TT-SAT Task Team Report

Lori Borg & Axel von Engeln

12 March 2024

ICM -15

Members as of Nov ‘23

Name	Organisation
Lori Borg (co-chair)	SSEC, University of Wisconsin-Madison, US
Axel von Engeln (co-chair)	EUMETSAT, DE
Stephen Leroy	AER, US
Tony Reale	NOAA / NESDIS / STAR, US
Benjamin Ruston	UCAR, US
Chi Ao	Jet Propulsion Laboratory, California Institute of Technology, US
Johannes Nielsen	Danish Meteorological Institute, DK
Florian Ladstädter	Wegener Center, University of Graz, AT
Fabien Carminati	Met Office, UK
Jordis Tradowsky	Norwegian Meteorological Institute, NO
Bomin Sun	NOAA, US
Thomas August	ESA
Tim Hewison	EUMETSAT, DE

Progress with provision of satellite based ancillary measurements to RS92/RS41 colocation database (A2, initially raised at ICM-9)

- TT-SAT tasked to provide Lead Centre (LC) collocated satellite measurements with historical RS92/41 database
- **Fulfilling this action is complex**
  - Which satellite data (infrared, microwave, radio occultation)
  - Which satellite data products (level 1,2,3) and if e.g. level 1, which channels
  - Which colocation criteria (e.g. 1 hour and 100 km …)
  - Need for built in flexibility to accommodate reprocessing of satellite data sets
- **Paths Forward**
  - Leveraging NPROVS (Tony Reale & Bomin Sun)
  - Enhancing capabilities query GRUAN database

Progress with provision of satellite based ancillary measurements to RS92/RS41 colocation database (A2, initially raised at ICM-9)

- **Recent Discussions / Progress / Issues**
  - Provided some radio occultation examples to LC
  - Produced SNPP and Metop-B meta data for RS92-RS41 GRUAN soundings and sent to the LC
  - Provide some sounder overpasses to LC (on-going)
  - In this context, the VICIRS study and tools could become more relevant (see later talk)
  - EUMETSAT's plan to launch collocated radiosondes to satellite overpasses (see later talk)
  - Matching GRAS and RS92 / RS41 in bending angle space (see later talk)

Discussions on high ascent attainment for balloon radiosonde soundings

- Several group members involved in discussion
- Bruce showed some interesting results regarding impact of sonde winds
- More in Session 9

EUMETSAT Radiosonde Campaign/Monitoring

- Was discussed within the group
- Need for ancillary ground based data was raised, to support satellite validation with radiosondes
- More on this in dedicated talk (right after this one)

Session Overview

Session 4 - Task Team Satellite (TT-SAT)

Chair: Ankie Piters

4 - 1	09:00 - 09:15	Task Team Report & Satellite co-locations (B2) & EUMETSAT Campaign	TT Chairs
4 - 2	09:15 - 09:30	Update on the study for a vicarious calibration using GRUAN sondes (VICIRS)	Nico Cimini
4 - 3	09:30 - 09:45	GRUAN radiosondes applied in preparation and validation of specific humidity profiles derived from radio occultations.	Johannes Nielsen
4 - 4	09:45 - 10:00	On the consistency between GRUAN RAOBs and satellite hyperspectral infrared sounder measurements	Bomin Sun
4 - 5	10:00 - 10:15	Update on GRUAN Radio Sondes Validation against Radio Occultation	Axel von Engeln
4 - 6	10:15 - 10:30	Discussion Time	TT Chair to moderate
	10:30 - 11:00	*Coffee break*	