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**10th GRUAN Implementation-  
Coordination Meeting (ICM-10)**

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Session 7

Potsdam, Germany

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## GRUAN Site Report for La Réunion

*(Submitted by Stephanie Evan)*

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### **Summary and Purpose of this Document**

Report from the GRUAN site La Réunion for the period January to December 2017.

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# GRUAN Site Report for La Réunion (REU)

Reporting for the period January to December 2017

Date: 15-March-2018

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## Overview

Réunion Island has three measurement sites: the Maïdo observatory on the western part of the island (2160 m ASL), Gillot Airport (northern part of the island, 10 m ASL) and the University of La Réunion in Saint-Denis (northern part of the island, 80 m ASL). Although weekly ozonesondes (using M10 radiosonde and EN-SCI ECC ozonesonde) are launched from Gillot as part of SHADOZ and NDACC, the data are not being formally transmitted to GRUAN yet. In addition, M10/CFH sondes are launched from the Maïdo Observatory on a campaign basis (2 to 3 launches per year) but not all data have been transmitted to GRUAN yet. We plan to solve this issue this year.

## Change and change management

No changes (since 2017)

## Resourcing

While CFH launches (2 to 3 launches per year) have been supported in 2017 and 2018 by ACTRIS-FR the French component other European ACTRIS (Aerosols, Clouds, and Trace gases Research InfraStructure) research infrastructure. It is unlikely that ACTRIS-FR will continue to support these launches in the future. At the moment, there is no long-term plan to cover the cost of monthly CFH launches in La Réunion.

## **Operations**

Currently we are not using the RSLaunchClient to submit the M10/ozone data from the weekly SHADOZ ozonesonde launch. We have to work with Le Sirta in Paris and the GRUAN Lead Centre to decide on the data stream for the M10 radiosonde. We have ordered a standard humidity chamber that should arrive in May and will use it to test the M10 radiosonde which is used for the weekly ozonesonde launch at Gillot.

## **Site assessment and certification**

Most likely in 2019 but the lack of a monthly stratospheric water vapor (CFH) measurement is a concern for the certification process.

## **GRUAN-related research**

Stephanie Evan was awarded in July 2017 a Young Researcher grant by ANR (the french National Research Agency). The ANR JCJC CONCIRTO (CONvection, CIRus and tropical Tropopause layer over the Indian Ocean) project aims to further our understanding of how deep convection and cirrus clouds affect the composition of the Tropical Tropopause Layer (TTL, 14-19km) in the Southern Hemisphere. The ANR CONCIRTO project will fund balloon-sonde measurements of water vapor (CFH), aerosol (COBALD) and ozone with cloud radar observations at the Mado Observatory for a 5-month period starting in November 2018. The Leadcentre will collaborate in the CONCIRTO field campaign and 12 launches of RS92-RS41 are scheduled in January/February to improve the solar radiation correction on the RS41 sondes.

An article by H  l  ne V  r  mes is under review in Atmospheric Measurement Techniques:

V  r  mes, H., Payen, G., Keckhut, P., Duflot, V., Baray, J.-L., Cammas, J.-P., Leclair De Bellevue, J., Evan, S., Posny, F., Gabarrot, F., Metzger, J.-M., Marquestaut, N., Meier, S., V  mel, H., and Dirksen, R.: A Raman lidar at Ma  do Observatory (Reunion Island) to measure water vapor in the troposphere and lower stratosphere: calibration and validation, Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2017-32, in review, 2017.

## **WG-GRUAN interface**

None

## **Items for ICM-10 plenary discussions**

Transition to new water vapor instruments?

Is a monthly water vapor profile reaching the stratosphere a strong requirement for the GRUAN certification? (as there is the lack of fundings to support long-term monthly CFH measurements in La Réunion)

## **Other archiving centers**

The data (M10+Ozone) from the weekly ozone sondes performed at Gillot (near the airport in Saint-Denis in the north of the island) are submitted to NDACC and SHADOZ. The water vapor data from the Raman Lidar at the Maïdo Observatory should be submitted to NDACC in the near-future.

## **Participation in campaigns**

As described previously, the CONCIERTO campaign will take place from November 2018 and April 2019. The GRUAN Lead centre (visit of Susanne Meier) will collaborate in the field campaign and assist with RS92/RS41 and CFH launches. During the campaign we will also do ~ 9 launches with COBALD/CFH+IMET/ECC-Ozonsonde+M10 and possibly a few launches with the Printed Optical Particle Spectrometer (POPS) instrument that was developed at the NOAA and CIRES laboratories in Boulder (USA). A scanning cloud radar from the University of Leeds will also be deployed during the CONCIERTO campaign.

## **Future plans**

Stephanie Evan will visit the GRUAN Lead centre either in June 2018 or September 2018 to be further trained on CFH/ozonesonde and discuss the certification process for La Réunion.



# GRUAN Site Report for LaReunion (REU), 2017

Reported time range is Jan 2017 to Dec 2017

Created by the Lead Centre

Version from 2018-04-06

## 1 General GRUAN site information

Object	Value
Station name	LaReunion
Unique GRUAN ID	REU
Geographical position	-21.0797 °S, 55.3831 °E, 2165.0 m
Operated by	UNIV-REUNION   Univers de La Réunion
Main contact	Evan, Stephanie
WMO no./name	-
Operators	currently 5, changes +0 / -0
Sounding Site	1

### 1.1 General information about GRUAN measurement systems

System	Name	Type	Setups	Measurements
REU-RS-01	Radiosonde Launch Site (Maïdo)	Sounding Site	3	0

### 1.2 General comments from Lead Centre

#### 1.2.1 General

No dataflow to GRUAN LC so far.

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## 2 System: Radiosonde Launch Site (Maïdo) (REU-RS-01)

<b>Object</b>	<b>Value</b>
System name	Radiosonde Launch Site (Maïdo)
Unique GRUAN ID	REU-RS-01
System type	Sounding Site (RS - Radiosonde)
Geographical position	-21.0797 °S, 55.3831 °E, 2164.6 m
Operated by	UNIV-REUNION   Univers de La Réunion
Instrument contact	Evan, Stephanie
Started at	-
Defined setups	3 (MALICCA-1, CFH, MORGANE)
Possible streams	CFH, COBALD, ECC, IMET-1, RS41, RS92

### 2.1 Lead Centre comments

#### 2.1.1 Dataflow

No radiosonde dataflow to GRUAN LC as yet.