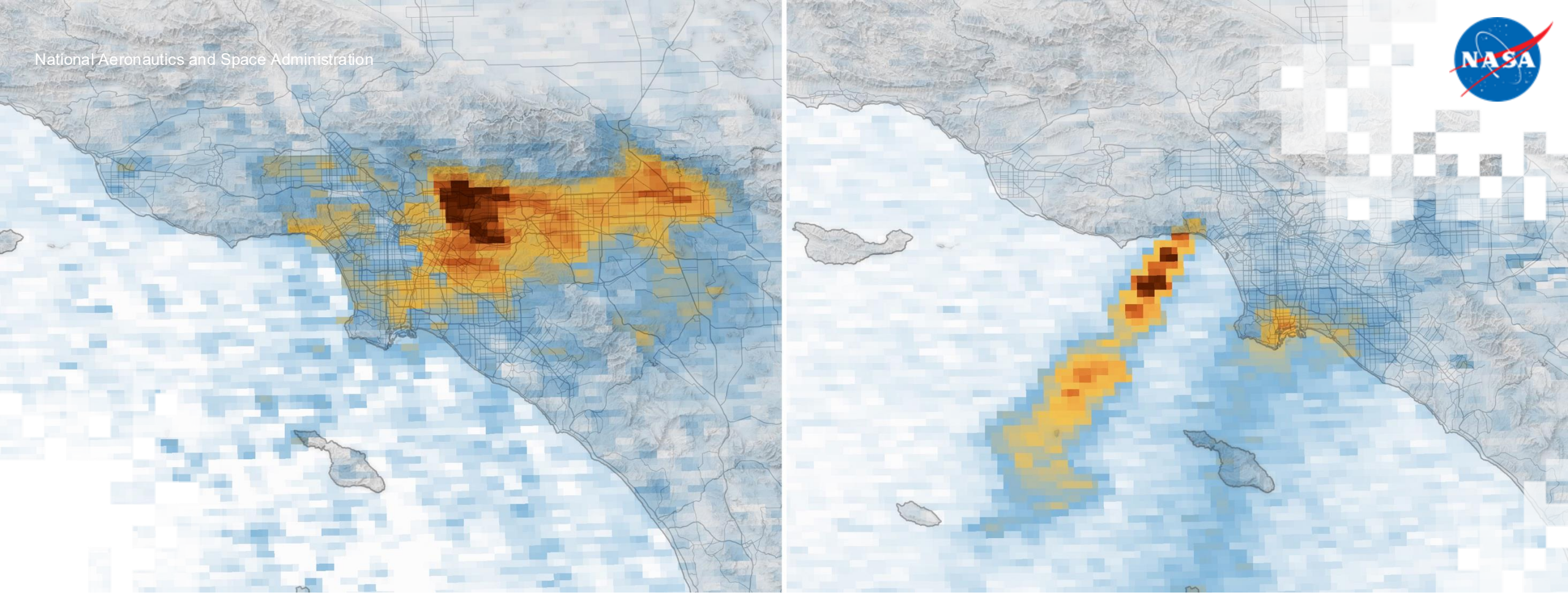
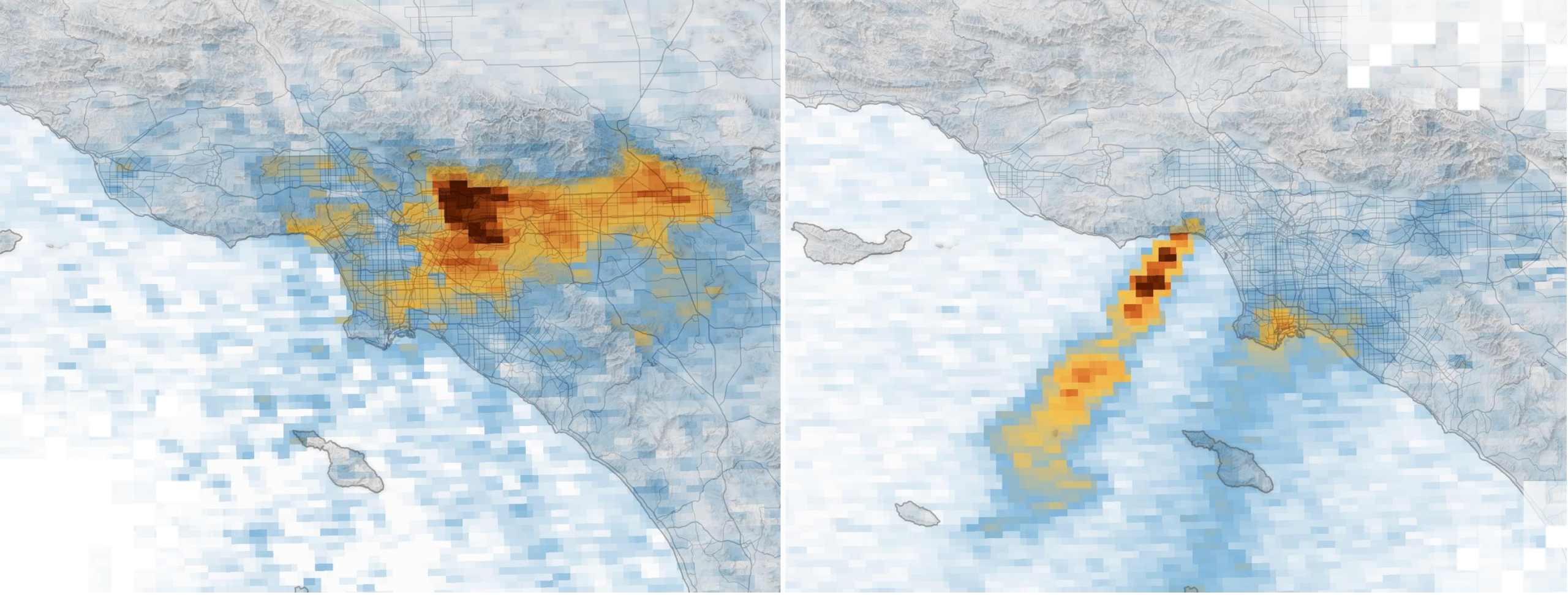


Introduction to Geostationary Observations for Air Quality Applications in the Western US

Day 1, Part 1: Welcome!

ARSET, WESTAR, CIRA, TEMPO Applications, and ASDC Teams

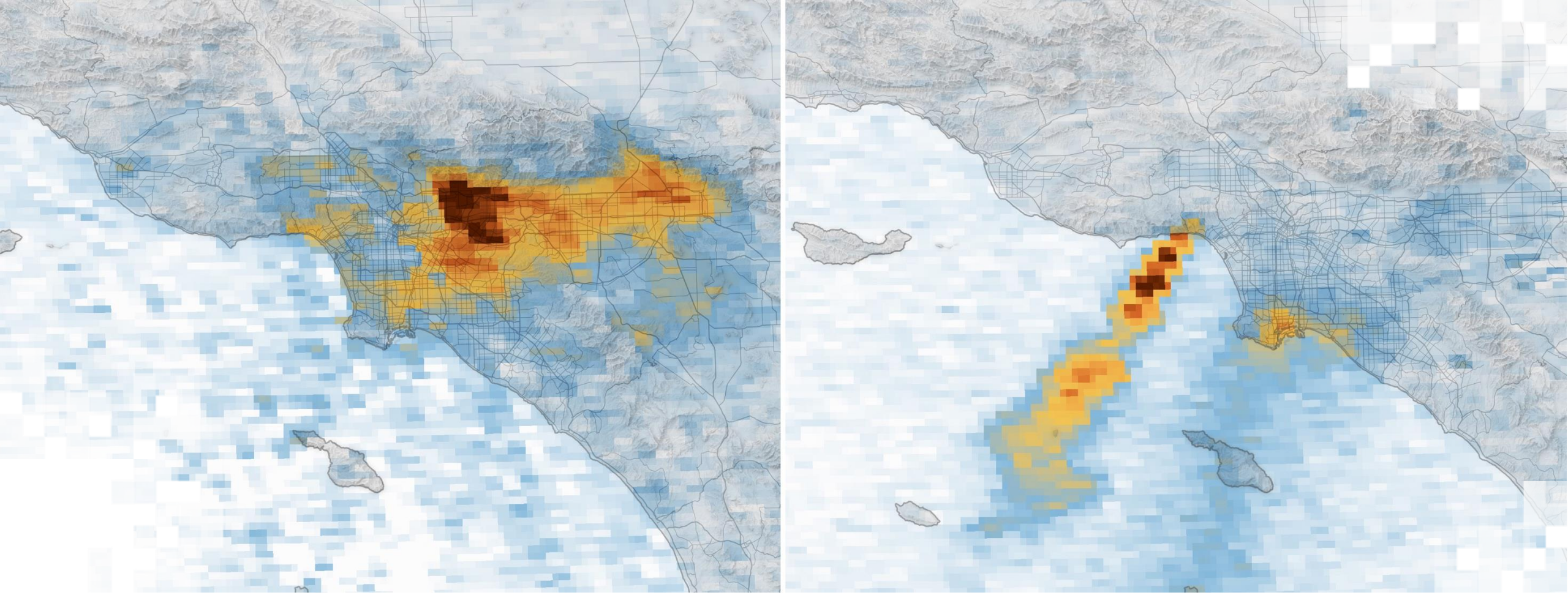
August 5, 2025



Welcome to CSU CIRA!

Welcome from WESTAR and CIRA!

- Welcome to Fort Collins and CSU/CIRA!
- CIRA facility landmarks-restrooms, water bottle refill stations
- Wi-Fi connectivity
- Drinks, lunch, and snacks
- Dinner plans
- Carpooling to CIRA from the hotel
- Heading back to the airport on Thursday/Friday
- Questions



About ARSET

About ARSET

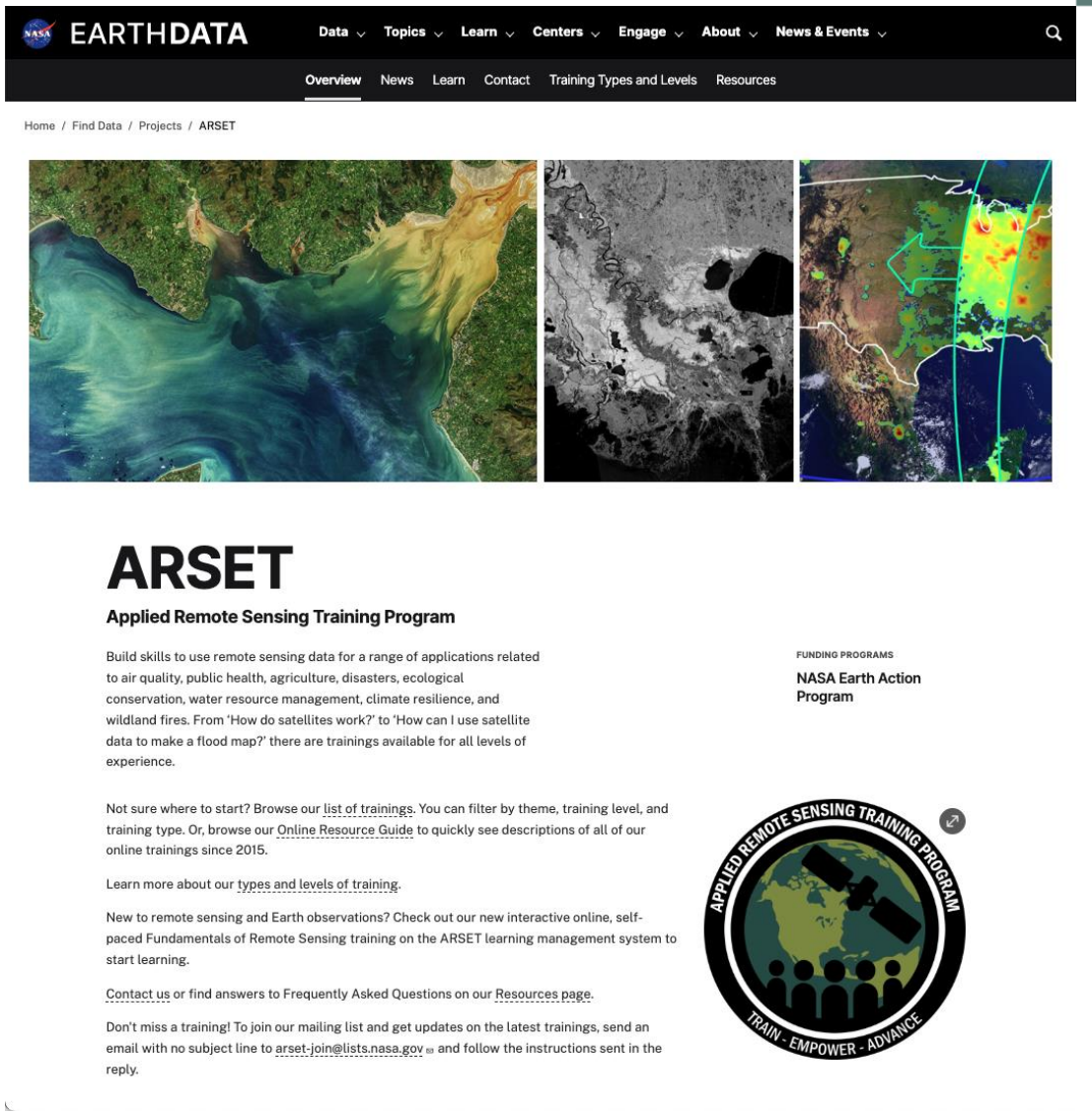
- **ARSET provides accessible, relevant, and cost-free training on remote sensing satellites, sensors, methods, and tools.**

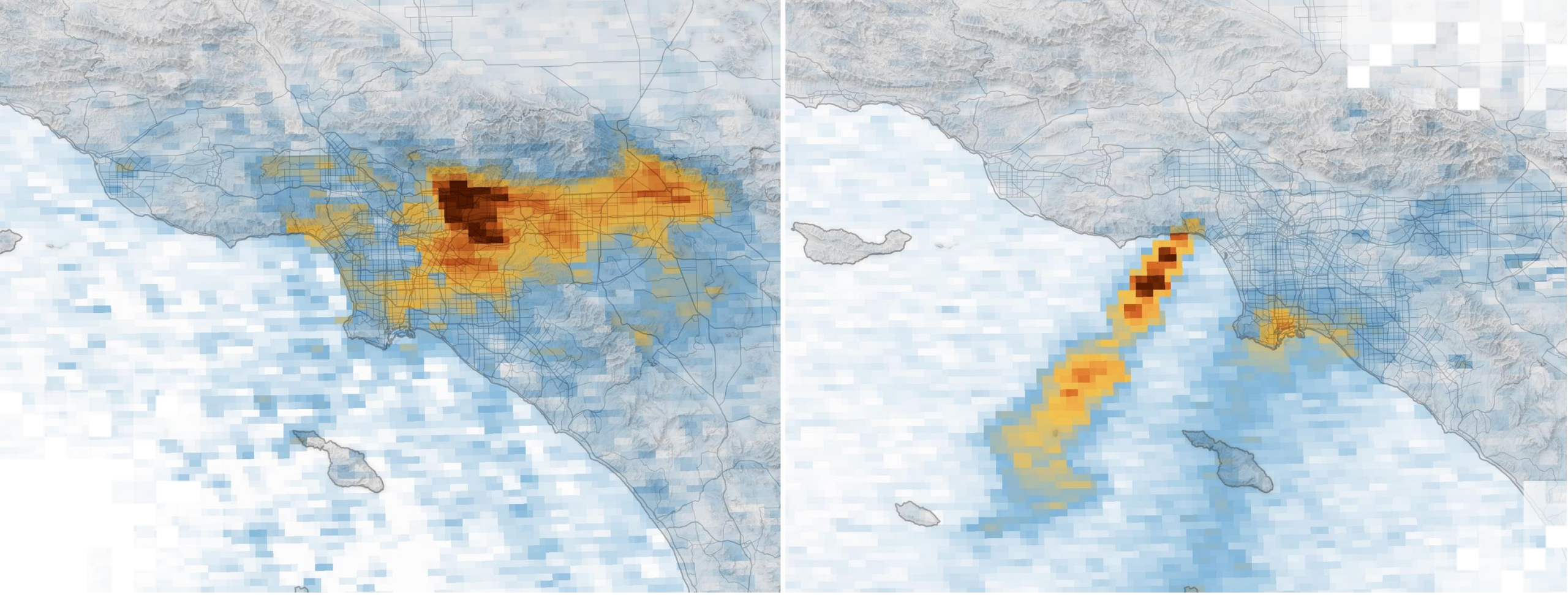
- Trainings include a variety of applications of satellite data and are tailored to audiences with a variety of experience levels.

About ARSET Trainings

- Online or in-person
- Live and instructor-led or asynchronous self-paced
- Cost-free
- Bilingual and multilingual options
- Only use open-source software and data
- Accommodate differing levels of expertise

- Visit the ARSET website to learn more.





Introduction to Geostationary Observations for Air Quality Applications in the Western US Overview

Source: NASA GSFC Scientific Visualization Studio
https://svs.gsfc.nasa.gov/5142/

Training Learning Objectives

By the end of this training, participants will be able to:

- Identify TEMPO capabilities and available data products.
- Describe the strengths and limitations of TEMPO compared with existing AQ satellite or ground-based remote sensing resources and in situ observations.
- Recall TEMPO data distribution interfaces and be able to visualize data online as well as download files and perform basic analysis and plotting.
- Apply remote sensing data toward primary air quality challenges using visualization tools and codes.
  - Regional air pollutant patterns and trends
  - Smoke, dust, and ozone precursor tracking
  - Ambient monitoring and forecasting support
  - Source identification & emissions assessments
  - Public communication
  - Exceptional event demonstrations

Training Outline

Day 1

9:00 Welcome
9:30 Review of RS for AQ
10:30 NASA Worldview
10:45 Break
11:00 TEMPO Intro
12:00 Lunch
1:00 TEMPO Trace Gases
2:00 TEMPO Visualization
2:30 Break
2:45 TEMPO Aerosols
3:45 TEMPO $PM_{2.5}$ Product
4:30 Wrap-Up

Day 2

9:00 Recap of Day 1
9:15 Getting TEMPO Data
9:45 Reading TEMPO Files
10:45 Break
11:00 TEMPO in EPA RSIG
12:00 TEMPO in Earthdata GIS
12:30 Lunch
1:30 Use Case: Surface AQ
2:45 Break
3:00 Use Case: Ozone
4:15 Wrap-Up

Day 3

9:00 Recap of Day 2
9:15 Use Case: Smoke, Dust
10:15 Break
10:30 Use Case: EE Demos
11:30 Prepare for Project
12:00 Lunch
1:00 Group Project
2:30 Break
2:45 Project Presentations
4:15 Wrap-Up

A certificate of completion will be awarded at the end of the workshop.

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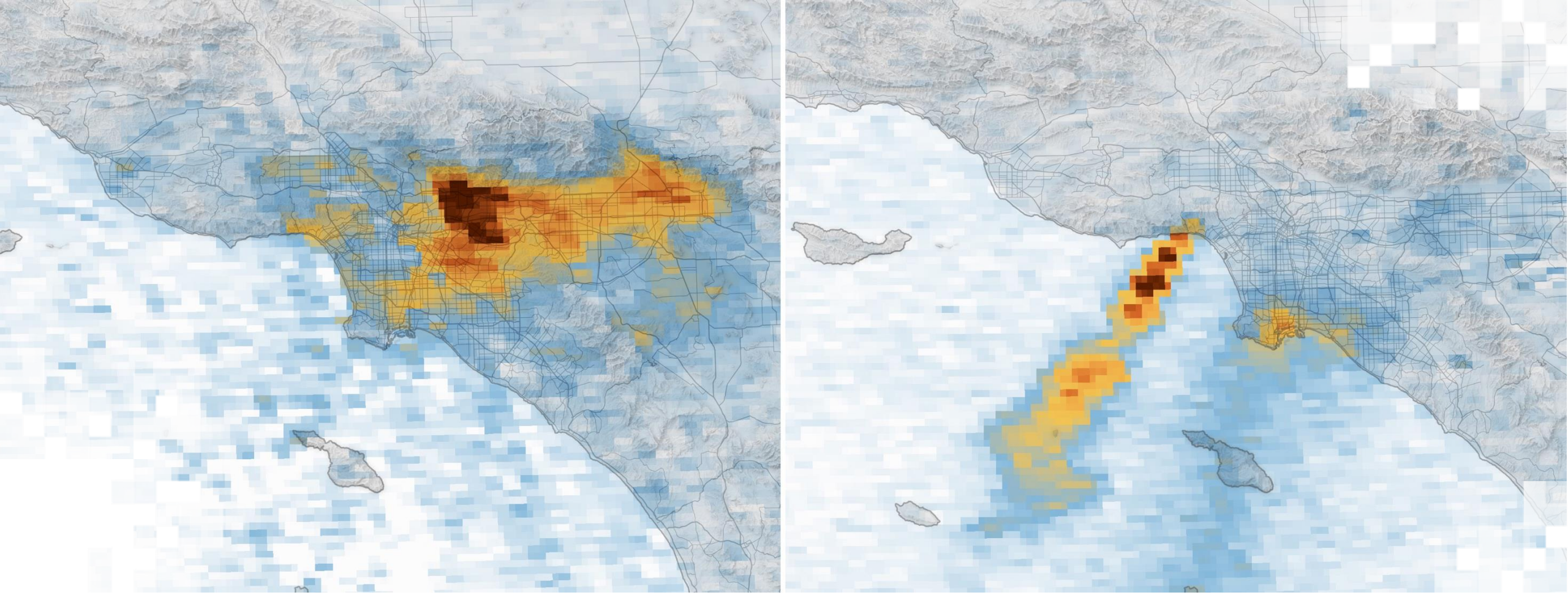


Meet the Trainers

Trainers – Applied Remote Sensing Training (ARSET) Program

Carl Malings

Assistant Research Scientist

Morgan State University
& NASA GSFC

Kristina Pistone

Research Scientist

Bay Area Environmental
Research Institute & NASA ARC

Kevin Fuell

Research Scientist

University of Alabama Huntsville
& NASA MSFC

Trainers – TEMPO Mission Applications

Aaron Naeger

TEMPO Mission
Applications Lead

NASA MSFC

Trainers – Atmospheric Science Data Center (ASDC)

Georgina Hayes-Crepps

Science & Development Coordinator

AMA & NASA LARC

Hazem Mahmoud

ASDC DAAC Scientist

RSES & NASA LARC

Daniel Kaufman

ASDC TEMPO Lead Data Scientist

Booz Allen Hamilton, NASA LARC

Trainers - Guests

James Szykman

Senior Research Engineer

EPA

Barron Henderson

Physical Scientist

EPA

Matt Freeman

Senior Scientific Applications Developer

Applied Research Associates

Trainers - Guests

Amy Huff

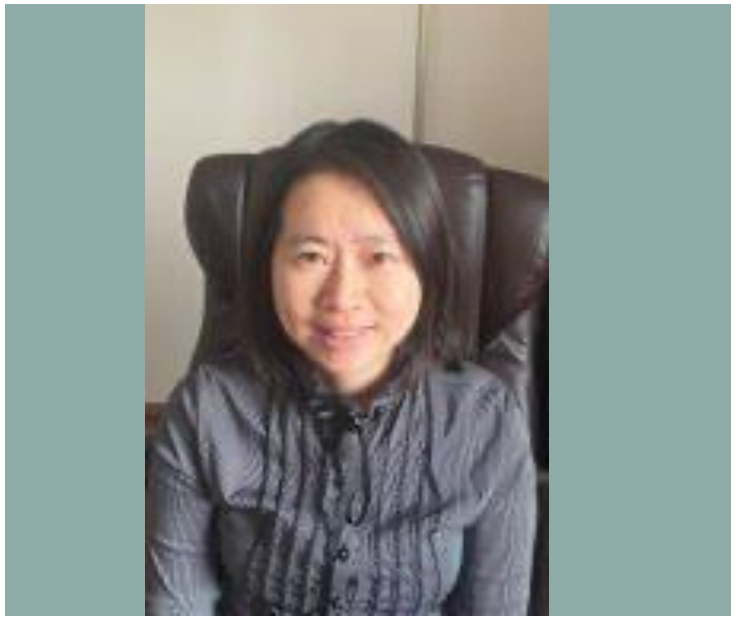
Senior Research Scientist

IMSG & NOAA/NESDIS/STAR

Emily Bian

Air Quality Specialist

SCAQMD

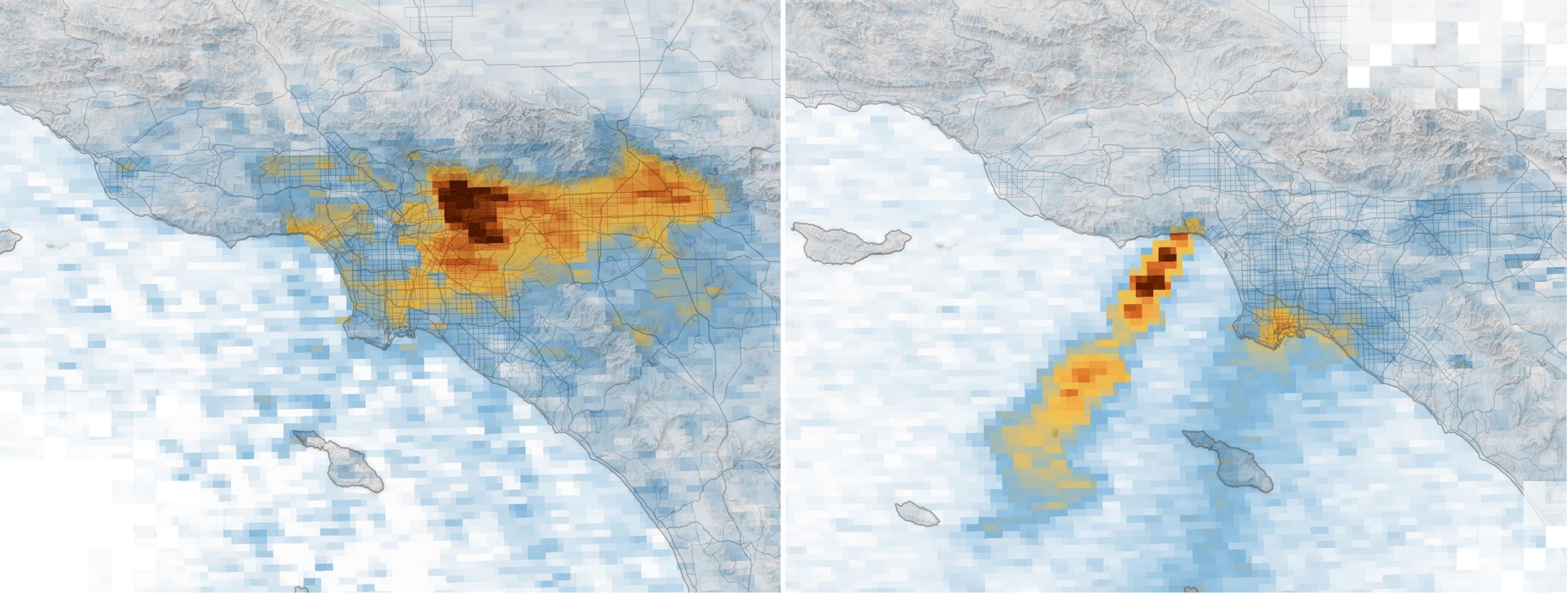


WESTAR & CIRA Hosts

Mary Uhl
Executive Director
WESTAR

Shawn McClure
Research Associate IV
Colorado State University

Rhonda Payne
WRAP Program Manager
WESTAR

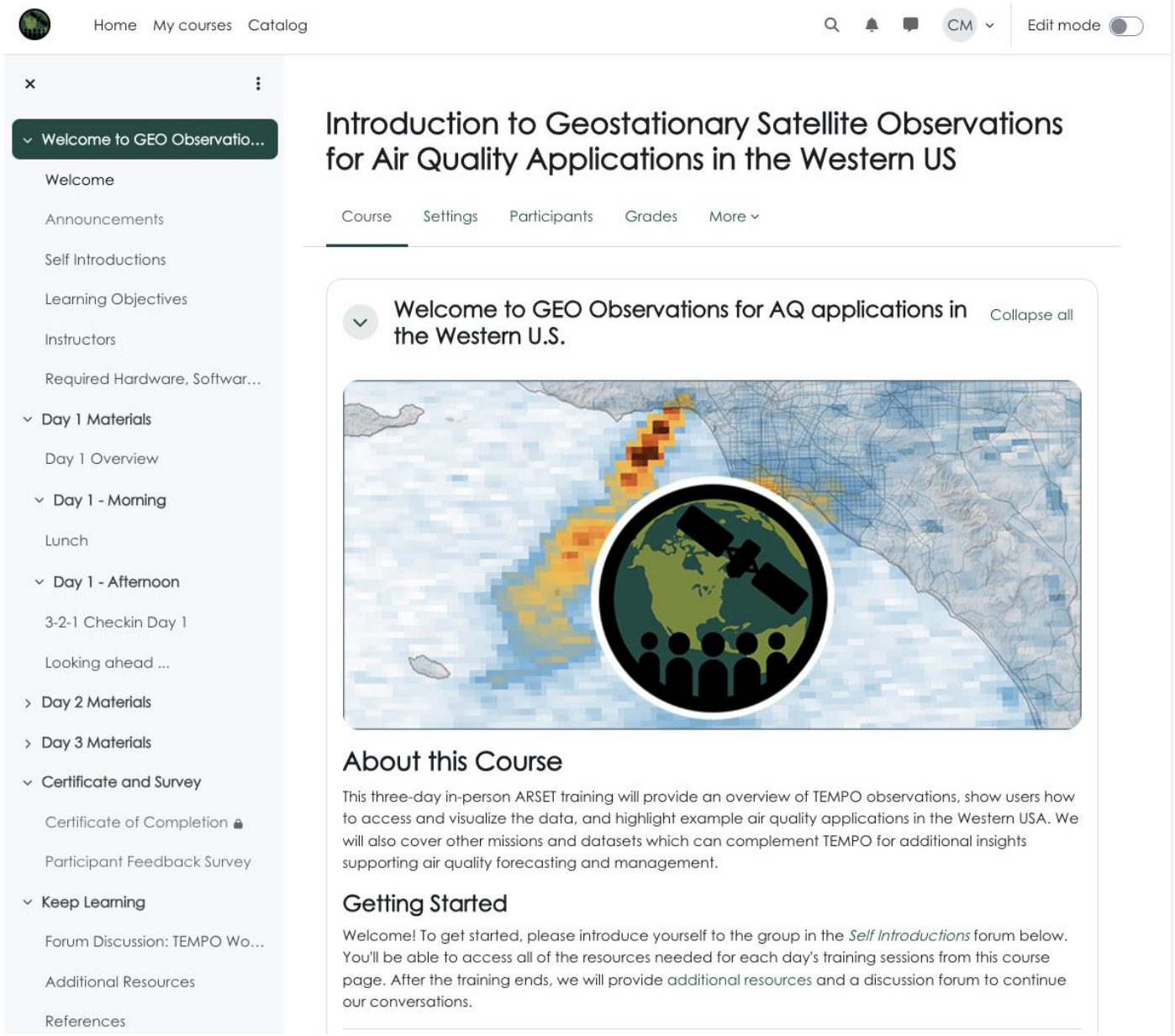


Moodle Page and Forum

Moodle

- Go to the course in Moodle.
- Navigate the days and parts.
- Look at the “Self Introductions”.
- Introduce yourself.

https://arset.unhosting.site




APPLIED REMOTE SENSING TRAINING PROGRAM
TRAIN - EMPOWER - ADVANCE

Thank You!