

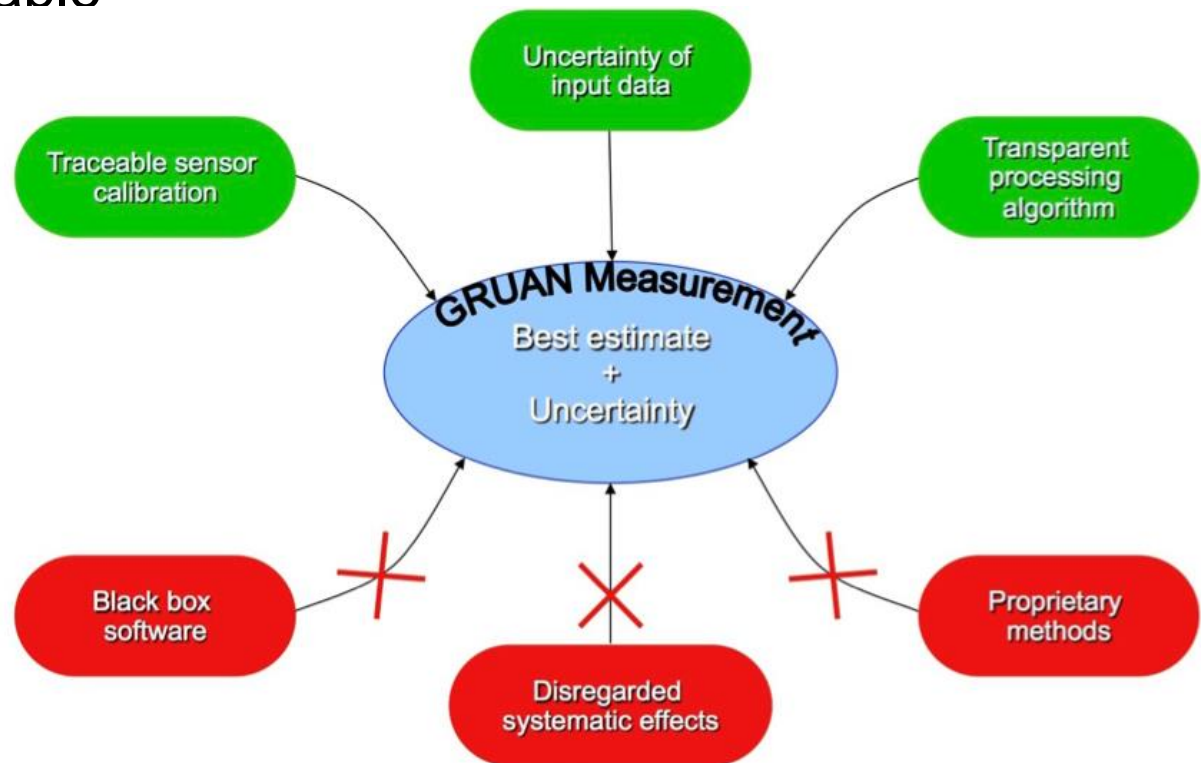


Status of all GDPs under development

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13th GRUAN Implementation and Coordination Meeting (ICM-13)
November 2021

- From the GRUAN-for-beginners presentation:
To answer the need [of WMO and the Global Climate Observing System] for highest accuracy data possible
- GRUAN's main deliverable



Requirements for certification of GRUAN data product

- Outlined in TN-1 & TN-4
 - Technical document
 - Peer reviewed paper
 - System in use within GRUAN
 - Central processing facility
 - Existing data stream
 - Review of data stream

Certified

RS92
RS-11G
GNSS-PW*
RS41**

*NetCDFdata format not implemented yet
** provisional certification

Under development

RS-11G V2
iMS-100
MWR
lidar
M10
Graw DFM09/DFM17
CFH
O₃



System	data processor	centralized processing facility	GRUAN documentation	Peer reviewed paper	GRUAN certification
Meisei IMS-100	yes	yes	Update TD5 in progress	submitted	
Meisei RS-11G V2	yes	yes	Update TD5 in progress		
Modem M10	beta version	yes	in preparation/under review	Dupont et al. 2020 (JAOT)	
Graw DFM09/DFM17	in preparation	yes	in preparation		
Meteolabor SRS 34C	yes	yes			halted
Meteolabor SRS 50C	?	yes			halted
Ozone	?	no	Under review/update	ASOPOS	
lidar	yes		in progress	Leblanc et al 2016 (AMT)	
MWR	in progress	in progress	in progress		
CFH/FPH		no		e.g. Vömel et al 2016 (AMT)	

Accessible in the restricted area

- Site journal ▾
- Measurements ▾
- Metadata (GMDB) ▾
- Data products ▾
 - GDP ▾
 - EDT ▾
 - RAW ▾
 - ORI ▾
 - Development status**
 - Data availability
- File archive ▾
- Software ▾
- Data policy

Development status of GRUAN data products

as of 2018-12-05

Radiosonde data products

Instrument	Product	Status	Certification	Maintainer	Comments
Vaisala RS92 , RS92-GDP.2	RS92-GDP.2	released (2012)	no formal certification process available at this time	Michael Sommer	* In operational use since 2012 * Originally based on DC3DB files only * Workaround implemented to use MWX files (2017)
Vaisala RS92, RS92-GDP.3	RS92-GDP.3	in development , but inactive	not started yet	Michael Sommer	* Development is inactive until a first BETA version of RS41-GDP is available
Meisei RS-11G , RS-11G-GDP.1	RS-11G-GDP.1	certified (2019)	1. technical document, yes (GRUAN-TD-5) 2. peer reviewed paper, yes (Kobayashi et al. 2019) 3. system used, yes (TAT-RS-01, SYO-RS-01) 4. central processing facility, yes (Tateno)	Nobuhiko Kizu ?	* Operational processing * RS-11G-GDP.1 data stream is available at LC (NCEI in preparation) * Who is current maintainer? has to be clarified

- RS41: presentation 1-3
- M10: presentation 1-7
- DFM09/DFM17: presentation 1-8
- O₃: presentation 1-10
- MWR: presentation 2-2
- CFH/FPH: presentation 2-6
- Lidar: presentation 2-7
- iMS100 & RS-11G V2

Updates for Meisei GDPs (RS-11G & iMS-100)

- The article for evaluation of GDP for iMS-100 (intercomparison with RS92) is JUST SUBMITTED
 - Evaluation of new version of GDP for RS-11G is one of future tasks
- The new version of technical document for Meisei GDPs (GRUAN-TD5-Rev2) are now under revision
 - Some of reviewers' suggestion may need some time...
- Intercomparison between iMS-100 and RS41 at Tateno are under carrying out about 1 year
- Data processing for iMS-100 observation at Singapore has started in the end of August

- Development of GRUAN data product is a considerable task. For radiosonde products and GNSS-PW typically 4 years.
 - Multiple persons involved
 - Takes time and resources.

- Based on experience and lessons learned, can the development be sped up?

- Radiosondes: some investments can be re-used
 - Optimized measurement program + set ups + analysis software, modular data processor system

- Not re-usable
 - Data analysis, develop & implement correction algorithms, validation (perform & evaluate twin soundings), documentation