

ICM-10 Actions status

Peter Thorne

Summary

- We had 30 agreed actions from last ICM. Of these ...
 - 15 are completed
 - 14 are in progress
 - 1 remains unaddressed
- We had 3 high priority items (3)
- We had 7 actions related specifically to the RS92-RS41 transition (4, 2, 1)
- We had 8 actions related to new GRUAN data products (4, 4)
- We had 12 remaining actions (7, 5)

On a note of process for actions that involve multiple actors it continues to be the case that only the primary seems to be taking responsibility. All parties should feel ownership.

High priority actions

HP1 First full version of RS41 GDP

Lead Centre to complete production of first full version of RS41 GDP before ICM-11 and be under active consideration by WG for certification.

Lead Centre, TT Radiosondes.

Due May 2019

LC has developed an Alpha version of GRUAN data processing for RS41. Beta is under development. We will discuss later in the meeting what evaluations need to be conducted to help finalize the GDP.

Talk in Session 4, Tuesday a.m.

HP2 Radiosonde fundamental documentation

Develop first draft of GRUAN radiosonde foundational technical document to cover the general instrument-independent aspects.

TT Radiosondes and Lead Centre
January 2019

First draft of omnibus completed but not ready for WG review.

Talk in Session 9, Thursday a.m.

HP3 Autolaunchers

(1) An assessment of the advantages and disadvantages of manual vs. auto launches written up and submitted to the peer reviewed literature and/or a technical document.

(2) Find a way to get GRUAN certification for radiosonde data products taken with auto launcher systems (define critical questions).

WG-GRUAN, Lead Centre, TT sites, TT radiosonde

May 2019

(1) A preliminary draft for peer review has been circulated for comment.

(2) Critical questions defined and circulated.

Talk in Session 9, Thursday a.m., breakout meeting later in the week

RS92 to RS41 transition actions

Update on RS92-RS41 transition: Session 6, Wednesday p.m.

A1 Community approach paper

Paper describing the GRUAN change management replacement strategy submitted to peer-reviewed journal (GI) to increase visibility of effort and get broad community buy-in.

Lead Centre, TT Radiosondes, WG-GRUAN
September 2018

Paper written but some of the more in-depth critiques proving time-consuming: focusing on swift submission.

A2 Ensuring all sondes on multi-payloads in archive

Sites who have launched more complex set-ups with additional non-Vaisala sondes on their rigs not currently archived to advise Lead Centre and where possible provide that additional data to the Lead Centre.

Lead Centre, TT Ancillary measurements, TT Sites.
Oct 2017 (satellites plus Lindenberg)
Apr 2018 (all sites)

Complete. Talk on Wednesday

A3 Parallel soundings database augmentation with satellite/ancillary

Augment parallel soundings of RS92-RS41 with satellite co-locations and 'ancillary' measurements (CFH, FPH, lidar, MWR, satellites, cloud observations (incl. BSRN) within +/-2 hours).

TT Ancillary measurements; TT Sites (co-led); WG Chair; Lead Centre.

May 2018

Very limited progress to date. Sites require further guidance. Suggest that WG Chairs and LC work to provide such guidance

A4 UKMO/BAS ascents inclusion

Arrange for the inclusion of Met Office and BAS parallel soundings data in the RS92-RS41 transition. Particular interest in St. Helena given paucity of tropical locations.

Lead Centre, Tim Oakley
April 2018

Complete. Talk on Wednesday

A5 Scheduling by conditions

Lead Centre to work with sites to fill the low solar elevation angle 'hole' in the current set of dual launches with a lack of dawn / dusk ascents.

Lead Centre; TT sites
ICM-11

Performed maximum solar elevation angle soundings (90 degrees) at Reunion Island in January 2019. Performed dawn / dusk measurements at Lindenberg in Jan / Feb 2019. Analysis ongoing.

A6 Updated analysis of dual launch holdings

Presentations on updated analysis, including accounting for distinctions in rigging and ancillary measurements to be presented at ICM-11. Reports to be made available a month prior. Consideration of submission of reports as peer-reviewed literature.

RIVAL team; ad hoc TT; WG Chair; Lead Centre
ICM-11

Talks scheduled for later in the week but no reports were prepared ahead of time.

Some problems ingesting data in the GRUAN data system. Many issues in acquiring the RIVAL raw-sonde files needed for GRUAN processing of the RIVAL sondes. Many files are still missing (mostly from the NSA site). LC have all files currently available.

A7 Hard to soft casing

Lead Centre to undertake a number of RS-41 dual launches between hard and soft casing and archive as part of the dual soundings archive. Other sites that wish to ascertain the impact to also submit to the archive.

Lead Centre; TT sites

ICM-11

NWS -Sterling reported on hard / soft casing comparison at ICM10: no change was found. Intercomparison flights completed at Lindenberg. Analysis ongoing.

New GRUAN data
products

B1 Keeping track of new data stream developments and progress

WG to define and agree table entries for a quick check table on progress against data stream requirements (per summary given by Tom Gardiner). Lead Centre to host this on an appropriate area of the GRUAN website. WG to regularly review this table on calls.

Working Group; Lead Centre
October 2018

Webpage prepared. Check table is updated with TD5 (Meisei RS-11G and iMS-100) and TD7 (Multipayload). Will review Tuesday. May be better way to visualise on the website?

B2 Meisei GDP product certification

WG Chair to initiate data stream certification as soon as a discussion version of a paper describing the product is available.

WG Chair; Lead Centre; Working Group; TT Radiosondes ICM-11

Complete. Paper published in AMT (January 4th 2019):

Kobayashi, E., Hoshino, S., Iwabuchi, M., Sugidachi, T., Shimizu, K., and Fujiwara, M.: Comparison of the GRUAN data products for Meisei RS-11G and Vaisala RS92-SGP radiosondes at Tateno (36.06 N, 140.13 E), Japan, Atmos. Meas. Tech., <https://doi.org/10.5194/amt-2018-416>, 2019.

Talk in Session 4, Tuesday a.m.

B3 GNSS-PW GDP data flow and certification

WG Chair to work with TT-GNSS-PW to ensure review and finalisation of TD. GFZ to advance a data stream with full uncertainties (considering how to ensure as much information as possible expressed).

TT GNSS-PW; WG Chair; GFZ; Lead Centre; WG ICM-11

Final GNSS-PW version (TD2) with LC for publication.
GFZ working on making data processing code operational.

B4 Ozonesondes GDP

WG Chair to discuss with relevant parties (Richard Querel, Jacquie Witte, Greg Bodeker, Lead Centre) remaining challenges in instigating an Ozone sonde product and revert to WG with an update. Challenges are: Peer reviewed paper, data processing.

WG Chair
October 2018

To discuss next steps at this meeting. Call did not occur but Richard Querel to report some progress

B5 Modem sonde GDP

Further update on the Modem product development to be given at ICM-11.

CNR; Lead Centre; TT Radiosondes
ICM-11

Manuscript for the Modem M10 radiosonde has been submitted (Dupont et al., J. Atm. Ocean. Tech).

Talk in Session 4, Tuesday p.m.

B6 Microwave Radiometer GDP

WG-Chair and Lead Centre to discuss with Nico Cimini and explore potential processing centre options for an MWR product stream and outline potential options.

WG Chair; Lead Centre
ICM-11

Update on Tuesday, Session 4, 14:00 (Fabio Madonna).

B7 Lidar GDP

Report on beta testing outcomes and progress of a v1 data stream at ICM-11. If beta testing shows no issues then aim to have finalised TD and be in a position to certify one or more initial lidar data streams.

Lead Centre; TT sites
ICM-11

Update on Tuesday, Session 4, 13:25 (Thierry Leblanc).

B8 Frostpoint hygrometer roadmap

Prepare a strategy document (2-sides max) to address the remaining steps required for instigation of a general frostpoint hygrometers GDP (to cover at least FPH and CFH).

Dale Hurst; Ruud Dirksen
ICM-11

Strategy discussed and will be presented on Tuesday, Session 4, 14:15.

Remaining actions

C1 Sites photos

Technical note on guidance on site survey photos and upload instructions. Current site photo surveys to be uploaded to appropriate area of website. GCOS Secretariat to then discuss with WIGOS inclusion into OSCAR Surface metadata database.

WG Chair; TT Sites; Lead Centre; GCOS Secretariat
June 2018

Site Photos Technical Note complete (incorporating feedback from WG and TT Sites). With LC for publication.
Upload area to be created on gruan.org.

C2 Failsafe back-up

Lead Centre and CNR to instigate a mirror of the raw data holdings from the GRUAN archive.

CNR, Lead Centre, TT Radiosondes
July 2018

Lead Centre and CNR in discussion. The principal barrier is infrastructure and provision of an offsite facility. Currently, neither DWD nor CNR servers can be accessed externally.

C3 Generalisation of overpass information

Augment the current golden overpass emails so they show in addition appropriately polar orbiter overpasses information to enable sites to also be able to target these overpass times should they wish to do so.

TT ancillary measures; Fabio Madonna, Tony Reale; Lead Centre; TT Sites; Axel von Engel
August 2018

Emails now include EUMETSAT overpass times but discussions ongoing with regard to adding NOAA overpass times.

C4 Certification and auditing

WG-GRUAN and Lead Centre to ensure certification and auditing of sites on the agreed upon timetables and verify against these targets at ICM-11.

Peter Thorne; Lead Centre
ICM-11

Singapore and ARM certified.

Ny Alesund, Boulder, Lauder and Payerne all re-certified.

Tenerife under consideration by LC.

GRUAN certificate presentation to Singapore at site visit on Thursday, p.m.

Need to identify subsequent sites to certify at this ICM. Also sites to recertify in 19/20.

C5 Annually based reporting

Lead Centre to provide automated reports on annual performance no later than 20 January of each year. Sites to append site report no later than 15 February to inform the ICM. WG-GRUAN members to read site reports prior to ICM.

TT Sites; Lead Centre; WG-GRUAN
ICM-11

The automated part of report-generation is complete. Site-specific comments completed, follow-up questionnaire sent.

C6 Letters on behalf of sites

WG-GRUAN chair to review site reports and initiate letters from appropriate parties accordingly. TT sites to advise any additional requests as they arise.

WG Chair; TT Sites; Lead Centre; GCOS Secretariat
June 2018

Letters prepared and sent: Arrival Heights, Lauder/Invercargill, BoM Australia, Neumayer, Xilinhot

Letters in preparation: Sodankylä , Beltsville

Sites requiring letters please discuss with Dave in a coffee break this week!

C7 Uncertainty terminology and presentation in GRUAN products

Brief (max. 8 pages) discussion document to be produced on issues surrounding uncertainty terminology and presentation to users in GDPs including a review of heterogeneity in current approaches in certified and candidate streams.

Tom Gardiner; WG Chair; Lead Centre; TT-AM; TT-GNSS-PW; TT radiosondes
February 2019

Initial work is under way on a paper on uncertainty characterisation and terminology. A document will follow ICM-11 that will inform the paper by taking account of resulting discussions.

Talk in Session 4, Tuesday p.m.

C8 Vertical radiation profile sounding

With a view to the GCOS IP action, Lindenberg (via LC) to provide an update on their radiation measurement program including *inter-alia*: costs; practical deployment considerations; understanding of traceability; and assessment of required launch frequency.

Lindberg site
ICM-11

Talk in Session 7, Wednesday p.m.

C9 New sites

Lead Centre to follow up with French sites over potential site in Faa'a, Tahiti as proposed in Modem product update talk.

Lead Centre
July 2018

Other sites:

- Tenerife: application submitted. Under appraisal by LC.
- Australia: reply letter to GRUAN invitation being drafted currently.

New sites talks:

1. Paramaribo 2. Tahiti 3. Barbados 4. Arrival Heights

Talk in Session 10, Friday a.m.

C10 Clarification on NRT transmission when launching dual sondes

Lead Centre to draft letter with John Eyre to sites undertaking dual launches to clarify preference to transmit the operational sonde in NRT.

Lead Centre
May 2018

Completed and circulated

C11 Standard Humidity Chamber

Paper to justify the use of the SHC in terms of the data quality using data arising from the Lead Centre.

WG Chair

ICM-11

Richard Querel taking the lead; David Smyth to support.
Richard and David to discuss on sidelines this week.

Talk in Session 4, Tuesday p.m.

C12 Usage of GRUAN data

Investigate and instigate appropriate usage metrics to support sites in making the case for continued GRUAN participation. Brief discussion document to present at ICM-11 on additional potential ways to monitor usage.

WG Chair, TT sites
ICM-11

Scopus and Googlescholar used to compile bibliography on gruan.org.

Talk in Session 10, Friday p.m.

Carrying items over to next year

- Default position will be to carry over and, as necessary, rescope items into the next plan that remain open.
- Please discuss with WG Chairs if you have objections or wish to modify items.
- We shall also modify items depending upon outcomes of presentations and discussions through the week.

Short talk summaries

- Please send these after your talk
- Keep to 1 paragraph
- ctassone@wmo.int