2018 Meeting of the GSICS Working Group on Research (GRWG) and Data (GDWG):
R. Ferraro attended the Global Space based Inter-Calibration System (GSCIS) Annual Meeting, hosted by the Chinese Meteorological Agency (CMA) in Shanghai, China, during March 19-23.

The meeting, attended by approximately 50 calibration experts from operational satellite agencies, focuses on both research and data issues centered around GSICS. Several CICS-MD scientists (L. Wang, L. Lin, M. Bali) are critical contributors to GSICS, as well as other STAR scientists (L. Flynn, X. Wu, C. Cao). The GRWG is organized around sensor types - visible, infrared, ultraviolet, and microwave; I chair the microwave subgroup of the GRWG. As part of the plenary session, I presented an annual status review of the groups’ accomplishments, including the status of several action items related to developing GSICS "best practices" for satellite intercalibration. In addition, we conducted a half-day session devoted to microwave topics, including several presentations for CMA and their affiliates regarding the calibration of sensors on their FY satellites. Finally, we identified a vice-chair to our group, Dr. Qifeng Li of CMA, who leads their data assimilation group and will contribute to uses of radiative transfer models for assessing sensor performance.

Importance: NESDIS is one of the leaders of GSICS and our contributions continue to improve the worldwide progress of satellite sensor calibration. **POC:** R. Ferraro
Validation of GOES-16 Land Surface Temperatures

CICS-MD Scientist Peng Yu and his team at STAR/SMCD/EMB have been working on validation of the GOES-R/GOES-16 Land Surface Temperatures (LST) from the Advanced Baseline Imager (ABI) observations.

- The validation/monitoring system has been updated, tested and implanted to the GOES-16 LST Environmental Data Record (EDR);
- The verification and initial assessment of GOES-16 LST has been completed;
- The LST product has reached provisional maturity because both accuracy and precision have met the mission requirement.

The top figure above shows the LST products: Full Disk, Continental U.S. (CONUS), and one of the two Mesocale (MESO) maps. The figure on the bottom shows each product compared to Surface Radiation Network (SURFAD) observations. The tightness around the diagonal shows the close match between the two.

**Importance:** Timely validation of GOES-16 products allows for quicker use by NOAA users such as the National Weather Service. **POC:** P. Yu
• **Accelerating Model Assimilation of New Observations:**

CICS-MD Scientists Eugenia Kalnay and Tse-Chun Chen (JPSS PGRR) along with former CICS Scientists Daisuke Hotta have a new article in the March issue of *Nonlinear Processes in Geophysics*. They developed the Ensemble Forecast Sensitivity to Observations (EFSO) for NOAA as a method of quality control for observations. In this article, they talk about its using in increasing the speed in which new observations can be developed for Numerical Weather Prediction (NWP) data assimilation (DA). There are three steps in this process:

1. Computing EFSO samples for the new observing system using an offline DA.
2. Investigating the EFSO statistics for possible data selection strategies.
3. Verifying the actual forecast impacts by observing system experiments (OSEs).

This current process is done by OSEs using trial and error. EFSO will narrow the options so fewer OSEs need to be run.


**Importance:** New methods for assimilating satellite observations from NOAA satellites will lead to NWP model improvements. **POC:** E. Kalnay