GSICS Microwave Subgroup

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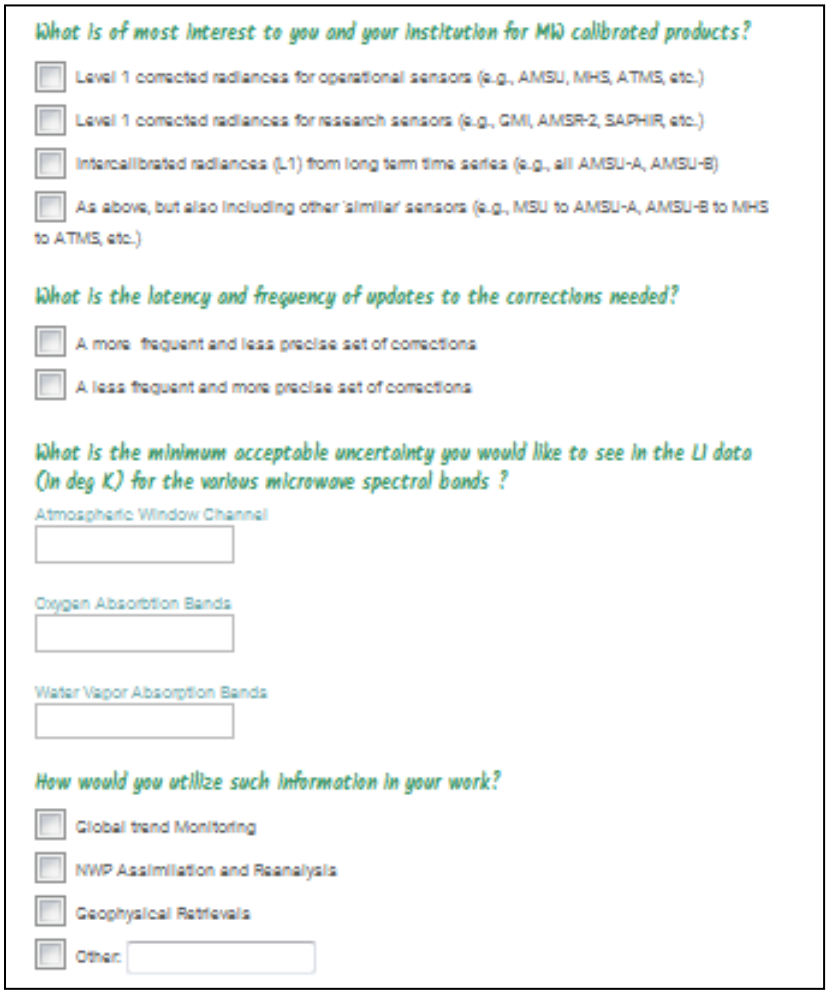
2015 GSICS Microwave Survey



What is of most interest to you and your institution for MW calibrated products?

- [ ] Level 1 corrected radiances for operational sensors (e.g., AMSU, MHS, ATMS, etc.)
- [ ] Level 1 corrected radiances for research sensors (e.g., GMI, AMSR-2, SAPHIR, etc.)
- [ ] Intercalibrated radiances (L1) from long term time series (e.g., all AMSU-A, AMSU-B)
- [ ] As above, but also including other similar sensors (e.g., MSU to AMSU-A, AMSU-B to MHS to ATMS, etc.)

What is the latency and frequency of updates to the corrections needed?

- [ ] A more frequent and less precise set of corrections
- [ ] A less frequent and more precise set of corrections

What is the minimum acceptable uncertainty you would like to see in the L1 data (in deg K) for the various microwave spectral bands ?

Atmospheric Window Channel

Oxygen Absorbtion Bands

Water Vapor Absorption Bands

How would you utilize such information in your work?

- [ ] Global trend Monitoring
- [ ] NWP Assimilation and Reanalysis
- [ ] Geophysical Retrievals
- [ ] Other:

Real time use and/or climate use?

Latency vs. precision?

Different spectrum has different use and requirements

Potential application areas

Survey Summary

- Mapping time series of similar sensors but from vastly different heritage (e.g., SSMT2 to AMSU-B) together is of low priority (Q1)
- More precise, longer latency correction are preferred (Q2)
- It does appear most users would look at time series for global trends (most likely the O_2 & H_2O bands) and use to derive geophysical parameters (most likely window & H_2O bands) (Q3)
- The average desired accuracy of the corrections was on the order of 0.4 K (slightly less for the O_2 bands) (Q4)

MW Focus Topics for 2016 and Link to today's talks from User's

- Defining CLEAR PATH for **GSICS MW products and algorithms**
  - Methodologies (Zou)
    - SNO, Double difference, etc.
  - Reference Standards (Berg)
    - A particular sensor? Likely to be wavelength dependent (e.g., window, O_2, H_20); A RTM?
  - LUT/Correction Tables (Forsythe, Huffman)
    - Near real-time and climate; they will be different