

Weekly Report

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

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Awards and Recognition

Best Paper Award for GOES-R CWG: CISESS Scientists Zhipeng Wang, Fangfang Yu, Hyelim Yoo, Haifeng Qian and Xi Shao have been honored with a *SPIE Journal of Applied Remote Sensing* 2020 Best Papers Award. Their article, "On-orbit calibration and characterization of GOES-17 ABI IR bands under dynamic thermal conditions," was selected as the best paper for Photo-Optical Instrumentation and Design. The paper summarizes efforts by NOAA's GOES-R Calibration Working Group (CWG), in collaboration with other teams, to evaluate and alleviate negative impacts of warmer and floating focal plane module temperatures on ABI IR calibration.



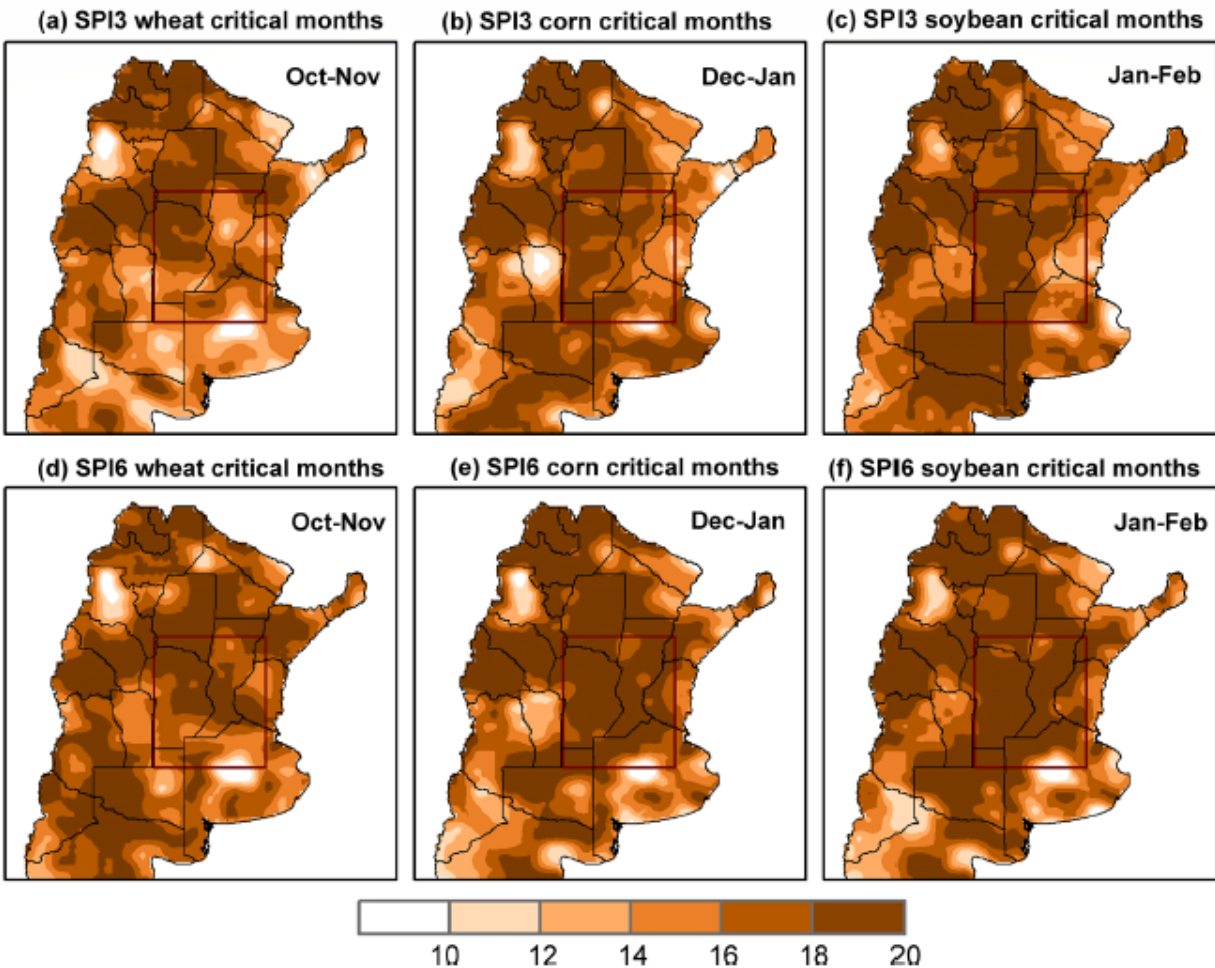
Zhipeng Wang, Xiangqian Wu, **Fangfang Yu**, Jon P. Fulbright, Elizabeth Kline, **Hyelim Yoo**, Timothy J. Schmit, Mathew M. Gunshor, Monica Coakley, Mason Black, Daniel T. Lindsey, **Haifeng Qian**, **Xi Shao**, Robbie Iacovazzi, 2020: On-orbit calibration and characterization of GOES-17 ABI IR bands under dynamic thermal condition. *J. Appl. Remote Sens.*, **14**, 034527, <https://doi.org/10.1117/1.JRS.14.034527> .

(POC: Zhipeng Wang, zhipeng.wang@noaa.gov; Funding: GOES-R PGRR)

Publications

Drought Characteristics in Argentina: CISESS Deputy Director E. Hugo Berbery has a new article published on May 17th in the journal *Hydrology and Earth System Sciences*. It describes a study that advances the understanding and impacts of dry episodes on wheat, corn, and soybean yields over Argentina's core crop region, a critical contribution to the country's gross domestic

product. The researchers looked at the droughts’ properties, including their magnitude, frequency at different timescales, duration, and severity over 40 years of data on precipitation and soil moisture data. They found that, regardless of the duration, droughts have larger impacts during the crops’ critical growth period. They suggest that shorter scale drought indicators during sensitive periods are more appropriate for predicting crop yield losses than the longer-scale indicators. This new approach can be helpful for regional decision-making systems that support planning by water managers and agricultural stakeholders.



The figure above shows the percentage of months under moderate to extreme drought conditions during the crops’ critical growing months from January 1979 to December 2018. The percentage of drought occurrence in northeastern Argentina ranges between 12% and 18 %, with the larger values located towards the core crop region’s eastern–northeastern sector.

Sgroi, L. C., M. A. Lovino, **E. H. Berbery**, and G. V. Müller, 2021: Characteristics of droughts in Argentina’s core crop region. *Hydrol. Earth Syst. Sci.*, 25, 2475–2490, <https://doi.org/10.5194/hess-2020-236>.

(POC: E. Hugo Berbery, berbery@umd.edu ; Funding: Task I)