GRUAN Task Team on Ancillary Measurements
2017-2018 activity report

Thierry Leblanc

Tony Reale

Lori Borg

TTAM oversee the production and integration of ancillary measurements, namely MWR, FTIR, and lidar in compliance with GRUAN best measurement practices, and coordinate the use of satellite data for GRUAN-related tasks

No change in Task Team membership, <u>until today</u>

Thierry Leblanc (co-chair)	NASA/JPL, USA
Tony Reale (co-chair)	NOAA/NESDIS, USA co-chair
John Dykema	Harvard University, USA
Jonathan Gero	AERI, USA
Alexander Haefele	Meteoswiss-Payerne, Switzerland
Nik Kämpfer	University Bern, Switzerland
Jim Hannigan	NCAR, USA
Matthias Schneider	KIT/IMK-ASF and AEME, Germany
Marc Schröder	DWD, Germany
Michael Sommer	DWD, Germany
David Whiteman	UMBC, USA

Tony Real is stepping down of his co-chair position

New co-chair proposed for next 2 years: Lori Borg, University of Wisconsin

Microwave TD (N. Cimini)

See presentation by Nico Cimini

FTIR (M. Schneider):

1. No progress the past 12 months
2. Efforts needed to review suitability and applicability of column-integrated measurements to GRUAN

GRUAN Lidar Data Stream (T. Leblanc, see presentation Tuesday)

1. T. Leblanc visited M. Sommer at GRUAN LC July 2017 to work on LidarRunClient
2. A. Apituley (Cabauw), Gianni Martucci (Payerne) and 2 more NDACC (Lauder, Eureka) visited T. Leblanc at JPL-TMF for implementation of their lidar data processing
3. Raw data from 12 lidars (GRUAN, NDACC, TOLNet) are now processed
4. LidarRunClient revamped, new prototype version available
5. GRUAN Lidar Data Stream exists, but not through the normal GRUAN pathway
6. Additional manpower needed to continue/finalize items 2-3
7. Full documentation (TD) will come with release of GLDP1

Accomplishments (Tony Reale):

1. NPROVS infrastructure upgraded to store satellite Sensor Data Records (SDR) for hyper-spectral infra-red and advanced microwave sensor observations (NOAA and EUMETSAT); 500km radius

1. Re-configurations to access/store RIVAL (see Lori Borg presentation) "dual" and "dual sequential" RS41 / RS92 / satellite collocations (w/SDR)

1. NPROVS expanded to include NOAA-20 (January, 2018); NOAA-20 targeted in RIVAL

2. NPROVS assigned to COSMIC-2 cal/val team and includes use of GRUAN for assessment (with and without GRUAN processing?) (Bomin)

Path Forward:

1. Coordinate with LC and configure "user" access of RIVAL collocations (and SDR); options include link to NPROVS, store at LC (or both):

  - NPROVS Radiosonde "averaged" (see Bomin) to 100 vertical layers suited for RT …
  - LC would provide full hi-density radiosonde access …

2. Coordinate with Scheduling WG (Tom Gardiner) to guide/initiate Ancillary data streams, assessments (i.e., consistency within uncertainty) and use/value for SASBE (per site)

3. Consider retrospective SDR storage for all "timely" GRUAN and satellite collocations …

4. Facilitate GRUAN / GSICS satellite sensor (RT model) assessments (Bomin Sun)

5. Access /integrate CFH radiosonde (nrt and retrospective) (i.e. Beltsville, ARM) … target satellite overpass … (Bomin)

6. Facilitate access of COSMIC-2, GRAS post-processed and associated targeting at GRUAN … mutual feedback to GRUAN and GPSRO agencies