

Survey Time!

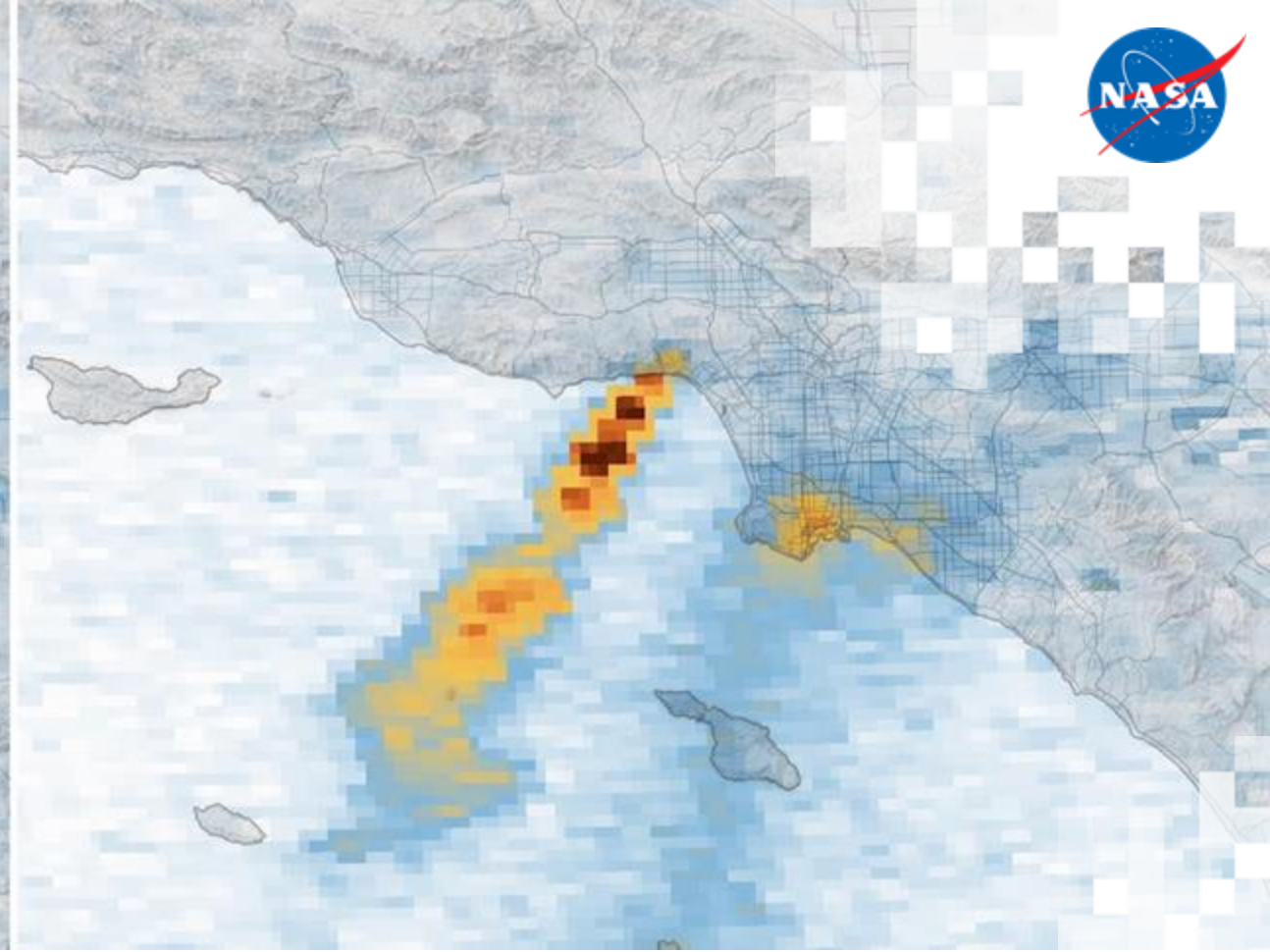
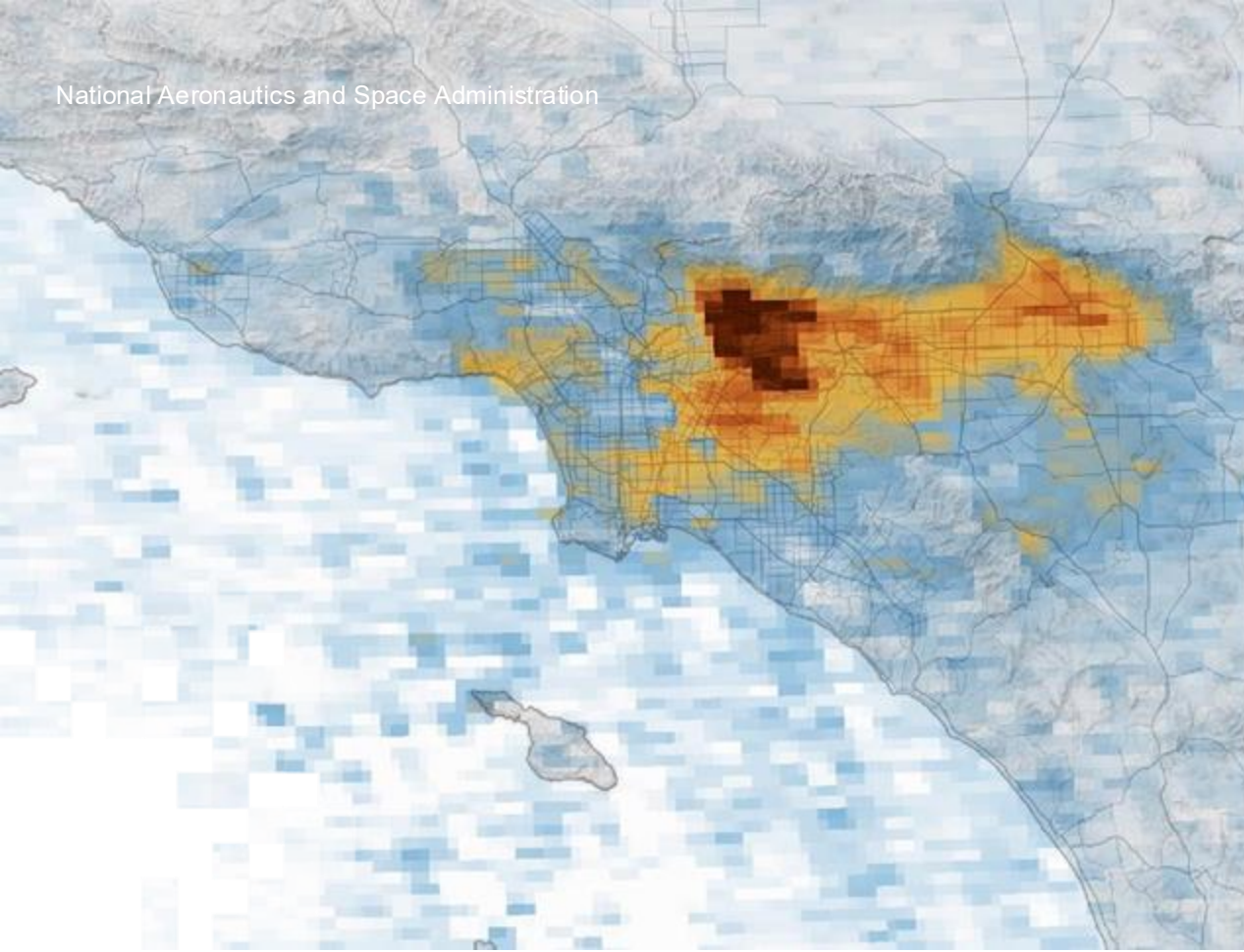
We want your feedback on this workshop!

Go to the Moodle site for the link

(Left Menu -> Participant Workshop Feedback Survey -> Survey: Attendee Post Workshop)

or

[Click on this link](#) if you have the slide PDF open.



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

Day 3, Part 5: Conclusions & Closing Thoughts

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

August 7, 2025



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



What are some capabilities, strengths, and limitations of TEMPO?

- Orbit: Geostationary
- Spectral Resolution: Hyperspectral
- Temporal Resolution: Hourly
- Spatial Resolution: $\sim 10 \text{ km}^2$

How do these compare with other instruments & missions?



What are some data products you learned about?

- TEMPO
 - Nitrogen Dioxide
 - Formaldehyde
 - Ozone Profiles
- TEMPO & ABI
 - AOD, ALH, ADP
 - Near-Surface PM_{2.5}
- Other Missions & Instruments
 - Aerosols: MODIS, VIIRS
 - Trace Gases: OMI, TROPOMI
 - Ground Networks: Pandora, TOLNet



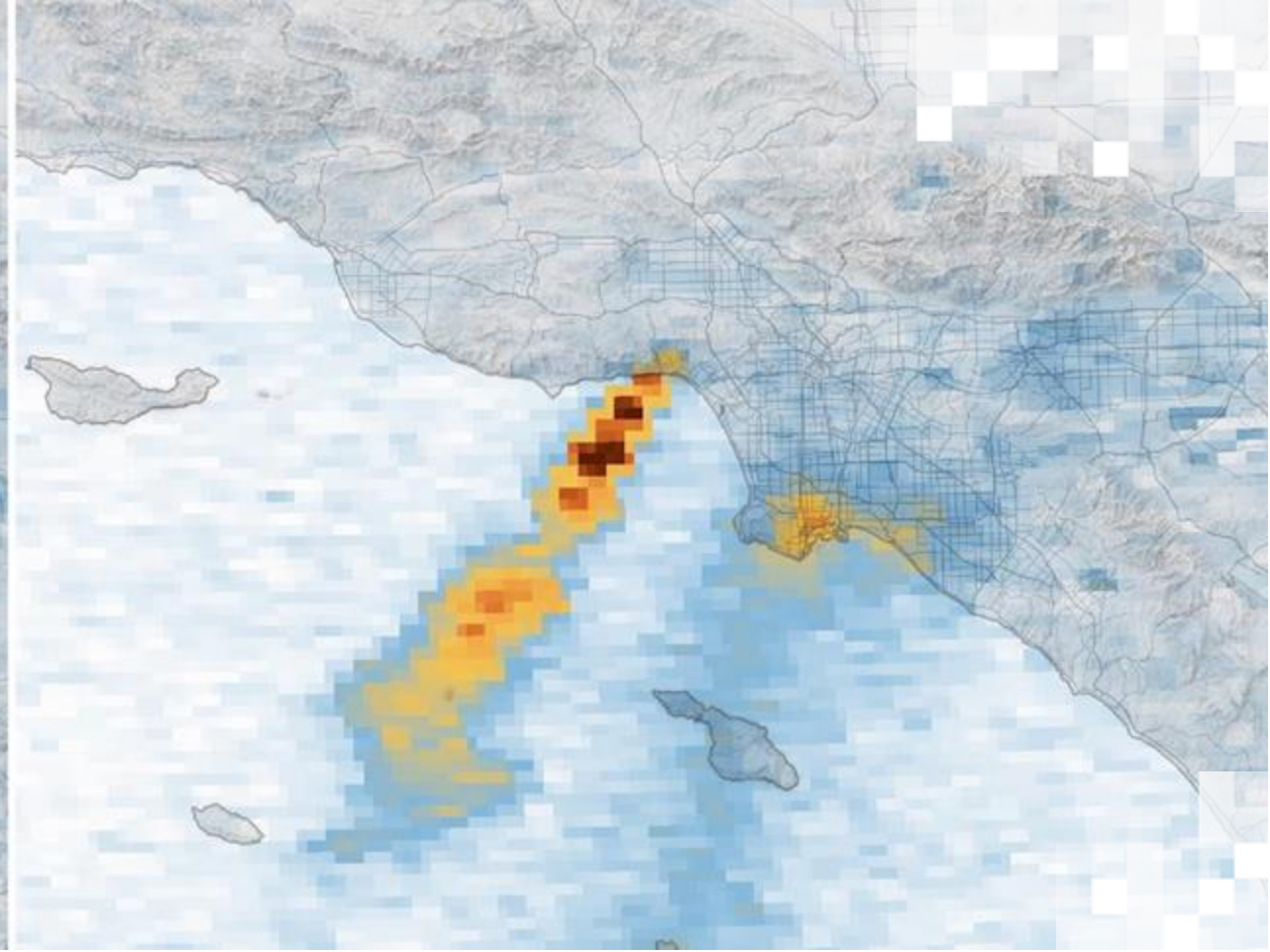
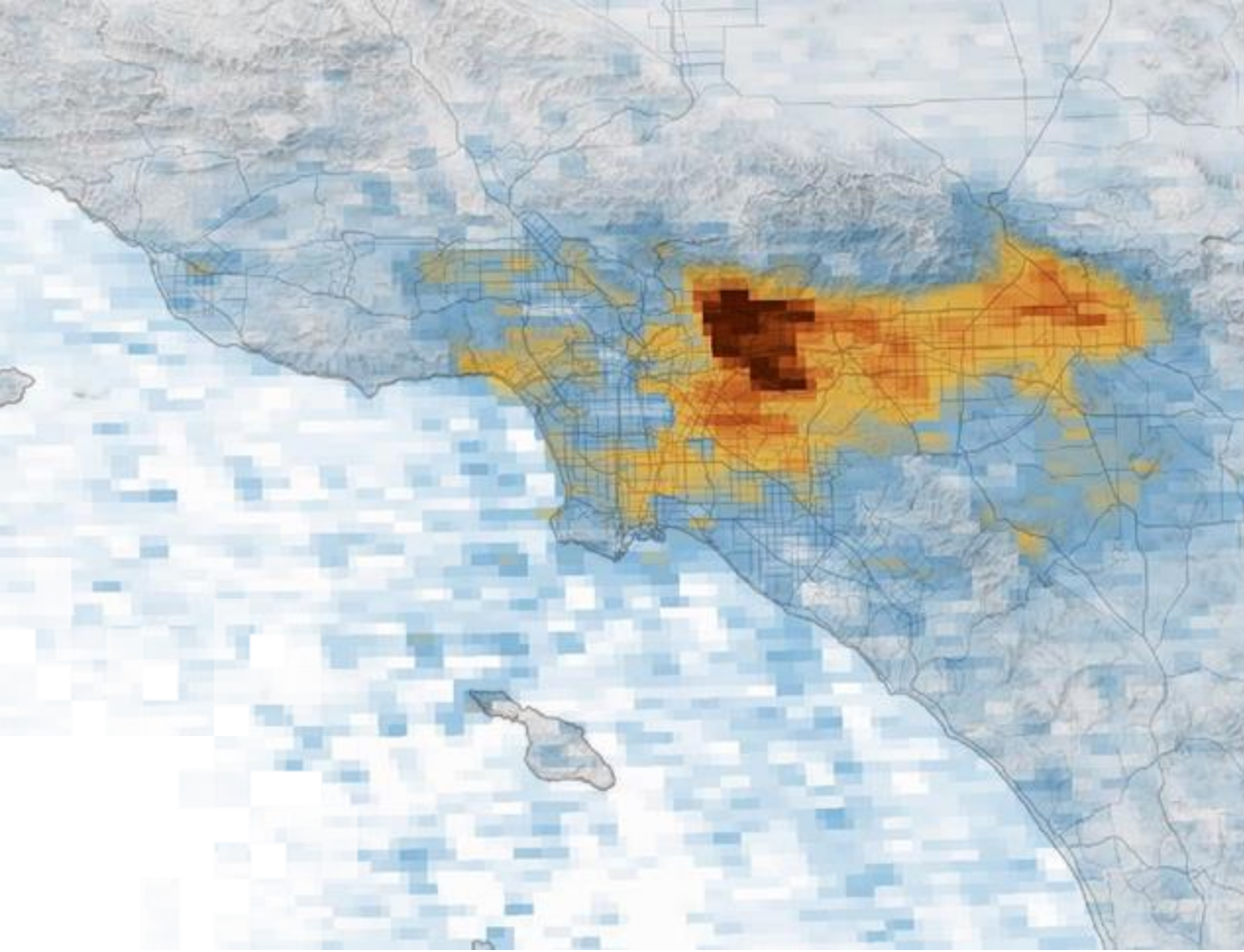
What are some visualization & analysis tools you learned about?

- Worldview
- TEMPO Data Viewer
- RSIG3D
- Earthdata GIS
- Earthdata Search
- Python Packages (e.g., Harmony-py, earthaccess, pyrsig)

What are some ways you might be use TEMPO or other NASA data?

- Assessing air pollutant patterns and trends
- Tracking smoke, dust, and ozone precursors
- Demonstrating exceptional events
- Creating communication materials for policymakers & the public
- Estimating surface-level concentrations in unmonitored areas
- Looking for sources & estimating emissions
- Evaluating models & forecasts





Next Steps

Next Steps

- Training certificates will be e-mailed in the next few weeks
- All training resources will remain accessible in the Moodle page
 - Public training webpage will be updated with materials for broader access
- Use the Discussion Forum (in Moodle Workshop site) to stay connected:
 - Ask questions about TEMPO capabilities, data/products, or how to address an AQ challenge
 - ARSET to initially monitor the forum and help to find answers and involve experts
 - Share with your peers as you work with TEMPO over the long term
 - Develops community that can support each other and encourages new participants



Where to learn more

- Check [ARSET](#) for trainings on other missions & datasets
 - [ARSET Trainings](#)
- Check ASDC for examples and resources for working with TEMPO data
 - [ASDC TEMPO Project Page](#)
 - [ASDC TEMPO Github](#)
- Check Earthdata for Earth observation data
 - [Earthdata Search](#)
 - [Earthdata Forum](#)
 - [Earthdata Air Quality Landing Page](#)
- Check Earth Science for new projects & results
 - [Atmospheric Composition](#)
 - [Air Quality](#)
 - [Health & Air Quality Applied Sciences Team](#)





Thank You!

