

## ICM-9 agenda

12-16 June 2017  
Helsinki, Finland

All presenters at ICM-9 will be asked, before they leave the meeting, to provide the rapporteurs for the day, with a summary of their presentation, appropriate for cutting and pasting directly into the ICM-9 report (and therefore conforming in narrative style to previous ICM reports), that includes the outcomes of any resultant discussions, and no longer than 1.5 pages in length. Rapporteurs will then collate that material, include their own notes, edit as required, and forward to Greg Bodeker within a week of the end of the meeting. Greg will then use these as a starting point for the ICM-9 report.

There will also be opportunities to present posters. These can be viewed during the coffee breaks and also at the end of Tuesday. Please advise Rigel Kivi if you plan to display a poster.

### Monday 12 June

**Day chair: Peter Thorne**

#### ***Section 1 - Opening session and keynotes***

Rapporteur: Greg Bodeker

8:00 - 8:40	Registration	
8:40 - 8:50	Welcome, local logistics, outline of events and Adoption of agenda	Local hosts & WG chairs
8:50 - 8:55	Introductory talk from FMI	Professor Yrjö Viisanen
8:55 - 9:10	FMI air quality and climate studies	Dr. Iolanda Ialongo
9:10 - 9:25	GRUAN Fundamentals	Ruud Dirksen
9:25 - 9:40	Remarks from GCOS including relevant AOPC outcomes	Caterina Tassone
9:40 - 10:05	Lead Centre progress report	Ruud Dirksen
10:05 - 10:20	In memory of Sasha Kats	Ruud Dirksen

**10:20 - 10:40 Coffee break**

#### ***Section 2 - ICM-8 action items review***

Rapporteur: Greg Bodeker

10:40 - 11:05	Assessment of progress against action items arising from ICM-8	Peter Thorne
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#### ***Section 3 - Discussion of topics raised by Task Team reports***

Rapporteur: Axel von Engel

11:05 - 11:15	Brief summary (2 slides) on discussion points arising from Radiosonde Task Team report	Masatomo Fujiwara
11:15 - 11:30	Discussion of Radiosonde TT topics	To be led by day chair
11:30 - 11:40	Brief summary (2 slides) on discussion points arising from Sites Task Team report	Belay Demoz and Dale Hurst
11:40 - 11:55	Discussion of Sites TT topics	To be led by day chair
11:55 - 12:05	Brief summary (2 slides) on discussion points arising from Scheduling Task Team report	Tom Gardiner and Fabio Madonna
12:05 - 12:20	Discussion of Scheduling TT topics	To be led by day chair
12:20 - 12:25	Poster summary: Temperature-SASBE version 2	Jordis Tradowsky
12:25 - 12:30	Poster summary: A multi-mission RO-GRUAN comparison	Johannes Nielsen

### **12:30 - 13:30 Lunch**

Rapporteur: Stephanie Evan

13:30 - 13:40	Brief summary (2 slides) on discussion points arising from Ancillary Measurements Task Team report	Tony Reale and Thierry Leblanc
13:40 - 13:55	Discussion of Ancillary Measurements TT topics	To be led by day chair
13:55 - 14:05	Brief summary (2 slides) on discussion points arising from GNSS-PW Task Team report	Galina Dick
14:05 - 14:20	Discussion of GNSS-PW TT topics	To be led by day chair
14:20 - 14:45	Report from GRUAN science coordinators and subsequent discussion	Tom Gardiner and Richard Querel
14:45 - 15:00	General discussion of topics arising from task teams	To be led by day chair

### **15:00 - 15:30 Coffee break**

### ***Section 4 - Advances in the development of new GRUAN data products***

Rapporteur: John Eyre

15 minute talks + 5 minutes discussion

15:30 - 15:50	Meisei	Masami Iwabuchi
15:50 - 16:10	Modem	Stephanie Evan
16:10 - 16:30	Ozonesonde	Richard Querel

16:30 - 17:05	The future of balloon-borne reference water vapor measurements in GRUAN: Motivation/GCOS IP-Thorne(5), P-CFH-Dirksen(5), Japanese FP-Fujiwara(5), FLASH B-Lykov(5), Air Labs CBH-Bodeker(5), Discussion (10)	Dale Hurst to coordinate
17:05 - 17:25	Lidar	Thierry Leblanc
17:25 - 18:00	Discussion on progress on GRUAN product development	Day chair
Greg will rapporteur the session below		
18:00 - Done	Discussion and resolution on the size, composition, and terms of reference for the Working Group ( <b>Working Group Members only</b> )	Greg Bodeker discussion lead

## Tuesday 13 June

**Day chair: Greg Bodeker**

### **Section 5 - Special session on the Arctic**

Rapporteur: Marion Maturilli

08:30 - 08:50	Research activities at Sodankylä	Rigel Kivi
08:50 - 09:15	INTAROS, integration of the existing Arctic observing systems into a common data frame	Roberta Pirazzini
09:15 - 09:45	ARM, ASR, and UAF Activities at the NSA	Martin Stuefer and Douglas Sisterson
09:45 - 10:05	Ny-Alesund: update & Atmosphere Flagship program	Marion Maturilli
10:05 - 10:20	Arctic Council	Johanna Ekman

**10:20 - 10:45 Coffee break**

### **Section 5 - Special session on the Arctic (continued)**

Rapporteur: Rob Kursinski

10:45 - 11:05	Satellite borne observations of GHGs in the Arctic	Hannakaisa Lindqvist
11:05 - 11:25	Atmospheric methane in the Arctic	Leif Backman
11:25 - 11:45	Arctic stratosphere dynamical response to global warming	Alexey Karpechko
11:45 - 12:05	The N-ICE campaign	Stephen Hudson
12:05 - 12:30	General Discussion	

**12:30 - 13:30 Lunch break**

***Section 6 - GRUAN management of the RS92-other sondes transition***

Rapporteur: Jonathan Jones

13:30 - 14:00	A summary of developments to date	Ruud Dirksen
14:00 - 14:20	The Met Office/British Antarctic Survey experience of managing a transition from RS92 to RS41	Tim Oakley
14:20 - 15:00	Initial analysis results	Alessandro Fasso

**15:00 - 15:30 Coffee break**

***Section 6 - GRUAN management of the RS92-other sondes transition (cont)***

Rapporteur: Dan Brewer

15:30 - 15:40	Testing radiosondes in the EDDIE tunnel at INRiM	Andrea Merlone
15:40 - 16:00	RS92-RS41 transition at Cabauw	Arnoud Apituley
16:00 - 16:20	Assessment of the radiation-induced temperature error for RS92-RS41 using NPROVS	Bomin Sun
16:20 - 16:40	Global Correction of the radiosonde temperature biases in the upper troposphere and lower stratosphere using GPS RO data	Ben Ho
16:40 - 17:15	Discussion and development of agreed way forward for GRUAN transition from RS92 to other radiosondes	Ruud Dirksen to coordinate

**17:15 - 18:00 Poster viewing**

Jordis Tradowsky - An improved Site Atmospheric State Best Estimate for the Temperature above Lauder, New Zealand

Johannes Nielsen - ROM SAF CDR v1 temperature profiles compared to GRUAN v2.0

**Wednesday 14 June**

**Day chairs: Dale Hurst and Belay Demoz**

***Section 7 - GRUAN sites day***

Rapporteur: Lori Borg

8:30 - 9:00	GRUAN data flow	Michael Sommer
9:00 - 9:15	Lauder Site Update	Richard Querel
9:15 - 9:30	Developments at Singapore on the way to GRUAN implementation	<a href="#">Shwei Lin</a>
9:30 - 9:45	Updates from Tateno and introducing the new candidate sites	Masami Iwabuchi
9:45 - 10:00	GRUAN activities at La Reunion	Stephanie Evan

**10:00 - 10:30 Coffee break**

Rapporteur: Peggy Hoch

10:30 - 10:45	ARM SGP CFH operations status	Martin Stuefer
10:45 - 11:00	ARM Sites report/instrument uncertainties update	Doug Sisterson
11:00 - 11:15	ARM Sites radiosonde operations status and upgrades	Doug Sisterson
11:15 - 11:30	CMA plans for the Xilinhote site	Zhao
11:30 - 12:00	The GRUAN Mid-Atlantic Consortium: Vision, Composition, Activities, Plans	GMAC Team
12:00 - 12:30	Discussions of station reports	Lead Center

**12:30 - 13:30 Lunch break**

Rapporteur: Xavier Calbet

13:30 - 13:50	A novel automatic calibration system for water vapor Raman lidar	Giovanni Martucci
13:50 - 14:15	The 2019 WMO radiosonde intercomparison campaign, GRUAN's scientific requests	Ruud Dirksen and Giovanni Martucci
14:15 - 14:30	Aspects of GPS-RO Water vapor retrieval	Rob Kursinski
14:30 - 14:45	Partnering with operational met sites: Lauder's new Invercargill-based datastream	Richard Querel
14:45 - 15:00	GNSS data processing	Galina Dick

**15:00 - 15:30 Coffee break**

Rapporteur: Marco Rosoldi

15:30 - 15:50	Consistency between GRUAN sondes, LBLRTM and IASI	Xavier Calbet
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15:50 - 16:10	GRAS Occultation Forecasting Prediction: A new EUMETSAT Product?	Axel von Engel
16:10 - 16:30	The use of AIRCORE in GRUAN	Rigel Kivi
16:30 - 16:50	The status of the Fluorescence Lyman- $\alpha$ Stratospheric Hygrometer (FLASH-B) instrument	Aleksey Lykov
16:50 - 17:05	Links between GRUAN and the global radiosonde network	Bruce Ingleby
17:05 - 17:25	Update on where we are at with bringing new sites into GRUAN.	Greg Bodeker lead
17:25 - 18:00	An open discussion for sites	Dale Hurst and Belay Demoz to moderate

## Thursday 15 June

### Section 8 - Optional sessions

#### Option 1: Visit to Vaisala

#### Option 2: Breakout session on GAIA-CLIM outreach

8:30 - 10:00	Discussion of GAIA-CLIM gap analysis and prioritisation activity	Peter Thorne
<b>10:00 - 10:30</b>	<b>Coffee break</b>	
10:30 - 12:30	Hands on session on the GAIA-CLIM Virtual Observatory	Fabio Madonna and Peter Thorne
<b>12:30 - 13:30</b>	<b>Lunch break</b>	

#### Option 3: Review of GRUAN web pages

8:30 - 10:00	A team review of the GRUAN web pages - this would involve the group sitting down and together working through the web pages and making notes on suggested changes	Greg Bodeker and whoever else is interested.
<b>10:00 - 10:30</b>	<b>Coffee break</b>	
10:30 - 12:30	Continuation of web review	Greg Bodeker

<b>12:30 - 13:30</b>	<b>Lunch break</b>	
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**MeteoMet Training Course - this will be back at FMI**

13:30 - 13:50	Metrology for GRUAN: MeteoMet activities of interest	Andrea Merlone
13:50 - 14:10	Towards SI traceable humidity measurements with radiosondes	Martti Heinonen
14:10 - 14:30	Basic metrology, terminology, procedures	Tom Gardiner
14:30 - 15:00	MeteoMet training course Q&A	

**15:00 to 15:30 Coffee break**

***Section 9 - GRUAN Operations***

**Day Chair: Greg Bodeker**

Rapporteur: Hiram Escabi

15:30 - 15:40	Status of the GRUAN radiosonde generic technical document omnibus	Christoph von Rohden
15:40 - 16:00	Analysis of radiation temperature experiments	Christoph von Rohden
16:00 - 16:15	Discussion of radiation temperature results	Lead by day chair

**GRUAN dinner: information to come here**

**Friday 16 June**

***Section 10 - Underpinning science for GRUAN***

**Day chair: Ruud Dirksen**

Rapporteur: Jennifer Fowler

15 minute talks + 5 minutes discussion

8:30 - 8:50	Geophysical profile data from GRUAN radiosonde data products to a TOA radiance and uncertainty	Fabien Carminati
8:50 - 9:10	Integration and Assessment of GRUAN v2 uncertainties using NPROVS+	Tony Reale
9:10 - 9:30	Manual vs. autosonde launches	Rigel Kivi
9:30 - 9:50	GRUAN and RO intercomparison as done in	Jordis Tradowsky

	the ROM SAF VS31 project	
9:50 - 10:10	Frost Point Hygrometers and Satellite Sensors for Stratospheric Water Vapor	Dale Hurst

**10:10 - 10:30 Coffee break**

***Section 11 - GRUAN connection to partner communities and activities***

Rapporteur: Howard Diamond

15 minute talks + 5 minutes discussion

10:30 - 10:50	Reporting from the IROWG meeting in Austria	Jordis Tradowsky
10:50 - 11:10	Discussion of results from GAIA-CLIM maturity assessment for GRUAN and what we can learn from this.	Peter Thorne
11:10 - 11:30	The new AOPC task team on GUAN	Tim Oakley
11:30 - 11:50	The new C3S BARON activity	Fabio Madonna
11:50 - 12:20	GAIA-CLIM gap analysis and prioritisation activity	Peter Thorne
12:20 - 12:30	General discussion	Day chair

**12:30 - 13:30 Lunch**

***Section 11 - GRUAN connection to partner communities and activities (cont)***

Rapporteur: Hannu Jauhiainen

13:30 - 13:50	Discussion of the GRUAN Science Coordinator role	Greg Bodeker
13:50 - 14:10	Update of the IAGOS-H2O ongoing aircraft measurements and QA-efforts	Herman Smit
14:10 - 14:40	GRUAN web page and other tools to coordinate Working Group communication	Michael Sommer
14:40 - 15:00	Ozonesondes in GAW and future collaboration between GAW-WCCOS and GRUAN on ozonesonde QA	Herman Smit

**15:00 - 15:30 Coffee break**

***Session 12 - Wrap-up***

Rapporteur: Greg Bodeker



15:30 - 16:30	The GRUAN work plan for 2017/2018	Peter Thorne
16:30 - 17:00	Close	Local hosts and co-chairs

**Saturday and Sunday 17 and 18 June: Optional visit to Sodankylä (attendees to pay their own way)**