

Workplan to ICM-6

Peter Thorne

Outline

- Key considerations
- Items for this period in the IP update
 - Keep / modify / discard (if latter then justify)
 - I have made some mods to deadlines etc. in advance of presentation that are *italicized*.
- New items arising from discussion
- Minor items
- Open items (old and new)
- ICM-6 plans
- Next steps
- Meeting feedback
- And finally ...

Key considerations

- Tasks should be realizable rather than aspirational?
- Tasks need to be well posed with measurable outcomes and an owner
- Tasks are Denoted: Task. Owner. Due.

IP refresh stated tasks for this period

- Technical documents for GRUAN Lidar stream submitted for review by WG- GRUAN. TT-AM. *1 April 2013*
- GRUAN report synthesizing the four white papers developed through the GRUAN Network Expansion Workshop. Greg + NEW participants and collaborators. *November 2013*
- Retention of collocated satellite / sonde / NWP data within or linked from the GRUAN data archive to facilitate intercomparisons. TT-AM / WG. *June 2013*

- Develop a calibration/validation concept for the EUMETSAT geostationary MTG series based on GRUAN sites. TTAM / WG. *June 2013*
- A paper on "Colocation of observations" with an emphasis of how to account for mismatches in quantifying and comparing uncertainties submitted to a peer reviewed journal. Alessandro Fasso and GATNDOR. *May 2013*
- A paper on "Quantifying the value of complementary measurements" submitted to a peer reviewed journal. Fabio Madonna. *June 2013*

- Microwave radiometer Technical documents submitted for review by WG-GRUAN. TT-AM. June 2013 (two different documents, one for June and one for later)
- FTIR Technical documents submitted for review by WG-GRUAN. TT-AM. June 2013
 - Is it reasonable to expect these two big pieces of work delivered concurrently? Is either timeline realistic?

- A short GRUAN report detailing the process implemented to provide feedback of observation minus background fields to the GRUAN Lead Centre. David Tan. November 2013
- A paper submitted to a peer reviewed journal that provides a more accessible version of the GRUAN network expansion workshop report (e.g. a BAMS article). Greg and workshop participants / contributors. *December 2013*
- Formal establishment of Metadata Task Team – list of members provided to Lead Centre. WG chairs. June 2013

- ~~Manuscript describing the results of the RS92 humidity time lag assessment submitted to a journal. LC / TT radiosondes. August 2013~~
 - Replaced by action arising from this workshop later
- A document detailing the operational challenges related to multi-payload soundings submitted either to peer reviewed literature (first choice) or to WG-GRUAN for review as a TD. TT radiosondes. October 2013
- An assessment of the advantages and disadvantages of manual vs autosonde launches written up and submitted to the peer reviewed literature. TT radiosondes. November 2013

- Online tools based on the NPROVS system to visualize and monitor the GRUAN profiles and collocated satellite and NWP data (GPROVS). TTAM / WG. August 2013
- ~~Complete set of TDs describing all aspects of GRUAN RS92 procedures. LC / TT radiosondes. December 2013~~
 - Replaced by new action arising from this meeting
- Manuscript(s) detailing operational considerations for controlled descents submitted to a journal or detailed in a GRUAN Report. TT radiosondes. December 2013

- GRUAN launch activity as agreed between GRUAN participants. *WMO EC May 2014. Possible event on GRUAN / GUAN / GOS interactions before. WG chairs and LC to report on progress at ICM-6.*
- First report on data usage including items such as publications arising, queries received etc. Lead Centre. February 2014 (meld with former - A GRUAN report documenting how data usage will be monitored and reported. LC. June 2013)
- Technical documentation completed for frostpoint hygrometer measurements. LC / TT radiosondes. 31 December 2013 12 pm.
- Manuscript describing the derivation of uncertainty estimates for GNSS-PW measurements submitted to a peer reviewed journal. TT GNSS-PW. March 2014

- Short report for inclusion in ICM-6 proceedings summarizing sites processed to date. WG Chairs. March 2014
- Investigate site-specific “recipes” of GRUAN ancillary and sonde measurements (including uncertainties) for comparison with sounding products, focusing on atmospheric temperature and moisture. Manuscript submitted. TTAM. March 2014
- Temperature scheduling requirements study – Tom Gardiner

Posited new tasks identified in the present meeting

- Lead Centre to revise the RS-92 data stream based upon feedback received.
 - Revised version 3 release including qc flags vectors and data in different vectors (good, questionable, missing) December 2013
 - TD omnibus of all things RS-92. December 2013
 - Paper describing the RS-92 product submitted to journal. February 2014

- WG Co-chairs to provide a two-page structure outline of the expected format of an omnibus TD for each data stream taking as a starting point the lidar guide (which we may suggest some changes to ...) and publish as a GRUAN report. By May 2013
- Sites to send maps of instrument locations, including elevation information to TT sites representatives chairs by June 2013. Use as a template information on the Lindenberg site which will be circulated to site representatives by Lead Centre.

- Revise IP language to be clearer that we are looking to partner with rather than duplicate work of other experts and that in very many cases we are not the experts. Also that GRUAN sites are owned and operated by third parties and not GRUAN. WG co-chairs (PT lead). March 2013.
- Task Team on radiosondes / Lead Centre to formally document what generic steps would be required to bring a new production sonde type into GRUAN as a GRUAN report. Submitted to review July 2013 (short report!)

- Documentation that makes clear what additional work is required by sites to join GRUAN. Greg / Lead Centre / TT sites by June 2013 as GRUAN report (small page number!)
- WG / LC / TT sites to define a site reports format expectation and roll out to sites for formal annual progress reports. Roll out November 2013. Site reports by end of Jan 2014.
- Sites task team to survey sites for ascertaining which of the specific new data streams envisaged in the IP refresh they may have capability to deliver, whether they may consider submitting them, and whether they are interested in participating in their development. Simple table. By June 2013 deliver to WG, LC and other task team chairs.

Minor items

- Add item to Lead Centre progress report to document training given / received by LC and others.
- Sites who wish to get a 100% pot to coordinate through Lead Centre by May.
- LC to ascertain why some sites are not utilizing the runclient facilities
- WG Co-chairs / AOPC to ascertain whether KNMI can share the RS92 data using the runclient

- Lead Centre to follow up with GFZ to thank for offering to be GNSS processing centre.
- GCOS secretariat to be asked to formalize role of GFZ as a processing centre within GRUAN.
- WG chairs to raise discussion of external assessment at ICM-6 based upon developments in interim.
- Peter to raise a request that AOPC consider how to facilitate GUAN-GRUAN cooperation. How does GRUAN innovation percolate to GUAN / GOS? Put something prior to launch event at EC?
- Lead Centre to liaise with Tim Oakley on formalizing ties to GUAN operations

- Peter raise at AOPC the concept of paired sites in the context of network expansion. Plus financial support mechanisms.
- Greg to check that WG shalls in Guide and Manual WG are pulled out. WG members be asked to take responsibility for certain aspects to ensure things don't fall through the cracks.

Old open issues

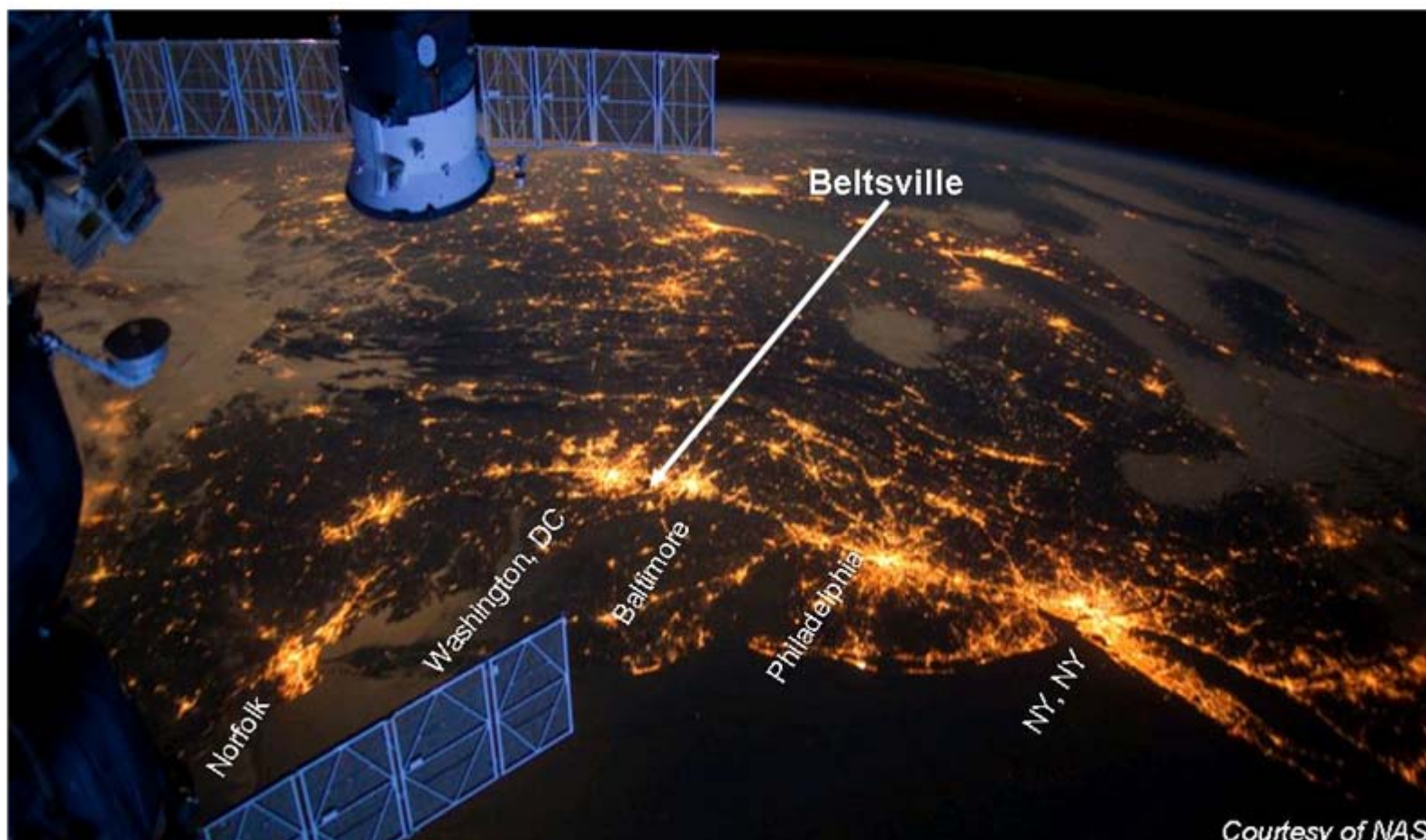
- Surface meteorological documentation – pick up in MeteoMet package. Maybe ask for AOPC support to make this happen.
- Is black box / initial GRUAN processing better for NRT data? If the latter how do we get NRT GRUAN data over GTS?
- Studies on the efficacy of change management protocols / concepts.
- Estimation of all terms in the error budget of the comparison of the satellite and GRUAN measurements.
- Develop tools to inter-compare complementary datasets including vertical resolution and correlation effects (e.g. Tb vs. profile).

- Pedagogical paper on how to integrate and apply GRUAN uncertainty estimates and box-of-tools – Greg (MLR wiki)
- ~~Cross-cutting uncertainty task team~~
- Public outreach material
- Funders involvement

New open issues

- Data DOIs – the what, the where, the when, the how. Talk at ICM-6 on the issue.

ICM6 - Beltsville, MD



Courtesy of NASA

ICM-6

- Tentatively scheduled for DC area hosted by Beltsville site in cooperation with others
March 10th-14th 2014 (+/- n!)
- Will aim for meaningful engagement with US funders / relevant agencies working with US WG members.

Next steps on meeting report

- We will take the googledocs draft and edit for style, consistency, clarity and flow (do not envisage changes to structure etc.)
 - GCOS secretariat say current draft + structure a great start.
 - Please look and edit before Monday directly or email comments to Holger, Greg + Peter. After that googledocs document will be taken + edited offline.
- Circulate proposed final document in a week or so for quick comment
- Submit to AOPC mid-March

Meeting feedback

- What went well or badly? What could we do better in future?
- Please email Greg and Peter if you don't want to discuss in plenary

Finally

- Thanks to all of you for your active participation
- Special thanks to our KNMI hosts
- See you all next year (we hope)