



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

Doc. 7.23  
(13.IV.2018)

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

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Session 7

Potsdam, Germany

23 - 27 April 2018

## GRUAN Site Report for Tenerife

*(Submitted by Miguel Hernandez)*

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

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

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# GRUAN Site Report for Tenerife (TEN)

Reporting for the period January to December 2017

Date: 31-March-2018

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## Overview

TEN contributes to GRUAN data with a twice-a-day sounding programme. In the period Jan-Dec 2017, two streams are available, a RS92-SGP stream (688 soundings) and from December 14th 2017 a RS41-SGP stream. Temperature, RH, pressure and wind are the recorded variables. Nominal launches usually reach the 10 hPa level.

## Change and change management

Data stream RS92 covered most of 2017. This data programme changed on December 14th 12Z to a new stream using new Vaisala RS41-SGP radiosondes. In order to use new radiosondes, significant software/hardware modifications were done at the site. Most relevant are:

1. Sounding System upgraded to MW41/AS15. SRS S/N N34501 version 2.6.1
2. Groundcheck upgrading to RI41 (S/N N2920017) with barometer module 1QML-AV (S/N N3410102).
3. Standard modification of carousel tray shape in order to accommodate new sonde model.
4. Activation of Vaisala GRUAN Licence.

Operation routines were modified in order to use new RS41. The most relevant modification is the loading. Currently, Vaisala loading manuals for the RS41 sonde are followed closely.

The transition between programmes was carried out in a straightforward manner. Intercomparison was not performed. Some soundings are missing due to fine-tuning of the transition.

In 2017, all past data available were supplied to GRUAN by ftp. Usage of GRUAN RsLaunchClient was started in March 7th 2018 and is currently in operation.

From March 7th 2018, we are using GRUAN RsLaunchClient to submit data to GRUAN LC.

## **Resourcing**

There is enough support, both in personnel and resources from Spanish weather office, AEMET.

## **Operations**

In the past there have been occasional complaints from public and, in one occasion, from local Environmental Agency regarding a sonde landing in an environmental protected area. In order to provide information and clarification, in 2017 (and onwards), every sonde has a sticker with basic information about the sounding and contact data. In the 2017 period, we received feedback from 21 people who had found sondes.

## **Site assessment and certification**

We are confident TEN will be ready for certification during the 2018 period. Required minimum equipment needed for Certification can be purchased. We are ready to undergo an audition process when GRUAN LC decides and correct/modify procedures after audition findings.

## **GRUAN-related research**

At present, there is no GRUAN-related research at TEN. We hope this can change in future periods. As newcomers, we expect feedback for GRUAN LC regarding research topics of interest at our site.

## **WG-GRUAN interface**

Currently we have good support from LC in setting up RsLaunchClient and communication is fluid and helpful. In the future, and especially regarding certification process, new required equipment acquisition will be necessary, GRUAN LC support letters will be helpful in this.

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

No specific issues.

## **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**

TEN has participated occasionally in international campaigns. Last one took place from September 4th 2012 to November 6th 2012 with a special observation period SOP1 within HyMex campaign (assessing impact of raising launching frequency on weather forecasts) on that year. Several extra sounding were added to normal schedule. In 2017, TEN has not been involved in other campaigns.

## **Future plans**

Certification process is our immediate goal in 2018.



# GRUAN Site Report for Tenerife (TEN), 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	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	688

### 1.2 General comments from Lead Centre

#### 1.2.1 General

Good communications between station and GRUAN LC.

## 2 System: Tenerife Automatic Radiosonde Launch System

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 streams of the Vaisala RS92-SGP (until Dec 2017) and RS41-SGP (since Dec 2017). All launches are submitted using the GruanToolRsLaunch.

#### 2.1.2 General

Change of operational sonde from Vaisala RS92-SGP to Vaisala RS41-SGP was on 12 December 2017.

### 2.2 GRUAN data products

Product	Version	Soundings received	Available at LC	Distributed by NCEI
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#### 2.2.1 Stream: RS92

RS92		688	688	
RS92-RAW	001		688	
RS92-RAW	002		688	
RS92-EDT	001		687	
RS92-GDP	002		607	476

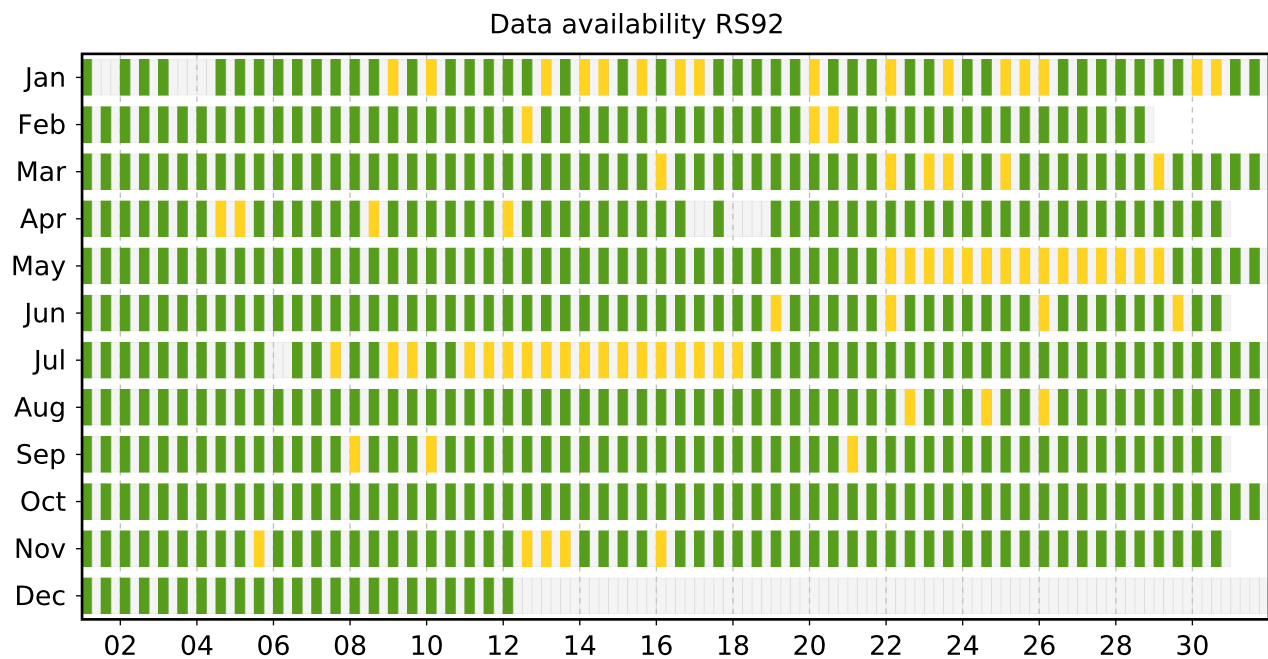
## 2.3 Data availability of data products

Available (green): All steps of processing have been successfully completed. The data file is available at LC (e.g. unapproved or uncertified GRUAN data products) and at NCEI (approved and certified GRUAN data products).

Unprocessed (yellow): The raw data file has been successfully converted to a GRUAN standardized raw data file format (NetCDF). The processing (e.g. GRUAN data processing) has not yet been done, or has not been completed. Reason may be a processing routine which does not yet exist, or software errors.

Original (red): The original raw data file is available (e.g. MWX). The raw data file was not converted to a GRUAN standardized raw data file format (NetCDF). Reason may be a converting routine which does not yet exist, or a corrupt original raw data file, or software errors.

### 2.3.1 Stream: RS92





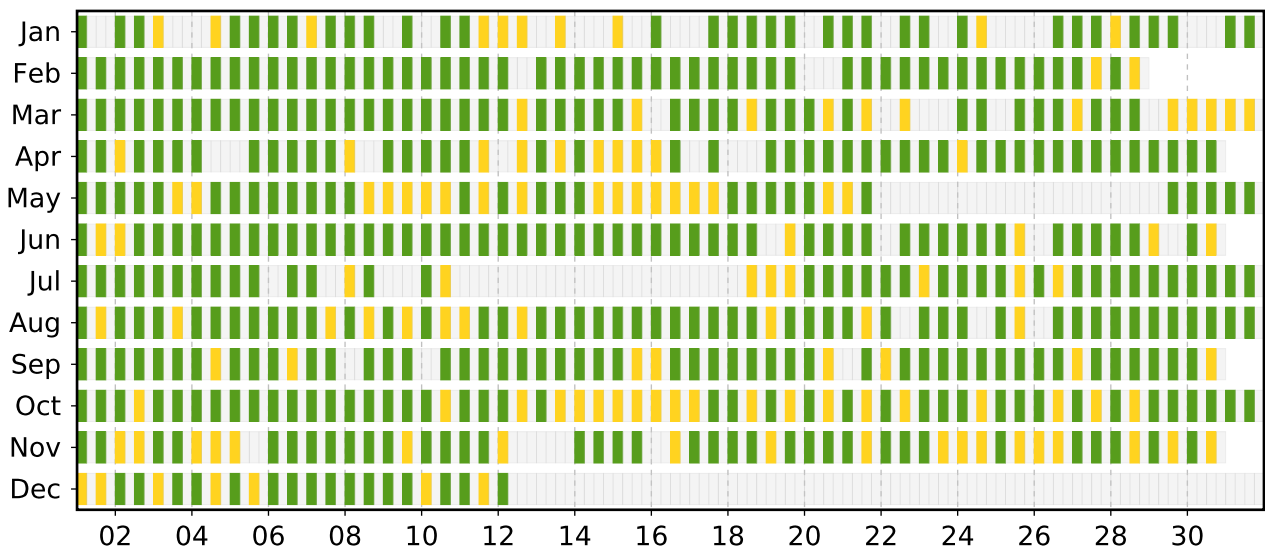
## 2.4 Data quality of current GRUAN data products

Month	Total	GRUAN Data Quality			Issues				
		Approved	Checked	Rejected	Meta-data	Process.	Press	Temp	RH

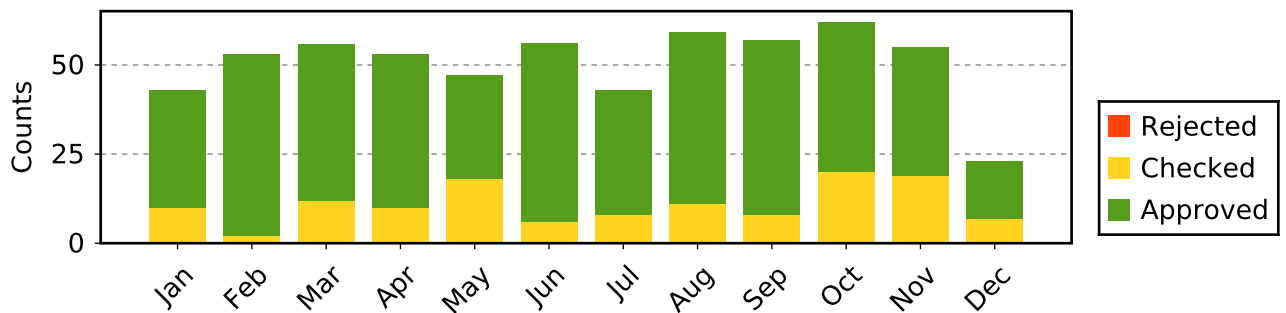
### 2.4.1 Stream: RS92 (Product: RS92-GDP-002)

Jan	43	33	10				4		7
Feb	53	51	2						2
Mar	56	44	12				6		8
Apr	53	43	10				4		7
May	47	29	18				1		18
Jun	56	50	6				6		
Jul	43	35	8				8		
Aug	59	48	11				10		1
Sep	57	49	8				6		2
Oct	62	42	20				4		19
Nov	55	36	19				2		18
Dec	23	16	7						7
<b>Sum</b>	<b>607</b>	<b>476</b>	<b>131</b>				<b>51</b>		<b>89</b>

Data quality of stream RS92



Data quality statistic of stream RS92



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## 2.5 Instrument combinations of TEN-RS-01

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<b>Count</b>	<b>Instrument combination</b>
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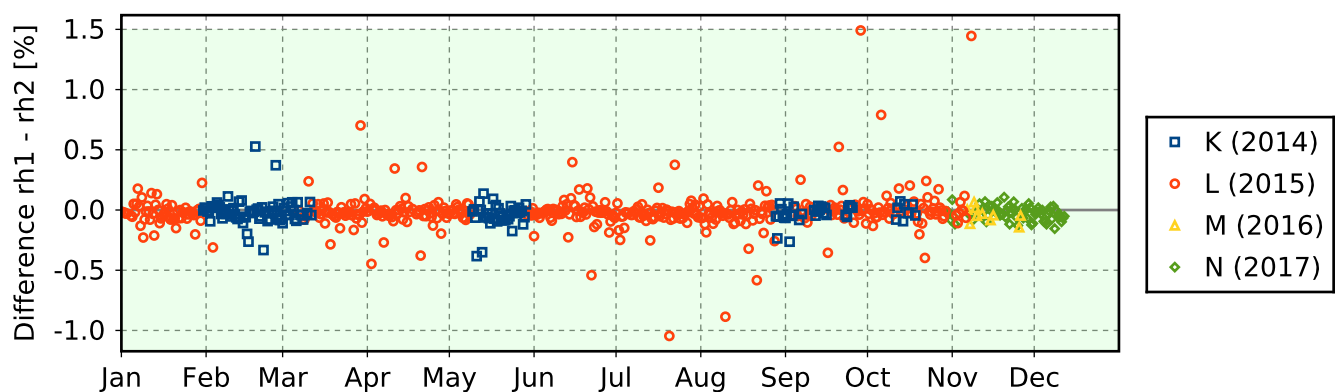
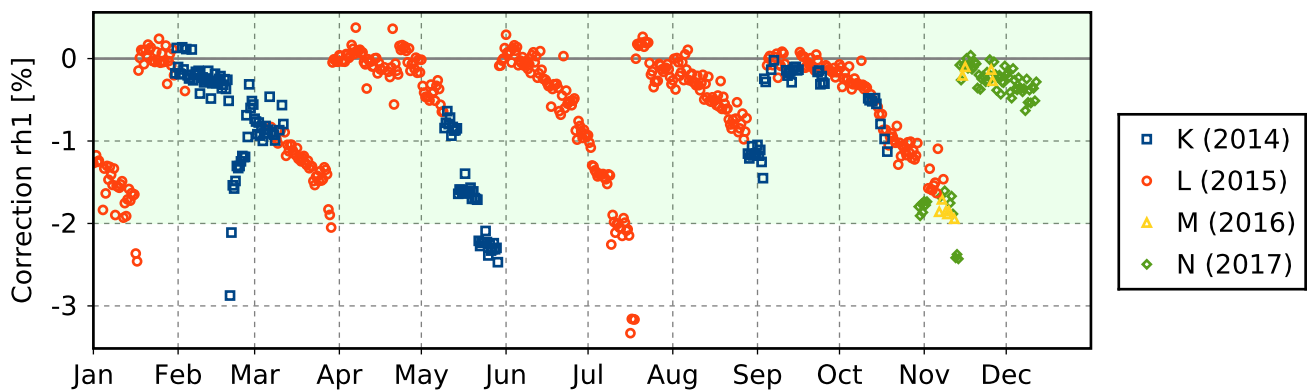
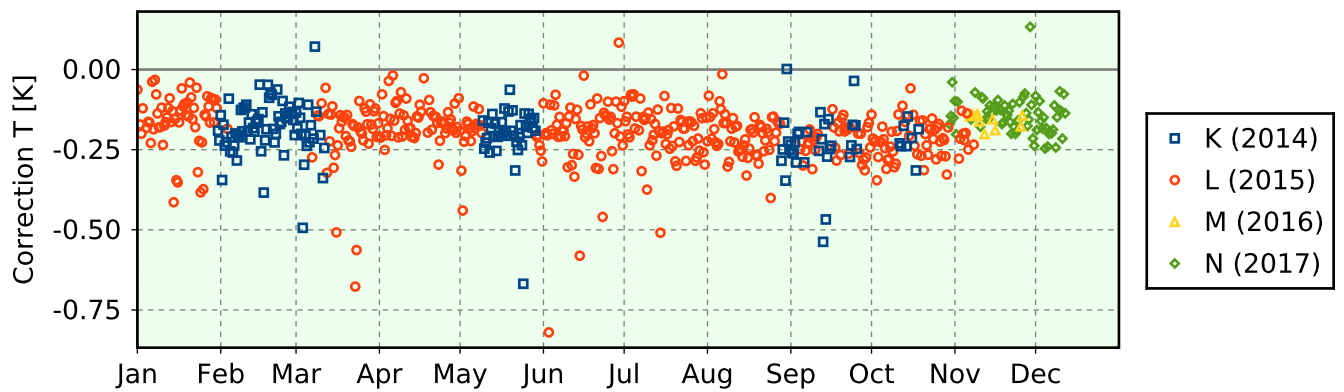
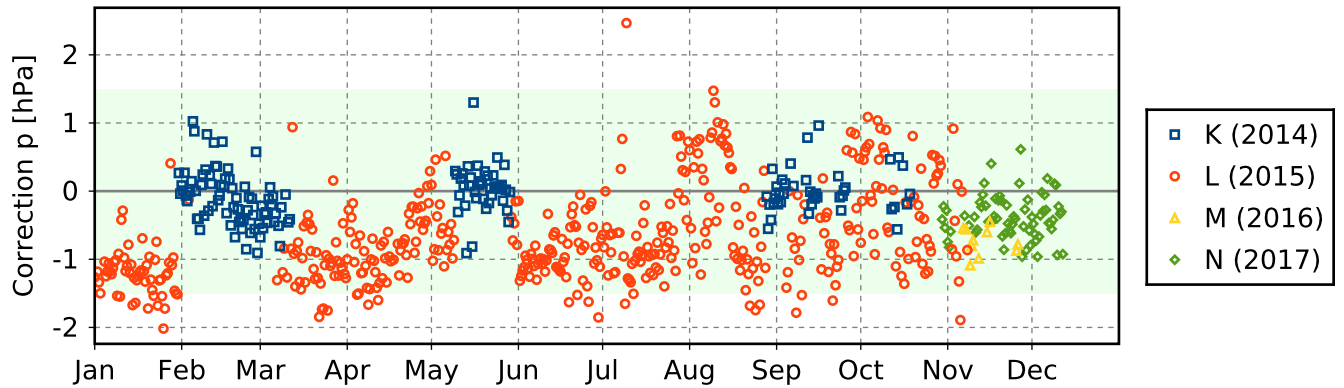
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688	RS92
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## 2.6 Instrument ground check

### 2.6.1 Stream: RS92

#### (1) GroundCheck: GC-GC25



## 2.7 Measurement events

