



OPERA

Observational Products for End-Users from
Remote Sensing Analysis

Fifth OPERA Workshop

September 11, 2025

Stakeholder Engagement Program Updates

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University of Maryland*

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Government sponsorship acknowledged.

This workshop is open to US and non-US participants. The
material presented has been cleared for unlimited release.

No ITAR information is to be presented.

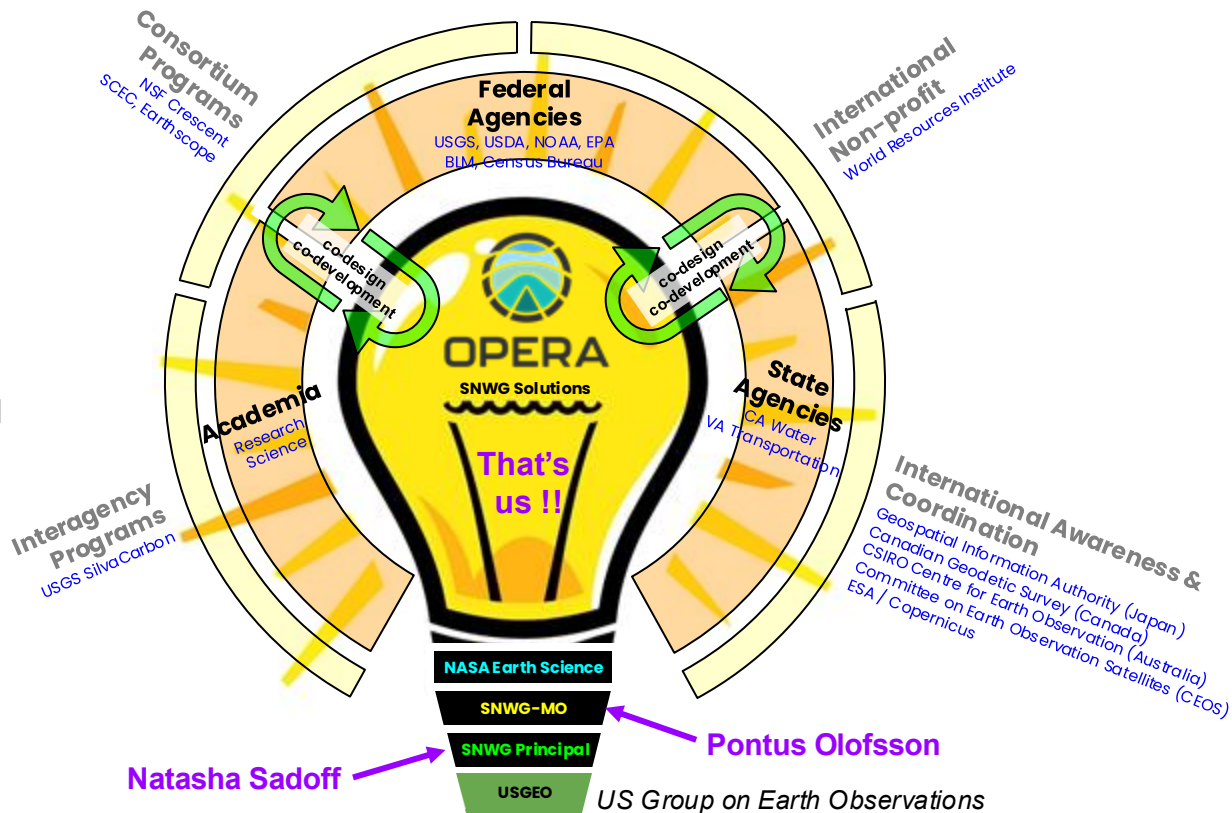
National Aeronautics and
Space Administration



Stakeholder Engagement Program (SEP)



- A key goal of the OPERA Project is to **engage** with interested satellite **data users** and members of the broader science and application community
- **Primary stakeholders:**
 - Managers at US Federal Agencies → ensure OPERA products **meet agency needs**
 - Users at Federal and State agencies → directly utilize OPERA products for their agency's applications

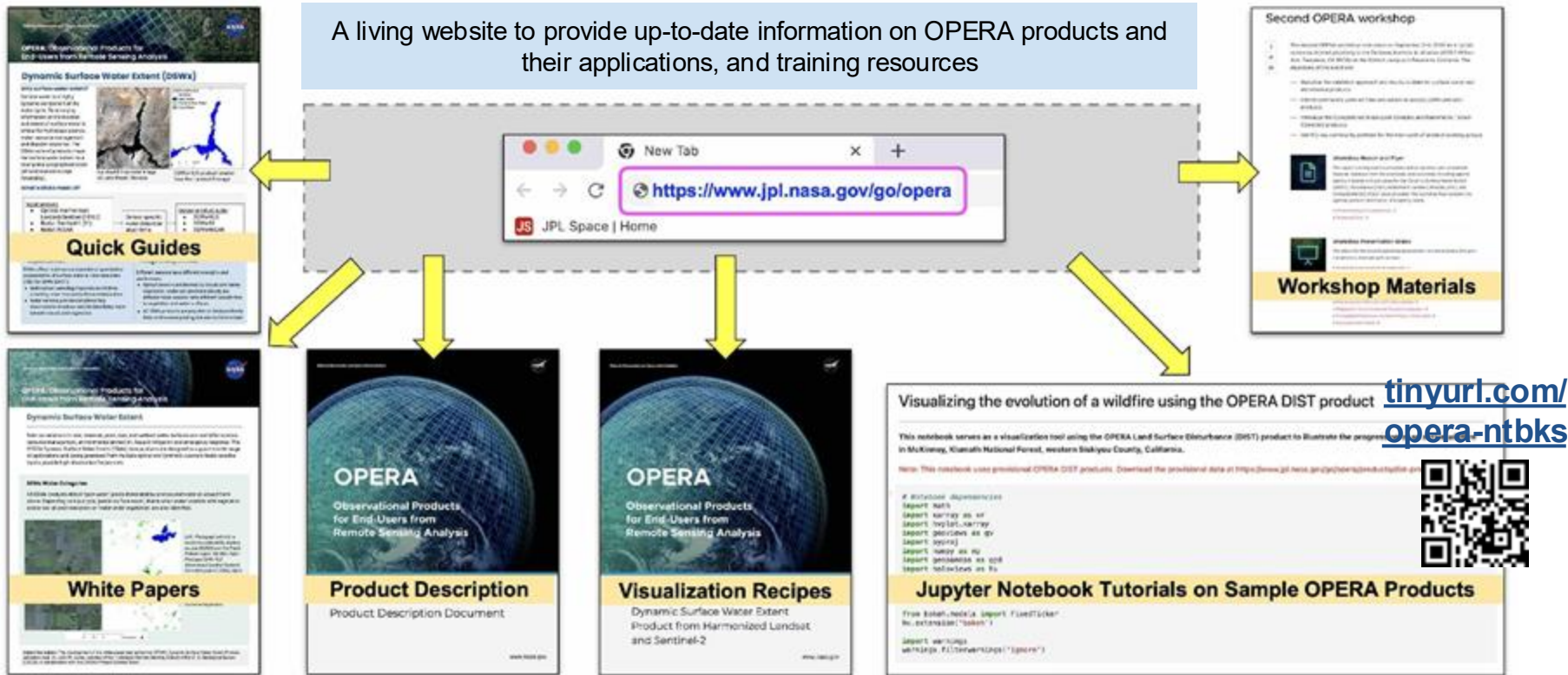


Stakeholder Engagement Program (SEP)

National Aeronautics and
Space Administration



A living website to provide up-to-date information on OPERA products and their applications, and training resources



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2024–2025 SEP Activities

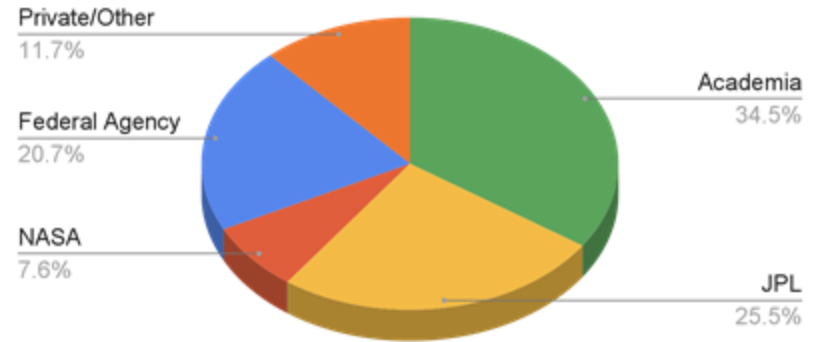


Fourth OPERA Workshop

- The 4th OPERA workshop took place on July 19th, 2024 as a hybrid event with 149 participants
- Invited talks by Federal Stakeholders on *their* use of OPERA products
- Workshop materials can be found at:
<https://www.jpl.nasa.gov/go/opera/opera-workshops/fourth-workshop/>



4th OPERA Workshop Attendance Statistics



Stakeholder Feedback:

“OPERA DIST-ALERT outperforms optical predecessors, as harmonized input reduces revisit time to 2-4 days”

Dr. Paul Berkowitz, U of Hawaii / USGS

“OPERA is filling an important gap in understanding the vulnerability of critical infrastructure... and will assist in planning to prevent and better prepare for responding to releases due to infrastructure impacts.”

Drs. Fran Kremer & Blake Schaeffer, US EPA-ORD

2024–2025 SEP Activities



OPERA SEP held a 1-1 hackathon with USGS Volcano Science Center (VSC):

- Discussed existing needs and challenges
- Developed a dedicated interactive notebook to create prototype displacement (e.g. DISP) maps and time-series from OPERA SAR products (e.g. CSLC)
- Provided technical consultation and product interpretation
- Ongoing engagement as needed

The USGS-VSC wants to integrate OPERA SAR data (Sentinel-1/NISAR) products in their monitoring system for active volcanoes in North America.

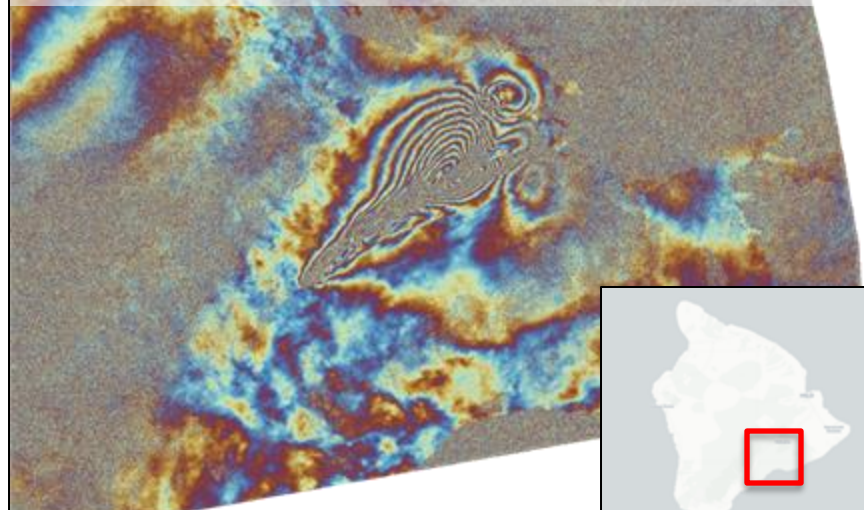
User experience:

“OPERA 1-1 allowed me to get started using OPERA SAR products. Preliminary results look promising for use in our monitoring system.”

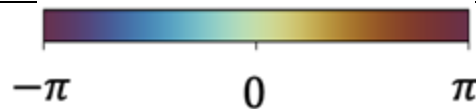
Dr. Marco Bagnardi, USGS-VSC data scientist

Eruption at Kilauea’s Southwest Rift Zone (June 2024)

Sentinel-1 Asc. (T124) May 30, 2024 – June 11, 2024



Formed using OPERA CSLC data



2024–2025 SEP Activities



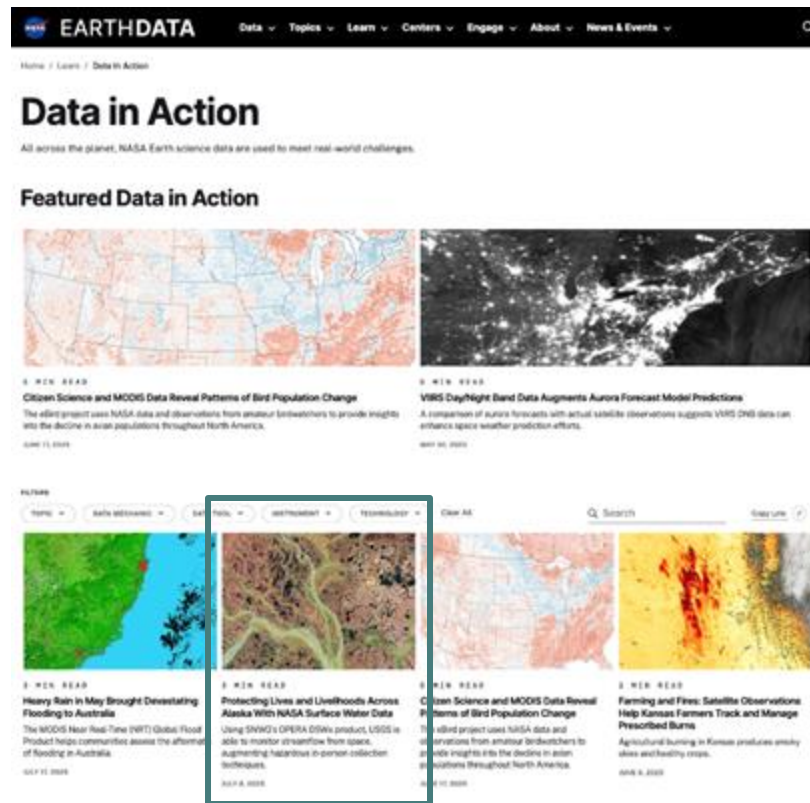
Internal & External Highlights

SNWG Solution Impact Stories and Science Nuggets:

- Demonstrate where OPERA products enable or improve decision making, both for NASA and for our end-users
- Highlight the value of OPERA products to NASA's leadership and the US government

Town Halls and Presentations at Conferences:

- Continuously provide overview and updates of OPERA products
- Extend the realm of potential applications and research opportunities utilizing our products





Direct Engagement

Product Working Groups:

- Product Working Group members meet with product leads to: test product and ease of use in workflows, review product specification document and discuss challenges/limitations
- Working Group members' feedback is integrated by the product development team

"Having a way to directly look at displacement data over an area of interest would be very helpful." – DISP Product WG members



DISP Portal is now online!

"Filtering OPERA DIST-ALERT-HLS's DIST-VEG-Status by the beginning and end date let us see fallowed fields. This is really helpful!" – USDA ARS Researcher



Webinars, Workshops and Tutorials:

- OPERA Team members routinely engage with Federal and State Agencies to present and provide training on the use of OPERA Products

More details on OPERA SEP activities can be found on OPERA website:

<https://www.jpl.nasa.gov/go/opera/stakeholder-engagement-program>



Direct Engagement

Roundtable meetings with the Private Sector (e.g. finance, insurance, banking, investment, technology, philanthropy, supply chain):

- OPERA SEP has participated in a series of roundtable discussions organized by NASA HQ to assess private sector's needs and present on the potential applications of OPERA products to meet these needs

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Working with NASA's Disasters Program:

National Aeronautics and
Space Administration



Program Elements:



Disaster Applications

Advances the use of Earth observations to support decisions across the disaster cycle



Disaster Response Coordination System

Leverages NASA's expertise and resources to provide insights that informs decision-making



NASA Disasters Mapping Portal

Hosts geospatial resources for easy information access and integration into decision-support tools



maps.disasters.nasa.gov

- Direct support from OPERA for disasters activations
- Connect with the data end-users directly and indirectly

Join the SEP Activities ...



Contact us: opera.sep@jpl.nasa.gov

Join our mailing list:

