GSICS VIS/NIR web meeting for May 12, 2022

We had 3 presentations and the meeting lasted 2-hours. We had 16 participants

Kazuki Koedra from JMA presented "Validation results for AHI by ray-matching method with VIIRSs". Kazuki outlined the JMA ray-matching method. JMA uses a BT threshold to elimate clear-sky GEO/LEO reflectance pairs. Also, JMA found that the AHI B2 0.51µm spectral response is more closer to VIIRS M03 band. The ray-matching results using AHI as a radiative transfer radiometer shows similar NPP and N20 VIIRS calibration differences as those published with direct comparisons. The AHI ray-matching results were similar to lunar, AHI solar diffuser, and stratus cloud RTM, except for B5 and B6. JMA uses a 2 parameter linear regression and averaged AHI pixels into a 2-km pixels for comparison with VIIRS.

Fangfang Yu from NOAA presented "Implementation of GOES-R ABI vs. VIIRS Ray-Matching Inter-Calibration Method". She showed the bow-tie spatial pattern of where the GEO/LEO angle matched pixels are located. To reduce data volume NOAA uses a narrow strip at the equator of the GEO image to match with the VIIRS granule. Sunglint ray-matched pairs introduce noise, especially for dark scenes. Including sunglint can impact the regression slope by 2%.

Dave Doelling from NASA presented "NASA-CERES GEO/MODIS Ray-matching highlights." He showed the impact of spatial homogeneity filter as well as variable angle threshold as a function of the reflectance. With darker more anisotropic scene with more stricter angle matching where as for bright scenes to use lax angle matching. The impact of SBAF was demonstrated over land, which when properly applied the one coefficient and two coefficient fit were nearly identical. Lastly, he showed deseasonalization of seasonal gain variability, without impacting the overall downward trend slope.