



WMO/IOC/UNEP/ICSU
GLOBAL CLIMATE OBSERVING
SYSTEM (GCOS)

Doc. 1.23
(03.X.2020)

**12th GRUAN Implementation-
Coordination Meeting (ICM-12)**

Session 1

Virtual

16 - 20 November 2020

GRUAN Site Report for Tenerife

(Submitted by Miguel Hernández)

Summary and Purpose of this Document

Report from the GRUAN site Tenerife for the period January to December 2019.

Overview

TEN contributes to GRUAN with a twice-a-day sounding programme. In this Report Period (Jan-Dec 2019), 722 soundings were sent to LC in data stream RS41-SGP

Change and change management

- In general, procedures have not changed, neither have instruments or operators.
- The site is regularly visited for reloading and or maintenance at least once a week. Two operators and the site manager take part in these activities.
- Software version change was performed in 2019. Vaisala MW41 software changed version from 2.6.1 to 2.11 on October, 3rd. LC was informed.
- Site description aerial photographs taken in 2019 will be used to update site description on GRUAN website. There is no significant change in Sites environment.

Resourcing

Current reporting period had no resourcing issues. Resources are guaranteed for next period (2020), in personnel, funding and materials for operational (forecasting oriented) launchings.

Operations

- The main problem during 2019 had to do with the software regulating file uploading to GRUAN LC. The gtRsl software was OK, however a local PCs script caused problems and about one every three files did not reach LC. LC warned about this issue in October. The problem persisted for the remain of the year. Periodic checking and manual upload was instructed. Problem correction is expected early in 2020 (see Future Plans).
- Larger than expected fluctuations in total balloon gas volume has been observed in some occasions from launch to launch. This affects ascension velocity. Autolauncher fluximeter is OK. Upgrade of gas banks pressure reduction system has been scheduled (see Future Plans).
- Autolauncher regular bi-annual maintenance was performed on February and October 2019 by INEMET S.L. (Vaisala certified contractor).
- Verification of AWS and GroundCheck pressure sensors took place in September 2019 with good results.

- Scheduled weather stations T RH probe was replaced and verified on February and verified again on October 2019 with good results.

Site assessment and certification

Site has not been certified yet. In October 2019, LC sent a note to site manager asking for further development of a previously sent application form. Unfortunately, by reasons beyond our control, this task has been postponed. It is planned to come back to this subject during last term of 2020.

A Standard Humidity Chamber model 1 was purchased in 2019 as part of the hardware required for certification. However no systematic checking has been implemented yet.

GRUAN-related research

No significant research has been done at TENERIFE during this period.

During 2019, research on autolaunchers performance led by Fabio Madonna has been done (eventually publishing a paper in 2020). Tenerife personnel contributed to this paper.

WG-GRUAN interface

OK

Other archiving centers

The station belongs to AEMETs Thermodynamic Sounding Network (RST). This network management is ISO 9001:2008 certified. Data (in TEMP BUFR format) contributes to the GOS and the GUAN network.

Participation in campaigns

No participation in 2019.

Future plans

- Upgrade PC and VAISALA software to minimize current gtRsl file upload problems (accomplished by the date this questionnaire is sent).

- During 2020 the use of recent RS41-SGP EPS-covered radiosonde will be implemented. This change will permit radiosondes to reach higher altitudes before balloon bursting (accomplished by the date this questionnaire is sent).
- During 2020 recording of descent data will be implemented at TEN site (accomplished by the date this questionnaire is sent).
- It is intended to push forward Tenerife GRUAN certification during 2020 and 2021. Requirement from LC will be addressed and feedback provided. Required installation of GNSS precipitable water vapour measuring instrumentation will be a goal during 2020 and 2021.
- Upgrade helium distribution and pressure reduction system to provide a more stable gas flow to autolauncher in order to overcome observed gas pressure fluctuation (accomplished by the date this questionnaire is sent).



GRUAN Site Report for Tenerife (TEN), 2019

Reported time range is Jan 2019 to Dec 2019
Created by the Lead Centre
Version from 2020-11-05

1 General GRUAN site information

Object	Value
Station name	Tenerife
Unique GRUAN ID	TEN
Geographical position	28.3184 °N, -16.3822 °W, 115.0 m
Operated by	AEMET Agencia Estatal de Meteorología
Main contact	Hernández, Miguel
WMO no./name	60018 TENERIFE-GUIMAR
Operators	currently 0, changes +0 / -0
Sounding Site	1

1.1 General information about GRUAN measurement systems

System	Name	Type	Setups	Measurements
TEN-RS-01	Tenerife Automatic Radiosonde Launch System (AUTOSONDE)	Sounding Site	2	722

1.2 General comments from Lead Centre

No comments from Lead Centre.

2 System: Tenerife Automatic Radiosonde Launch System (AUTOSONDE)

Object	Value
System name	Tenerife Automatic Radiosonde Launch System (AUTOSONDE)
Unique GRUAN ID	TEN-RS-01
System type	Sounding Site (RS - Radiosonde)
Geographical position	28.3184 °N, -16.3822 °W, 115.0 m
Operated by	AEMET Agencia Estatal de Meteorología
Instrument contact	Hernández, Miguel
Started at	2002-09-10
Defined setups	2 (ROUTINE, ROUTINE2)
Possible streams	RS41, RS92

2.1 Lead Centre comments

2.1.1 Dataflow

Sonde dataflow to the GRUAN LC is operational since November 2017. This dataflow includes stream of the Vaisala RS41-SGP (since Dec 2017). All launches are submitted using the GruanToolRsLaunch (gtRsl).

2.2 GRUAN data products

Product	Version	Soundings received	Available at LC	Distributed by NCEI
---------	---------	--------------------	-----------------	---------------------

2.2.1 Stream: RS41

RS41		722	722	
RS41-RAW	001		720	
RS41-EDT	001		719	
RS41-GDP-ALPHA	001		118	
RS41-GDP-ALPHA	002		597	
RS41-GDP-ALPHA	003		234	
RS41-GDP-BETA	001		237	

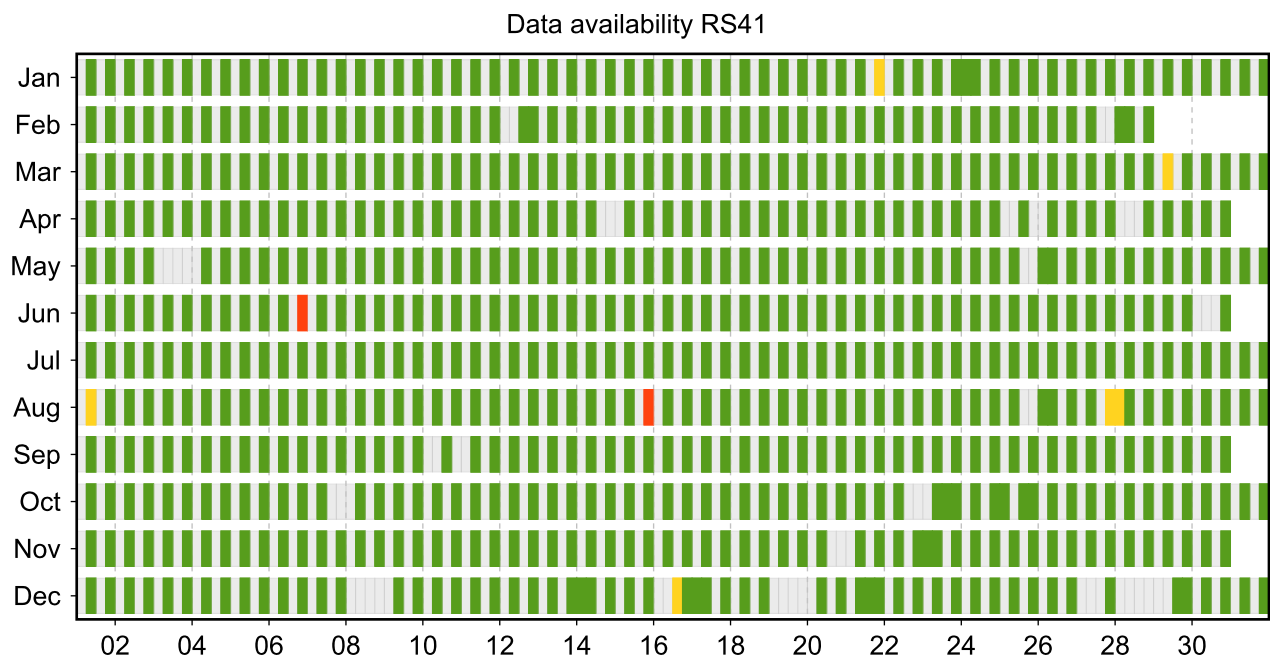
2.3 Availability of data products

Available (green): All steps of data processing have been successfully completed. The data product file is available at LC (e.g. files that didn't pass QA/QC or uncertified GRUAN data products) and/or at NCEI (a certified GRUAN data product file that did pass QA/QC).

Unprocessed (yellow): The manufacturer-produced file with raw measurement data has been successfully converted into a GRUAN-standardized raw data format (NetCDF). The GRUAN data processing has not been performed or was aborted. Reasons for this may be a still missing GRUAN data processor or a processing-software error.

Original (red): The original, manufacturer-produced, raw data file is available (e.g. MWX data file) but was not converted into a GRUAN-standardized raw data format (NetCDF). Reasons for this may be missing data conversion software, a software error, or a corrupt data file.

2.3.1 Stream: RS41



2.4 Instrument combinations of TEN-RS-01

Count	Instrument combination
722	RS41

2.6 Measurement events

