



Soundings: Team Lead Report

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Summary

- Very well run
- 13 presentations and over 50 participants for Soundings
- Presentations addressed a variety of atmospheric sounding techniques validated in a variety of ways
- User applications were focused on level 2 and level 3 products rather than the radiance measurements
- The topic of atmospheric rivers (initiated by Chris Barnet) echoed user interests focused on severe weather events ... refreshing!
- Sounding product performance and validation was a common theme among providers (Bill, Joel, Chris G, Xu Liu, Antonia, Tony, Chris G)
- Feedback to planned EDR sounding work at STAR/JPSS not so much ...



Thoughts

- Presentations from users (3) should be formulated into an evolving list of users and applications, formal project interaction with SPoRT, etc
- The distinction between the direct readout and global product environments must be clearly understood; they are not the same
- Clearly define the source and commitment wrt NOAA unique NESDIS retrieval across IASI/AIRS and CrIS
- Clearly define STAR's position wrt project independent oversight for respective product development, implementations (research to OPS), routine monitoring and validation; NPROVS/NPROVS+ as source of standardized validation (RT model, sensor) at STAR
- Support (mandate) active engagement of EDGE analytic interface among atmospheric (T, h₂O) product providers at STAR (NUCAPS, MiRS ...)



Thoughts

- Clearly define role/requirement for externals (NASA and CIMSS) in EDR development/validation ... \$
- Plan for gas retrievals
- It would be wonderful to formally share EDR products at STAR, examples, soundings to routinely append cloud products to “validation” datasets (NPROVS+) and in special cases (AEROSE) to include dust/aerosol, etc
- Address the question why soundings (or any EDR) which does not (appear) to have a clear user mandate; creates an official, sanctioned STAR view ... formal STAR position
- Address the question of sustained satellite synchronized validation; many speakers desire closely matched ground and satellite data to best demonstrate potential product value and impact; make available the validation datasets (NPROVS+, VALAR)



Thoughts

- Talks directly relevant to STAR/JPSS mission: Antonia (3), Feltzer (5), Chris G (7), Tony (9), Emily (SPORT, 10), Nalli (11), Ward 912) and Kopacz (13, gas)
- AK talk points to need for direct interaction between STAR (NPROVS, etc) and OPS concerning monitoring and feedback between STAR / OPS including the transition from research to operations (Walter...)
- Some comparisons against NUCAPS (ie Joel) (Xu Lui vs IDPS) reported; engage others to validate our products; make product (including test) available.



Looking Forward

- CrIS full spectral resolution data (from Dec. 2014?).
- Continuous CrIS full spectral data beyond JPSS-1.
- NPROVS+ builds testbed for the validations of common sounding products; internalization, internationalization.
- JPSS-funded integrated sounding system for all hyperspectral sensors ... unified NESDIS ...
- Explore (better) performance sounding products associated with severe weather (clear and cloudy) ... EDGE, etc
- Carbon products for climate studies.
- Sounding product applications for air quality monitoring and forecasting.
- Uncertainty estimates!