

DISCOVER-AQ
HSRL Data Summary

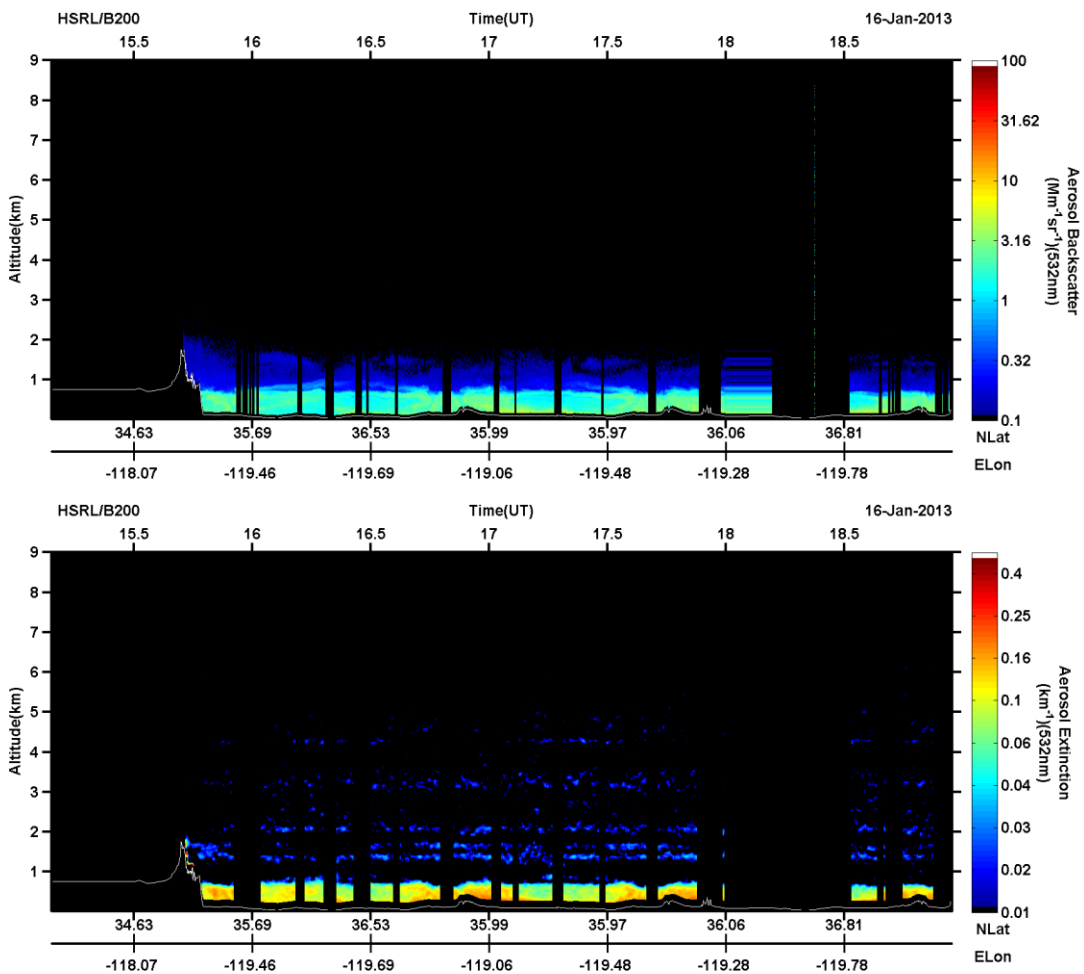
FLIGHT: Morning science flight (1 of 2)

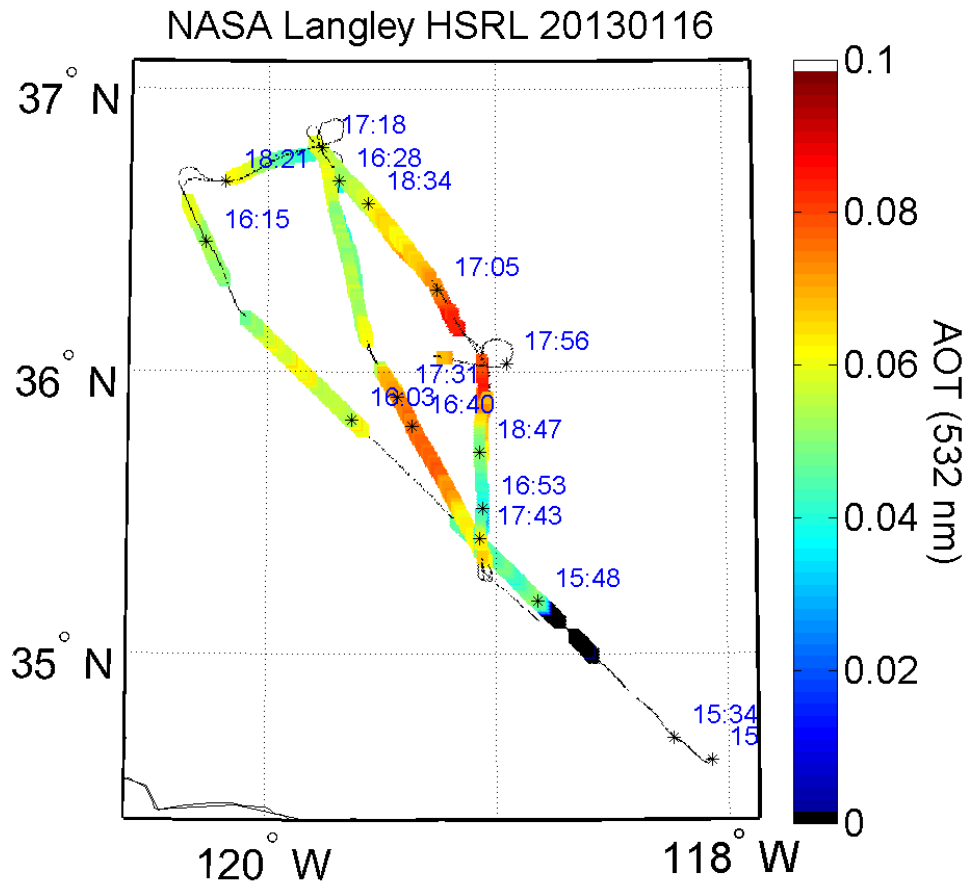
DATE: Jan 16 2013

DURATION: 4 hours

SUMMARY: HSRL operated nominally; however, a power breaker blew a few times during the flight, bringing down all instruments. A very shallow boundary layer was observed with low scattering and extinction. The boundary layer showed some small scale structure both vertically and horizontally, i.e., it was not well-mixed.

SUMMARY PLOTS (last leg only):



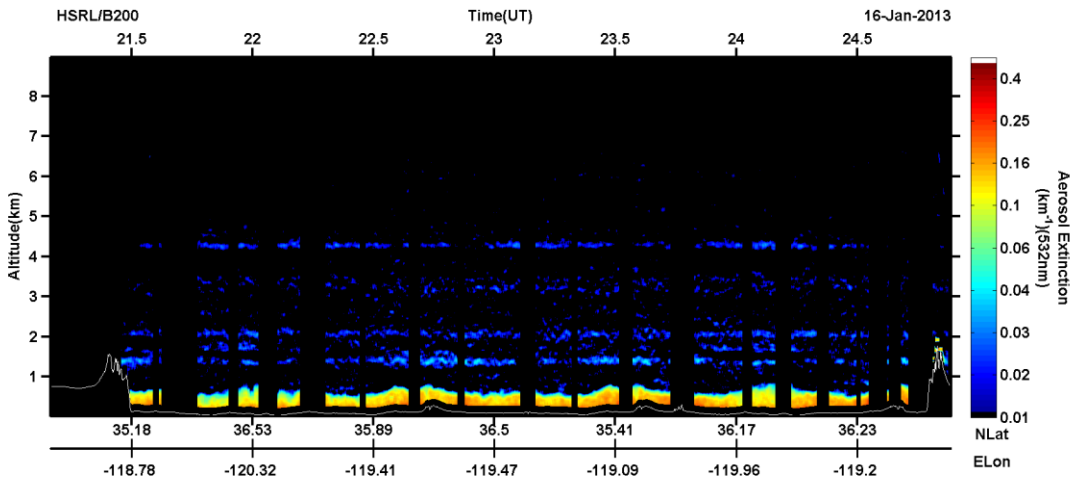
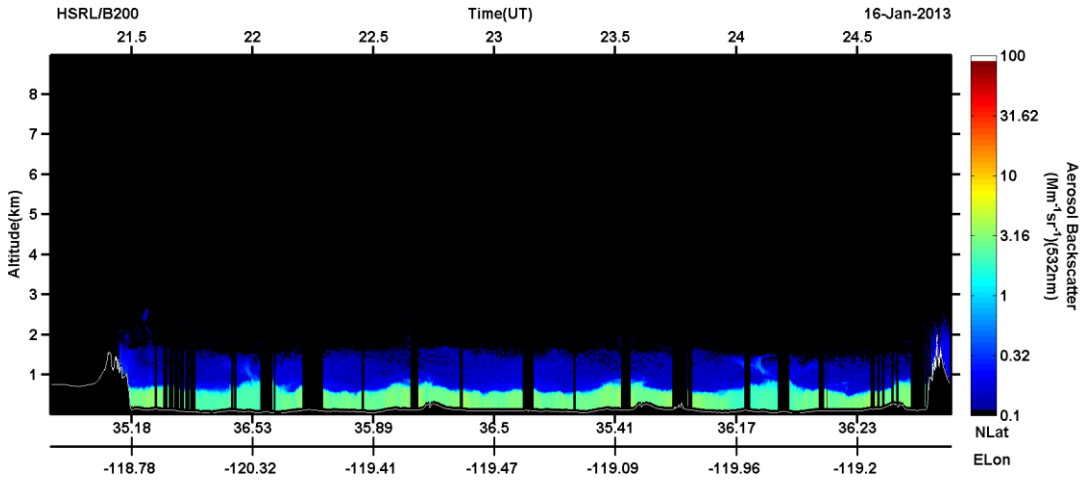


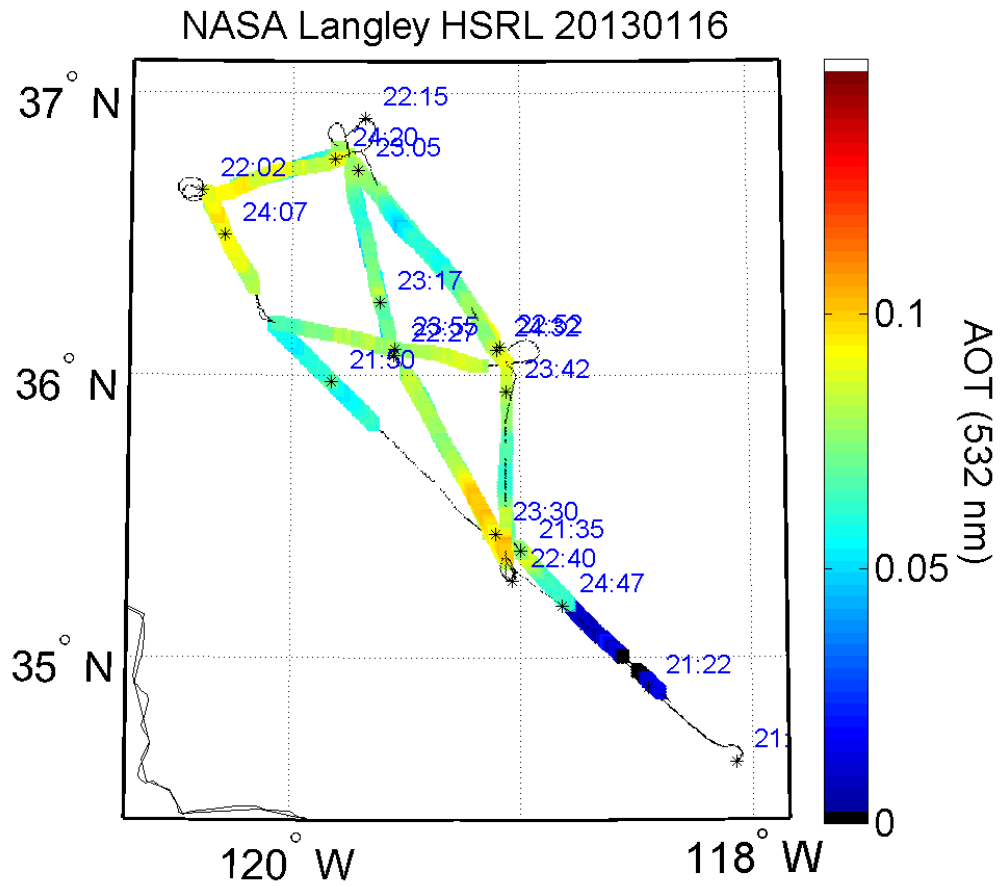
FLIGHT: Afternoon science flight (2 of 2)

DATE: Jan 16 2013

DURATION: 4 hours

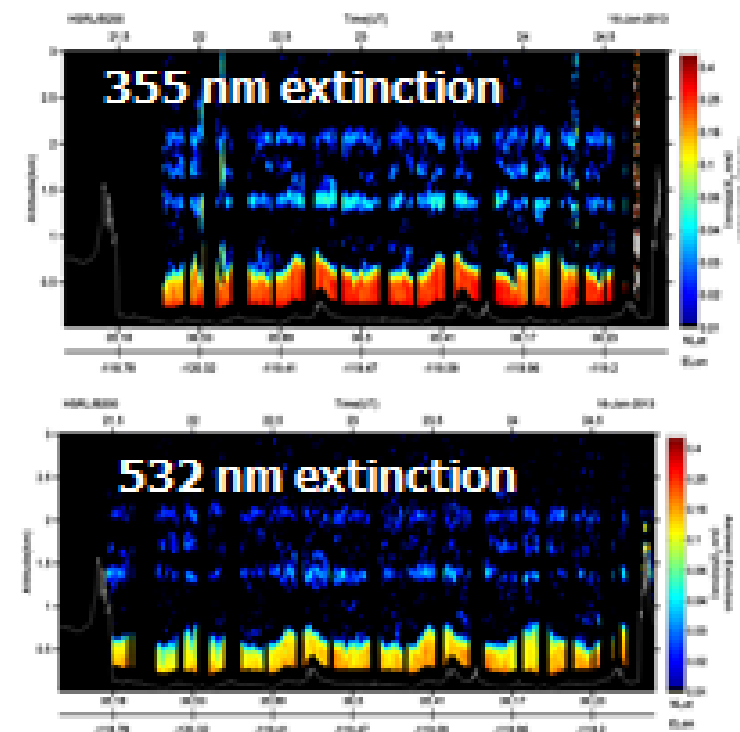
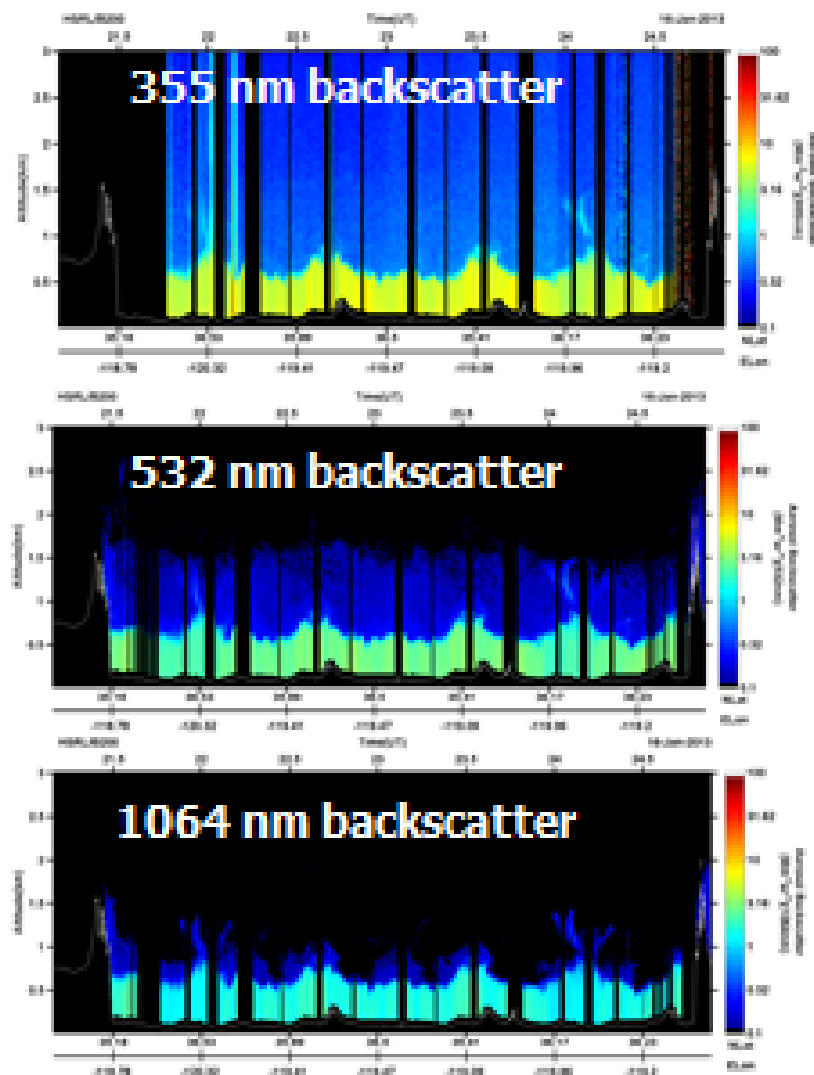
SUMMARY: The problem with the power breaker was diagnosed and fixed between flights. HSRL operated nominally. The boundary layer height, scattering, and extinction did not increase significantly during the flight; however, the layer did become well-mixed vertically and showed less small scale horizontal structure.





On the following pages are Rich Ferrare's charts on HSRL-2 presented at the 4:00 tagup on 17 January

HSRL-2 adds measurements at 355 nm

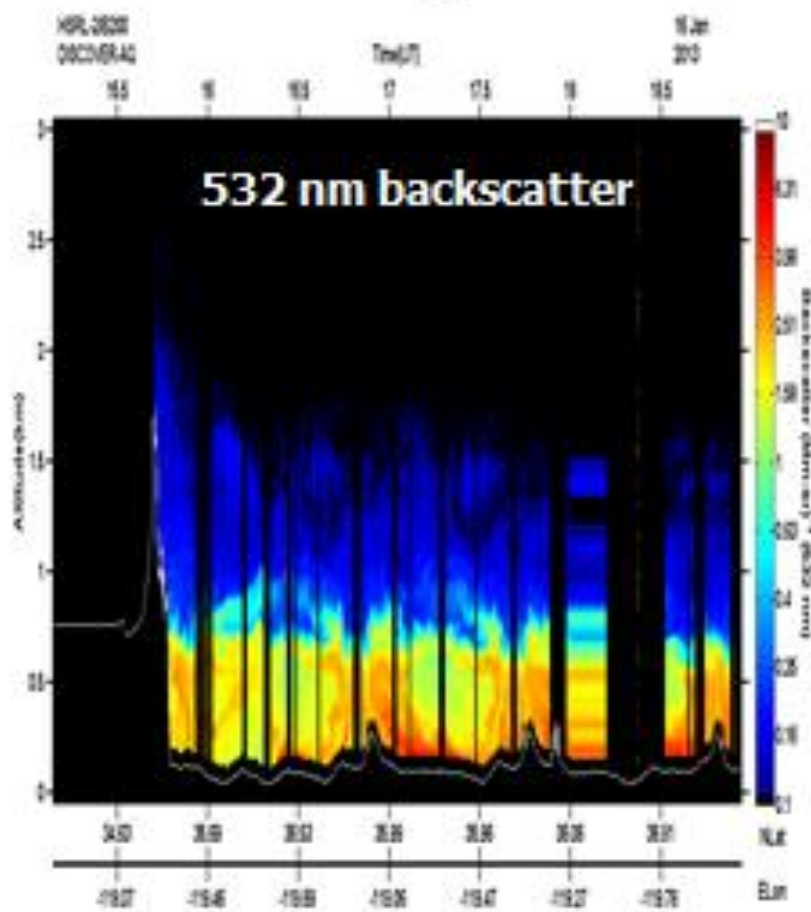


- DISCOVER-AQ (Jul. 2011) – HSRL-1
- DISCOVER-AQ (Jan. 2013) - HSRL-2
 - Backscatter at 355, 532, and 1064 nm
 - Extinction at 355 and 532 nm (HSRL)
 - Depolarization at 355, 532, 1064 nm

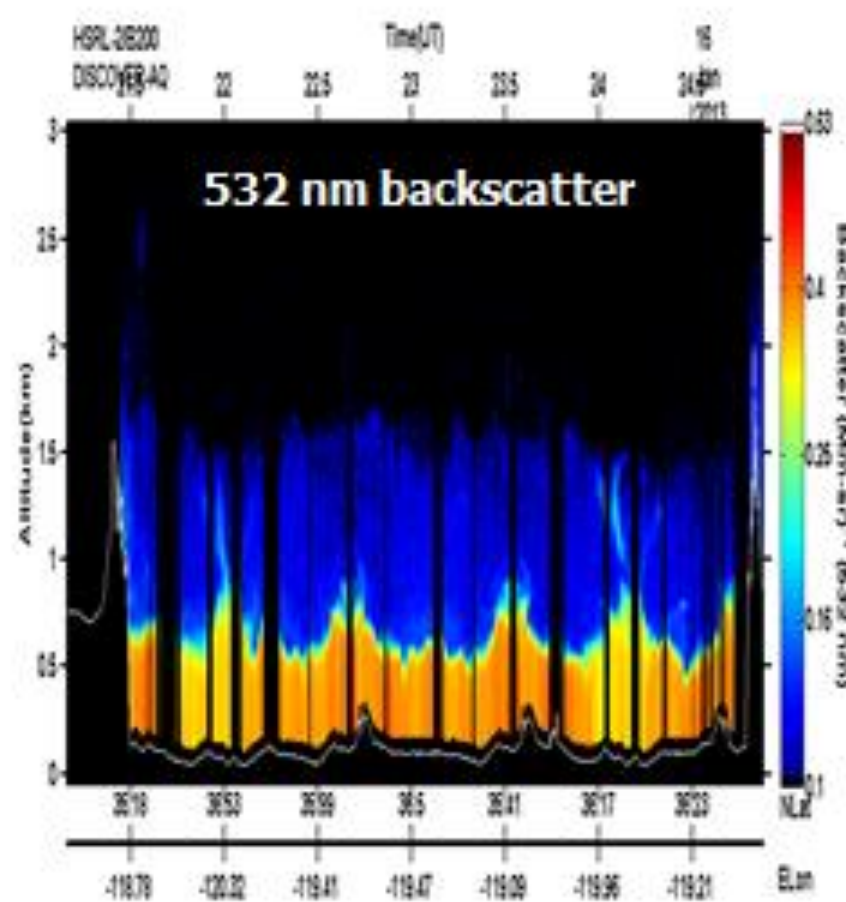
HSRL-2 measurements of temporal and vertical aerosol variability



Morning



Afternoon

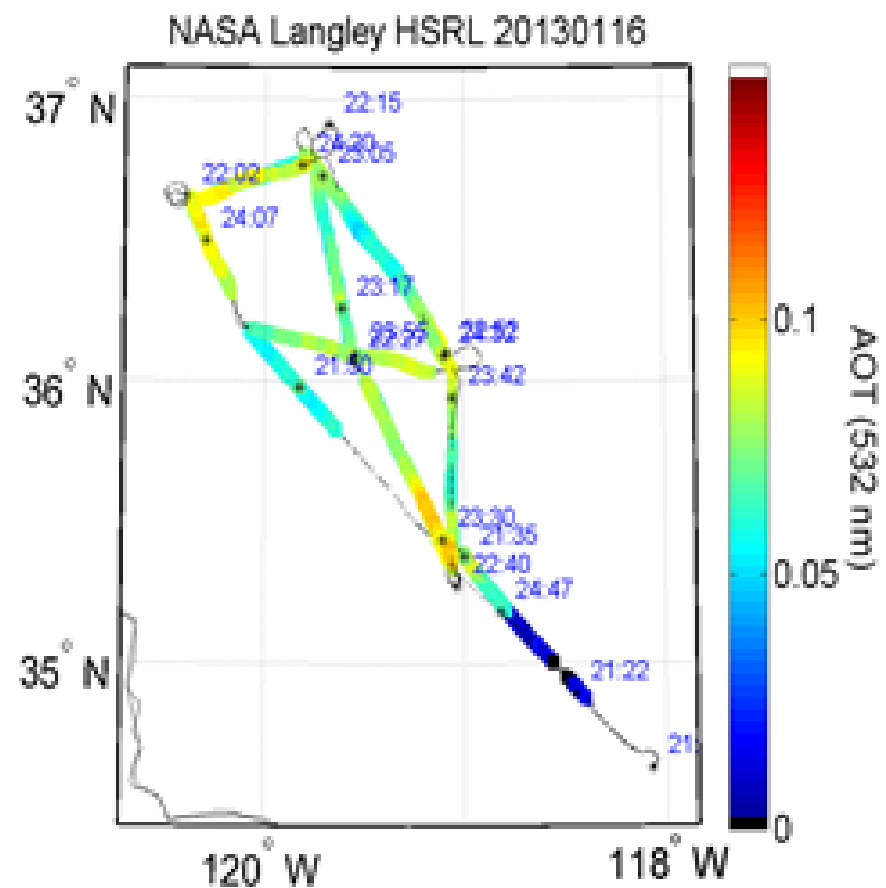
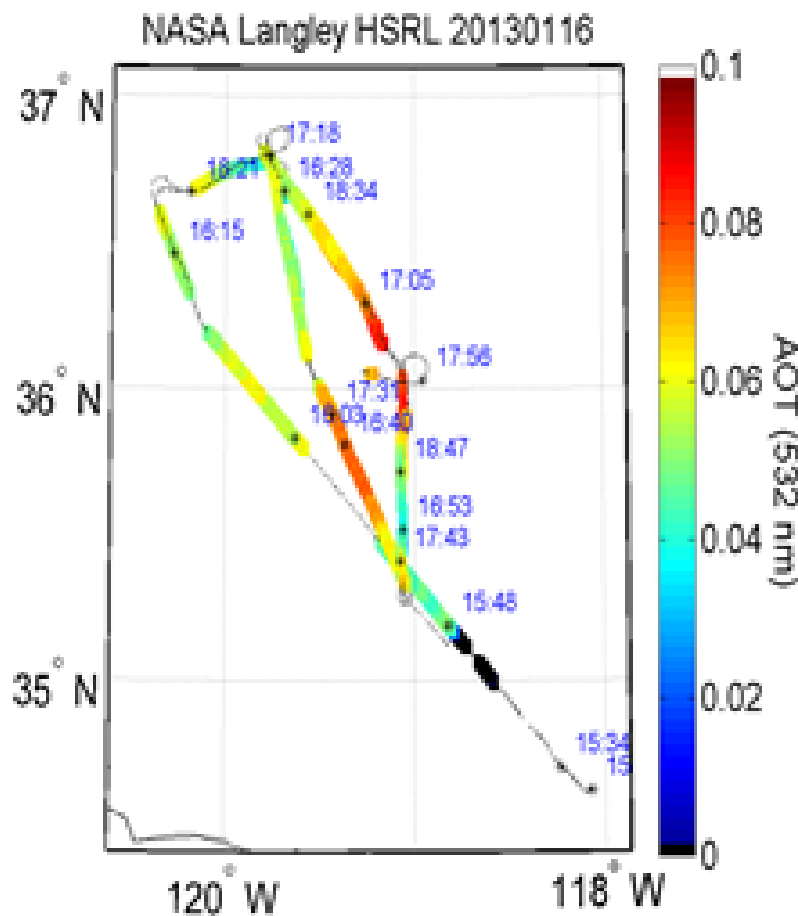


HSRL-2 532 nm AOT Jan. 16 2013 Flight 2



Morning

Afternoon



HSRL-2 sample subset of measurements Jan. 16 2013 Flight 2

