

Weekly Report

SCSB/CISESS
Cooperative Research Program Division (CoRP)
STAR/NESDIS
National Oceanic and Atmospheric Administration (NOAA)

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Awards and Recognition

CESSRST/CUNY Student Award: Equisha Glenn awarded the second position at the Association of State Floodplain Managers Foundation's (ASFPM) 11th Annual Collegiate Student Paper Competition for her NOAA mission-driven doctoral research. The research is titled, 'A New Framework for Detecting Coherent Floods in the U.S. for Flood Risk Management.' Tom Smith has been advising Equisha on her PhD and she has been a CISESS Visiting Scholar three times in the past six years. More details on the award are at the following site:



Equisha Glenn
NOAA EPP-MSI CESSRST Scholar
Ph.D. in Civil Engineering, CCNY

[https://www.cessrst.org/assets/newsletters/3164/equishas_story- asfpm \(new\).pdf](https://www.cessrst.org/assets/newsletters/3164/equishas_story- asfpm (new).pdf)

(POC: T. Smith, tom.smith@noaa.gov Funding: PDRA)

Workshops, Conferences, and Meetings

NASA Sounder Science Team Meeting Presentation - A three day long NASA AIRS/Sounders Virtual Science meeting was held May 18-20, 2021. Dr. Bin Zhang (from ESSIC/CISESS, University of Maryland) and Dr. Changyong Cao (from NOAA/STAR) attended this meeting and presented their research entitled "From HIRS to IASI/AIRS: Retrospective Spectral Calibration towards a 40+ year Longwave CO₂ Channel Time Series for Climate Studies". This research studies the long time series of HIRS CO₂ longwave infrared observations from 1980 to present. Algorithms are developed and used to remove inter-satellite radiance bias jump and discrepancy, thanks to the METOP IASI, which has been used as on-orbit calibration reference for the HIRS instrument in order to retrospectively calibrate the HIRS observations in the past through simultaneous nadir overpass (SNO) observations between satellites. A new algorithm was also developed to bridge the observation gaps in the mid-1980s between NOAA-7 and NOAA-9. As a result, the historical HIRS observations from NOAA-6 to current Metop A/B

(Fig.1) with minimal systematic inter-satellite bias that spans 40+ year have been developed for climate studies.

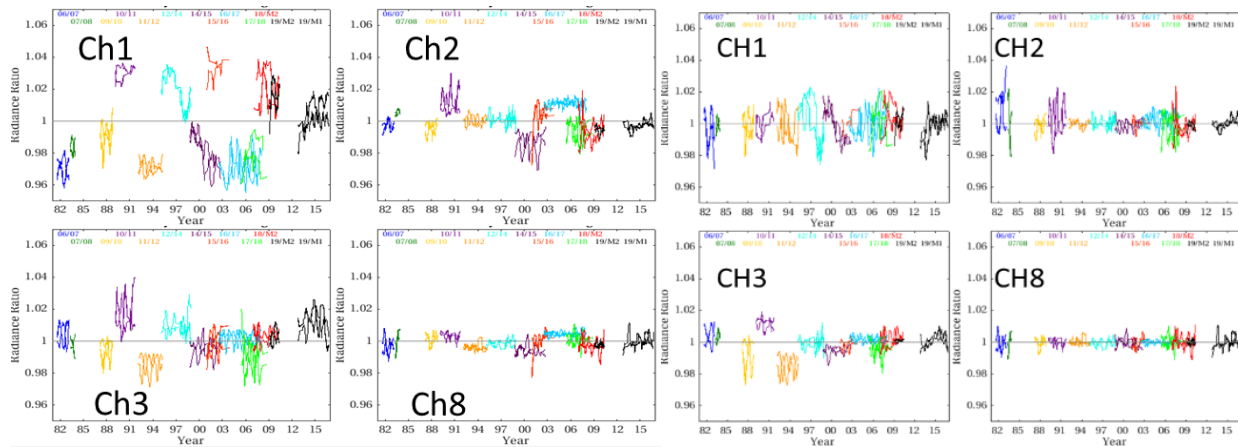


Figure 1 HIRS time series (from 1982- current) shows jumps and discrepancies before (left panel), and improvements after (right panel) the spectral recalibration.

(POC: Bin Zhang, bin.zhang@noaa.gov Funding: JPSS PGRR)

Training and Education

Patton Presents at the CMO Lightning Symposium: The Caribbean Meteorological Organization (CMO) and the World Meteorological Organization (WMO) held a virtual Symposium on Lightning and Lightning Safety Awareness on May 19 -20.



CISESS Scientist Joseph Patton was one of the speakers. He gave a talk on Understanding and Utilizing the Geostationary Lightning Mappers (GLMs) for Operational Meteorology and Lightning Safety Awareness.

(POC: J. Patton, jpatton4@umd.edu , Funding: GOES-R AWG & GOES-R PGRR)