TRAVEL AND MEETING REPORTS

**Significantly Higher Level of Contemporary Global Fire Emissions:** CISESS scientists Joanne Hall and Louis Giglio (UMD Geography Department), who are working on the development of a next-generation science-quality geostationary satellite active fire product, co-authored a talk at the European Geosciences Union (EGU) General Assembly that took place on May 23-27 in Vienna, Austria and online. Their presentation provided evidence of significantly higher global fire emissions than previous inventories, as a result of recent advances in scientific understanding of burned area, fuel consumption, and emission factors. Increases in the availability of high-resolution burned area datasets from Sentinel and Landsat allow for more effective estimation of fire scars associated with small and discontinuous fires in many biomes. By combining these regional-scale datasets with burned area and active fire observations from the Moderate Resolution Imaging Spectroradiometer (MODIS), they estimate that global burned area exceeded 700 Mha per year during 2001-2020. The impact of contemporary wildfires may have been underestimated in past work.


*(Louis Giglio, lgiglio@umd.edu; Joanne Hall, jhall1@umd.edu; NOAA Roses)*
**Lightning as an Indicator of Climate:** CISESS scientist Daile Zhang attended and presented at the National Climate Assessment (NCA) “Lightning as an Indicator of Climate” Annual Science Meeting that was held on June 6-7 at the UMD Department of Atmospheric and Oceanic Science (AOSC) Atlantic Building. The meeting is an annual working group get-together for people from NASA, University of Arizona, City College of New York, University of Alabama in Huntsville, and University of Maryland on various lightning tasks/projects, including lightning climatology, lightning NOx observations, dry lightning, wildfires, and this year’s NASA Marshall Space Flight Center CubeSpark project. The talk, co-authored by Ken Cummins (University of Arizona), Tim Lang (NASA), and Dennis Buechler (NASA), included an inter-comparison of the Geostationary Lightning Mapper (GLM), International Space Station-Lightning Imaging Sensor (ISS-LIS), and Tropical Rainfall Measuring Mission-Lightning Imaging Sensor (TRMM-LIS). Dr. Zhang presented the work on the satellite lightning observations, funded by NOAA ROSES, and the Raspberry Pi observations, funded by a CISESS Seed Grant.

Inter-comparison of GLM, ISS-LIS, and TRMM-LIS

2022 NCA Meeting

Daile Zhang, Ken Cummins, Tim Lang, and Dennis Buechler

(Daile Zhang, dlzhang@umd.edu, GOES-R AWG, GOES-R PGRR, NOAA-NASA ROSES)