

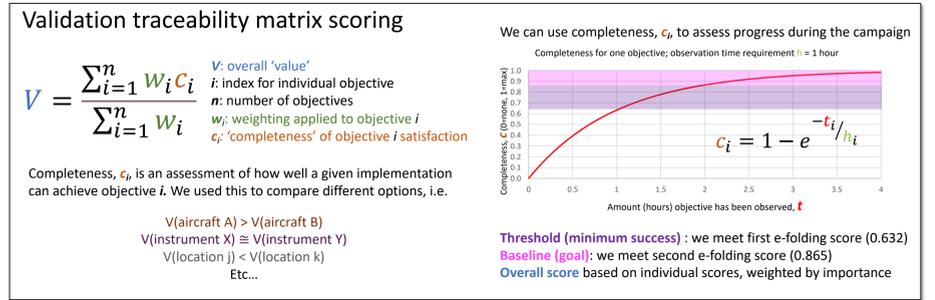
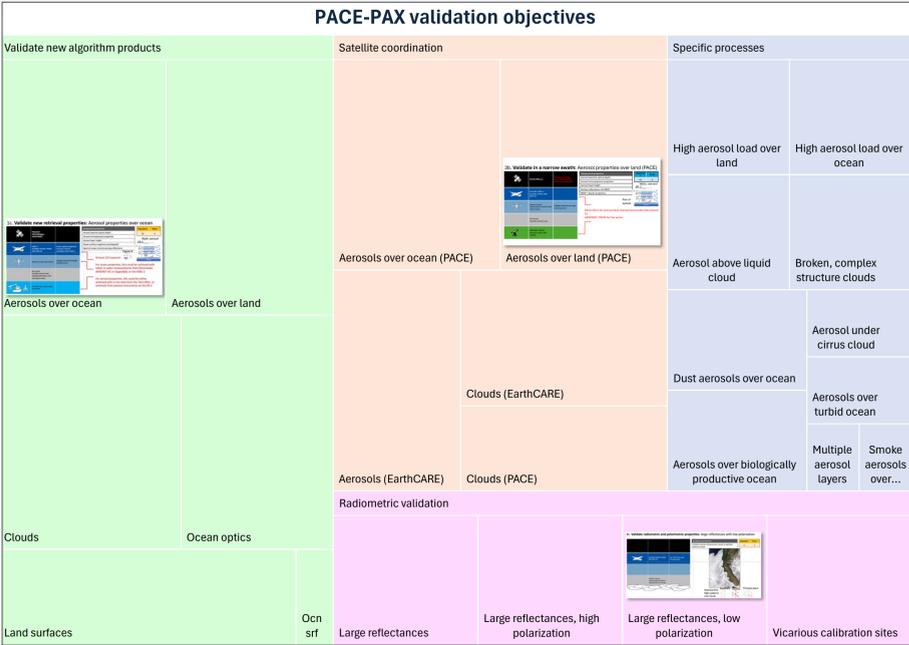
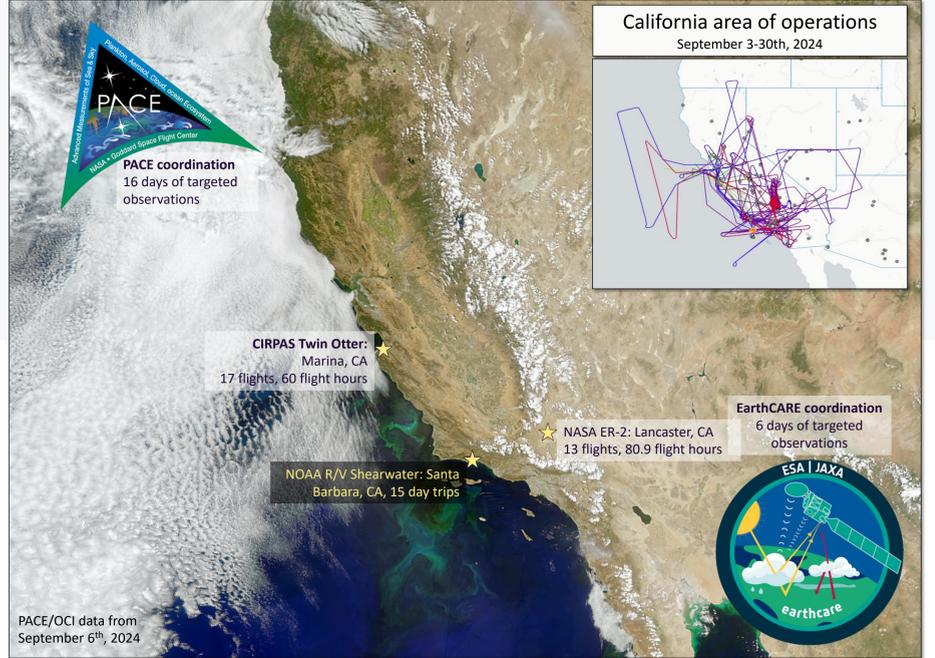
Kirk D. Knobelspiess¹, Brian Cairns², Ivona Cetinić^{1,3}, P. Jeremy Werdell¹, and the entire PACE-PAX team *contact: kirk.knobelspiess@nasa.gov*

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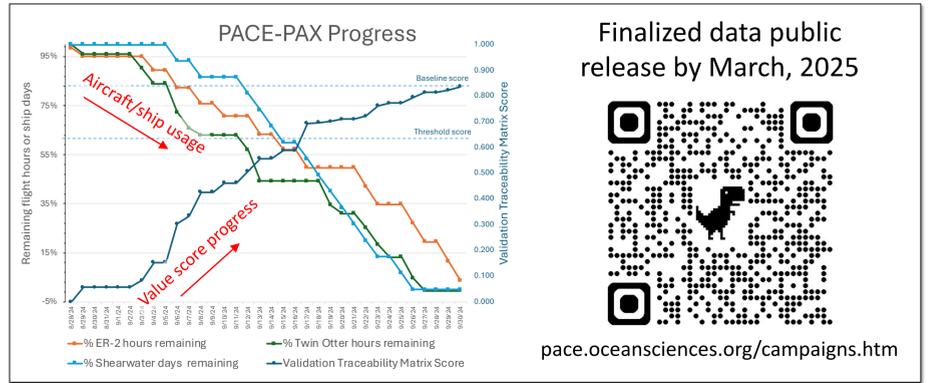
Launched February 8th, 2024, the NASA Plankton, Aerosol, Cloud and ocean Ecosystems (PACE) Mission produces ocean color, aerosol, cloud and land surface data products from three sensors. The PACE Postlaunch Airborne eXperiment (PACE-PAX) was a campaign to validate PACE data

- A Validation Traceability Matrix (VTM), with 25 weighted objectives, was used to design and implement the field campaign
- Based in central and southern California in September, 2024, PACE-PAX included:
 - The NASA ER-2 high altitude aircraft, with an airborne version of PACE and other remote sensing instruments
 - The Navy Postgraduate School Twin Otter, a low altitude aircraft with aerosol and cloud in situ instruments
 - The NOAA R/V Shearwater, a coastal research vessel with ocean and atmospheric optical instruments
 - Cooperation with several other ocean and land surface based assets
- An additional objective was validation of ESA/JAXA's recently launched EarthCARE mission
- All data are to be finalized and publicly available by March, 2025



Instrument(s)	Platform	Role	Lead PI	Institution
AirHARP	NASA ER-2	PACE/HARP2 polarimetry proxy	J. Vanderlei Martins	UMBC
PICARD	NASA ER-2	PACE/OCI spectrometer proxy	J. Jacobson / K. Meyer	NASA ARC/GSFC
PRISM	NASA ER-2	PACE/OCI spectrometer proxy	David R. Thompson	JPL
SPEX Airborne	NASA ER-2	PACE/SPEXone polarimetry proxy	B. van Diedenoven	SRON
HSRL-2	NASA ER-2	Aerosol/cloud/ocean Lidar	T. Shingler / J. Hair	NASA LaRC
RSP	NASA ER-2	Multi-angle polarimeter reference	B. Cairns / K. Sinclair	NASA GISS
Facility instruments	NPS Twin Otter	Aerosol/cloud in situ instruments	Anthony Bucholtz	NPS
LARGE	NPS Twin Otter	Aerosol/cloud in situ instruments	Luke Ziemba	NASA LaRC
LI-Nephelometer	NPS Twin Otter	Aerosol phase functions	Adam Ahern	NOAA
ISARA	NPS Twin Otter	In situ data synergy activity	J. Schlosser / S. Stammes	NASA LaRC
Ocean instruments*	NOAA R/V Shearwater	Day cruises, ocean and atm. obs.	Mike Ondrusek	NOAA
SeaSTAR*,&	NOAA R/V Shearwater	Experimental sun photometer	Stephen Brocardo	NASA Ames
Ocean surface polarimetry*,&	NOAA R/V Shearwater	Polarimetric Validation of PACE	R. Foster / A. El-Habashi	NRL
AERONET, AERONET-OC*	R/V Shearwater & surface	Aerosol prop., water leaving radiance	E. Lind / P. Gupta	NASA GSFC
Ocean radiometry, pigments*,&	Small boats	Santa Barbara Channel	S. Maritorea	UCSB
Ocean radiometry*	Ocean gliders	HSRL2 ocean property validation	M. Oliver	U. Delaware
HyperNAV*	Ocean floats	Radiometric calibration ocean floats	Andrew Barnard	OSU
Coastal Env. Obs. Station (CEOBS)*	Ground site, Watsonville, CA	Scanning Doppler radar, Lidar, and more	J. Schmidt	NRL

*externally funded activity; &PACE Validation Science Team funded



NOAA R/V Shearwater
<https://earthobservatory.nasa.gov/blogs/fromthefield/2024/09/13/sailing-away-for-pace/>

NPS CIRPAS Twin Otter
<https://earthobservatory.nasa.gov/blogs/fromthefield/2024/09/18/day-in-the-life-of-a-pace-pax-mission-flight/>

R/V Blissfully
<https://earthobservatory.nasa.gov/blogs/fromthefield/2024/09/24/twenty-one-hours-a-day-on-30-foot-floating-science-lab/>

Outreach - over 2,425 students reached!

- 62 presentations to 24 K-12 schools in three countries
- Reaching 50 at risk and 41 special education students at Flour Bluff ISD in Texas
- 30 presentations for GLOBE schools
- Multiple virtual R/V Blissfully tours with Dr. Bridget Seegers
- Receiving handmade cards from TK students in California

U. Del. gliders, UCSB, HyperNAV, AERONET, CEOBS, R/V Rachel Carson

Bridge fire, September 10, 2024

