



Met Office

A Brief Update on the Operational Use of Satellite Sounding Data at the Met Office

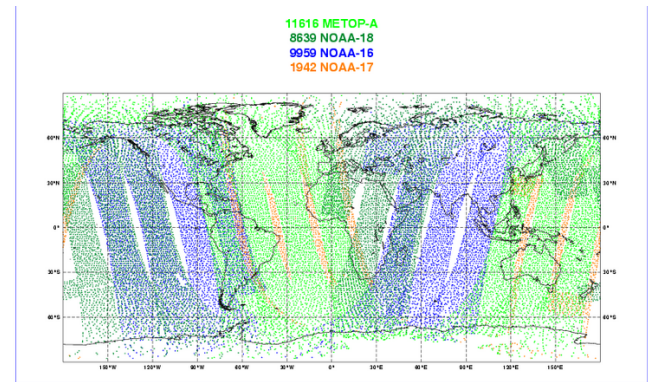
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ITSC-16, Angra dos Reis, Brazil



Contents

- ATOVS
- AIRS + introduction of IASI
- Operational Stratosphere issues
- Much more on the poster including configurations of all the other instruments...



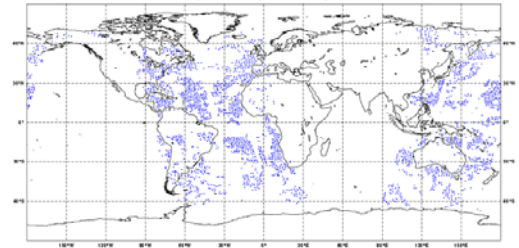
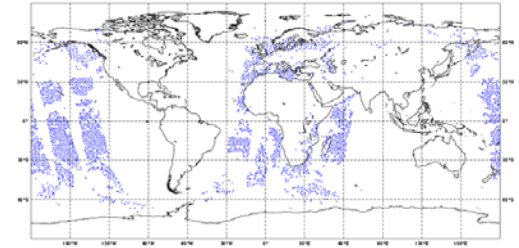
- Since ITSC-15 the amount of ATOVS data has risen by ~ 1.5 times
 - Thinning (and duplicate check) prior to 1D-Var allowed switch on of fourth ATOVS satellite + more RARS stations
 - HIRS channels reintroduced - excluding NOAA-18. (channels rejected from locally received data)
 - Swapped NOAA-15 for MetOp-A
- Biggest impact of these changes was from the introduction of MetOp-A



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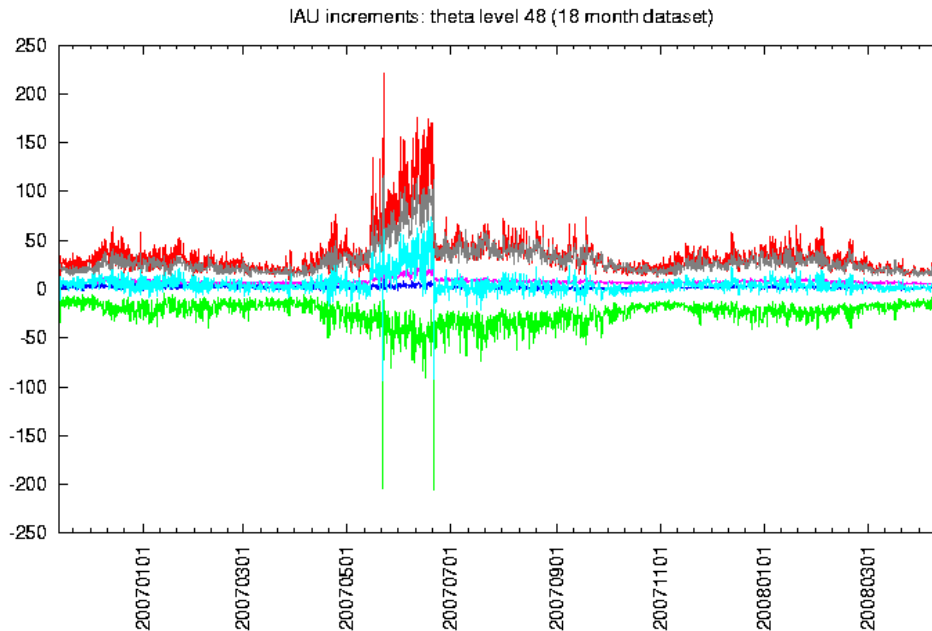
AIRS / IASI

- Began assimilating *AIRS* over land, using channels peaking above 400 hPa – 10 in total.
 - Neutral Impact.
- *IASI* went operational for first time in November 2007. *IASI* + *ASCAT* package contributed to a large positive improvement of 3 points on our weighted skill score.



Stratosphere/Mesosphere Assimilation Issues

- At ITSC-15 we reported that we had raised the model top to 60km (~ 0.1 hPa), allowing us to assimilate AMSU-A channels 10-14.
- During SH winter last year we noticed large analysis increments at very top of the model



Short term: give AMSU-14 more weight in analysis, reduce num of channels in the stratosphere

Long term: use climatological observations as constraint in data sparse region