



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

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**7th GRUAN Implementation-
Coordination Meeting (ICM-7)**

Session 8

Matera, Italy

23 February – 27 February 2015

GRUAN Station Report for Lamont (SGP)

(Submitted by Lead Centre)

Summary and Purpose of Document

Report from the GRUAN station Lamont (SGP) for the period Nov 2013 to Oct 2014.



GRUAN Station Report for Lamont (SGP), 2014

Reported time range is Nov 2013 to Oct 2014

Created by the Lead Centre

Version from 2015-02-11

1 General GRUAN station information

Info	Value
Station name	Lamont
Unique GRUAN ID	SGP
Geographical position	36.6000 °N, -97.4900 °W, 320.0 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	1
GNSS	1

1.1 General information about GRUAN measurement systems

System	Type	Setups	Measurements	As scheduled
SGP-GN-01	GNSS	0	0	not scheduled
SGP-RS-01	Sounding Site	1	1267	86.78 %

1.2 General comments from Lead Centre

1.2.1 General

ARM site.

Ground check procedures for the Vaisala RS92 launches at the SGP site do not appear to follow standard operating procedures. It is requested, that the sonde preparation at SGP follows standard Vaisala protocol and that a well calibrated station pressure sensor is used as reference for the Vaisala RS92 sonde re-calibration.

It is strongly recommended that the site uses a manufacturer independent ground check (e.g. SHC) for the Vaisala radiosonde.

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.

1.2.2 GTS

This site regularly sends PTU measurements in the GTS (FM35 format, 2 times / later 4 times per day).

2 System: GNSS Site SG01 (SGP-GN-01)

Info	Value
System name	GNSS Site SG01
Unique GRUAN ID	SGP-GN-01
System type	GNSS (GN - GNSS)
Geographical position	36.6041 °N, -97.4848 °W, 290.0 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 Dataflow

No GNSS dataflow to GRUAN LC as yet.

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

Info	Value
System name	Balloon-Borne Sounding System (SONDE)
Unique GRUAN ID	SGP-RS-01
System type	Sounding Site (RS - Radiosonde)
Geographical position	36.6100 °N, -97.4900 °W, 315.0 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 Change management

The launch schedule was changed from two launches per day to four launches per day in March 2014. The site is requested to inform the GRUAN LC about all pending changes.

3.1.2 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 included in the dataflow.

3.1.3 Data quality

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

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

GC25 ground check corrections are NOT as expected.

The ground check correction does not appear to use a reference pressure sensor and the mean pressure correction is 0.00 ± 0.15 hPa. A dedicated reference pressure sensor should be used to recalibrate the RS92 pressure sensor.

The use of a manufacturers independent ground check (e.g. SHC) is highly recommended.

3.2 GRUAN data products

Product	Version	Soundings received	Available at LC	Distributed by NCDC
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3.2.1 Stream: RS92

RS92		1267	1267	
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Product	Version	Soundings received	Available at LC	Distributed by NCDC
RS92-RAW	001		1226	
RS92-GDP	001		119	
RS92-GDP	002		1109	827

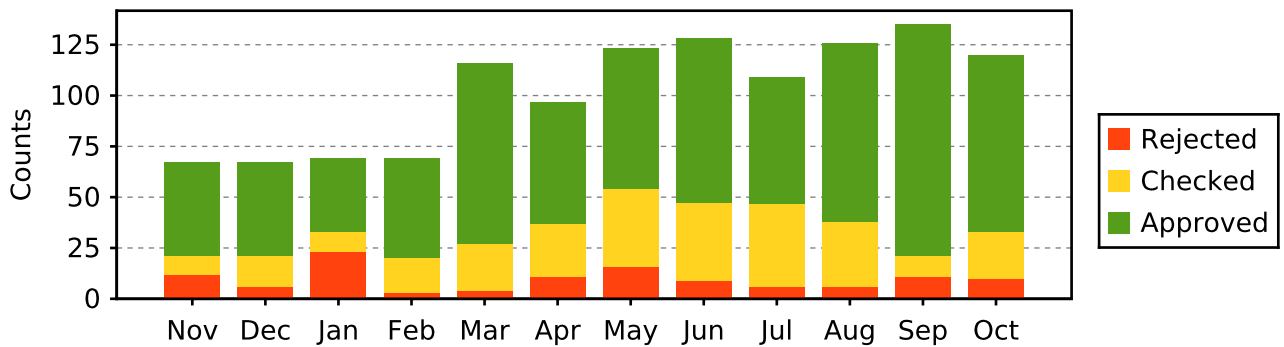
3.3 Data quality of current GRUAN data products

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

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

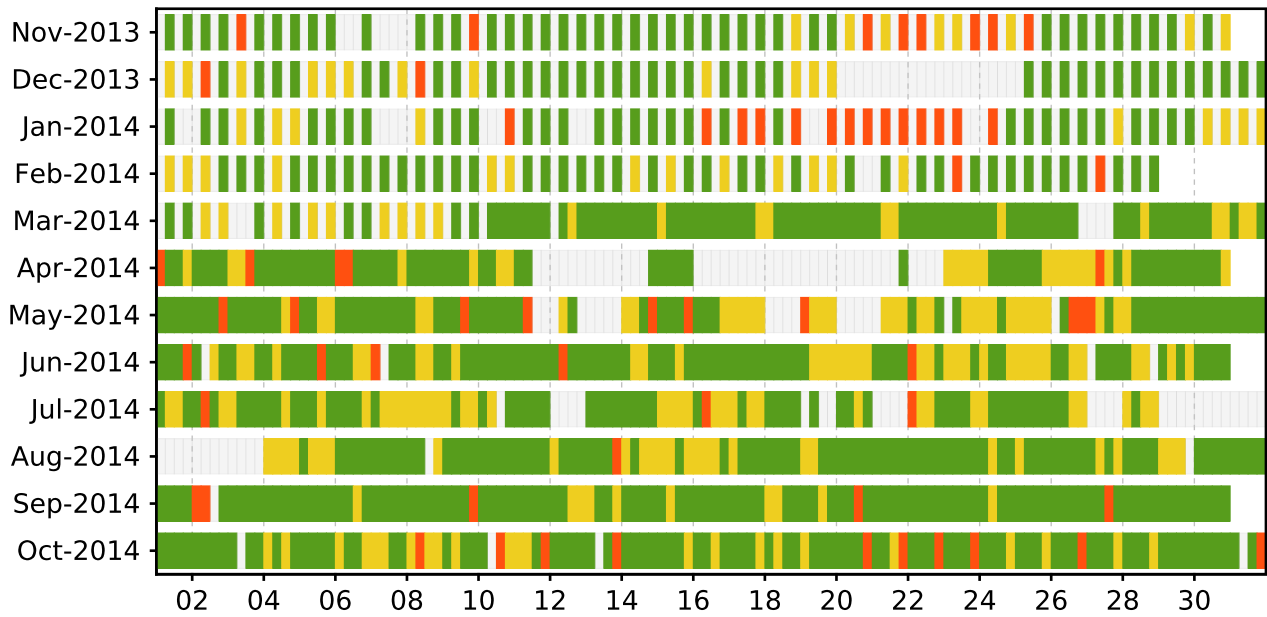
Nov 13	67	46	9	12			3		18
Dec 13	67	46	15	6			4	2	15
Jan 14	69	36	10	23			2	1	31
Feb 14	69	49	17	3			2		15
Mar 14	116	89	23	4			2		22
Apr 14	97	60	26	11			5	2	28
May 14	123	69	38	16			1		48
Jun 14	128	81	38	9			3		45
Jul 14	109	62	41	6			2		46
Aug 14	126	88	32	6			5		33
Sep 14	135	114	10	11			5		18
Oct 14	120	87	23	10			10	2	23
	1226	827	282	117			44	7	342

Data quality statistic of stream RS92



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

Schedule data quality of stream RS92



3.4 Instrument combinations of SGP-RS-01

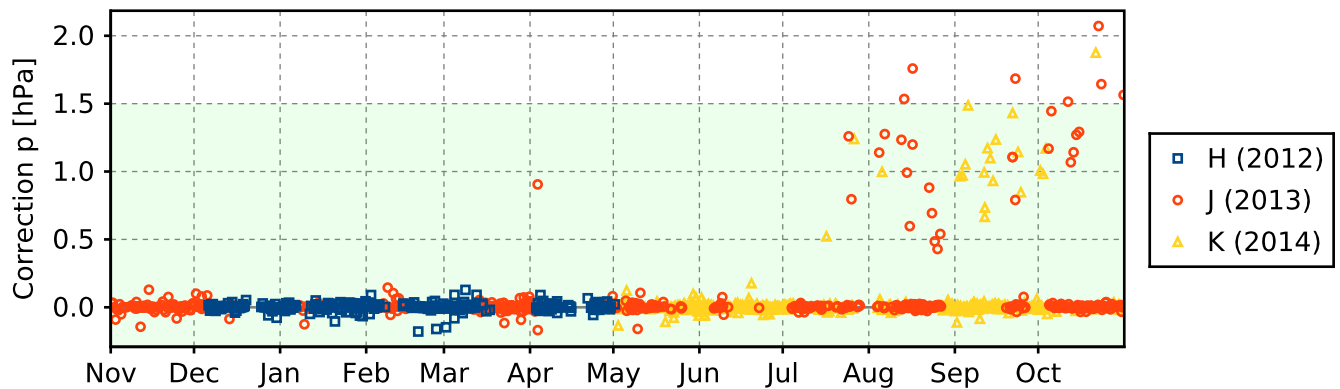
Count	Instrument combination
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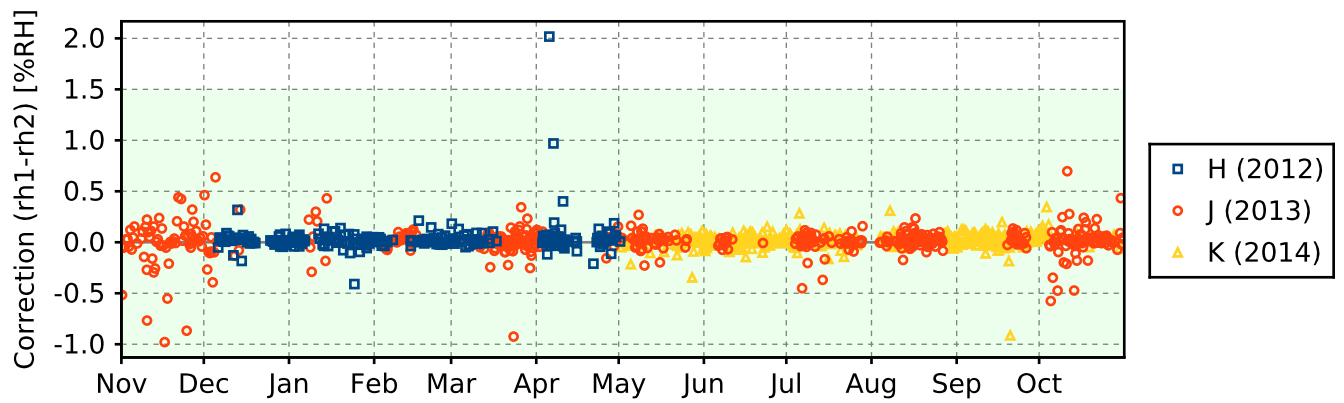
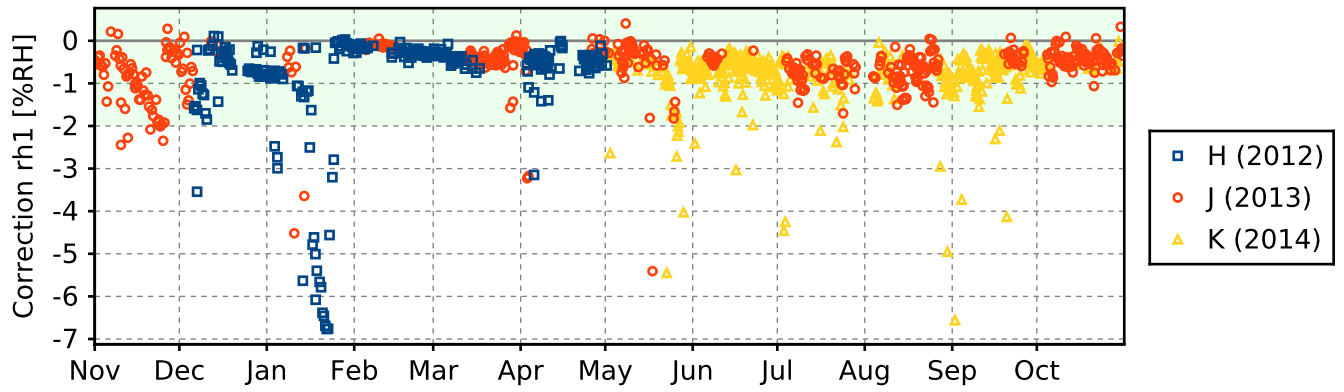
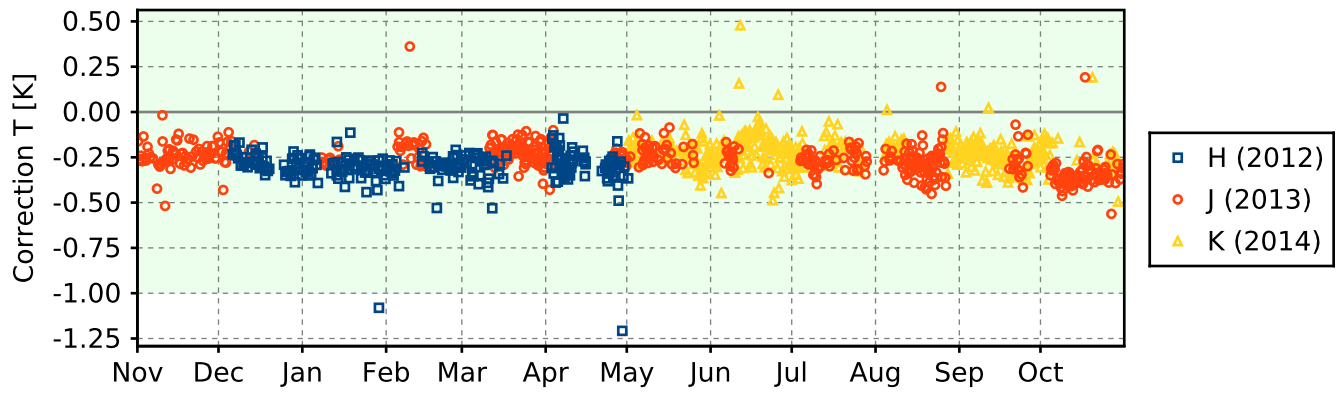
1267	RS92
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3.5 Instrument ground check

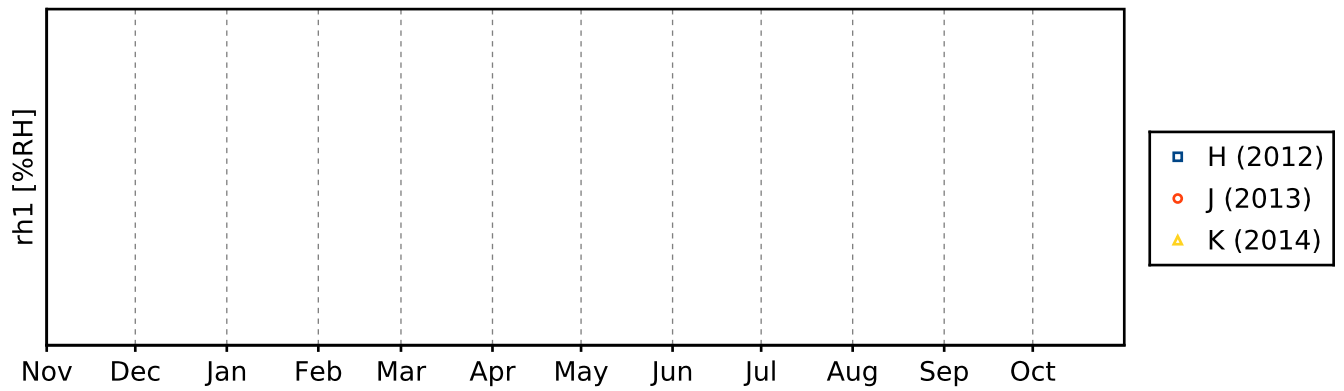
3.5.1 Stream: RS92

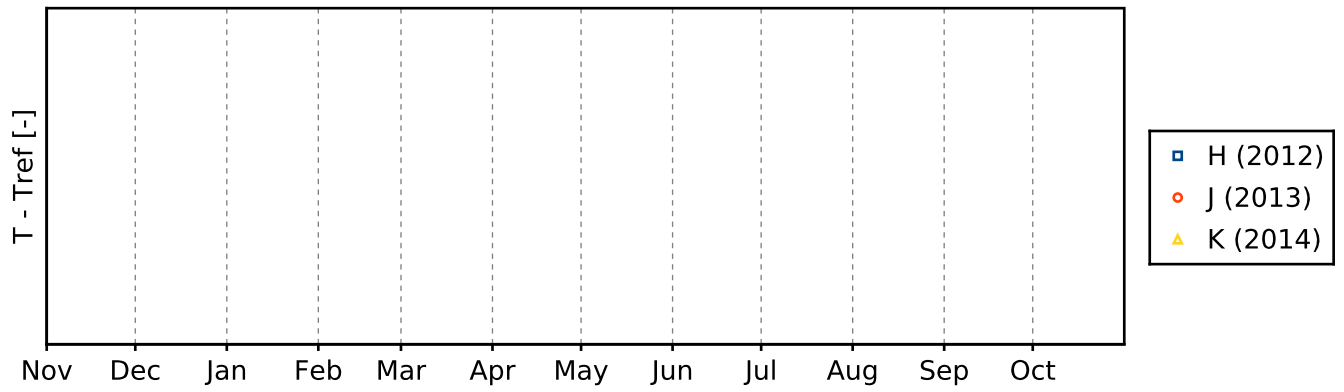
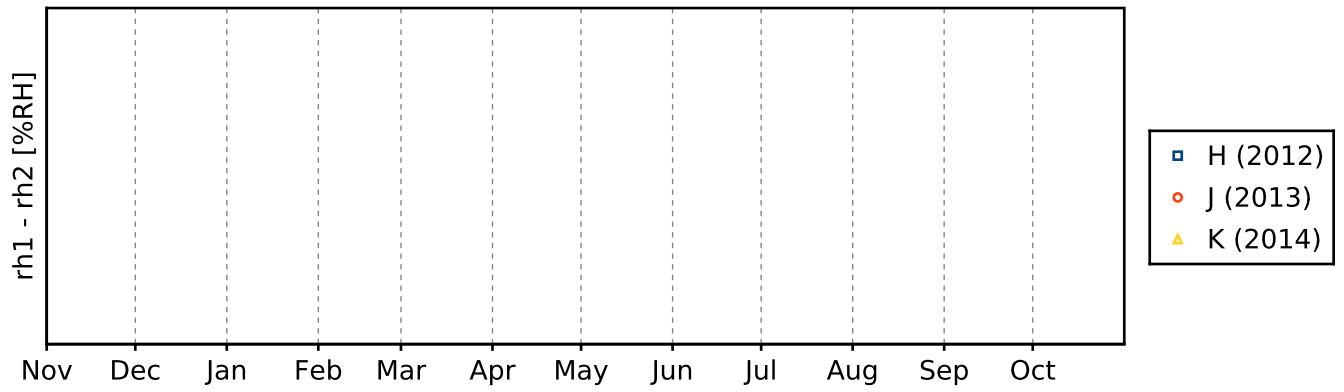
3.5.1.1 GroundCheck: GC25





3.5.1.2 GroundCheck: SHC





3.6 Measurement events

3.6.1 Stream: RS92

