiree, USA	
Hannu Jauhiainen	The Association of Hydro-Meteorological Equipment Industry; Vaisala, Finland	HMEI representative
Micheal Hicks	NOAA/NWS/OOS, USA	
Larry Miloshevich	MILO-Scientific, USA	
Rigel Kivi	Finnish Meteorological Institute, Finland	
Masami Iwabuchi	Japan Meteorological Agency, Japan	
Yang RongKang	China Meteorological Administration, China	
Martial Haeffelin	Institut Pierre Simon Laplace, France	

Updates of the Tasks

Main Tasks

1. ***Autosondes****: Auto-launchers versus manual launches → See next slide*
2. ***Multi-payload*** *launch configurations → TD manuscript under review; scientific studies needed*
3. ***GRUAN BUFR****: Amendments to the Manual on Codes (WMO No. 306) for BUFR to transmit uncertainties, etc. → Small progress*

Tasks led by LC or other body

1. *GRUAN Radiosonde Omnibus/generic Technical Document → See next slide*
2. *GRUAN TD for non-RS92 sondes (Meteolabor, Modem, Meisei, etc.) → GRUAN TD No. 5 for Meisei RS-11G and iMS-100 radiosondes has been published*
3. *RS92 GRUAN Data Product version 3 (& Time lag correction intercomparisons for Vaisala RS92 humidity)*
4. *RS41 GDP*

Other related Tasks

1. *Ozonesondes data product*
2. *UT/LS water vapour data product*

Autosondes: Auto-launchers vs. manual launches

- An assessment of the advantages and disadvantages of manual vs. autosonde launches written up and submitted to the peer reviewed literature.
- First define the critical questions to answer which would appear to be at least:
  - i) Can we create a GDP?;
  - ii) Is there a bias between manual and auto-launched sondes?;
  - iii) Does the random uncertainty change?;
  - iv) impact of lifetime in launcher (quality, SHC repeatability, and height attained).
- TT Radiosondes and Lead Centre
- August 2018 to define small set of well posed questions to be addressed. December 2018 to submit manuscript

Radiosonde Omnibus/Generic Technical Document

- Led by Christoph von Rohden
- ~99 pages with ~15 figures and ~6 tables

- Chapters / estimated progress

1. Introduction (Christoph) / ~75%
2. Importance of radiosondes (Christoph) / ~75%
3. Radiosounding and functional principles of radiosondes (Christoph) / ~75%
4. Chapter on main sources impacting the data quality of radiosoundings (?) (Christoph, …) - / 0% (to be discussed)
5. Measurement practice with radiosondes (Masatomo) / ~90%
6. Assurance of reference quality for measurement results (Ruud) / outline exists
7. GRUAN data products for radiosondes (Michael) / outline exists
8. Data management (Michael) / outline exists
9. Quality Management, postprocessing analysis (Greg) / ??
10. Radiosonde change management (June) / in progress