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GLOBAL CLIMATE OBSERVING
SYSTEM (GCOS)

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Session 7

GRUAN Site Report for Cabauw

(Submitted by Ankie Piters)

Summary and Purpose of this Document

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

GRUAN Site Report for Cabauw (CAB)

Reporting for the period January to December 2017
Date: 29-March-2018
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Overview

None

Change and change management

On 2017-01-17 the Vaisala RS41-SGP radiosonde replaced the RS92-SGP. At the same time there was a software upgrade of the ground station. Also a new processing PC was introduced. This runs the Vaisala MW41 software. No change management took place. The GRUAN web-page suggest that the data flow stopped after the change in 2017-01-17. True, but the data-stream has been restored shortly after.

Resourcing

In every budget-cut the continuation of the radiosonde launches are under discussion. So the future of these observations is uncertain. Most launches are performed by the duty meteorologist.

Operations

A majority of radiosondes reaches the 10 hPa level. Main exceptions are launches in winter when the stratospheric temperatures are low. The parachute often does not work well. We assume the mass of the balloon (600 gram) compared to the mass of the payload (113 gram) is to blame. This is a serious issue in a densely populated country. A significant number of radiosondes are recovered by

hobbyists after the flight. We are very happy about that, as we do not have the resources to recover the radiosondes ourselves. The RsLaunchClient is currently not used. An additional file with the relevant metadata is generated automatically. We are currently looking at the possibility to run the RsLaunchClient in future. The main issue is the additional workload for the duty meteorologist.

Site assessment and certification

Site is certified.

GRUAN-related research

None

WG-GRUAN interface

At the moment there are no specific wishes.

Items for ICM-10 plenary discussions

We would like to feel free to use additional sensors with our radiosondes. Everyone who comes in contact with our raw data should sign a confidentiality agreement.

Other archiving centers

Data from our ozonesondes is submitted to WOUDC, NDACC, and NILU.

Participation in campaigns

None

Future plans

Run RsLaunchClient if possible.

GRUAN Site Report for Cabauw (CAB), 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	Cabauw
Unique GRUAN ID	CAB
Geographical position	51.9700 °N, 4.9200 °E, 1.0 m
Operated by	KNMI | Koninklijk Nederlands Meteorologisch Instituut
Main contact	Apituley, Arnoud
WMO no./name	06260 DE BILT AWS
Operators	currently 0, changes +0 / -0
Sounding Site	1
GNSS	1

1.1 General information about GRUAN measurement systems

System	Name	Type	Setups	Measurements
CAB-GN-01	GNSS Site CABW	GNSS	0	not operational
CAB-RS-01	Radiosonde Launch Site (De Bilt)	Sounding Site	4	238

1.2 General comments from Lead Centre

1.2.1 General

It is strongly recommended that the site uses the RsLaunchClient to submit data to the Lead Centre.

The site uses a Standard Humidity Chamber during launch preparation of the ECC ozone soundings, but these data are not submitted to the Lead Centre. Using the RsLaunchClient will allow proper submission of these data. It is recommended to use the SHC during the preparation of the operational soundings as well.

The site is requested to submit ECC ozone soundings with complete metadata matching an ECC ozone sonde and not to submit it as routine radiosounding.

2 System: GNSS Site CABW (CAB-GN-01)

Object	Value
System name	GNSS Site CABW
Unique GRUAN ID	CAB-GN-01
System type	GNSS (GN - GNSS)
Geographical position	51.9690 °N, 4.9260 °E, 2.4 m
Operated by	KNMI | Koninklijk Nederlands Meteorologisch Instituut
Instrument contact	Apituley, Arnoud
Started at	-
Defined setups	-
Possible streams	-

2.1 Lead Centre comments

2.1.1 Dataflow

No GNSS dataflow to GRUAN LC as yet.

3 System: Radiosonde Launch Site (De Bilt) (CAB-RS-01)

Object	Value
System name	Radiosonde Launch Site (De Bilt)
Unique GRUAN ID	CAB-RS-01
System type	Sounding Site (RS - Radiosonde)
Geographical position	52.1000 °N, 5.1800 °E, 1.0 m
Operated by	KNMI | Koninklijk Nederlands Meteorologisch Instituut
Instrument contact	Apituley, Arnoud
Started at	-
Defined setups	4 (ROUTINE, OZONE, ROUTINE2, OZONE2)
Possible streams	RS41, RS92

3.1 Lead Centre comments

3.1.1 Dataflow

Sonde dataflow from De Bilt to the GRUAN LC was operational in a fully automated mode from January 2011 until 15 January 2017. The launch metadata were not checked by operators. Equipment changes (e.g. balloon, unwinder, …) were not recorded.

As a consequence it was essential that the Lead Centre was notified of all upcoming changes to be able to maintain a correct metadata record.

Since 15 January 2017, data flow is temporary stopped because change of operational sonde from Vaisala RS92 to RS41.

3.1.2 General

Change of operational sonde from Vaisala RS92-SGP to Vaisala RS41-SG was on 15 January 2017.

3.2 GRUAN data products

3.2.1 Stream: RS41

Product	Version	Soundings received	Available at LC	Distributed by NCEI
RS41		219	219	
RS41-RAW	001		219	
RS41-EDT	001		218	

3.2.2 Stream: RS92

Product	Version	Soundings received	Available at LC	Distributed by NCEI
RS92		19	19	
RS92-RAW	001		19	
RS92-RAW	002		19	
RS92-EDT	001		19	
RS92-GDP	002		18	13

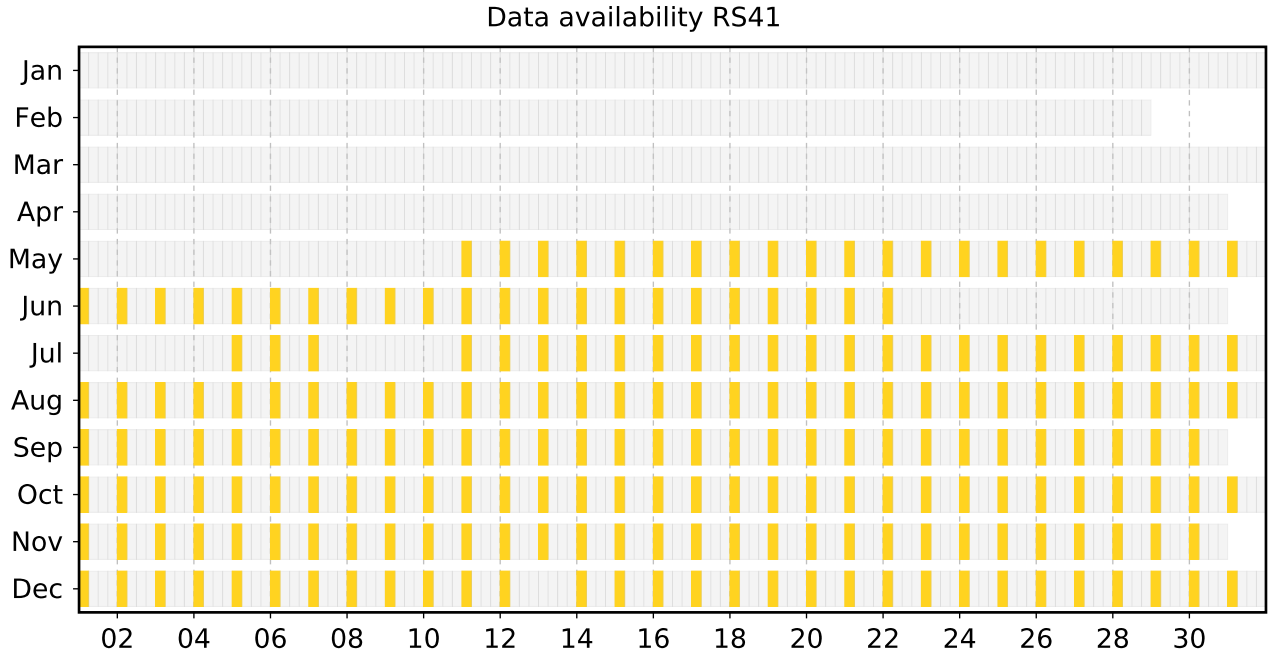
3.3 Data availability of data products

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).

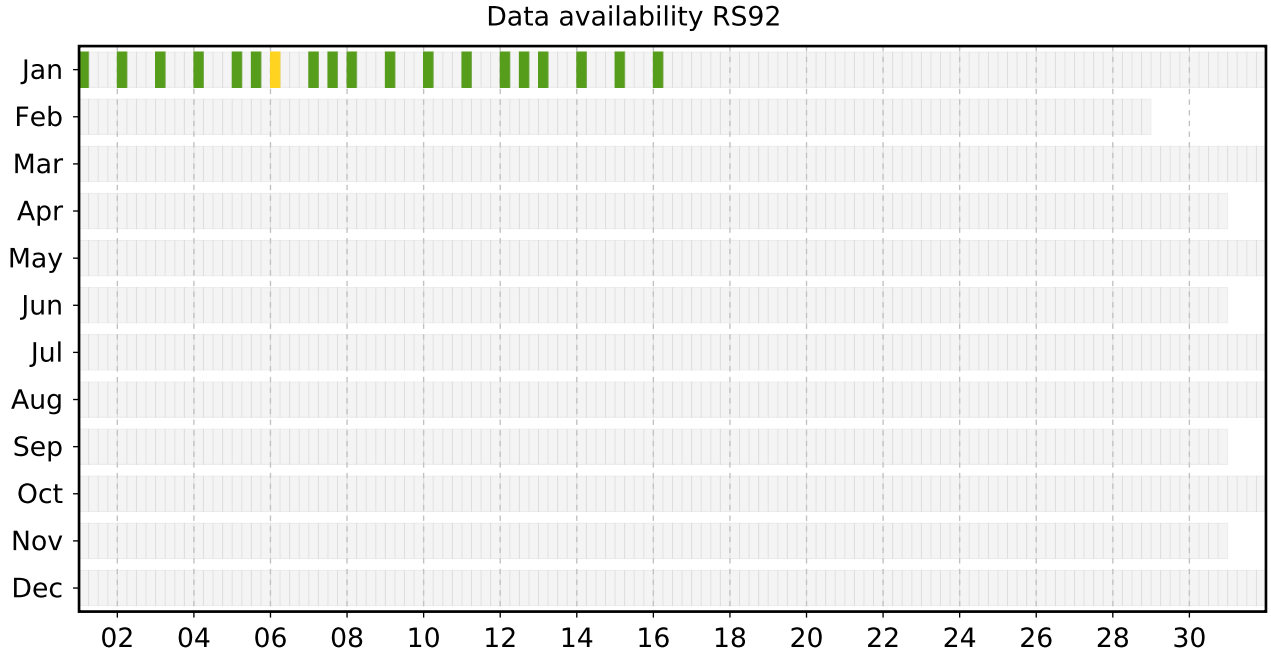
Unprocessed (yellow): The raw data file has been successfully converted to a GRUAN standardized raw data file format (NetCDF). The processing (e.g. GRUAN data processing) has not yet been done, or has not been completed. Reason may be a processing routine which does not yet exist, or software errors.

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.

3.3.1 Stream: RS41



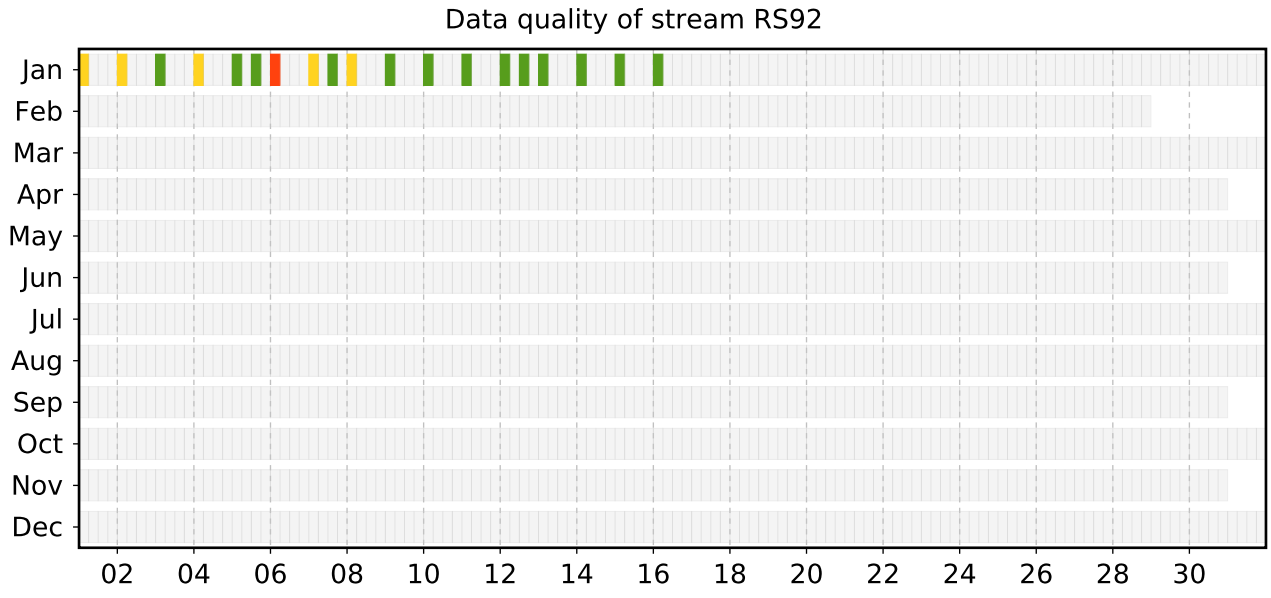
3.3.2 Stream: RS92

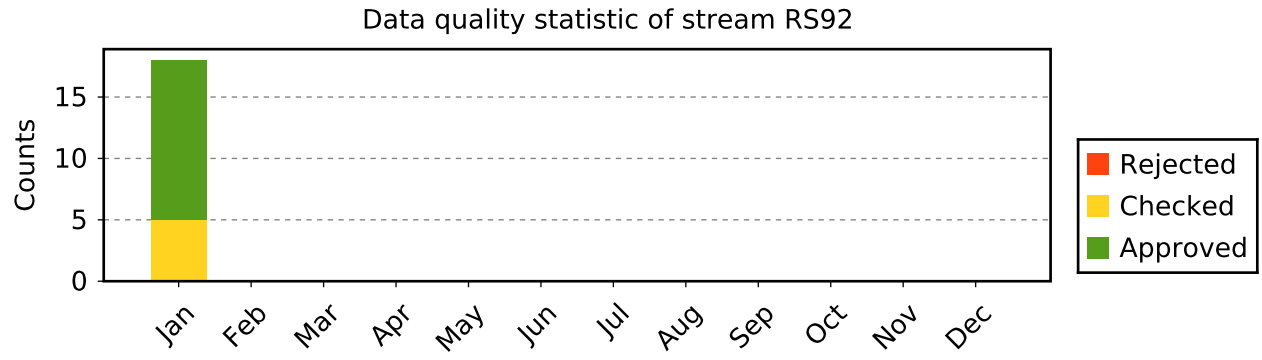


3.4 Data quality of current GRUAN data products

3.4.1 Stream: RS92 (Product: RS92-GDP-002)

Month	Total	GRUAN Data Quality			Issues				
		Approved	Checked	Rejected	Meta-data	Process.	Press	Temp	RH
Jan	18	13	5						5
Feb									
Mar									
Apr									
May									
Jun									
Jul									
Aug									
Sep									
Oct									
Nov									
Dec									
Sum	**18**	**13**	**5**						**5**





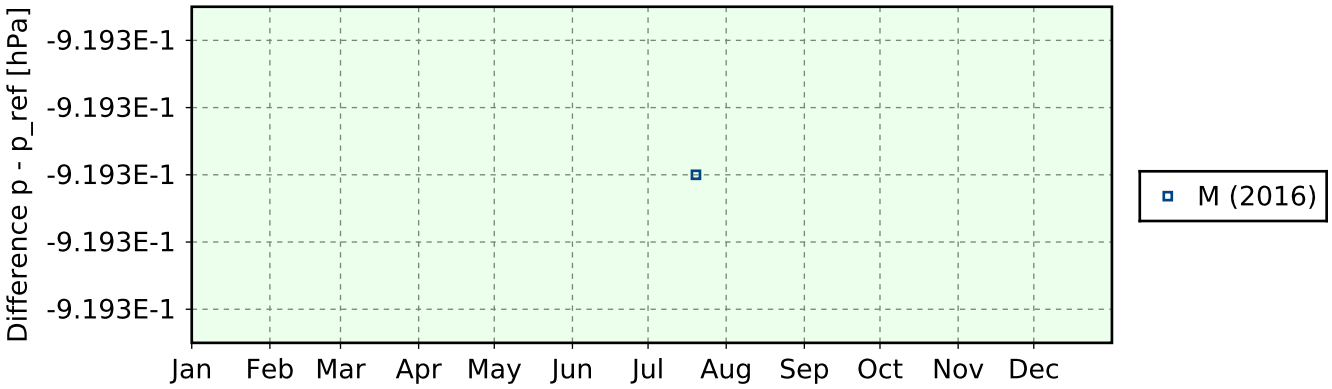
3.5 Instrument combinations of CAB-RS-01

Count	Instrument combination
219	RS41
19	RS92

3.6 Instrument ground check

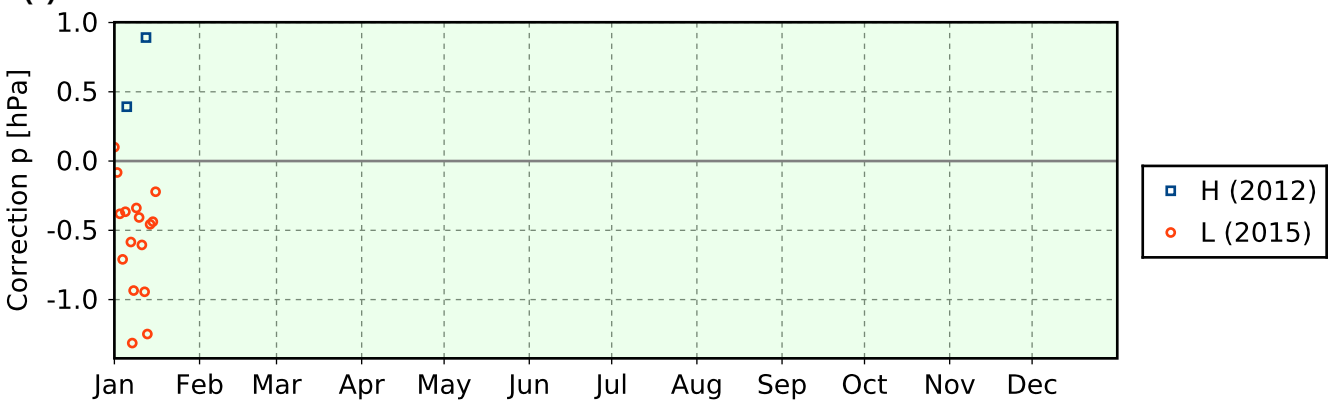
3.6.1 Stream: RS41

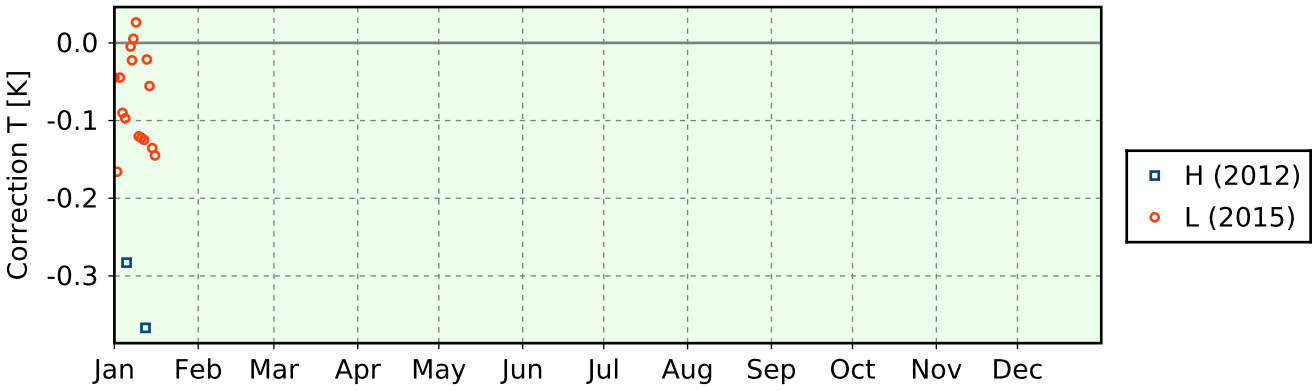
(1) GroundCheck: GC-RI41

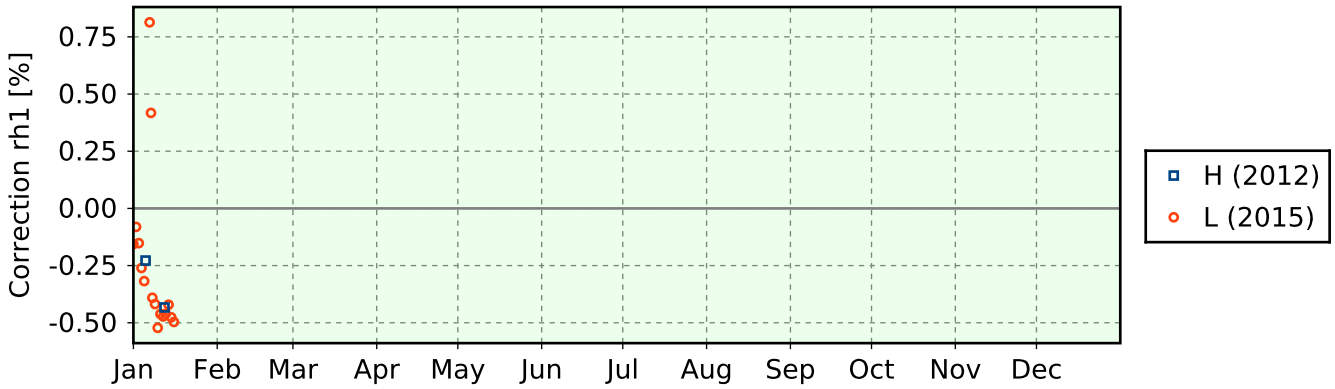


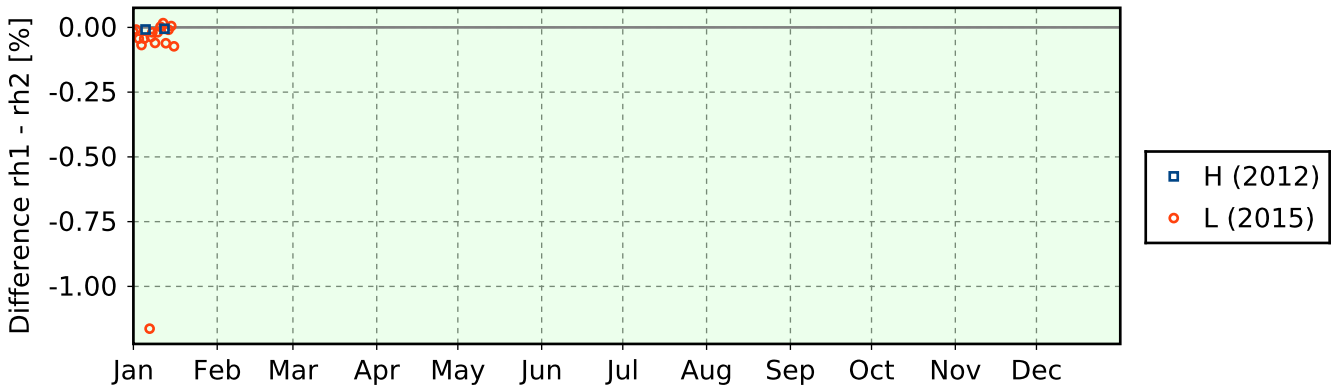
3.6.2 Stream: RS92

(1) GroundCheck: GC-GC25









3.7 Measurement events