An Overview of NRL/FNMOC Satellite Assimilation Activities

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NRL/FNMOC Satellite Assimilation Activities

• NAVDAS-AR (4D-Var), global → OPS Fall 2008
  – AMSU-A
  – IASI (Ruston; 7,7)
  – AQUA AIRS/AMSU-A
  – SSMIS lower assimilation sounding (LAS) channels (6.4)
  – SSMI, SSMIS, WindSat winds and TPW
  – Scatterometer, geostationary and MODIS AMV

• NAVDAS (3D-Var), global
  – Comparisons of CRTM vs. RTTOV-8.7 (A34)
  – Assimilation of MR/IR over land; MW/IR emissivity (6.4)
  – Aerosol optical thickness (AOT) assimilation

• SSMIS Unified Pre-Processor (Swadley/Bell; 1.8)
• Observation impact using adjoint techniques (3D, 4D-Var)

• Stratospheric and Mesospheric Assimilation (A16)
  – SSMIS Upper Atmosphere Sounding (UAS) Channels
  – NASA TIMED/SABRE, AURA/MLS, ozone, GPS-RO