

Summary of ICM-4 to ICM-5 proposed actions (and other things)

(subject to change based upon
discussions)

Peter Thorne

Over-arching proposal

- We had too many actions last year and many were ‘small items’.
- Suggest that ICM-4 to ICM-5 actions recorded in the report be solely the more significant requirements
- More minor requirements should be documented and checked online but do not raise to GCOS report status
- Proposed actions for inclusion in the GCOS report are in **green**. We will keep the remainder on a suitable online resource. They won’t be lost.
- Happy? 😊

(predominantly) WG-ARO actions

- Propose revisions to terms of reference and membership of WG-ARO to AOPC members prior to their late April meeting. WG chairs.
- Formally instigate and manage technical GRUAN literature review protocol as documented in the WG-ARO meeting outcomes. WG chairs
- Set up an online repository of all actions, whether they raise to work plans, within year report commitments or Implementation Plan items. Community owned. Managed by WG chairs (primary: Greg).

- To assess the site application currently under consideration and others received as detailed in the site assessment and certification document.
- Manual and Guide finalized and signed off, formally adopted and published. (Greg)
 - Add annex on what an instrument specific TD needs to contain
 - sectional roadmap
 - Remove ‘intermediate station’ from guide section 5
 - Change name of ‘fully compliant station’ (work with sites task team to find acceptable terminology)
 - Tom Gardiner and Andrea Merlone to work with Greg on uncertainty language throughout.
 - Remove seasonally variant scheduling language from guide but retain language that this might be important later.

- To discuss with task team chairs and WG-ARO members how to proceed on creation of metadata task (metadata that is not instrument specific, but still necessary for complete understanding; ensuring metadata consistency between data streams). Report via the blog by September 2012. WG chairs.
- To process 4 or more sites with a focus on those who may benefit from early certification to undertake certification. Work with TT site representative co-chairs in this. By ICM-5.

Task team led actions

- Radiosonde task team to resolve second co-chair issue along agreed WG-ARO procedures.
- The radiosonde task team will circulate their CIMO intercomparison summary for wide review and then submit to formal review as a special report by WG-ARO by the summer.
- RS-92 pre-launch documentation to be revised and submitted as a TD by the summer (Ruud Dirksen lead)

- Assessment of (RS92?) time lag humidity corrections, comparing the GRUAN processing to other published approaches to be undertaken and submitted to a journal prior to ICM-5. (R. Dirksen, M. Sommer, L. Miloshevich, A. Kats)
- Document detailing the issues surrounding multi-payload soundings to be drafted and submitted either to peer reviewed literature (first choice) or to WG-ARO for review as a TD. Summer 2012. (Jauhiainen)

- Further efforts will be made to assess controlled descent mechanisms for balloon payloads. A paper will be prepared on the Payerne solution. Topic to be discussed further at ICM-5. (Hurst/Philipona/Fujiwara)
- Assessment of auto-sounder influence vs. manual launches to be written up and submitted to the peer reviewed literature. Summer 2012 (Kivi / Kizu)

- To develop guidance on GNSS-PW data through a GRUAN GNSS data and product table. September 2012. TT GNSS members
- Identify best practices in making and verifying GNSS observations. Report at ICM-5. TT GNSS members.
- Provide the theoretical basis for GRUAN uncertainty estimates for GNSS-PW. Submission to peer reviewed literature. TT GNSS co-chairs (and other members). ICM-5

- Recommend practices on managing change in GNSS-PW measurements. Presentation at ICM-5. TT co-chairs.
- Report on discussions with LC and others on starting the GNSS-PW data flow. Data collection client requirement? Central processing facility? TT co-chairs to report at ICM-5

- Extend trend sensitivity studies analysis to stratospheric water vapour and submit the resulting analysis to the peer reviewed literature. Dec 2012. Dave Whiteman. Funding dependency.
- Review of temperature scheduling requirements (as already done for WV in the Guide) for scheduling decision support. TT co-chairs. ICM-5

- Develop and publish online tools using the NPROVS system to visualize the GRUAN products (incl. uncertainty) and collocated satellite data (GPROVS?) and possibly SASBE products. Reale / Vose / Tobin / Dykema, winter 2012
- Retention of collocated satellite radiances within or linked from the GRUAN data archive to facilitate intercomparisons. Reale, Sommer, ICM-5 report on this aspect.

- Investigate use of satellite collocation data as an additional QC/QA tool on GRUAN products over the coming year and report at ICM-5. Reale / Sommer
- GRUAN Lidar Technical document (incl. all species) submitted for WG-ARO review autumn 2012. Leblanc
- Report on progress towards gaining a LIDAR data stream including run clients and uncertainty estimation. ICM-5, Leblanc

- First draft of technical document on bringing microwave radiometer measurements into GRUAN, leveraging MWRnet expertise. N. Cimini and N. Kämpfer. Summer 2012 circulated to TTAM members
- First draft of GRUAN FTIR technical document, leveraging MUSICA, made available to TTAM members for comment. Summer 2012. M. Schneider and J. Hannigan

- Inventory of AERI instruments to be compiled for TTAM consideration and report to GRUAN community on viability to bring AERI into GRUAN. By ICM-5. J. Hannigan and M. Schneider
- A. Apituley and T. Leblanc to inquire to EARLINET colleagues on the status of their Centralized Data processing Algorithm and study possible synergy between EARLINET and GRUAN. Report at ICM-5

- Investigate essential “recipe” of GRUAN ancillary and sonde measurements (including uncertainties) to calculate SASBE with focus on atmospheric temperature and moisture for NPP satellite hyper-spectral products validation. D. Tobin. Report to TTAM by ICM-5

- Complete the matrices of measurements started and try to be as detailed as possible taking into consideration new updates, changes, etc. Dale (lead) and Belay (assistant). May, 2012 available at the gruan.org web site.
- Collocation. Identify if the instruments at a site are collocated or distributed and details of the distribution (distance, ownership, etc). Include maps etc. Belay with assistance of Dale. By ICM5

GATNDOR led items

- GATNDOR workplan published for coming year April 2012. Madonna. Published on the blog.
- Circulation of a Phd position for working on a new GATNDOR topic: "Assessment of the impact of comparison model error: use of GRUAN uncertainty covariance matrix and assessment of best vertical resolution to use in RTM modeling for improving satellite validation". [who? When?]

- Submission of a peer-reviewed paper about the topic "Quantify the value of complementary measurement" (ICM-5).
Madonna
- Submission of a peer-reviewed paper about the topic "Co-location of observations" with an emphasis of how to account for mismatches in quantifying and comparing uncertainties. (ICM-5). Fasso

LC led actions

- Development of initial frostpoint hygrometer product and associated technical document. Initial data and advanced draft of technical document available for consideration at ICM-5.
- Post online monitoring reports, graphics etc. and link from the ncdc ftp area to make aspects more accessible to the end users. Also link to a (still under development) 'GRPOVS' portal. Autumn 2012. Sommer

- Work with sites not launching RS-92 to further development of the processing streams for their standard radiosondes. Report at ICM-5 on progress.

Shared actions

- [Unidentified] to create a pedagogical paper (AMT, BAMS?) and supporting materials (online primer / tutorial) illustrating how to propagate not just the GRUAN best estimate but its uncertainty across a span of likely GRUAN applications. [time horizon unknown]

- WG co-chairs, Lead Centre, Task Team chairs [others?] to create a formal amendment to the Implementation Plan. To cover through 2016. To be submitted by September 1st to GCOS (AOPC) for consideration as a GCOS report. Owners: WG co-chairs.

- WG-ARO, LC, at least one member from each task team, others (meteomet?), to create a draft technical document on surface meteorological measurement requirements (T,p,u possibly others) in support of in-situ and remote sensing activities at GRUAN sites to include aspects on frequency of reporting, calibration and upkeep. Lead: Peter Thorne. Draft submitted for consideration / discussion at ICM5

- LC / WG-ARO / CIMO / HMEI to discuss how best to incorporate a GRUAN invited talk / talks / town hall / other as appropriate presence at the TECO meeting in Brussels in the autumn of 2012 to allow discussions with manufacturers. Report to WG-ARO. Holger / Bertrand/ WG chairs.

- Presentations at conferences
 - ITS9
 - TECO (see earlier)
 - WCRP reanalysis conference (Dian)
 - NWP conference (June)

Others

- Have I lost anything (other than my sanity [whether its questionable I walked in here with anyway]) from what was raised this week?

We'll be back ...

- Next ICM tentatively will be hosted by KNMI, host of the Cabauw site. Dates and location to be confirmed soon. But it'll be late Feb / early March as usual.