



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

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**13th GRUAN Implementation-
Coordination Meeting (ICM-13)**

Session 1

Virtual

15 November - 19 November 2021

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 2020.

Overview

TEN contributes to GRUAN with a twice-a-day sounding programme. In this Report Period (Jan-Dec 2020), 751 soundings were sent to LC in data stream RS41-SGP using the gtRsl tool.

Change and change management

- Software version was updated twice in 2020. The first time on 21-January-2020 (MW41 software changed to version 2.15.2) and the second on 6-July-2020 (MW41 was updated again to version 2.16). LC was informed (via gtRsl tool). Also the PC was upgraded and this solved the 2019 data sending problem to LC.
- On February 2020, descent data recording was activated. On 11-February-2020 descent data started circulation in GTS.
- Expanded-polystyrene covered RS41-SGP radiosondes started to fly on 11-February-2020. In order to compensate the weight difference, helium volume was reduced from an initial value of 1280 l to 1100 l. The last value settled on 13-June-2020. LC was informed (via gtRsl tool).
- Helium banks pressure reduction system was upgraded on 14-January-2020. It provides now a more stable gas flow and minimises leaks.
- There was no significant change in sites environment.

Resourcing

Current reporting period had no resourcing issues. Resources are guaranteed for next period (2021) in personnel, funding and materials for operational (forecasting-oriented) launchings. The site is visited at least once per week. Two operators and the site manager take part in these activities. INEMET S.L. (Vaisala certified contractor in Spain) performs twice-a-year mechanical and software maintenance.

Operations

- Verification of AWS and Autolauncher Ground Check pressure sensors took place on 15-September-2020 with good results.
- It was expected that, after gas volume reduction (see Change Section), bursting pressure would reduce. However, we have not seen a clear change in bursting altitude or pressure although the helium volume was reduce by 180 l (about 14%). Our calculations (taking into account

all 2020 launches) show that mean bursting pressure was 19.8 hPa. To reduce early-failure launches bias, the median is a better approximation to a normal fly and it was **9.7 hPa** in 2020.

Covid-19

Fortunately, Covid-19 has not played any significant impact during 2020, except for short delays in maintenance visits.

Site assessment and certification

No, Tenerife has not been certified yet. This is a long-standing issue that LC has pointed to us several times. We expect to face this issue in 2021. We will ask for help to LC so we can speed up the process.

GRUAN-related research

No significant novel research has been done during 2020.

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 (TEMP, BUFR format) contributes to the GOS and the GUAN network.

Participation in campaigns

No campaigns in 2020.

Future plans

- Our main concern in 2021 will be the GRUAN certification. It will require acquisition of a GNSS-PW instrumentation.

- In 2021 Tenerife intends to participate in RS41 ground-check stability using a SHC and attempt to reduce bursting pressure.



GRUAN Site Report for Tenerife (TEN), 2020

Reported time range is Jan 2020 to Dec 2020

Created by the Lead Centre

Version from 2021-04-27

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	751

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
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2.2.1 Stream: RS41

RS41		751	751	
RS41-GCA	001		727	
RS41-RAW	001		751	
RS41-EDT	001		732	
RS41-GDP-ALPHA	003		246	
RS41-GDP-ALPHA	004		185	
RS41-GDP-BETA	001		731	
RS41-GDP-BETA	002		119	

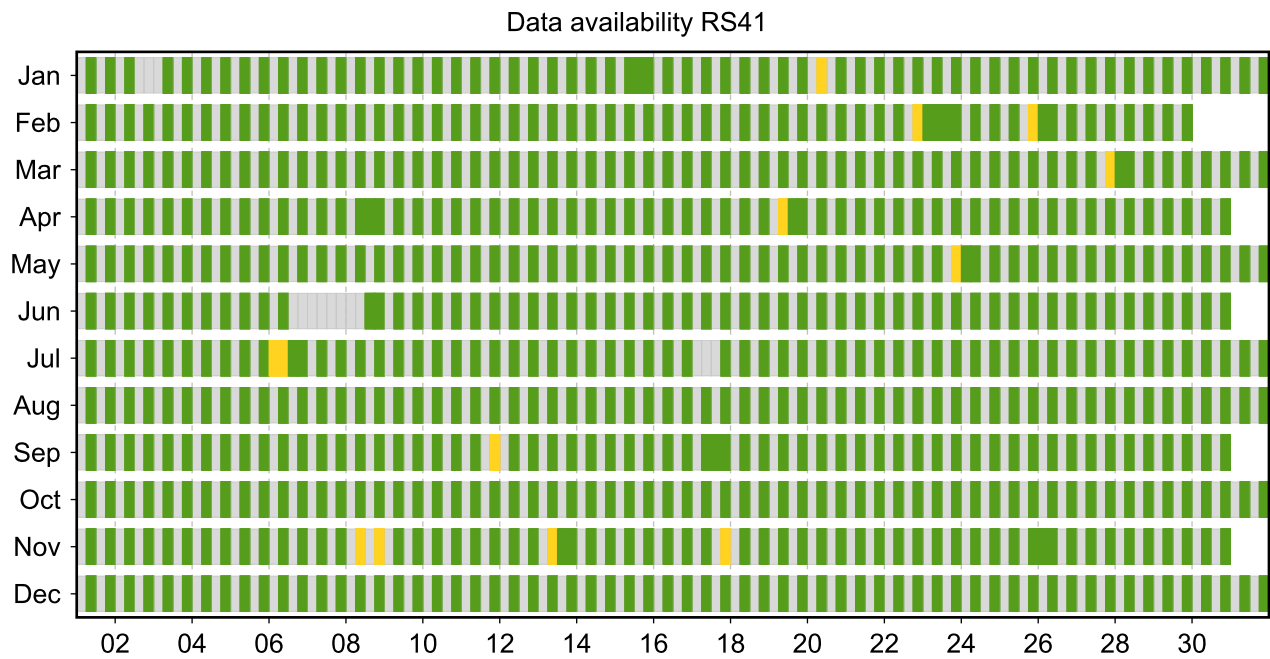
2.3 Availability of data products

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
751	RS41

2.6 Measurement events

