Progress and plans for the use of radiance data in the NCEP global and regional data assimilation systems

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14th January 2015 Global Model Upgrade

- Add Metop-B IASI, F17 SSMIS,
- T1534 (~13km) forecast model.
- Analysis resolution remains on a linear grid corresponding to T574 (1152x576 grid boxes)
- Hybrid EnKF-3DVar data assimilation system is used with 75% of the solution prescribed by the ensemble and 25% from the static background error covariance.
- The resolution of the 80 member ensemble has increased from T254 to match the analysis resolution at T574.
- FASTEM-5
- Advanced radiance bias correction
- (including for SSMIS)

14th January 2015 Global Model Upgrade

- All-sky data assimilation for AMSU-A
- 4DEnsVar
- Temporal thinning.
- CRTM v2.2 including the FASTEM-6
- Assimilation of AVHRR and VIIRS AMVs
- Aircraft bias correction
- Monitor Saphir, GMI, AMSR-2 (JCSDA)

The future

- Extend All-sky data assimilation to other microwave and infrared instruments
- Cloud cleared radiances
- Spectrally correlated errors.
- FSO