



MARCUS: DQ Update



Acknowledgements



- Thank you to everyone I bothered about this
 - Tami Toto, Jenni Kyouac, AOS Mentors, Vic Morris, Donna Holdridge, Paytsar Muradyan, Andrei Lindenmaier, Maria Cadeddu, Mike Reynolds, Mary Jane Bartholomew, site operations and any others I missed

General Note

- Limited Access Flag
 - To indicate that the data are still being reviewed by the mentor
 - There have been problems identified and we are working to correct the data
- Once approved, these will only flag pre-deployment data

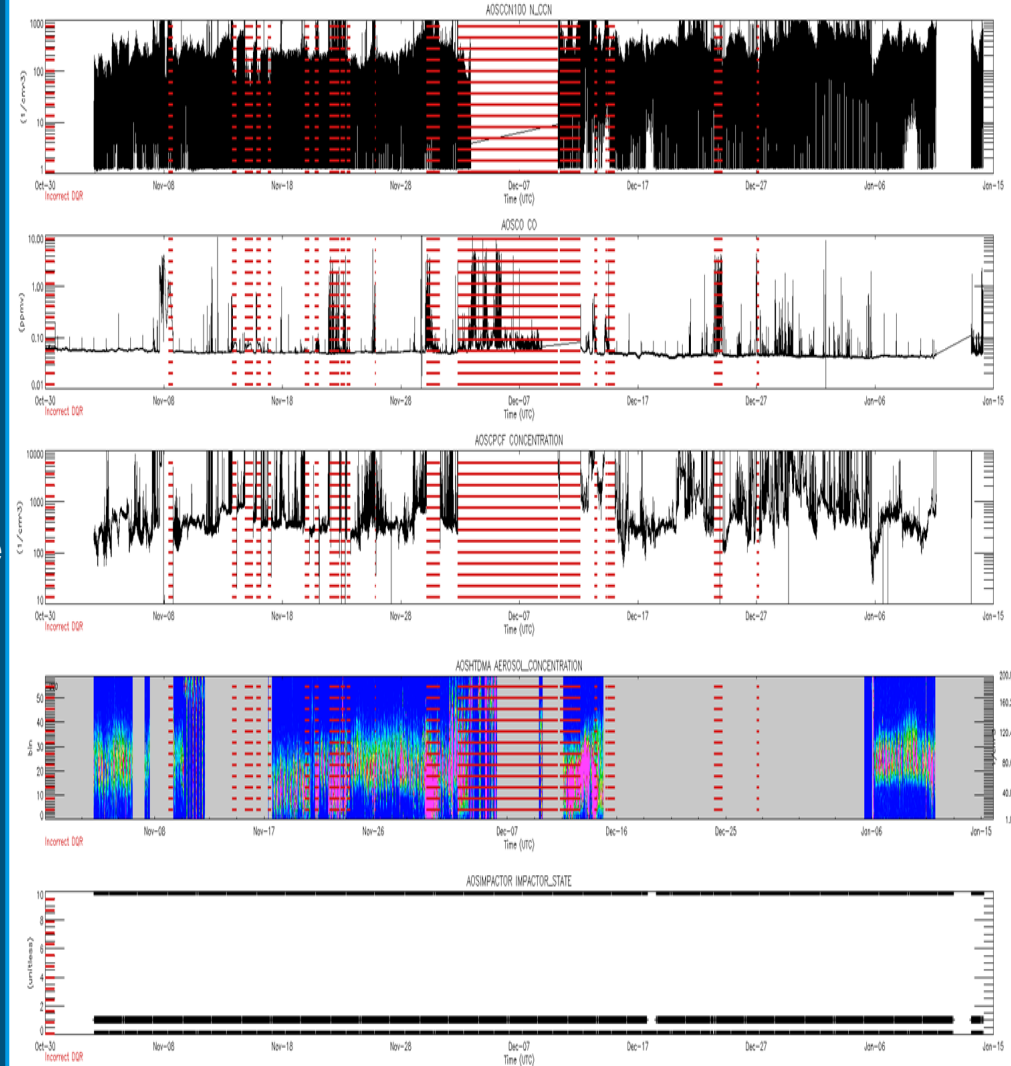


Data Quality Reports

- Official ARM mechanism to convey data quality issues to data users
- In the following plots
 - Incorrect Data - 
 - Suspect Data - 

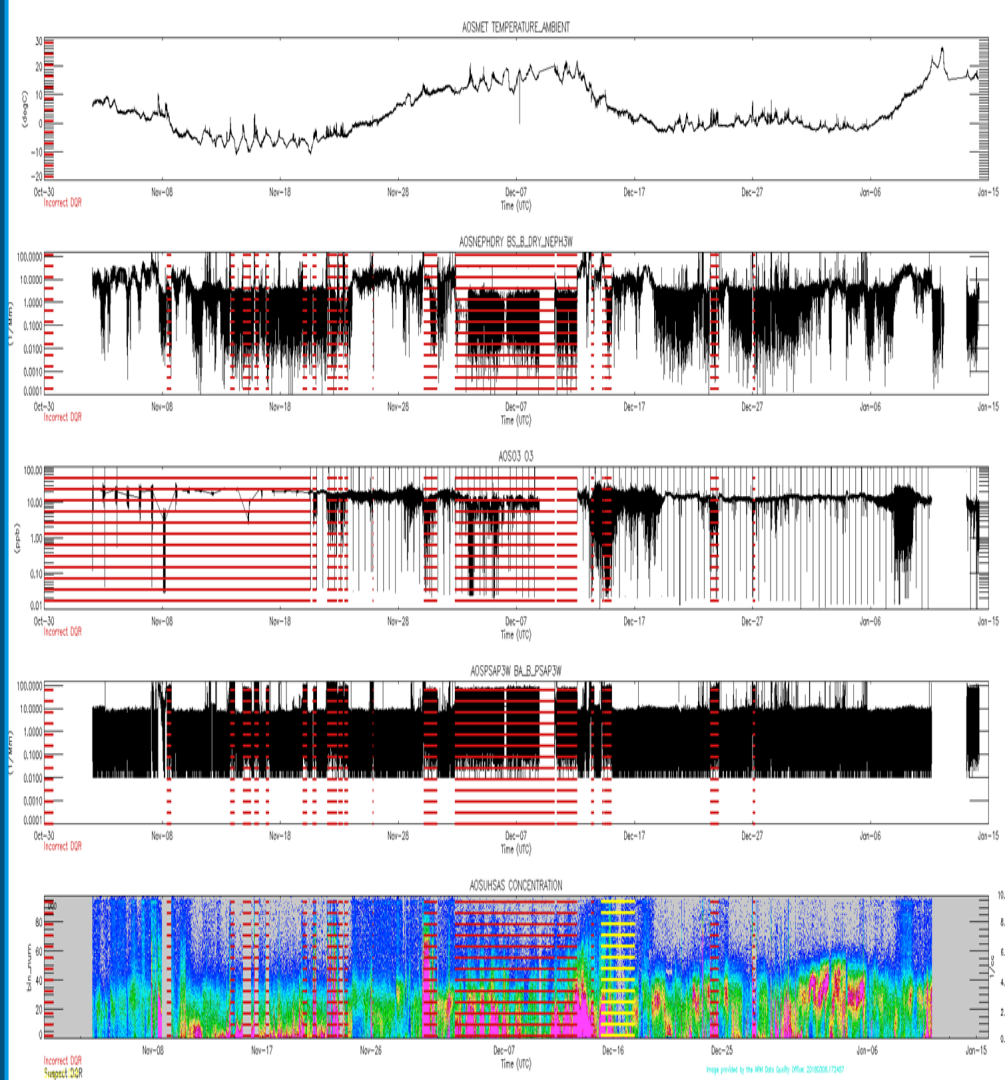
AOS

- Ship Contamination
 - Blowers were turned off at times
 - Contamination still present outside these periods
 - Working on ML methods to DQR the rest of the affected data
- HTDMA
 - External Dry Air Supply Failed (11/6/2017-1/6/2018)
- AOSMET
 - Should only be used as a characterization of the airflow into the AOS system



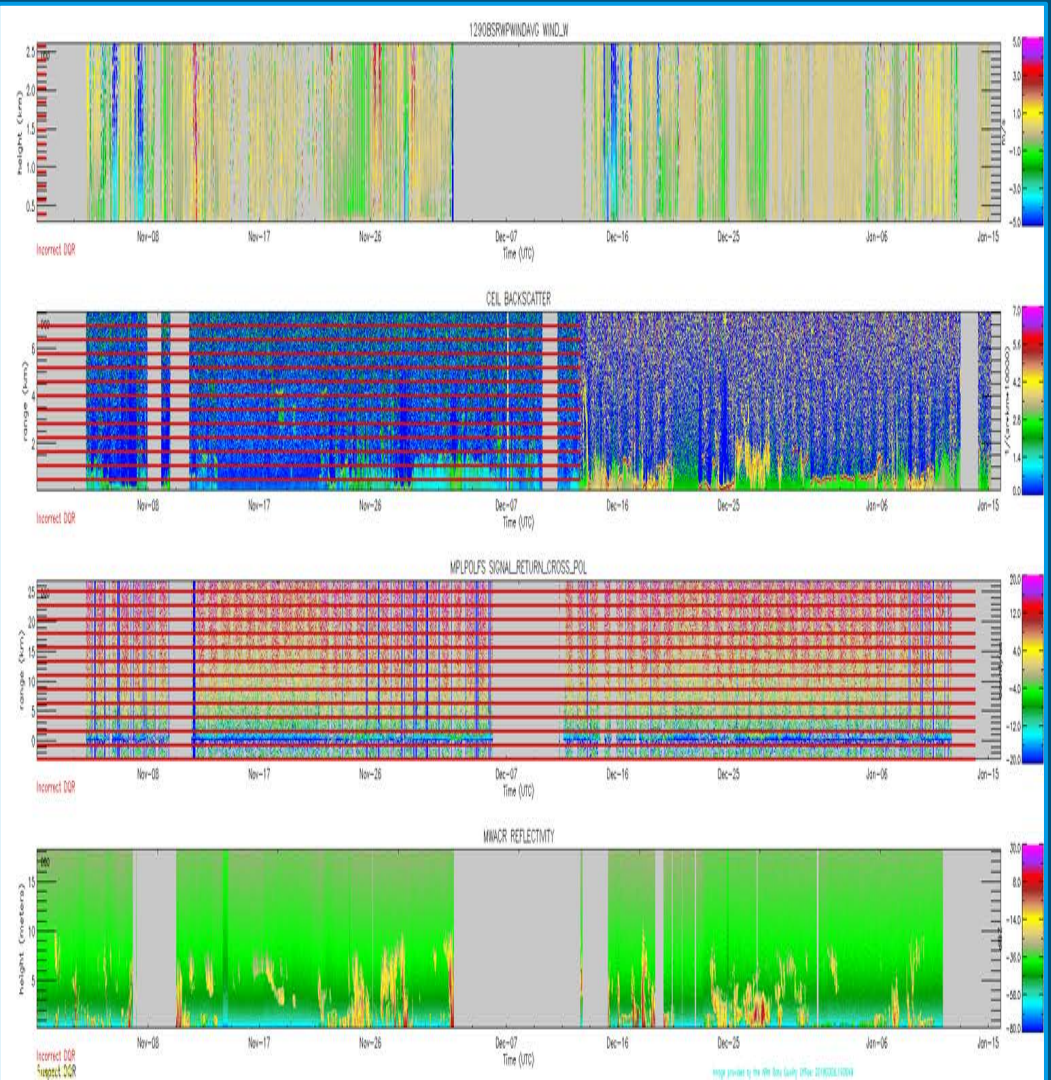
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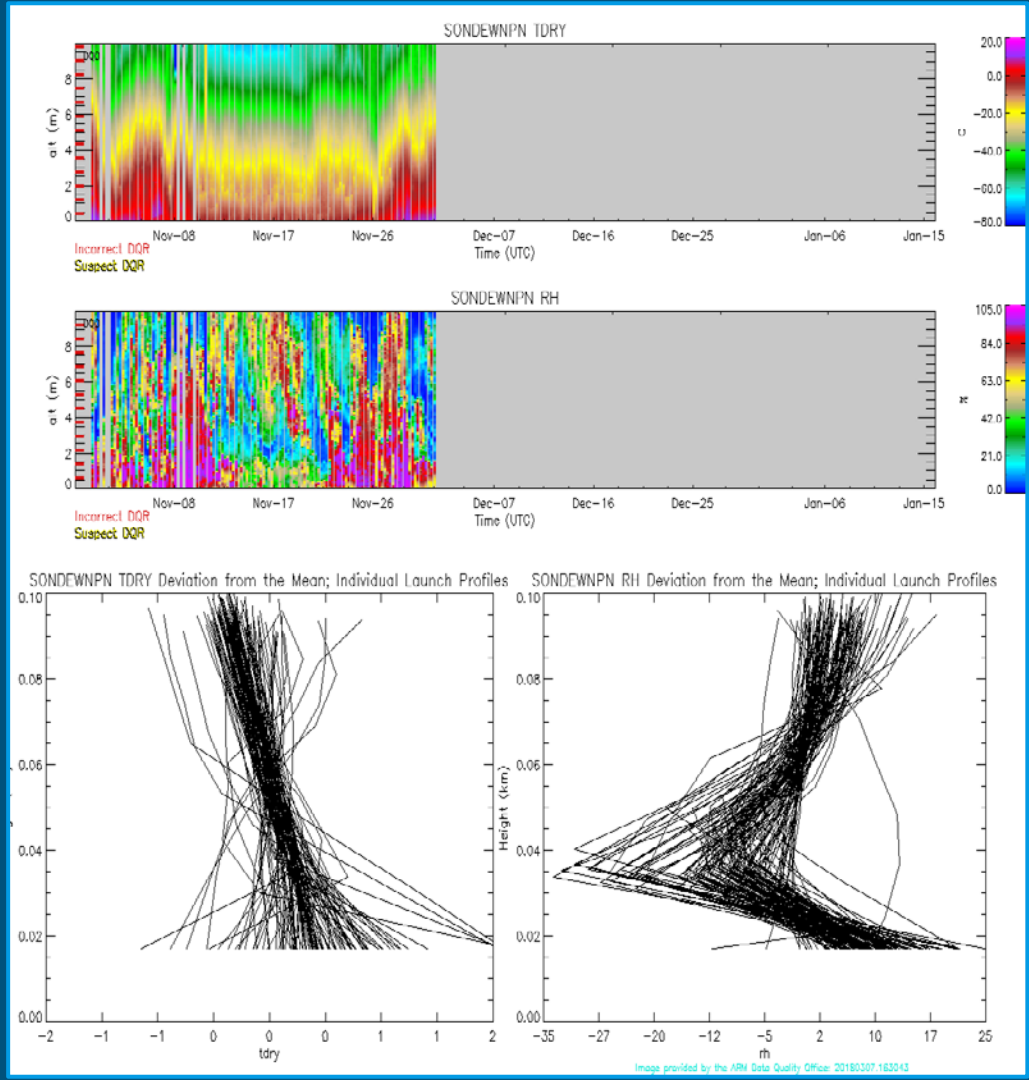
Radar/Lidars

- MPL (10/19 - 1/13)
 - High depolarization values
- CEIL (ending 12/12)
 - Update to the Backscatter units
 - Propose to change resolution to 10m instead of 30m average
- MWACR
 - Periodic problems with the stable table
 - Few intermittent periods where the transmitter failed; observed background noise



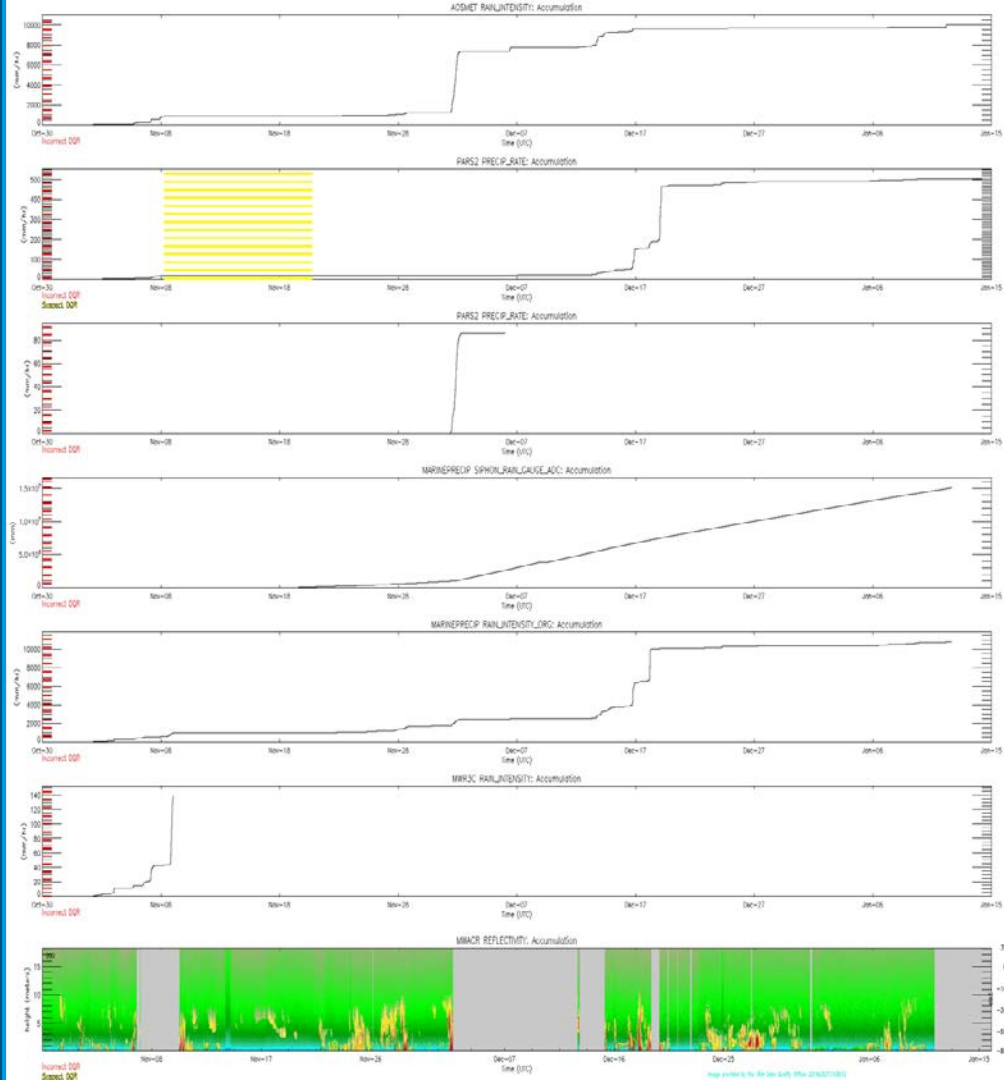
SONDE

- Incorrect lat/lon
 - Initial coordinates indicate Los Alamos launch site
 - 4 km average offset from when the sonde was initialize to when it was launched
- Data up to 100 m suspicious due to ship contamination (Mostly RH)
- V2 data did not make it off the ship, but will arrive with the next disks from V3



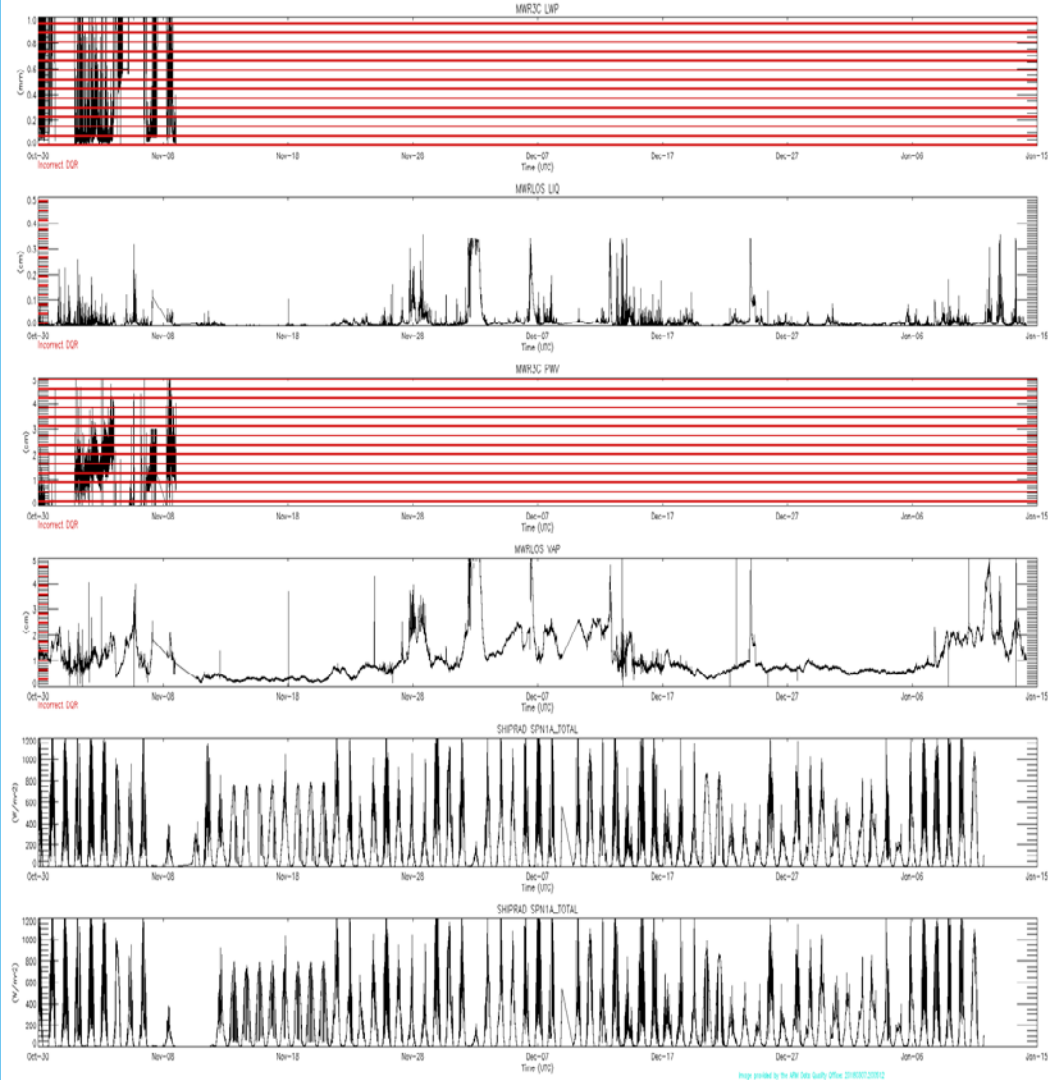
Precipitation

- PARS2
 - Reports erroneously large rates in frozen precipitation $R = \pi/6 * 3.6/1000 * 1/(F*t) * \sum(n_i * Di^3)$
 - Only 1 instrument on the ship
- AOSMET - Does not do well with snow
- Siphon Gauge - Investigation ongoing
- MWR3C (WXT520) - Removed after Voyage 1



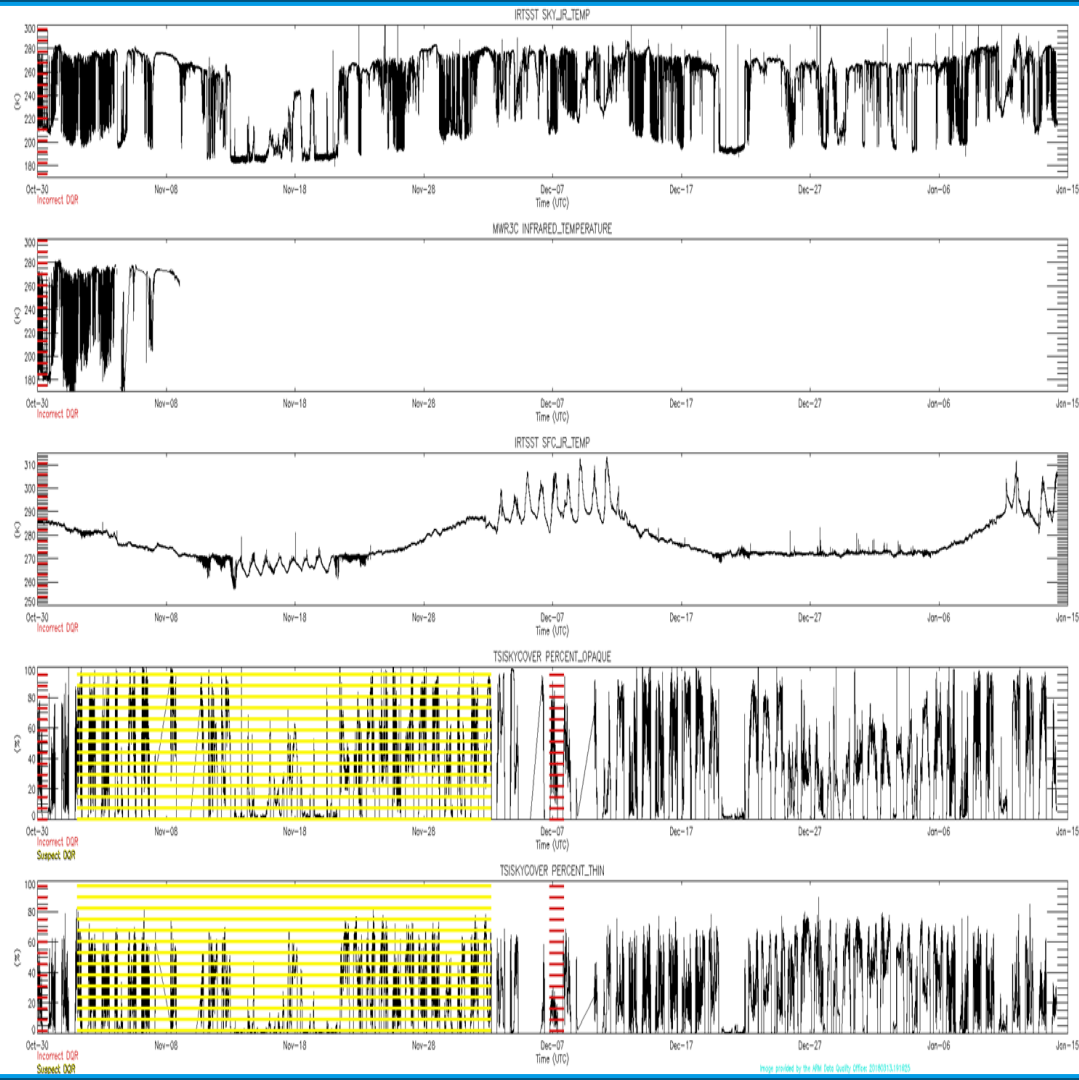
Radi(ation/ometer)

- MWR3C - Removed after V1
- SHIPRAD S1- Broken cables 10/25-11/16



IRT/Clouds

- TSI
 - Water on lens (Yellow)
 - Shadowband alignment issues at times (Red)



CAMSEASTATE

- V1-V3

