Improving User Utilization of JPSS products – Microwave Precipitation (and TPW)

Thursday May 15 10:30 – 2:30

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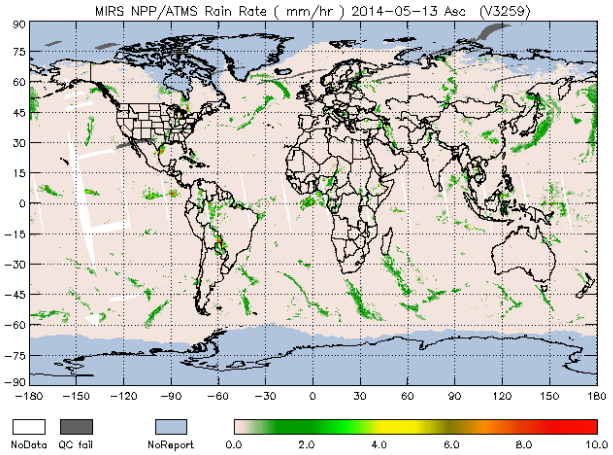
Facilitator - Lance Williams

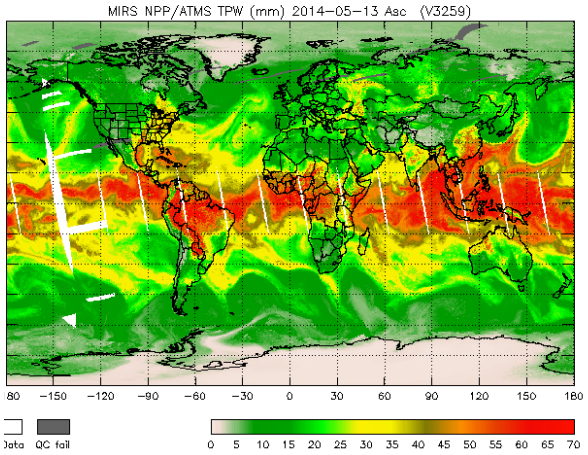
About 20 participants, including - NWS (OHD, NCEP/CPC), OAR (ESRL) , NASA (TRMM/GPM), NESDIS (STAR, OSPO, OSD), UMD

It would be good to have additional input from FNMOC, AFWA, NAVO, NWSFO, …

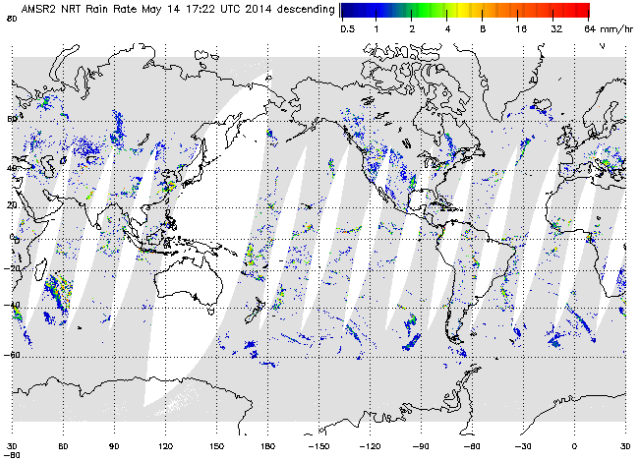
MW Precipitation from JPSS
(Should we expand to TPW as well?)

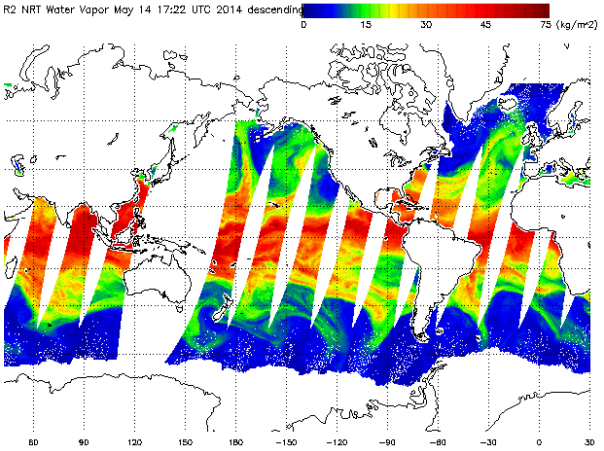
- S-NPP ATMS
  - MiRS rain rates (and TPW) via NDE





- GCOM AMSR-2
  - GPROF2010V2 rain rates (and STAR TPW EDR) via GAASP





Basic questions

- Describe how SNPP/JPSS (including GCOM) products provide continuity from legacy POES, METOP, DMSP, EOS?
  - For most users, it's continuity. Use both sounders and imagers.
    - L1 and L2 products in the 1330 orbit
    - L3 through primarily blended precipitation and TPW products
- What benefits or improvements do you expect from SNPP/JPSS?
  - Expected impact (high) and why?
    - ATMS provides greater swath width and better sensor signal quality, more channels, better resolution. Compensates for loss of MetOp-A data
- Provide Details on:
  - when do you plan to use the SNPP/JPSS Product?
    - The CMORPH and GPM projects are already testing these rain products (GOES-R, JPSS PGRR and NASA)
    - The NESDIS bTPW and bRR are also testing ATMS and GCOM products (PSDI, JPSS)
    - ScAPMR (GOES-R baseline QPE) will indirectly use via blended MW L2 data set
    - Have you thought about how you will get the data and have you identified the issues with your operational use of SNPP/JPSS ?
      - Augment L2 blended products into L3
      - Latency is an issue
  - Are the current legacy products well utilized? YES
  - Is the SNPP/JPSS product part of a blended product? YES
  - What additional work needs to be done to ensure that the SNPP/JPSS product is/will be well utilized? See following slides

Are enhancements needed for:

- Accessibility (data flow, latency, format)
  - Better latency (DB over OCONUS a possible solution)
  - Data access/security - causes delays and aguish…
  - Common format (netCDF vs HDF) for L1, L2 would be desired
- Product performance (accuracy, precision)
  - Consistency between legacy and JPSS satellites - long term stability – REPROCESSING!
- User applications (modifications to modeling , decision tools, visualization to use the new products)
  - Error characteristics for all user time/space needs

Other Topics 

- Product fusion
  - Meeting all users needs require different methods
    - Latency drives the fusion method
    - Time/space resolution
  - Synergy with GOES-R
    - Utilize 1 minute rapid scan (SRSOR), lightning, etc.
- Advancement in products
  - Snowfall rate, warm rain, orographic precip., cloud microphysics (NWP)
  - Error characteristics
- Long-Term Stability/Reprocessing
  - Start of S-NPP and GCOM records
  - Time series continuity from POES