

Update on Graw DFM-09 & RS92



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- GRUAN sites
 - LIN - research
 - SNG (operational until mid-2015)
- Various NMHSs, e.g. NWS (Caribbean)

Manufacturer processing



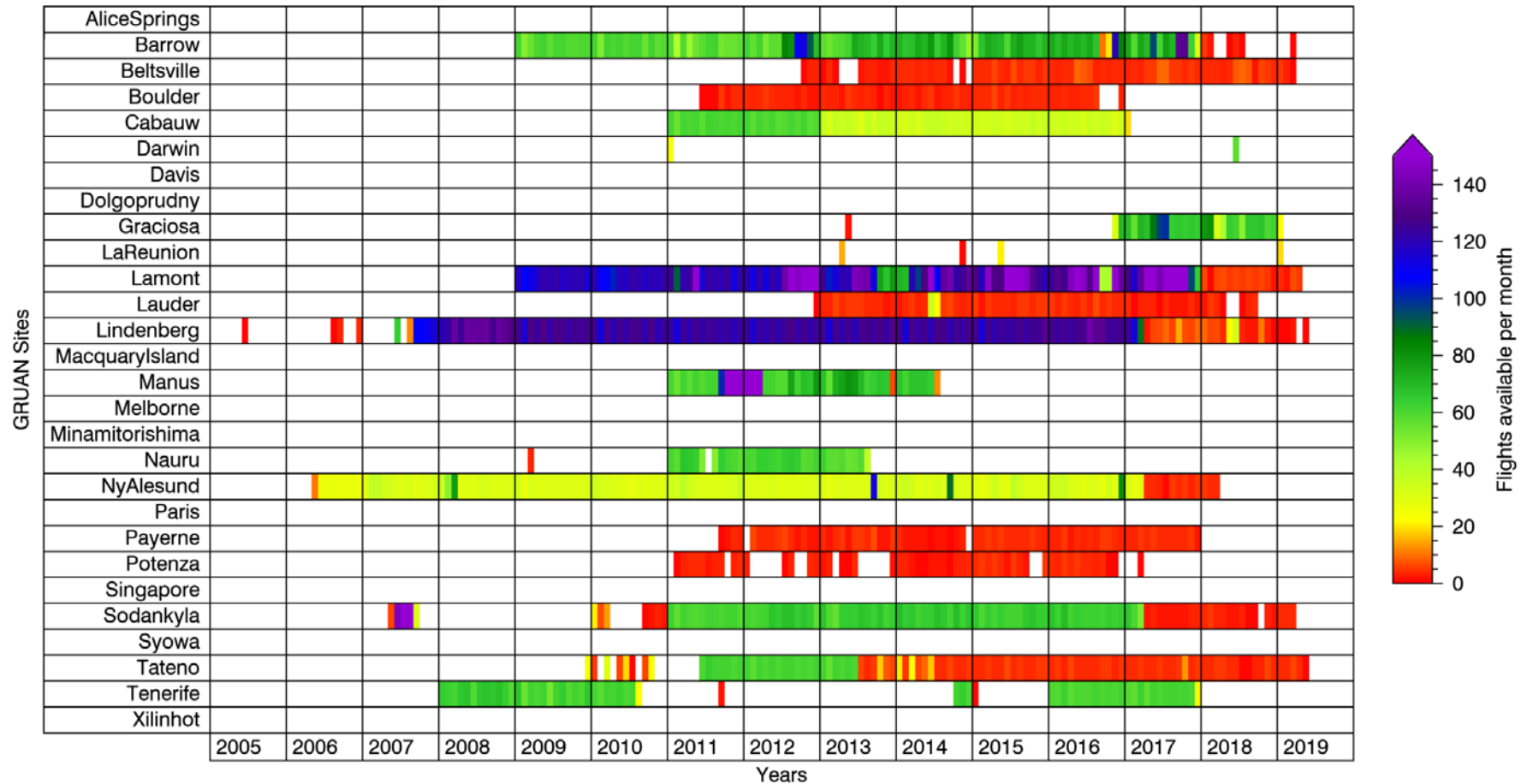
- Phased-out
- Radiosounding backbone of GRUAN until 2017-2018
- Global market share ~30%

GDP-v2



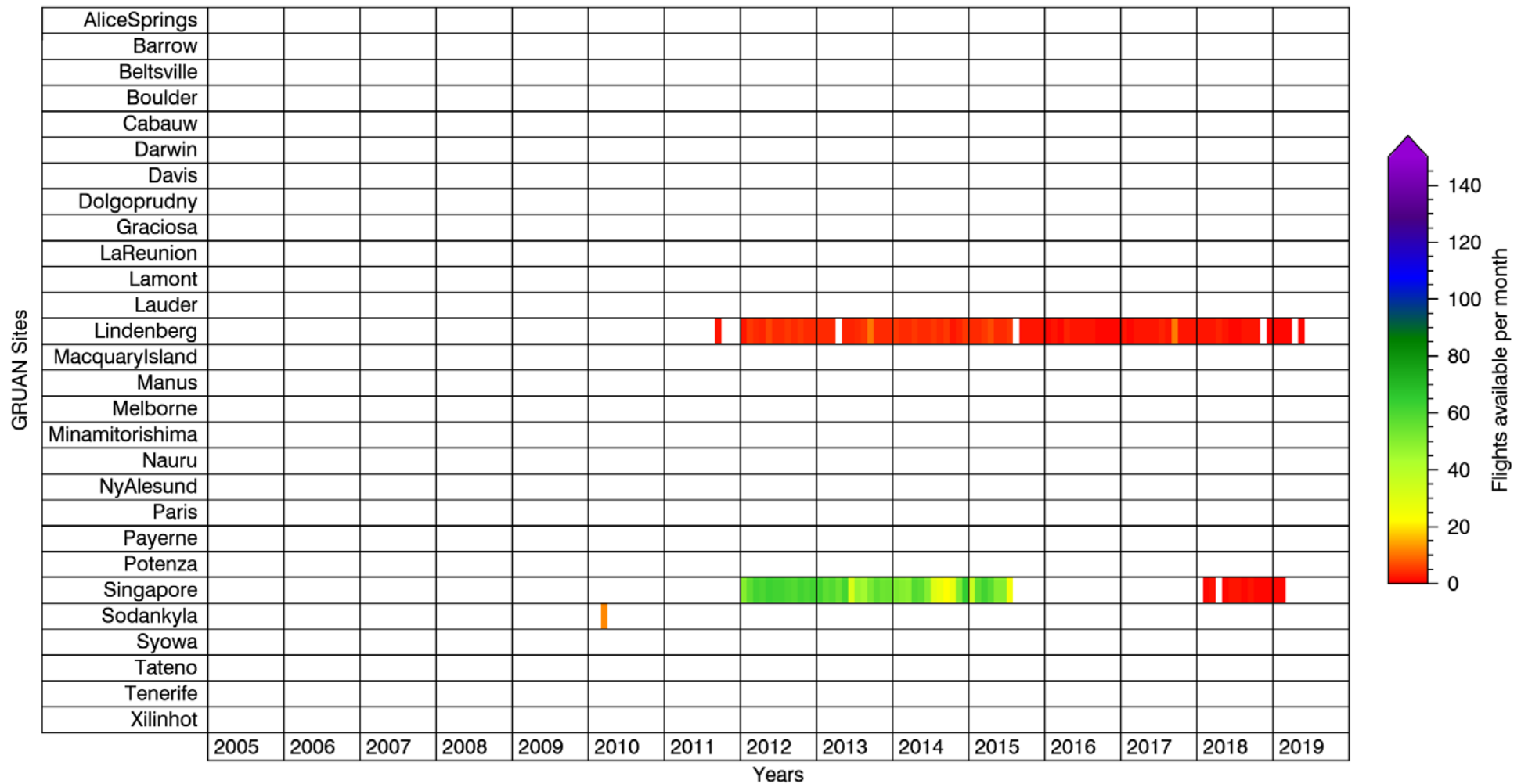
N ≈ 63000

GRUAN Vaisala RS92 Launches (total: 63068 at 2019-05-10)



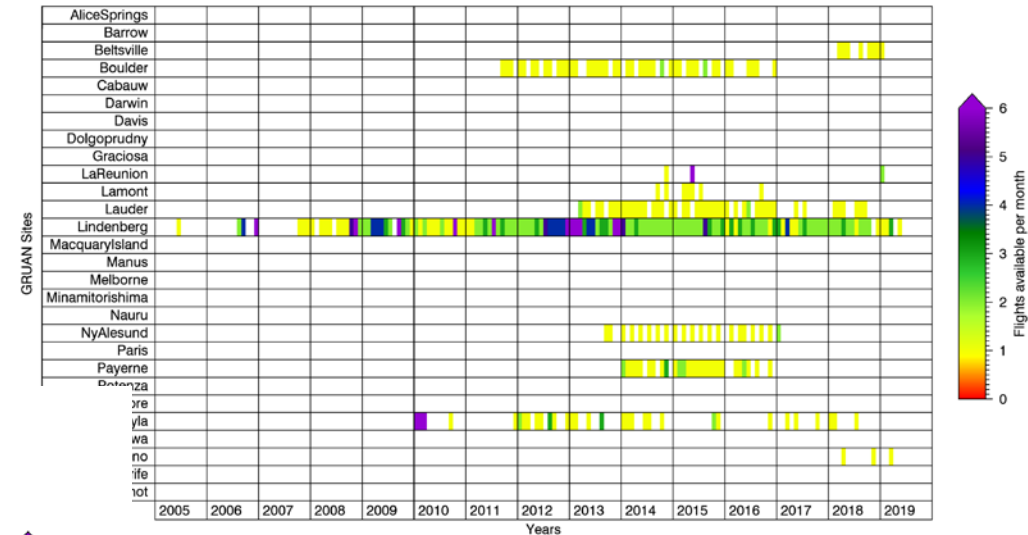
GRUAN Graw DFM-09 Launches (total: 2529 at 2019-05-10)

N ≈ 2500



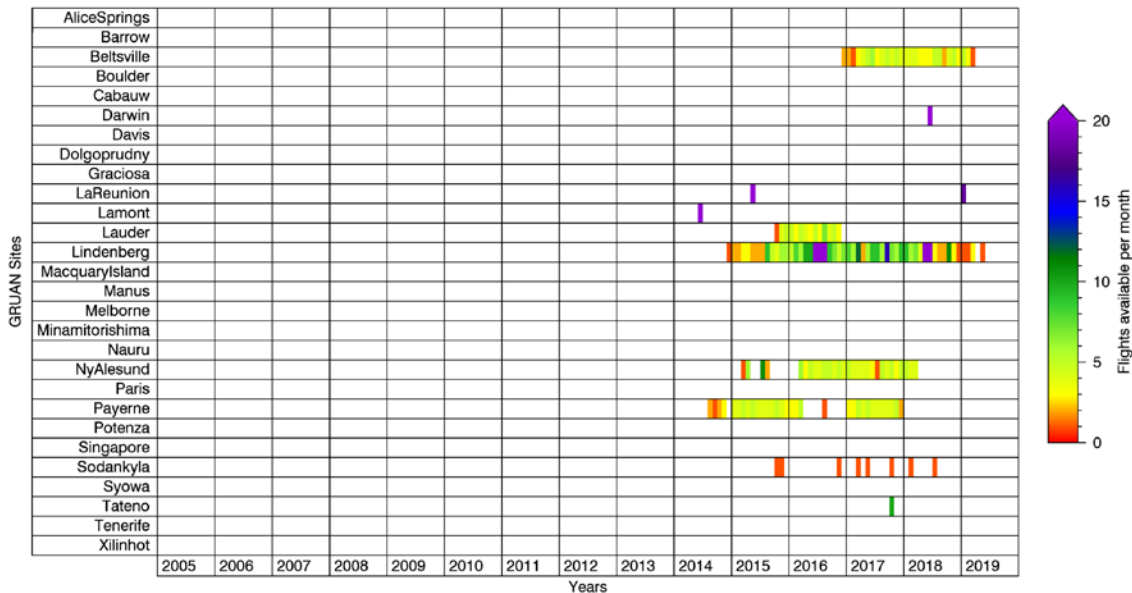
RS92-strat Hygrometer N = 655

GRUAN Vaisala RS92 vs. Stratospheric Humidity Comparison Launches (total: 655 at 2019-05-10)



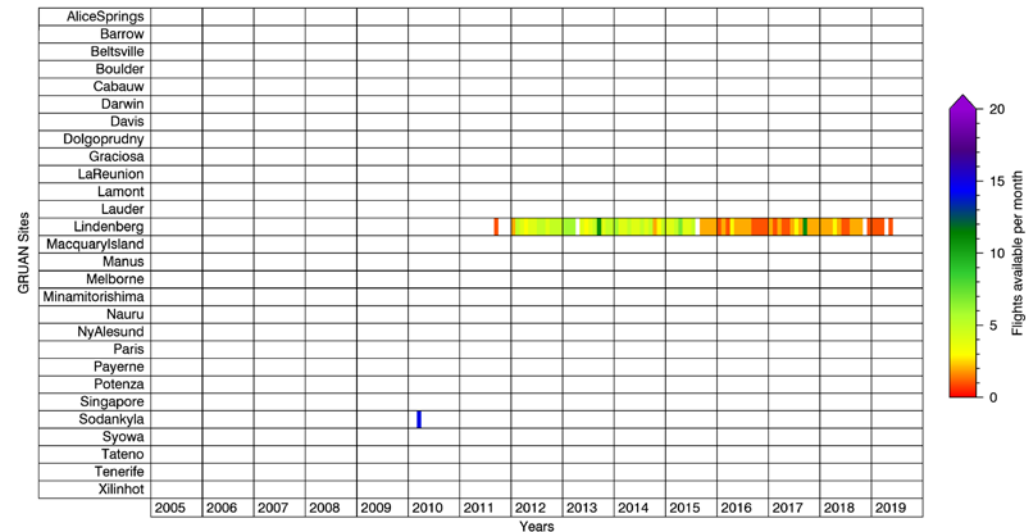
RS92-RS41 N = 942

GRUAN Vaisala RS92 vs. Vaisala RS41 Comparison Launches (total: 942 at 2019-05-10)



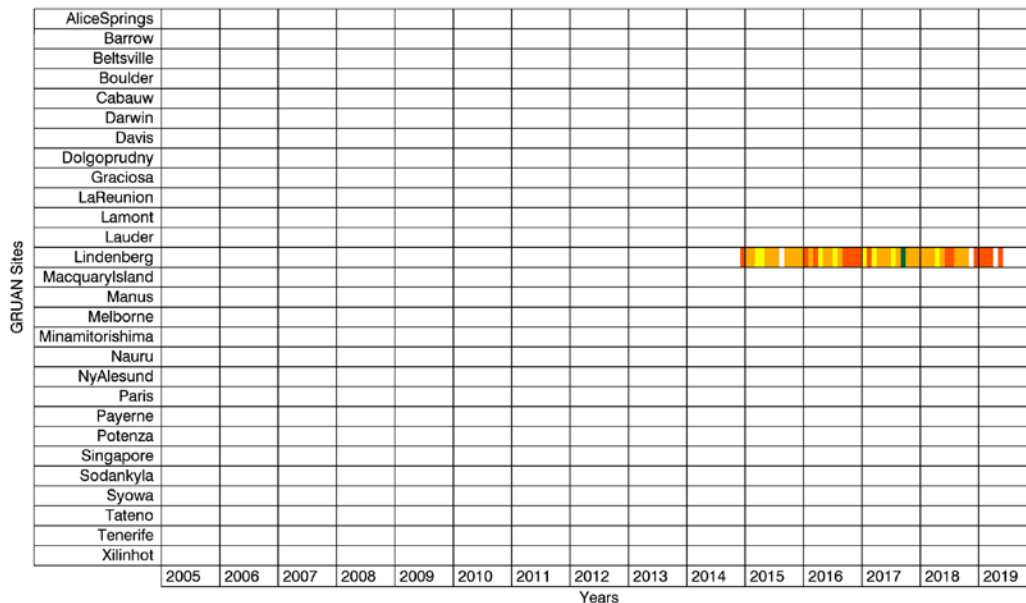
DFM09-RS92 N = 291

GRUAN Graw DFM-09 vs. Vaisala RS92 Comparison Launches (total: 291 at 2019-05-10)

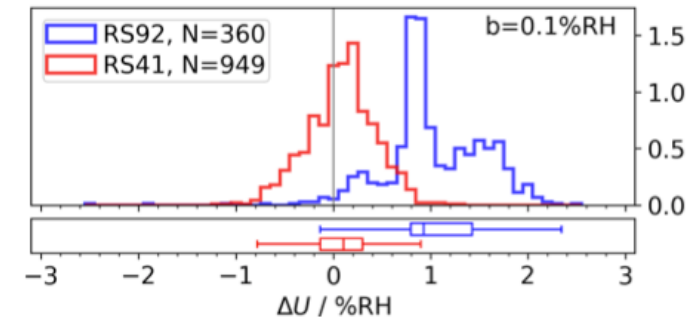


DFM09-RS41 N = 105

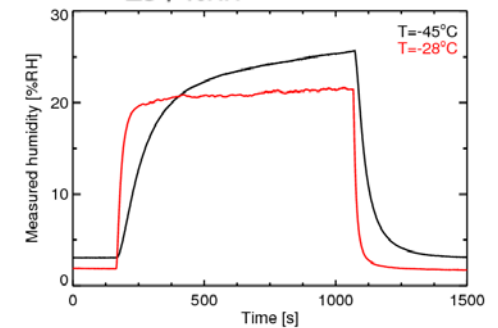
GRUAN Graw DFM-09 vs. Vaisala RS41 Comparison Launches (total: 105 at 2019-05-10)



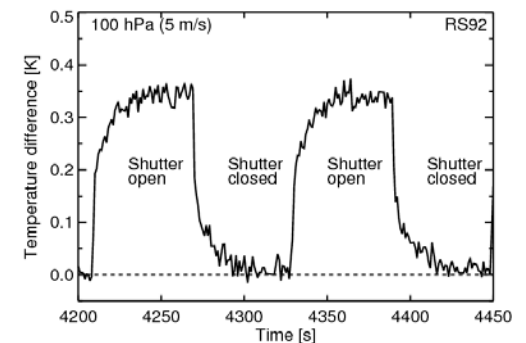
PTU



Climate chamber



Radiation



- GRUAN Data Processing System (GDPS) can ingest & process
 - Graw DFM-09 data
 - Vaisala RS92 data

- Determination of parameters for correction algorithms ongoing

Converting of original raw data format from manufacturer (GSFZ) to GNC-RAW	OK
Reading of GNC-RAW file from DFM-09	OK
Automatic analysis of ground check periods (e.g. in SHC)	OK (fine-tuning needed only)
Automatic start detection of launch	OK (fine-tuning needed only)
Data control of all input variables	OK (fine-tuning needed only)
Radiation correction of temperature sensor data	in progress (lab experiments needed with new radiation chamber)
Time-lag correction of humidity sensor data	in progress (more lab experiments needed)
Processing of wind data	not started yet
Processing of altitude and pressure	not started yet
Definition of output file	not started yet
Full documentation	not started yet

Converting of original raw data format from manufacturer (DC3DB or MWX) to GNC-RAW	OK
Reading of GNC-RAW file from RS92	OK
Automatic analysis of ground check periods (e.g. in SHC)	OK
Automatic start detection of launch	OK
Data control of all input variables	OK
Radiation correction of temperature sensor data	in progress (lab experiments needed with new radiation chamber)
Time-lag correction of humidity sensor data	OK
Processing of wind data	OK
Processing of altitude and pressure	in progress (fine-tuning needed only)
Definition of output file	in progress (optimization needed only)
Full documentation	in progress (some details are already written)

