



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

Doc. 6.01
(6.III.2014)

**6th GRUAN Implementation-
Coordination Meeting (ICM-6)**

Session 6

Greenbelt, USA

10 March – 14 March 2014

GRUAN Station Report for Barrow

(Submitted by Lead Centre)

Summary and Purpose of Document

Report from the GRUAN station Barrow for the period Nov 2012 to Oct 2013.

Note: For all ARM sites, the station report from the site representative is presented in Doc 6.06: "GRUAN Station Report for Lamont (SGP)".



GRUAN Station Report for Barrow (BAR), 2013

Reported time range is Nov 2012 to Oct 2013

Created by the Lead Centre

Version from 2014-02-20

1 General GRUAN station information

Info	Value
Station name	Barrow
Unique GRUAN ID	BAR
Geographical position	71.3233 °N, -156.6158 °W, 8.0 m
Operated by	ARM US DOE Atmospheric Radiation Measurement (ARM) Program
Main contact	Sisterson, Doug
WMO no./name	-
Operators	current 0, change +0 / -0
Sounding Site	2
GNSS	1

1.1 General information about GRUAN measurement systems

System	Type	Setups	Measurements	As scheduled
BAR-GN-01	GNSS	0	0	not scheduled
BAR-RS-01	Sounding Site	1	0	0.00 %
BAR-RS-02	Sounding Site	1	757	103.70 %

1.2 General comments from Lead Centre

1.2.1 General

ARM site.

ARM is using an automated routine to transmit data and raw data. ARM is requested to inform the Lead Centre of all upcoming changes in equipment, launch schedule or procedures to be able to update the metadata database.

It is strongly recommended that the site uses a manufacturer independent ground check for the Vaisala radiosonde.

1.2.2 GTS

This site regularly sends PTU measurements in the GTS (FM35 format, 2 times per day).

2 System: GNSS Site SG27 (BAR-GN-01)

Info	Value
System name	GNSS Site SG27
Unique GRUAN ID	BAR-GN-01
System type	GNSS (GN - GNSS)
Geographical position	71.3229 °N, -156.6103 °W, 7.5 m
Operated by	ARM US DOE Atmospheric Radiation Measurement (ARM) Program
Instrument contact	Sisterson, Doug
Started at	-
Defined setups	-
Possible streams	-

2.1 Lead Centre comments

2.1.1 General

No GNSS dataflow to GRUAN LC as yet.

3 System: Balloon-Borne Sounding System (SONDE) (BAR-RS-01)

Info	Value
System name	Balloon-Borne Sounding System (SONDE)
Unique GRUAN ID	BAR-RS-01
System type	Sounding Site (RS - Radiosonde)
Geographical position	71.3233 °N, -156.6158 °W, 8.0 m
Operated by	ARM US DOE Atmospheric Radiation Measurement (ARM) Program
Instrument contact	Sisterson, Doug
Started at	-
Defined setups	1 (ROUTINE)
Possible streams	RS92

3.1 Lead Centre comments

3.1.1 General

Manual launch site until February 2012.

4 System: Balloon-Borne Sounding System (SONDE) (BAR-RS-02)

Info	Value
System name	Balloon-Borne Sounding System (SONDE)
Unique GRUAN ID	BAR-RS-02
System type	Sounding Site (RS - Radiosonde)
Geographical position	71.3233 °N, -156.6158 °W, 8.0 m
Operated by	ARM US DOE Atmospheric Radiation Measurement (ARM) Program
Instrument contact	Sisterson, Doug
Started at	2012-02-08
Defined setups	1 (AUTO1)
Possible streams	RS92

4.1 Lead Centre comments

4.1.1 Dataflow

Dataflow is running fully automated from the ARM Archive to the GRUAN LC. Launch metadata are not checked manually. Equipment changes (e.g. balloon, unwinder, ...) are not recorded.

As a consequence it is essential that the Lead Centre is notified of all upcoming changes to be able to maintain a correct metadata record. (This comment applies to all ARM sites in GRUAN.)

Additional launches from the 'ARM Radiosondes for NPOESS/NPP Validation' field campaign are currently not included in the dataflow.

4.1.2 Data quality

Only few data processing issues (corrupt files or unknown issues).

One third of the measurements pass GRUAN Quality Control routines with a 'checked' label, largely due to uncertainty inconsistencies in pressure and humidity.

GC25 ground check corrections are within expected limits.

4.1.3 General

Auto-launcher since February 2012.

4.2 GRUAN data products

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

4.2.1 Stream: RS92

RS92		757	757	
RS92-RAW	001		754	
RS92-GDP	001		744	
RS92-GDP	002		711	439

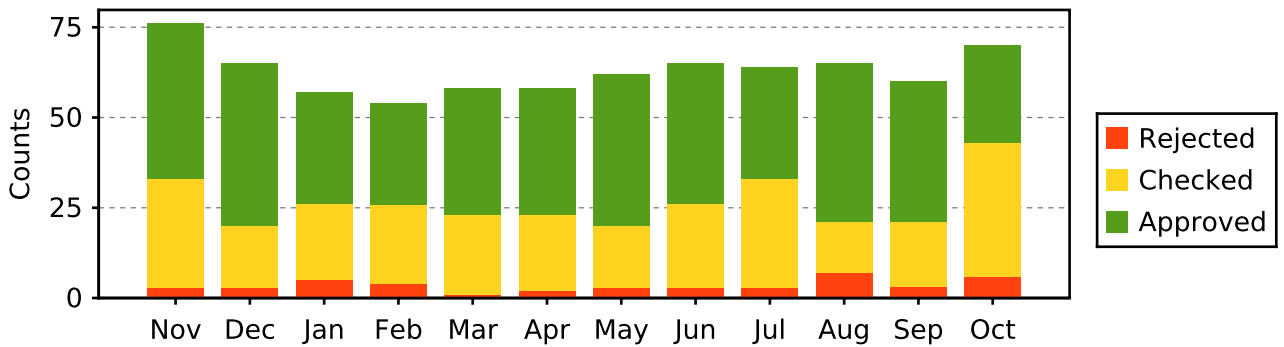
4.3 Data quality of current GRUAN data products

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

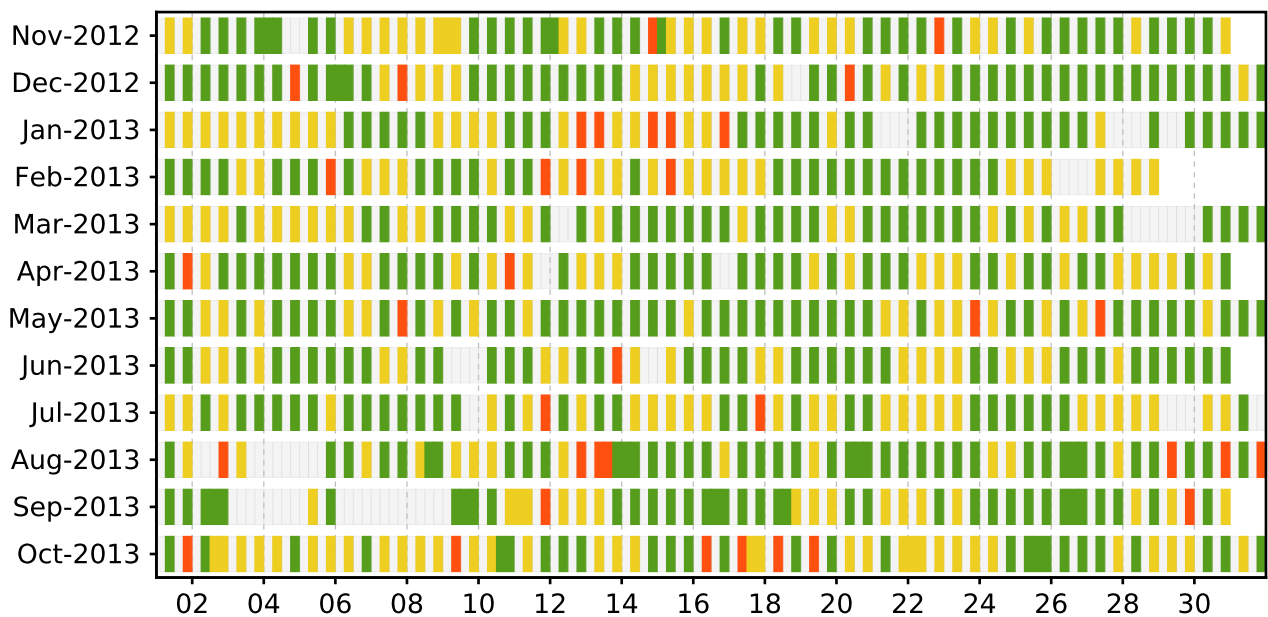
4.3.1 Stream: RS92 (Product: RS92-GDP-002)

Nov 12	76	43	30	3			3		30
Dec 12	65	45	17	3					17
Jan 13	57	31	21	5			4		21
Feb 13	54	28	22	4			3		20
Mar 13	58	35	22	1					22
Apr 13	58	35	21	2			1	1	21
May 13	62	42	17	3			2		17
Jun 13	65	39	23	3			5		24
Jul 13	64	31	30	3			1		32
Aug 13	65	44	14	7			7		13
Sep 13	60	39	18	3			3		17
Oct 13	70	27	37	6			8		36
	754	439	272	43			37	1	270

Data quality statistic of stream RS92



Schedule data quality of stream RS92



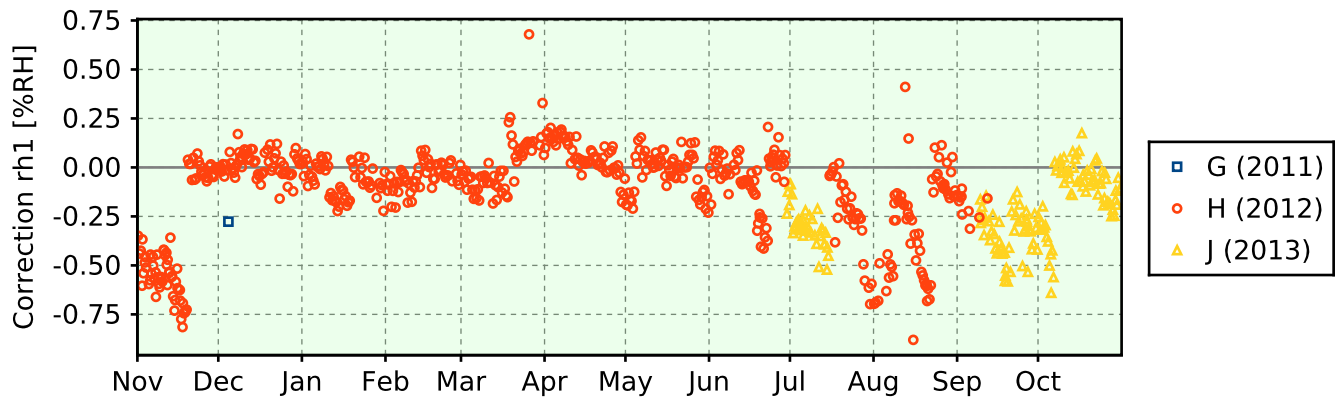
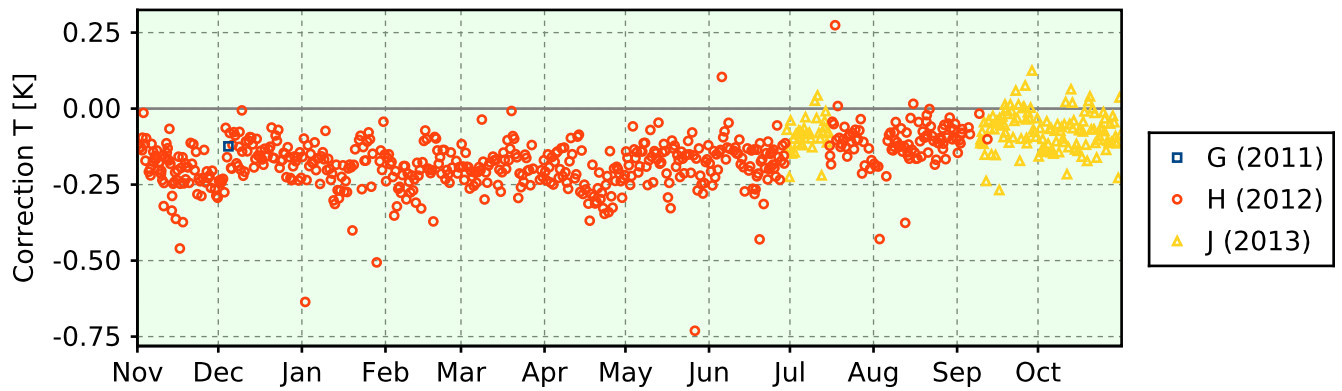
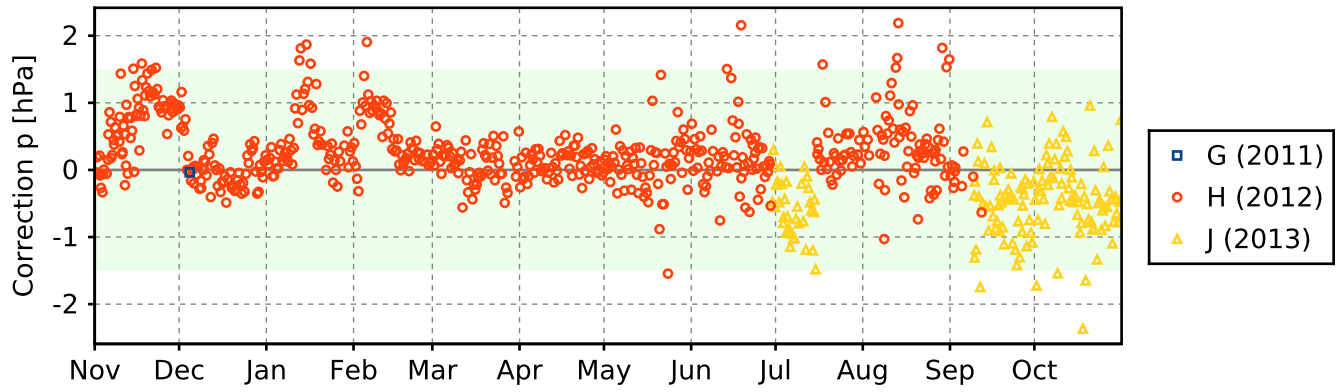
4.4 Instrument combinations of BAR-RS-02

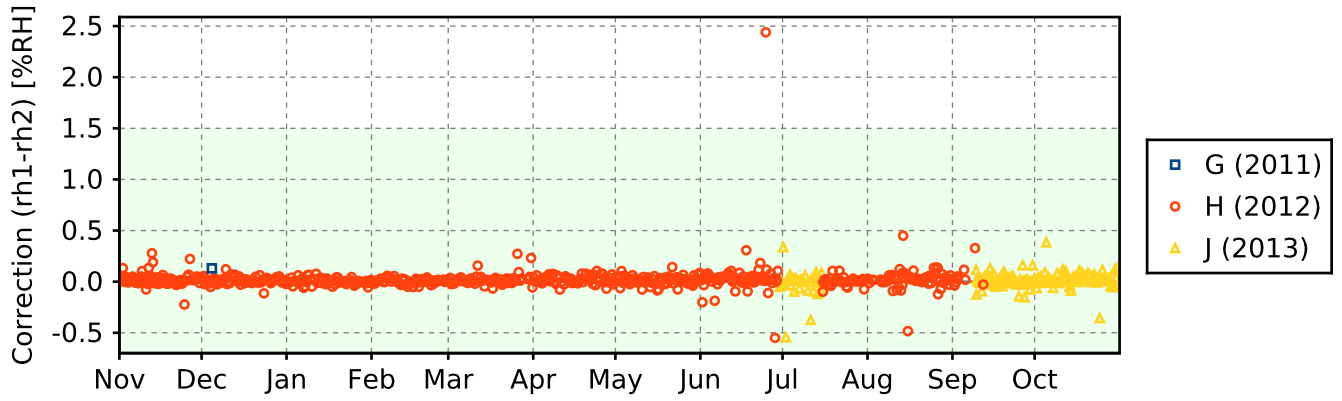
Count	Instrument combination
757	RS92

4.5 Instrument ground check

4.5.1 Stream: RS92

4.5.1.1 GroundCheck: GC25





4.5.1.2 GroundCheck: SHC

