

## **GRUAN Task Team on Ancillary Measurements 2018-2019 activity report**

**Thierry Leblanc**

**Lori Borg**

**Tony Reale**

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

**Tony Real stepped down of his co-chair position last year, but remains “wired” to TTAM for staellite/RIVAL activities**

**Current Task Team membership:**

Thierry Leblanc (co-chair)	NASA/JPL, USA
Lori Borg (co-chair)	NOAA/NESDIS, USA
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

**Microwave (N. Cimini, see update today):**

***Suggestion: Invite Nico Cimini to be “third” TTAM co-chair to represent Microwave***

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

1. More work needed on LidarRunClient
2. Raw data from 14 lidars (GRUAN, NDACC, TOLNet) are now processed by GLASS
3. GRUAN Lidar Data Stream exists, but not through the normal GRUAN pathway
4. Additional manpower needed to continue/finalize items 2-3
5. Full documentation (TD) in preparation, to be released together with GLDP1

**May 2020: Planning for new GRUAN/NDACC Water Vapor Intercomparison campaign at TMF**

1. Follow the principle of the MOHAVE 2009 NDACC campaign
2. Invite new radiosondes and Frost-Point sondes, compare with multiple lidars
3. May is “high season” for STE in the Western US → Great opportunity for UTLS

- Collaborators include DOE-ARM, GRUAN, SSEC (Univ Wisconsin), *GSICS* ...
- Leverages ARM / JPSS Dedicated Radiosonde Program at the 3 ARM sites
- **“Twin”** radiosonde soundings (RS92 & RS41 on same balloon) synchronized with NOAA-20 overpass performed **“weekly”** since February 2018
- Two years proposed; first year funded, second year pending
- Supports Vaisala RS92 to RS41 transition management ensuring continuity of ARM radiosonde record
  - Transition management of high interest nationally/internationally across satellite, weather forecast and climate communities
- Benefits of Twin Soundings:
  - Provides unique, reliable support for NOAA-20 EDR assessment ... *“two truths are better than one”*
  - Provides unique SDR and associated Radiative Transfer Model assessment opportunities ... *supports Global Spaced based Inter-Calibration System (GSICS)*
  - Cost Sharing: JPSS provides RS41 (via dedicated program) & ARM provides RS92
  - Radiosondes processed by GRUAN into “traceable reference” data ...
  - Supports JPSS NOAA-20 mission deployment



Site	ENA	NSA	SGP
<b>RIVAL Start Date</b>	26 Apr 2018	20 Jun 2018	13 Feb 2018
<b>Launches Completed</b> through 20190512	<b>36</b>	<b>12</b>	<b>55</b>
Single Balloon (day/night)	<b>36 (17/19)</b>	<b>5</b>	<b>21 (11/10)</b>
Twin Balloon (day/night)	---	<b>7</b>	<b>34 (18/16)</b>
<b>Launch Projection</b> by end Summer 2020	104	52*	104
Single Balloon (day/night)	104 (52/52)	26*	52 (26/26)
Twin Balloon (day/night)	---	26*	52 (26/26)

\* NSA - RIVAL launches occur at 'daytime' overpass, but Nov-Jan civil twilight. Unlikely to complete all 52 launches.

### Immediate Goals:

**1. Coordinate with Scheduling Task Team to a) Schedule (i.e., when Raob in air...), b) Assess and c) Integrate ancillary data streams for use in SASBE ... starting with RIVAL**

2. Coordinate with the LC to facilitate access to "relevant" satellites and "SDR (radiances)" data from RIVAL *and selected GRUAN sites ...* What (data, satellites ...)?  
Where should it be stored? How often?