

PACE-PAX research report 2024/09/11

Compiled by Samuel LeBlanc, 2025/09/08

Summary: HyperNAV at PACE overpass in clear waters

ER-2

None

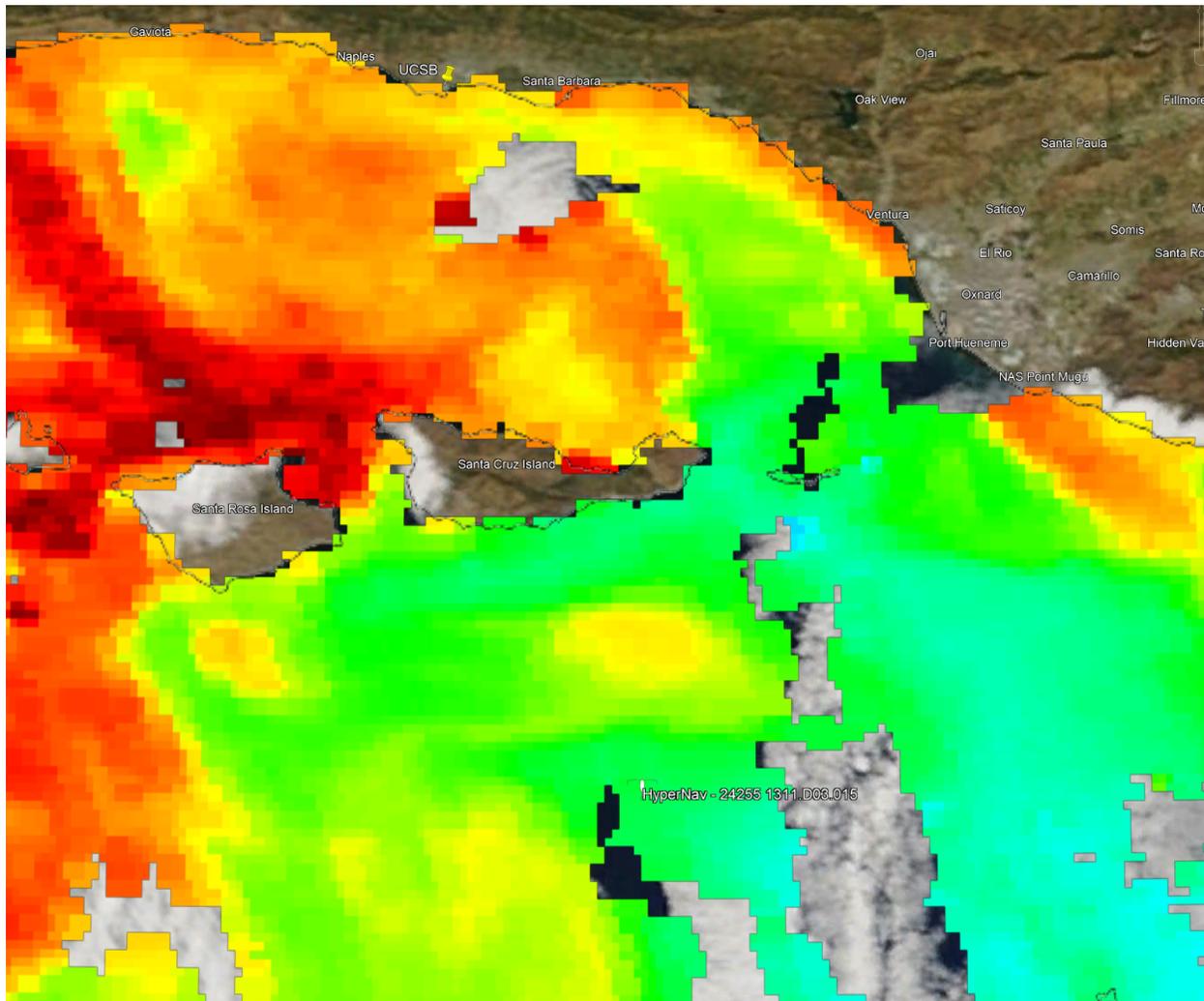
Twin Otter

None

PACE

Overpass: 20:49

Orbit track west offshore



All times are in UTC, VTM elements in **black** satisfied, **blue** partially satisfied and **red** not satisfied.

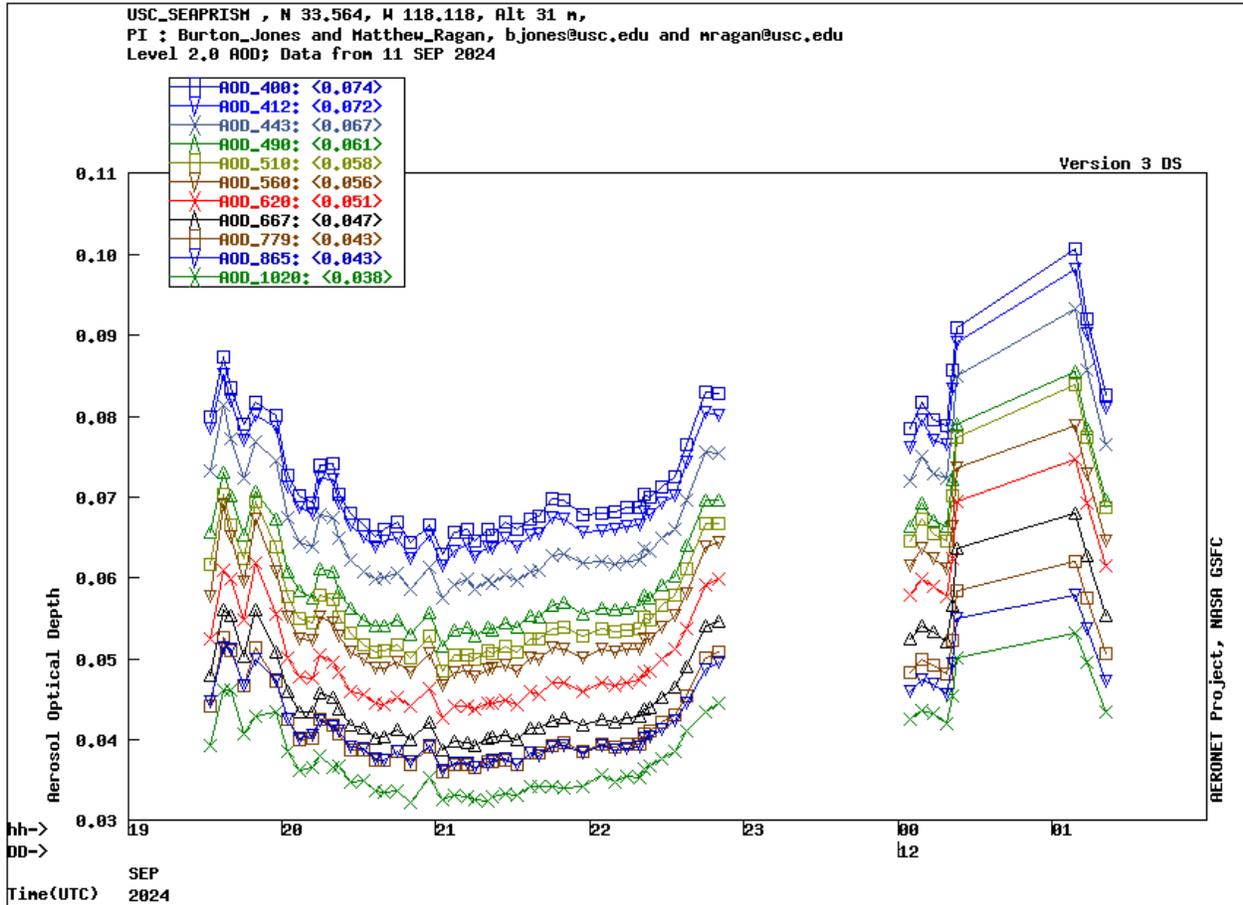
Time	Platform	VTM	
20:05	PACE		Overpass
20:19	HN	1b(0.5)	Profile up, nearest AOD (USC_SEAPRISM)=0.055

HN: HyperNAV

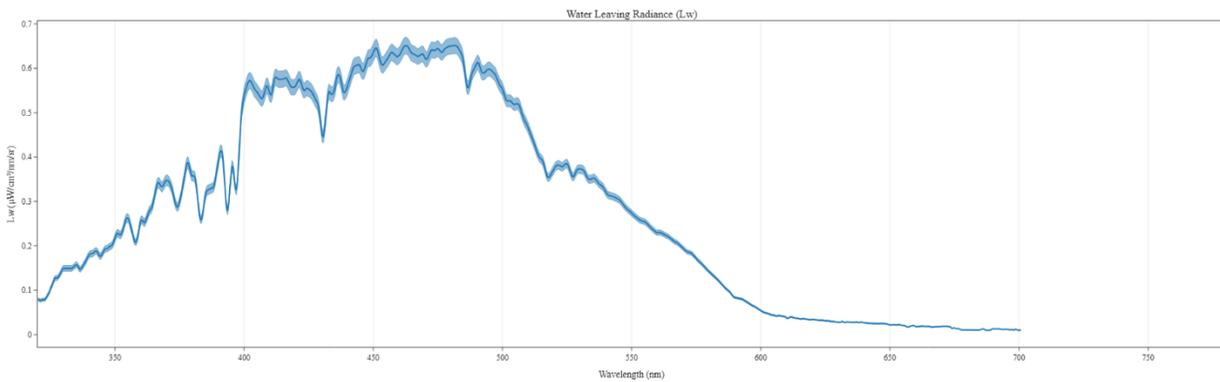
Assessment:

PACE-PAX progress tracking														29-Aug			
Validation objectives	ID	Measurement objectives	Importance, w	Observation time, h (hours)	Total observed (hours)	Fractional success 8/29	Fractional success 9/3	Fractional success 9/4	Fractional success 9/5	Fractional success 9/6	Fractional success 9/7	Fractional success 9/8	Total success	Remaining score	Flight details		
															time	completeness	success
1. Validate new retrieval properties	a	Land surface parameters	8	2.0	0.5	20.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.1%	6.4	0.5	0.9	1.6
	b	Ocean radiometric parameters	10	8.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0	0.0	1.0	0.0
	c	Aerosol parameters over the ocean	12	8.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.0	0.0	1.0	0.0
	d	Aerosol parameters over land	12	8.0	3.0	31.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.3%	8.2	3.0	1.0	3.8
	e	Cloud parameters	12	8.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.0	0.0	1.0	0.0
	f	Ocean surface parameters	1	8.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0	0.0	1.0	0.0
3. Validate in a narrow swath	a	Aerosol parameters over the ocean (PACE)	10	8.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0	0.0	1.0	0.0
	b	Aerosol parameters over land (PACE)	10	8.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0	0.0	1.0	0.0
	c	Cloud parameters (PACE)	5	2.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0	0.0	1.0	0.0
	d	Aerosol parameters (EarthCARE)	8	4.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0	0.0	1.0	0.0
	e	Cloud parameters (EarthCARE)	8	4.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0	0.0	1.0	0.0
4. Validate radiometric and polarimetric properties	a	Validate large reflectances	6	2.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0	0.0	1.0	0.0
	b	Validate large reflectances with high polarization	6	2.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0	0.0	1.0	0.0
	c	Validate large reflectances with low polarization	6	2.0	0.5	22.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	22.1%	4.7	0.5	1.0	1.3
	d	Overly rigorous calibration runs	6	4.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0	0.0	1.0	0.0
6. Focus on specific processes or phenomena	a	High aerosol loads over land	4	2.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0	0.0	1.0	0.0
	b	High aerosol loads over ocean	4	2.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0	0.0	1.0	0.0
	c	Multiple aerosol layers	1	2.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0	0.0	1.0	0.0
	d	Aerosol under thin cirrus	2	2.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0	0.0	1.0	0.0
	e	Aerosol above liquid-phase cloud	4	2.0	0.5	11.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.8%	3.5	0.5	0.5	0.5
	f	Broken clouds with complex structure	4	2.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0	0.0	1.0	0.0
	g	Dust aerosols over ocean	4	2.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0	0.0	1.0	0.0
	h	Aerosol and ocean parameters over turbid waters	2	2.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0	0.0	1.0	0.0
	i	Aerosol and ocean parameters over biologically productive waters	4	2.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0	0.0	1.0	0.0
	k	Smoke aerosols over ocean	1	2.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0	0.0	1.0	0.0
total:			150	98	4.5	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.8%		Accomplished		
				ER-2 flight hours		2.8	0	0	0	0	0	0	0	2.8			
				YO flight hours		2.5	0	0	0	0	0	0	0	2.5			
				Shearwater days		0	0	0	0	0	0	0	0	0			
			PACE-PAX overall objectives satisfied:			4.8%											

AERONET Quicklook



HyperNav Quicklook



PACE satellite quicklooks