Introduction to NASA Earth Observations and Tools for Operational Wildfire Monitoring and Management

April 16, 23, & 30, 2025

11:00-12:30 (Session A) or 15:00-16:30 (Session B) EDT (UTC-4)

Wildland fire managers, scientists and the public benefit from timely and easy to access information about current fire activity to provide information about potential risks and support suppression activities. NASA provides multiple sources of time sensitive satellite imagery and derived data products within the Fire Information for Resource Management System (FIRMS). FIRMS is a web-based application with a dynamic mapping interface to visualize current and historical satellite imagery, active fire detections/hot spots and related science data products to identify the location, extent, and intensity of wildland fire activity and its effects. The application also provides multiple tools for users to access and ingest data as downloadable GIS datasets and map services for use in applications. This three-part training will familiarize participants with the various modules available in FIRMS, explore the range of data and information available as well as the characteristics of satellite-based active fire detection, and provide hands-on experience that participants can apply to query, access and visualize the data in GIS and other applications.

Part 1: Introduction to Satellite-Based Active Fire Detection using FIRMS

ARSET Instructors: Melanie Follette-Cook

Guest Instructors: Jenny Hewson, Brad Quayle, Diane Davies

- Satellite-based detection of fires
- FIRMS navigation and modes
- Strengths and limitations of different satellite-based active fire detection data products

Part 2: Wildfire Monitoring and Evaluation

ARSET Instructors: Melanie Follette-Cook

Guest Instructors: Jenny Hewson, Brad Quayle, Diane Davies

- How FIRMS active fire data sources can be used for early detection of wildfires
- Using FIRMS capabilities to monitor wildfire growth
- Identifying factors that can impact wildfire detection

Part 3: Data Access

ARSET Instructors: Melanie Follette-Cook

Guest Instructors: Dylan Mendes, Otmar Olsina, Asen Radov

- Exploring Web Services available through FIRMS
- Options for ingesting active fire data and information into a GIS platform

ARSET empowers the global community through remote sensing training.