



Introduction to Lightning Observations and Applications

March 26, 28, & April 2, 2024

11:00-12:30 (Session A) or 14:00-15:30 (Session B) EST (UTC-5)

It is well-documented that there are approximately 24,000 worldwide fatalities from lightning each year, with about 10 times more being injured from lightning (NIH-NCBI). In addition, lightning strikes are one of the leading causes of wildfire ignition. During storms, lightning strikes on trees, utility poles, and infrastructure, can damage power lines resulting in power outages. Lightning flashes also generate electromagnetic fields (Sferics) that interfere with electrical devices on ground. As the intensity and frequency of extreme weather events are likely to increase due to climate change impacts, lightning activity will likely increase as well, causing more power outages, increased risks of wildfire ignition, and increased numbers of injuries and fatalities. Therefore, information about lightning activity is critical for better preparedness against these disasters. This three-part, introductory training focuses on global and regional lightning data products that can be applied to disaster risk preparedness.

Part 1: Background and History of Lightning Measurements

Trainers: Amita Mehta

Guest Speakers: Dr. Steven Goodman (Thunderbolt Global Analytics), NASA-GSFC

- Identify why and how lightning occurs
- Identify global patterns of lightning and the potential for resulting damage
- Recognize the history of lightning measurements at NASA

Part 2: Overview of Current Lightning Data Products from Remote Sensing and Ground-Based Measurements

Trainers: Amita Mehta

Guest Speakers: Dr. Timothy Lang, NASA-MSFC

- Identify lightning data production methodologies for selected sensors
- Identify available lightning data products

Part 3: Overview of Geostationary Lightning Mapper (GLM) Lightning Data Access and Applications

Trainers: Amita Mehta

Guest Speakers: Dr. Scott Rudlosky (NOAA), Dr. Christopher Schultz (NASA-MSFC)

- Become familiar with Geostationary Lightning Mapper (GLM)
- Recognize impact of lightning on disaster risks



ARSET empowers the global community through remote sensing training.