
ROM SAF CDR v1 temperature profiles compared to GRUAN v2.0

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ROM SAF DMI

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Multi mission homogeneous reprocessing of the entire GNSS RO era 2002-2016, including COSMIC, METOP, CHAMP and GRACE missions.

Output variables:

- ▶ Bending Angle
- ▶ Refractivity
- ▶ Dry temperature (no model information),
- ▶ 1D-Var temperature, specific humidity, pressure
- ▶ Level3 gridded data. 5 deg latitude bands.

11e6 profiles. Quality controlled. Under validation.

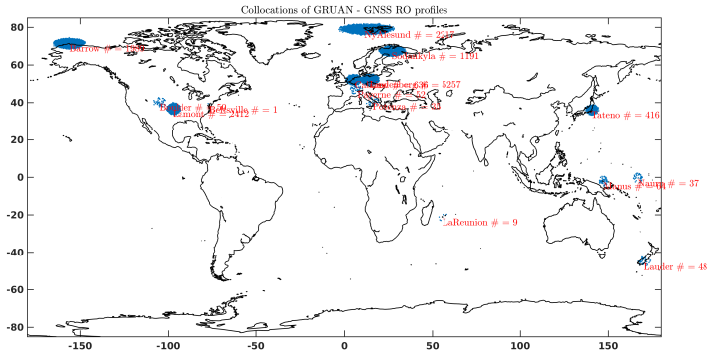
Early access can be granted on request at

<http://www.romsaf.com>

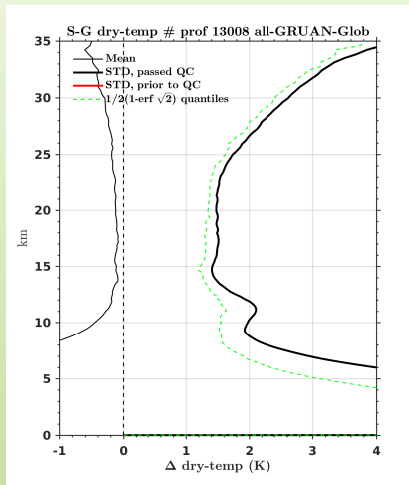
RO - GRUAN collocations

~ 13000 Collocations

Distance < 300 km, time difference < 3 hours.

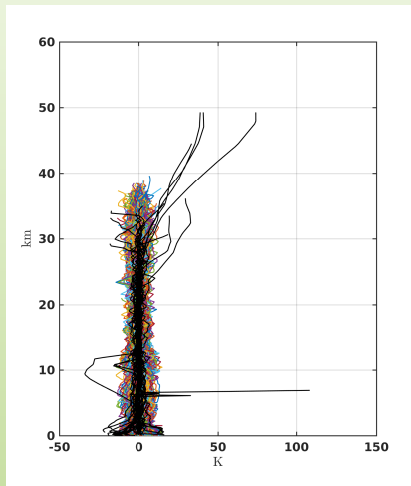


Dry temperature

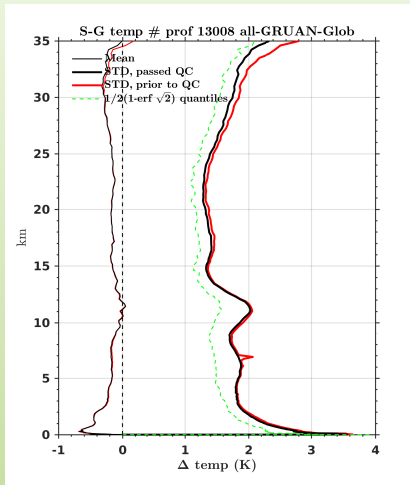


Dry temperature is virtually equal to temperature in the stratosphere.

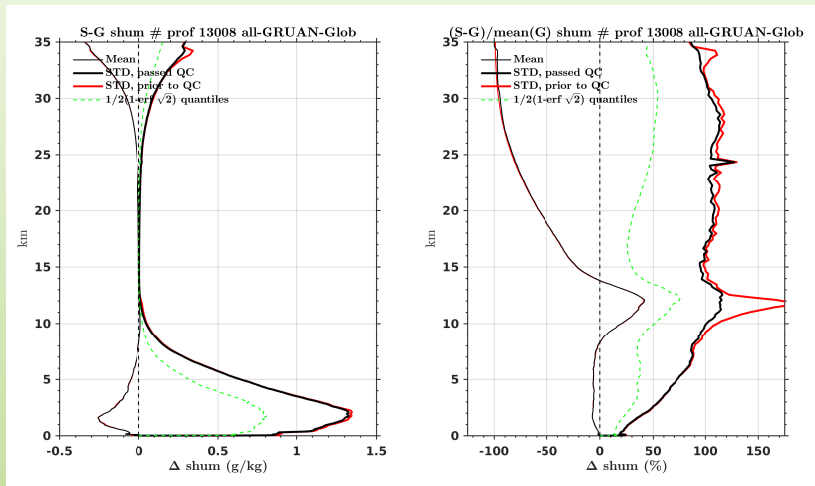
GRUAN outliers?



1D-Var temperature



Specific Humidity



Conclusions

- ▶ 12971 collocations passed QC.
- ▶ Collocations peak in 2013
- ▶ ~ 0.1 K “bias” in dry and wet temperature in lower stratosphere.