

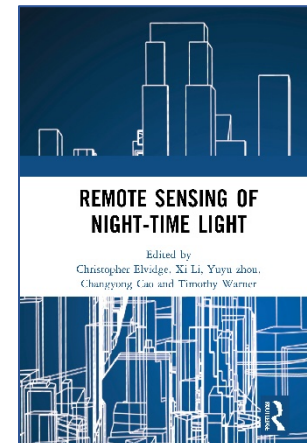
Weekly Report

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

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Publications

Remote Sensing of Night-time Light: CISESS Scientists Xi Shao, Sirish Uprety and Wen-hui Wang are contributors to a new book, *Remote Sensing of Night-time Light*, to be released on August 10th. Their chapter is on the assessment of straylight correction performance for the JPSS Visible/Infrared Imager Radiometer Suite (VIIRS) day/night band using Dome-C and Greenland under lunar illumination. This book captures key methodological issues associated with pre-processing night-time light data, documents state of the art analysis methods, and explores a wide range of applications.



Shi Qiu, **Xi Shao**, Chang Yong Cao, **Sirish Uprety** and **Wen Hui Wang**, Assessment of Straylight Correction Performance for the VIIRS Day/Night Band using Dome-C and Greenland under Lunar Illumination, in *Remote Sensing of Night-time Light* (eds., Christopher Elvidge, Xi Li, Yuyu Zhou, Changyong Cao and Timothy A. Warner) Routledge 2022, <https://www.routledge.com/Remote-Sensing-of-Night-time-Light/Elvidge-Li-zhou-Cao-Warner/p/book/9780367769833#>.

(POC: Xi Shao, xi.shao@noaa.gov, Funding: JSTAR)

Workshops, Conferences, and Meetings

International Lightning Safety Day: CISESS Scientist Daile Zhang was invited to give a talk at the meeting for the Preparing for Lightning Hazards - Preparing for 2021 International Lightning Safety Day. It was the lightning safety meeting with most participants and countries involved. There were 237 participants from 24 countries with 29 speakers from 17 countries. The meeting also had 14 domestic and international Lightning Safety Advocacy Programs (e.g. the U.S. National Lightning Safety Council, the African Centres for Lightning and Electromagnetics Network) as well as the World Meteorological Organization.



Daile talked about Lightning Detection from Space: how to obtain and use satellite lightning data. It provides the information of how to obtain the archived and current satellite-based lightning data and how to use them for lightning safety studies, especially for countries with no lightning or radar data available. The meeting videos are available at <https://www.youtube.com/playlist?list=PLapqki8XmijYQxVewilOVPdMpflYw9kuM>.

(POC: Daile Zhang, dlzhang@umd.edu, Funding: GOES-R PGRR & GOES-R AWG)

Other

Spaceborne SAR Measurement of Oil Spills: CISESS Scientist Frank Monaldo (STAR/SOCD) participated in a field campaign in May designed to validate algorithms to measure oil thickness on water using satellite Synthetic Aperture Radar (SAR). The first test was conducted off the coast of Santa Barbara. Off the coast there are permanent natural oil seeps. In the experiment, They flew a NASA’s UAVSAR (a SAR on a NASA aircraft) in conjunction with *in situ* surface oil thickness measurements. The measurements were made from the USCG Cutter Blackfin. In addition, the Marine Spill Response Corporation flew an aircraft to optically measure oil. The measurements also coincided with satellite SAR measurements from Sentinel-1A and Sentinel-1B. The researchers are just beginning to analyze the data and hope conduct a similar field test this fall.

May 2021 Field Test: USCG Cutter *Blackfin*

- Image oil from drone. In situ sampling.



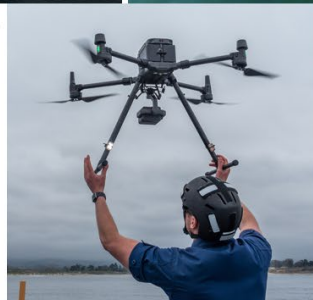
USCG Cutter *Blackfin*



Drone image of oil and the *Blackfin*.



In situ sampling



Drone deployment

(POC: Frank Monaldo, frank.monaldo@noaa.gov, Funding: Ocean Remote Sensing & NASA)