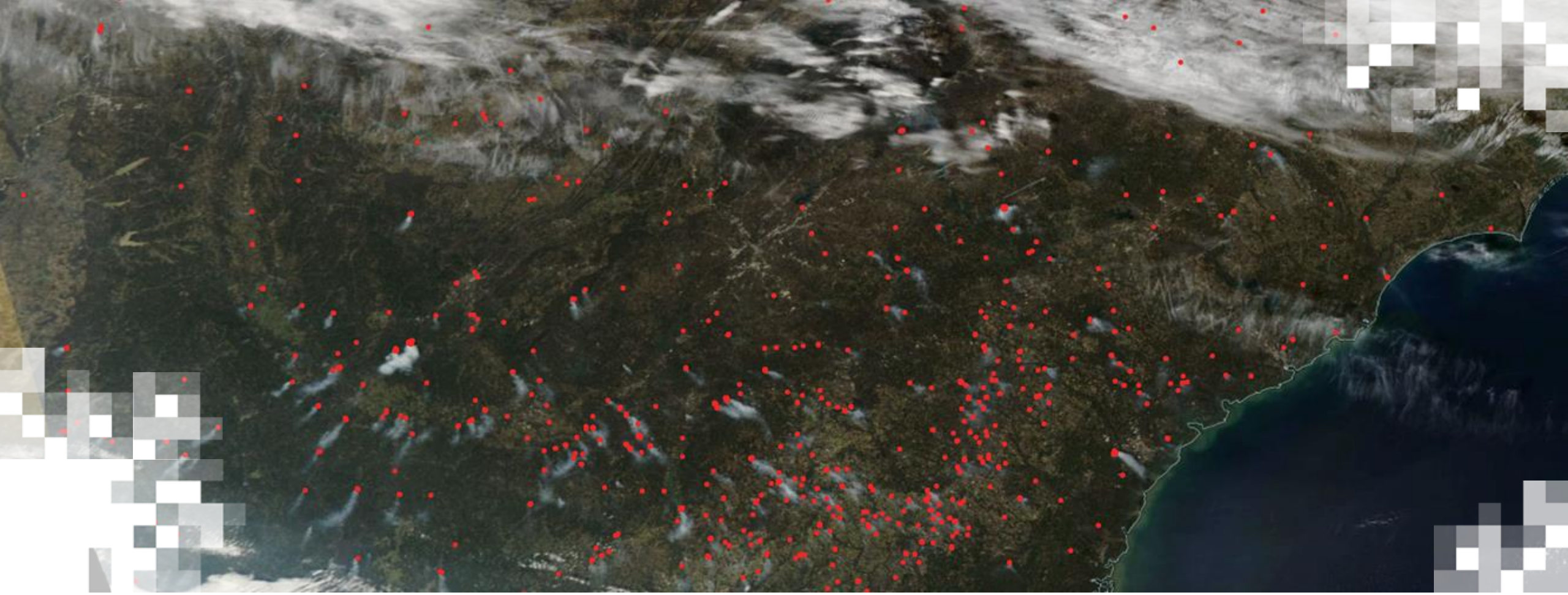


Hands-on Practice
Case Study Exploration

Hands on practice

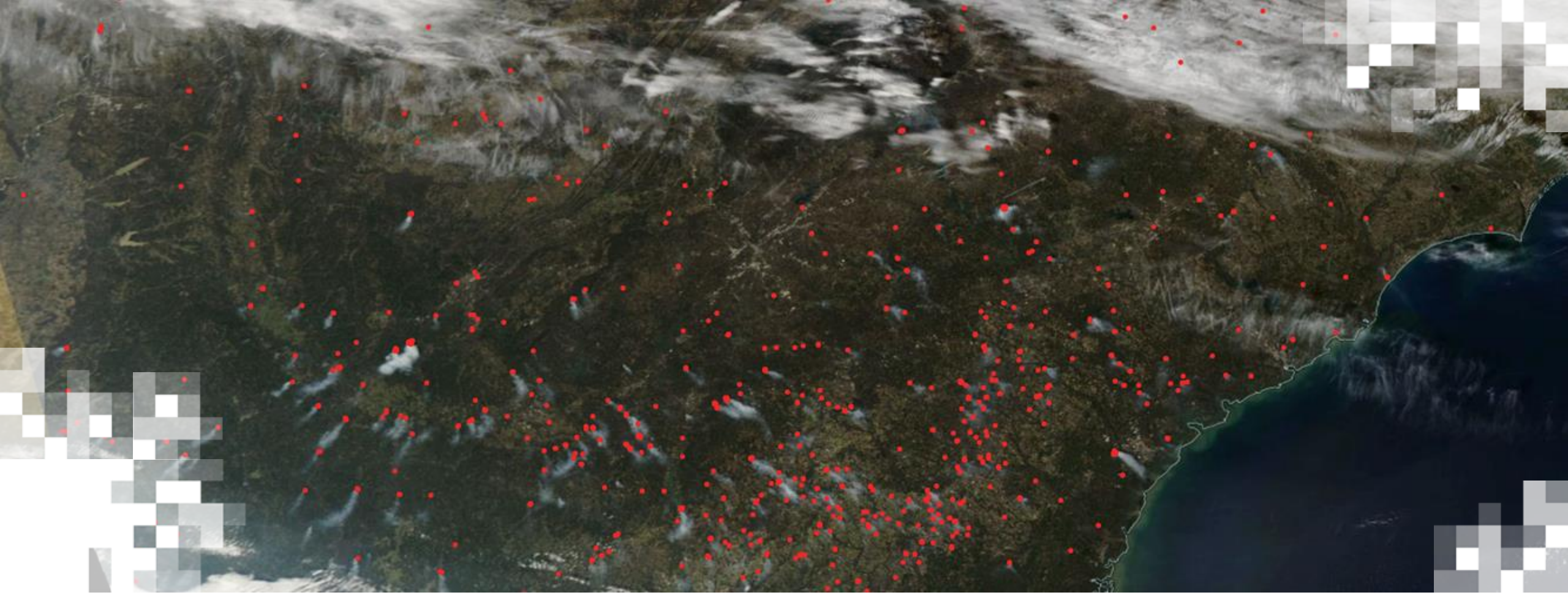
- In small groups or individually, choose a smoke or fire event of interest and explore it using Worldview, FIRMS, and/or your preferred tool.
- Trainers are available for troubleshooting and feedback.
- Some features to explore:
  - Temporal progression of event
  - Availability (or not) of data (e.g., cloud cover)
  - What else would you want to see to understand this event? How might you find those data?
- Some additional questions to keep in mind:
  - What event did you choose to explore?
  - Which tool(s) did you use and why?
  - Did you find any difficulties with the tools or data?
  - Did you see anything interesting or weird?
  - How might this apply to your work/how might you use these resources in the future?
- At the end, we will ask for volunteers to share out what you found.

Suggestions to explore

- **FIRMS**: https://firms.modaps.eosdis.nasa.gov/
  - US/Canada or international FIRMS maps, current or past events
  - Compare fire detections and imagery from various satellites
- **Worldview**: https://worldview.earthdata.nasa.gov
  - True-color: base layers (different overpass times) and GOES-ABI (past 90 days)
  - TEMPO: aerosol index, NO_2, HCHO, O_3.
    - TEMPO (L3) reprocessing is ongoing in Worldview; best availability at the moment is:
      - 3 Feb 2026 – present
      - 11 July 2024 - 6 Aug 2024
      - 2 Aug 2023 - 8 Sep 2023
  - MODIS/VIIRS: AOD (different MAIAC, Dark Target, Deep Blue algorithms)
  - False color/burned areas
  - Explore other layers! (+ Add Layers -> "Air Quality," "Fires," or "Smoke Plumes")
- **TEMPO Smithsonian viewer**: https://tempo.si.edu/data_for_public.html
  - Available for the full record: August 2023 – present (TEMPO NO_2 data only)
- **Your own data** (AQ monitors, sensors, databases…)

Some dates with fires

- Southern Georgia: Feb 12-13, 2026
- Oklahoma/Arkansas: Feb [23, 26], 2026
- Southern California (L2 TEMPO in Worldview): Jan 7-11, 2025
- Northern Texas (L2 TEMPO in Worldview): Feb 26-29, 2024
- Southwest of Tallahassee: yesterday!



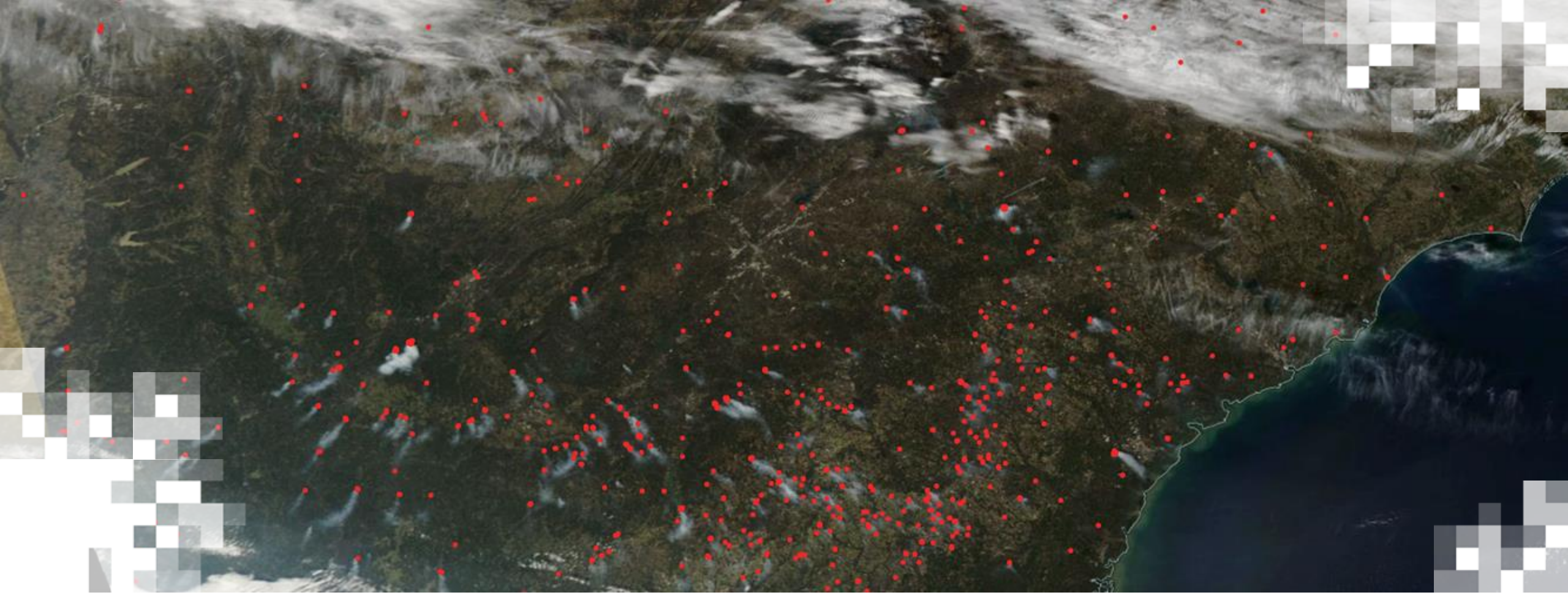
Hands-on Practice Time

Please ask us for help!

We will conclude at 17:30

Hands on practice – Share what you found

- Which tool(s) did you use and why?
- Did you find any difficulties with the tools or data?
- Did you see anything interesting or weird?
- How might this apply to your work? How might you use these resources in the future?



NASA Satellite Observations and Tools for Fire and Smoke Monitoring Summary

Training Summary and Discussion

Objectives:

- Identify satellite data products for detecting and monitoring fires and smoke plumes.
- Understand the capabilities and limitations of these data sources.
- Access data products for active fire and smoke monitoring using NASA tools (Worldview, FIRMS).
- Generate and interpret visualizations of satellite-based observations for fire and smoke monitoring.

Takeaways/Discussion

Please fill out our survey!

- Your constructive feedback helps us evaluate and improve our trainings. We appreciate any comments you would like to give, and we will read and review them all!

https://go.nasa.gov/4lCs1MF

Where to learn more

- Check ARSET for trainings on other missions & datasets
  - ARSET trainings
- Check Earthdata for Earth observation data
  - Earthdata Search
  - Earthdata Forum
- Check Earth Science for new projects & results
  - NASA Earth Science Research
  - Wildfires and Climate Change
  - Air Quality

Contact Information

Trainers:

- Caterina Mogno
  - caterina.mogno@nasa.gov
- Aaron Naeger
  - aaron.naeger@nasa.gov
- Kristina Pistone
  - kristina.pistone@nasa.gov
- Dylan Mendes
  - dylan.m.mendes@nasa.gov

- ARSET Website
- ARSET YouTube

For questions, comments, or to share how you have applied our trainings to your work or studies, email nasa.arset@gmail.com.

Join our quarterly newsletter to stay up-to-date on our latest trainings:

1. Send an email with no subject line to arset-join@lists.nasa.gov.
2. Follow the instructions sent in response.

Resources

- Training webpage
- NASA Worldview
- FIRMS


APPLIED REMOTE SENSING TRAINING PROGRAM
TRAIN - EMPOWER - ADVANCE

Thank You!