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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 Tateno

(Submitted by Kohei Honda)

Summary and Purpose of Document

Report from the GRUAN station Tateno for the period Feb 2014 to Feb 2015.



GRUAN Station Report for Tateno

Reporting for the period Feb 2014 to Feb 2015

Date:14-Jan-2015

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Overview

The Tateno site operated by the Aerological Observatory of the Japan Meteorological Agency (JMA) conducts surface observation and low-layer wind observation up to 1.5 km by using a Doppler lidar, upper-atmosphere observation up to about 30 km by using radiosonde, ozone vertical distribution observation using ozonesondes, total column ozone observation using a Dobson ozone spectrophotometer, ultraviolet observation using a Brewer spectrophotometer and radiation observation. Among these observations, radiosonde sounding data are operationally provided to the GRUAN Lead Centre.

Change and change management

JMA started to use a new type of radiosonde "RS-11G" by Meisei in place of "RS92-SGP" by Vaisala at Tateno in 1 July 2013. These RS92-SGP and RS-11G radiosonde performed dual launch experiment in October to November 2013 and January 2014 to confirm consistency and to analyse difference as reported ICM-6. Continuously, Tateno performed the dual launch experiment in 10 to 25 March and 26 May to 30 June 2014.

In addition, the previous radiosonde (RS92-SGP) is launched alternately in 00Z and 12Z observation every Monday instead of RS-11G. Also, this RS92-SGP single launch event will be change to dual launch (+RS-11G) from this April.

Resourcing

(N/A)

Site assessment and certification

Tateno would like to apply for the GRUAN certification after the establishment of the data processing of RS-11G radiosonde.

GRUAN related research

(NA)

WG-GRUAN interface

(NA)

Items for ICM-7 plenary discussions

(N/A)

Future plans

Radiosonde procurement will continue determined by the competitive tendering process next year. GRUAN GDP for Meisei radiosonde is currently creating. After completion of GRUAN GDP, Tateno will calculate the RAW data (JMAFMT) stored in the lead center. Also, Tateno accept the other site data that use the RS-11G or iMS-100 radiosonde.



GRUAN Station Report for Tateno (TAT), 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	Tateno
Unique GRUAN ID	TAT
Geographical position	36.0581 °N, 140.1258 °E, 27.4 m
Operated by	JMA Japan Meteorological Agency
Main contact	Tahara, Yoshihiko
WMO no./name	47646 TATENO
Operators	current 28, change +6 / -0
Sounding Site	1
GNSS	1

1.1 General information about GRUAN measurement systems

System	Type	Setups	Measurements	As scheduled
TAT-GN-01	GNSS	0	0	not scheduled
TAT-RS-01	Sounding Site	4	705	46.60 %

1.2 General comments from Lead Centre

1.2.1 General

Good communications between station and GRUAN LC.

For the ECC ozone sondes it is recommended that the site submits the meta-data and raw data to the Lead Centre in preparation for the planned ozone GRUAN data product.

2 System: GNSS Site TATN (TAT-GN-01)

Info	Value
System name	GNSS Site TATN
Unique GRUAN ID	TAT-GN-01
System type	GNSS (GN - GNSS)
Geographical position	36.0573 °N, 140.1265 °E, 67.0 m
Operated by	JMA Japan Meteorological Agency
Instrument contact	Tahara, Yoshihiko
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 (TAT-RS-01)

Info	Value
System name	Radiosonde Launch Site
Unique GRUAN ID	TAT-RS-01
System type	Sounding Site (RS - Radiosonde)
Geographical position	36.0581 °N, 140.1258 °E, 24.8 m
Operated by	JMA Japan Meteorological Agency
Instrument contact	Tahara, Yoshihiko
Started at	-
Defined setups	4 (ROUTINE2, DUAL, ROUTINE, COMPARE)
Possible streams	RS11, RS92

3.1 Lead Centre comments

3.1.1 Change management

Dual launches of RS92-SGP and RS-11G are performed and submitted to the GRUAN LC.

3.1.2 Dataflow

Dataflow to GRUAN LC running since June 2011. Until June 2013 only data for the Vaisala RS92 have been included.

Dataflow for the Meisei RS-11G started in September 2013.

All soundings are submitted using RsLaunchClient.

3.1.3 Data quality

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

One third of all Vaisala 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.

An additional ground check is used for Meisei RS-11G radiosondes.

3.1.4 Data streams

Data stream 'RS92' includes all measurements which were performed with any type of Vaisala RS92 radiosonde, like RS92-D, RS92-K, RS92-FN, RS92-AM, RS92-SGP, ...

Data stream 'RS11' includes all measurements which were performed with any type of Meisei RS-11 radiosonde, like RS-11G.

3.2 GRUAN data products

Product	Version	Soundings received	Available at LC	Distributed by NCDC
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3.2.1 Stream: RS11

RS11		662	662	
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Product	Version	Soundings received	Available at LC	Distributed by NCDC
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3.2.2 Stream: RS92

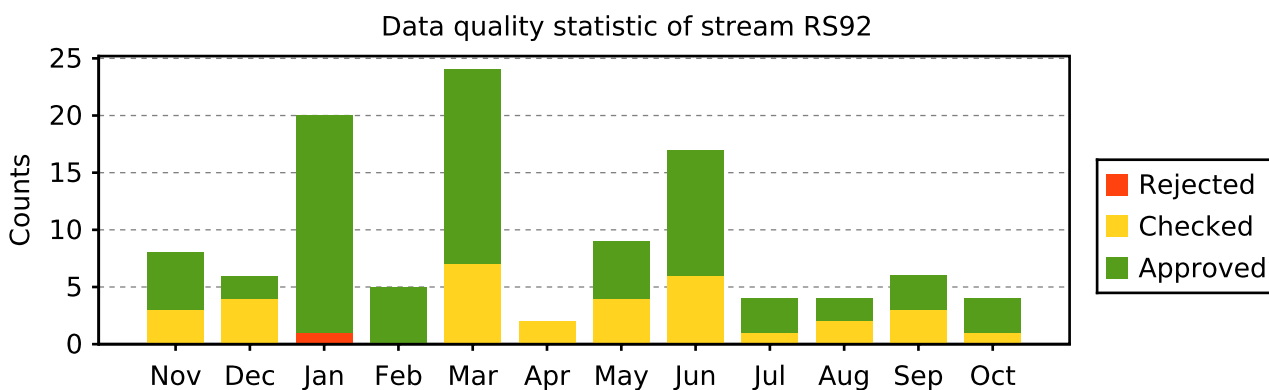
RS92		109	109	
RS92-RAW	001		109	
RS92-GDP	001		11	
RS92-GDP	002		108	75

3.3 Data quality of current GRUAN data products

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

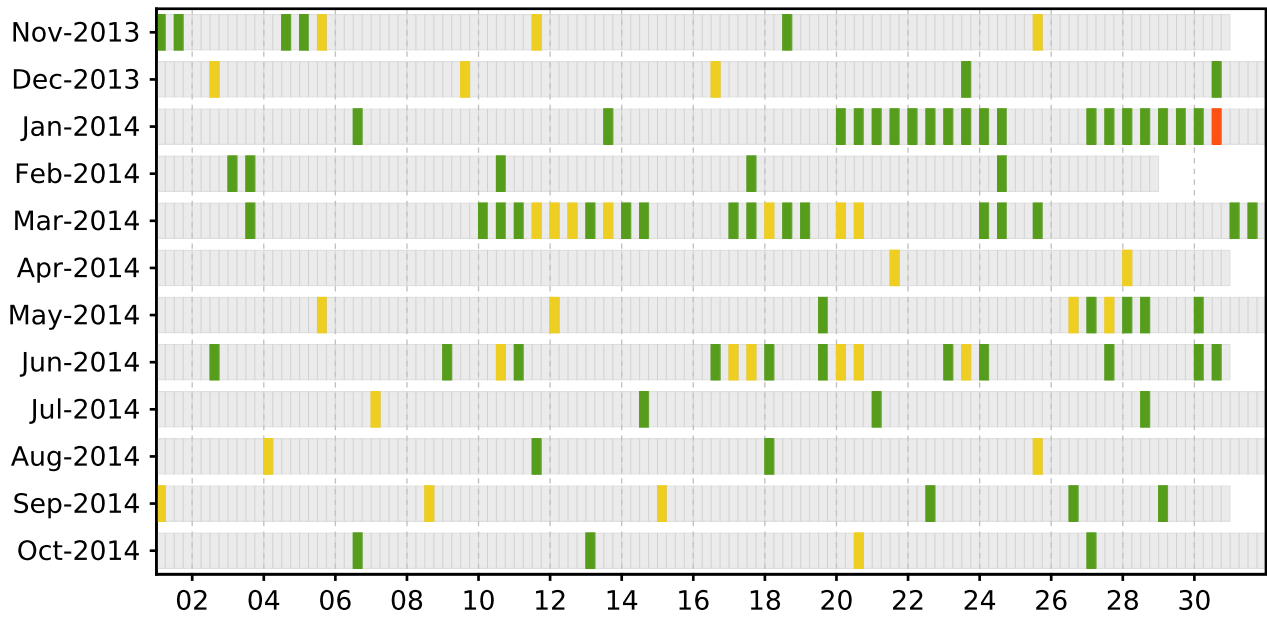
3.3.1 Stream: RS92 (Product: RS92-GDP-002)

Nov 13	8	5	3				1		2
Dec 13	6	2	4				1		3
Jan 14	20	19		1			1		
Feb 14	5	5							
Mar 14	24	17	7				1		6
Apr 14	2		2						2
May 14	9	5	4						4
Jun 14	17	11	6						6
Jul 14	4	3	1						1
Aug 14	4	2	2						2
Sep 14	6	3	3						3
Oct 14	4	3	1						1
	109	75	33	1			4		30



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

Schedule data quality of stream RS92



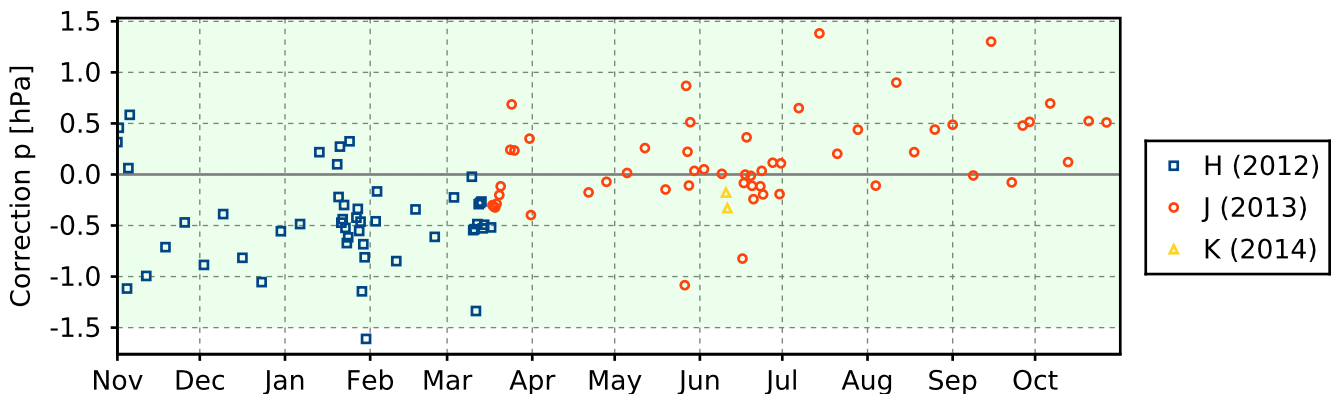
3.4 Instrument combinations of TAT-RS-01

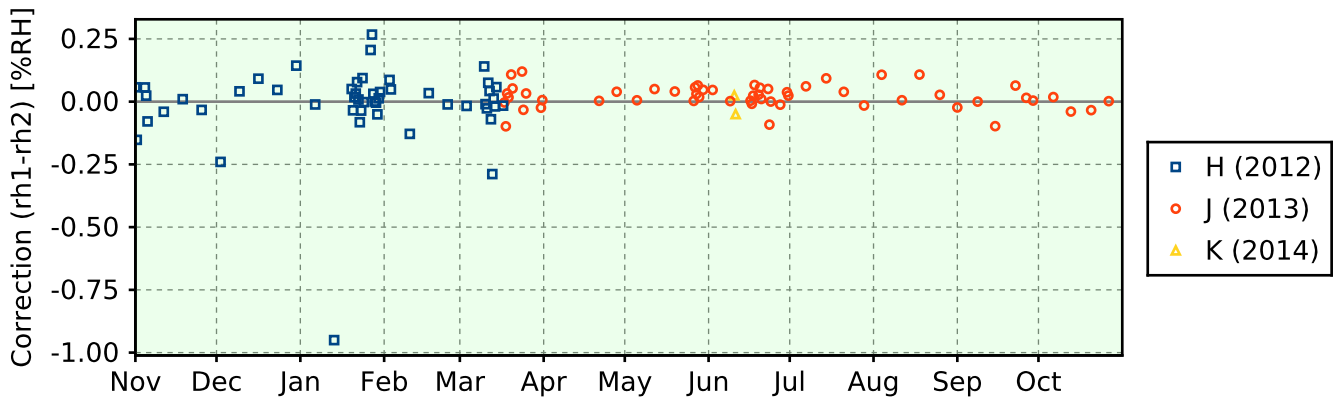
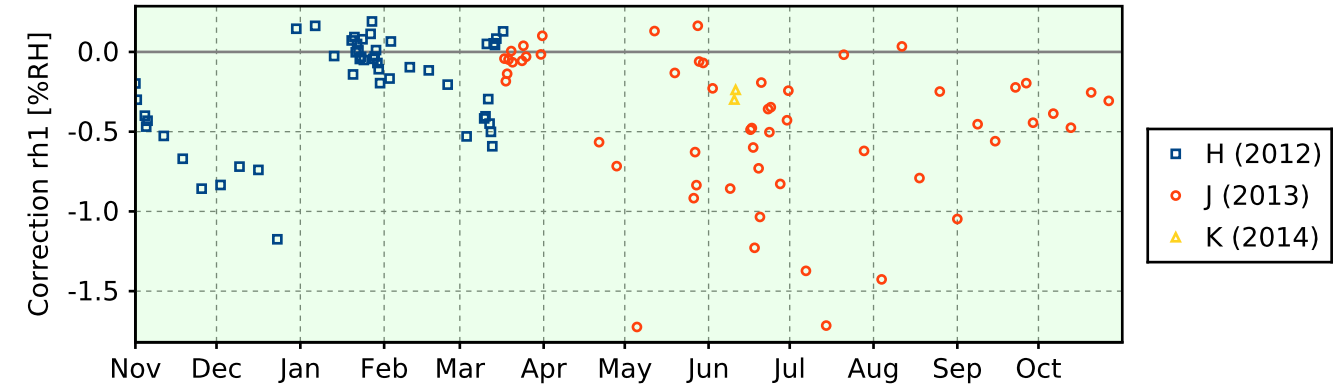
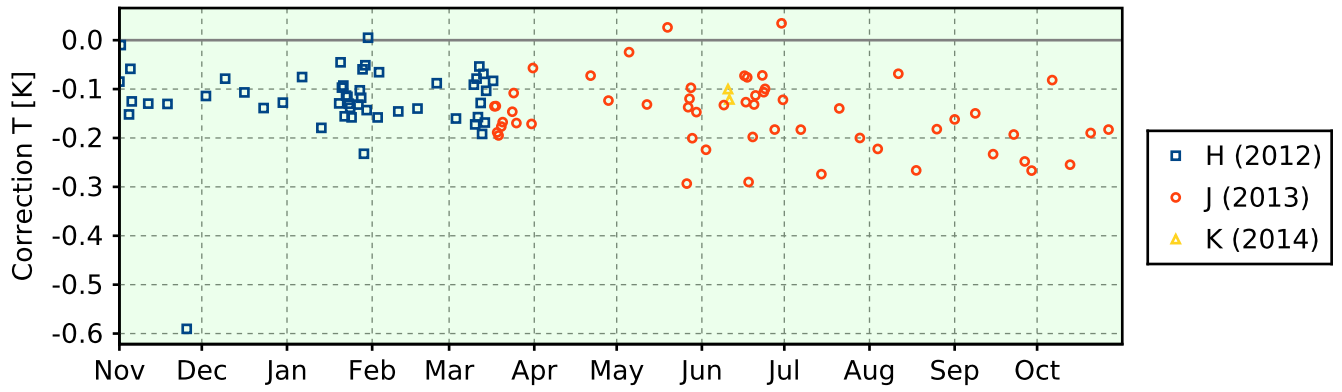
Count	Instrument combination
596	RS11
66	RS11, RS92
43	RS92

3.5 Instrument ground check

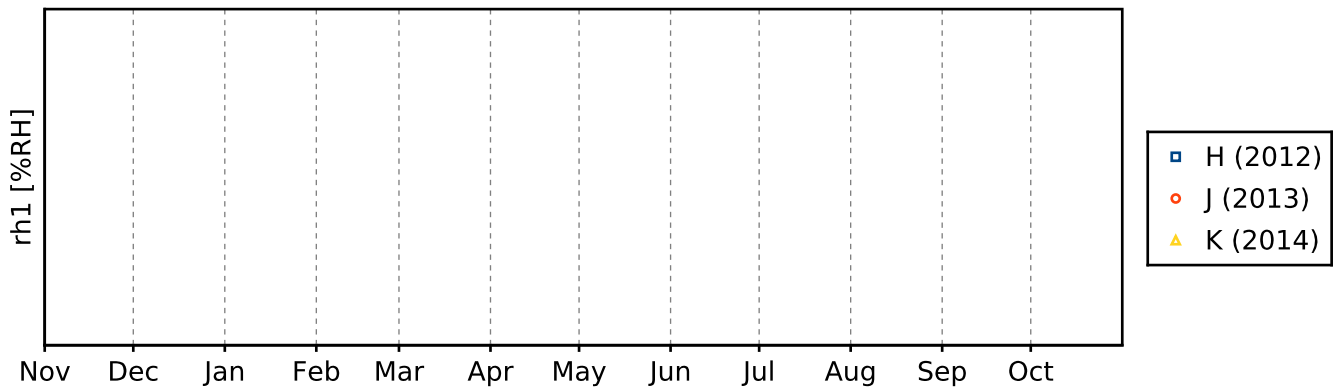
3.5.1 Stream: RS92

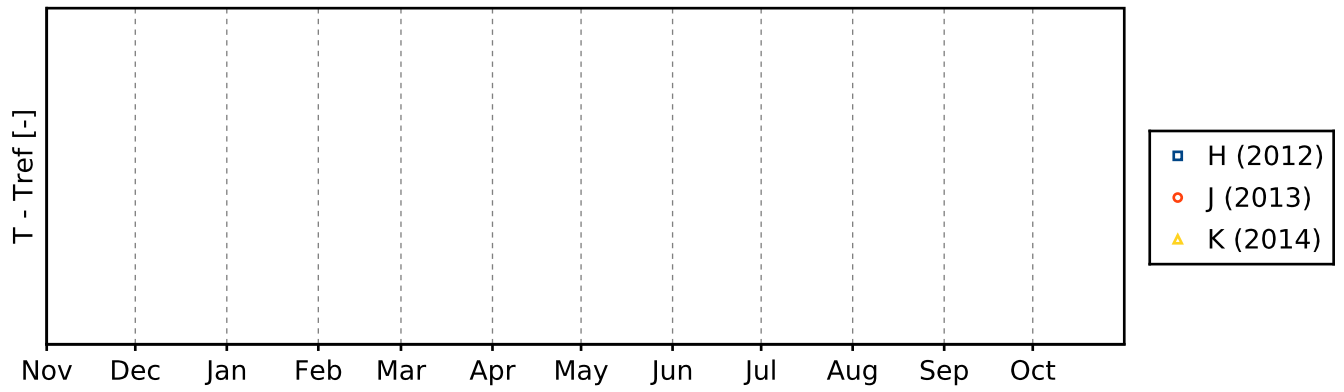
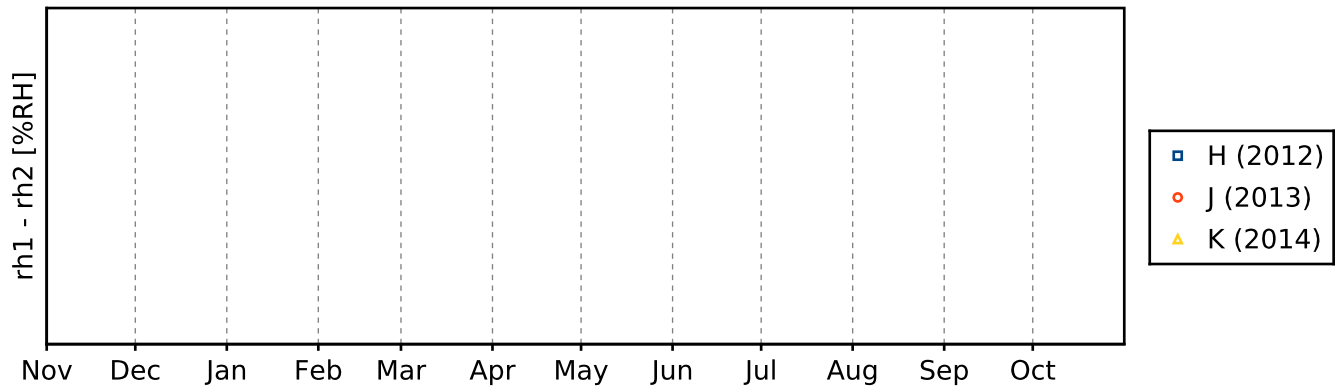
3.5.1.1 GroundCheck: GC25





3.5.1.2 GroundCheck: SHC





3.6 Measurement events

3.6.1 Stream: RS92

