

# Report from GRUAN science coordinators

Richard Querel & Tom Gardiner

ICM8 Boulder - April 25, 2016

# Slow going

- GRUAN SC have received zero unsolicited emails
- Challenging trying to coordinate in a vacuum
  - First seeing GRUAN-related research in ICM Station Reports or as discussion papers is too late to be useful
  - We shouldn't need to search for this
- Current model of SC requires sharing / dialogue
- How can we change how this is working?

# Feedback from email

- January 13, 2016, SC email sent out
- Email was a call for engagement in two areas:
  - (A) Site Atmospheric State Best Estimates (SASBEs)
  - (B) Qualifying new instrumentation for GRUAN measurements
- Responses (59 of 185 recipients, 32%):
  - Group (A) had 28 (15%)
  - Group (B) had 20 (11%)
- Negative responses (Why me? Don't spam me/my boss)
  - Action: contact email list needs to be updated by GRUAN LC, need a list of active researchers rather than administrators.

# Feedback (A) - SASBE

- I see my contribution as providing various data for test studies, and in discussing necessities to improve the measurement strategies.
- There are many techniques common to instruments and data products and the best-practice is not being adopted uniformly.
- Recipes to calculate at a given site based on available ancillary, etc., are among goals.
- Payerne SASBE study in AMTD (ozone)
- Lauder SASBE studies in progress (T, water, ozone)

# Feedback (A) - SASBE

- Need to pre-determine the consistency of respective ancillary obs. (at a given site) prior to their integration into SASBE, plus weighting based on their respective uncertainties (if they are consistent).
- Need for a GRUAN wide (and beyond GRUAN) workshop on standardization of practices for deriving measurement uncertainties across different instruments for different data streams. (What already exists in the metrology arena?)

# Feedback (B) - Instrument transition

- Need an assessment of change. Are full seasonal studies needed? Why not just fully characterise the sensor parameter space?
- Networking measurement quality, traceability and metrology is a primary issue for GRUAN
- Develop specific guidance for overlapping observations when switching from one sonde type to another
- Looking forward, for example some 5-10 years, there will arise a need to check whether the certified site still fulfils the criteria.

# Feedback (B) - Instrument transition

- “How to manage the transition away from RS92 to another type of radiosonde within GRUAN?” Ruud Dirksen/Lead Centre, April 2016

14  
studies

Site	Duration	Measurement Interval	Remark
Barrow	TBD	-	
Beltsville	TBD	-	
Boulder	TBD	-	
Cabauw	TBD	-	
Camborne*	2 weeks (Nov 2013)	-	Vaisala + MetOffice
Darwin	TBD	-	
Lamont	1 week (June 2014)	-	[Jensen et al. 2015]
Lauder	1 yr.	1 week	
Lindenberg	2 yr.	1 week	
Ny Alesund	2 yr.	1 week	
Payerne	2 yr.	1 week	
Potenza	6 months	4 weeks (?)	
Sodankyla	2 yr.	?	
Table Mountain		2 yr. ~4 weeks	

# Feedback from email - next steps

- Send response to groups (A) and (B) detailing our knowledge of current GRUAN-related work in each area along with that group's subset of email addresses.
- Highlight potential overlapping research areas
- State the open questions that arose
- Request detail on additional research activities
- Hopefully begin a dialogue within each group



# Curate list of small projects

- Maintain a working list of small projects
- 1-3 month duration, suitable for students and contracted staff
- Advance site-specific and GRUAN-related science
- Cost-effective, potential for funding assistance?
- Tangible outputs: reports, papers, etc.
- Example: RO-radiosonde project by Jordis Tradowsky as visiting scientist at the EUMETSAT Radio Occultation Meteorology Satellite Applications Facility (ROM SAF)
- Looking for suggestions (for topics A, B, or other...)

# Term for SC

- Guideline for the SC role is a 4-year term, staggered between the 2 SCs for continuity
- Tom and Richard have both been in role for 2-years
- Is it time for a change, i.e. begin the staggering?
- Is anybody else interested in the SC role?

Feedback?