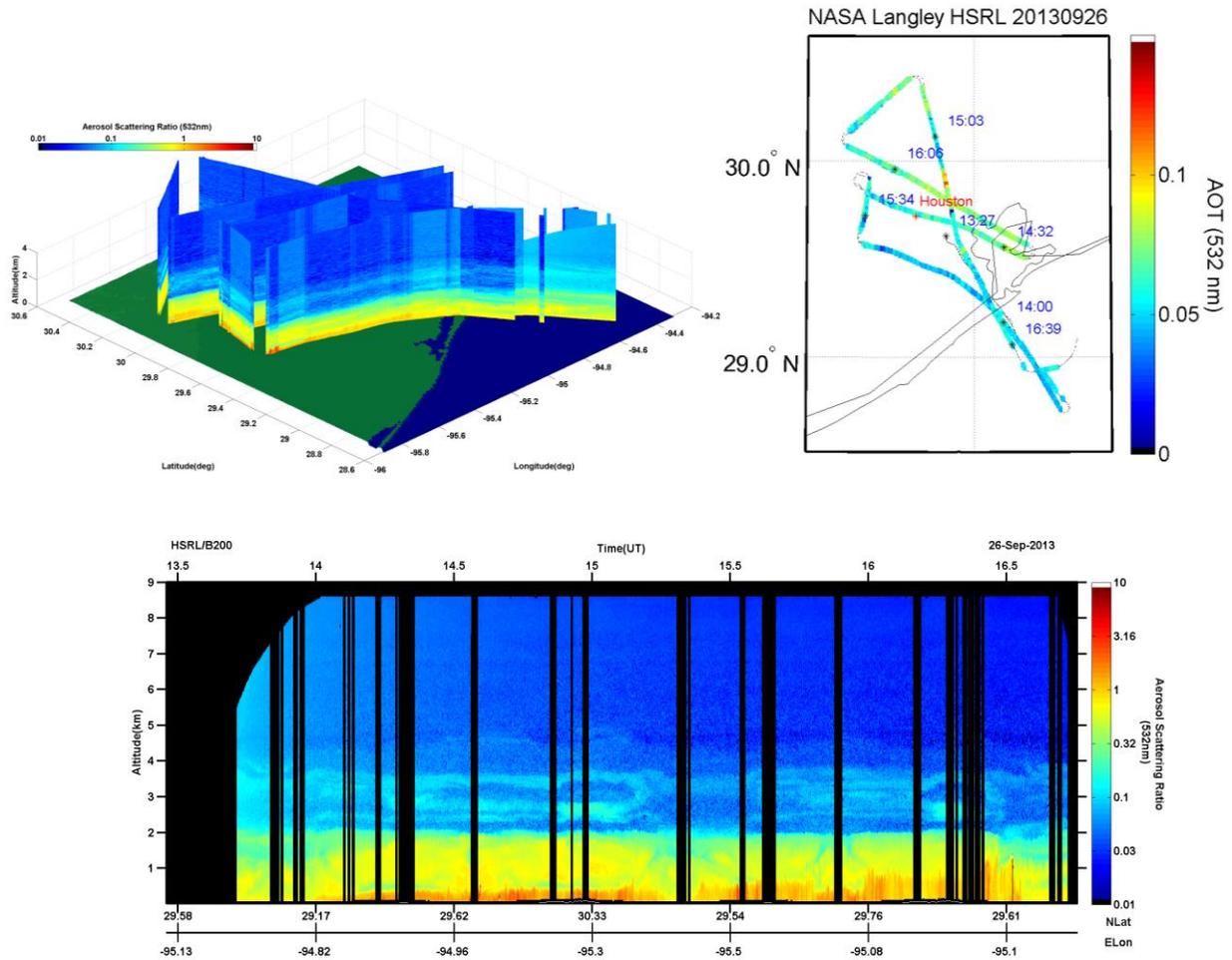


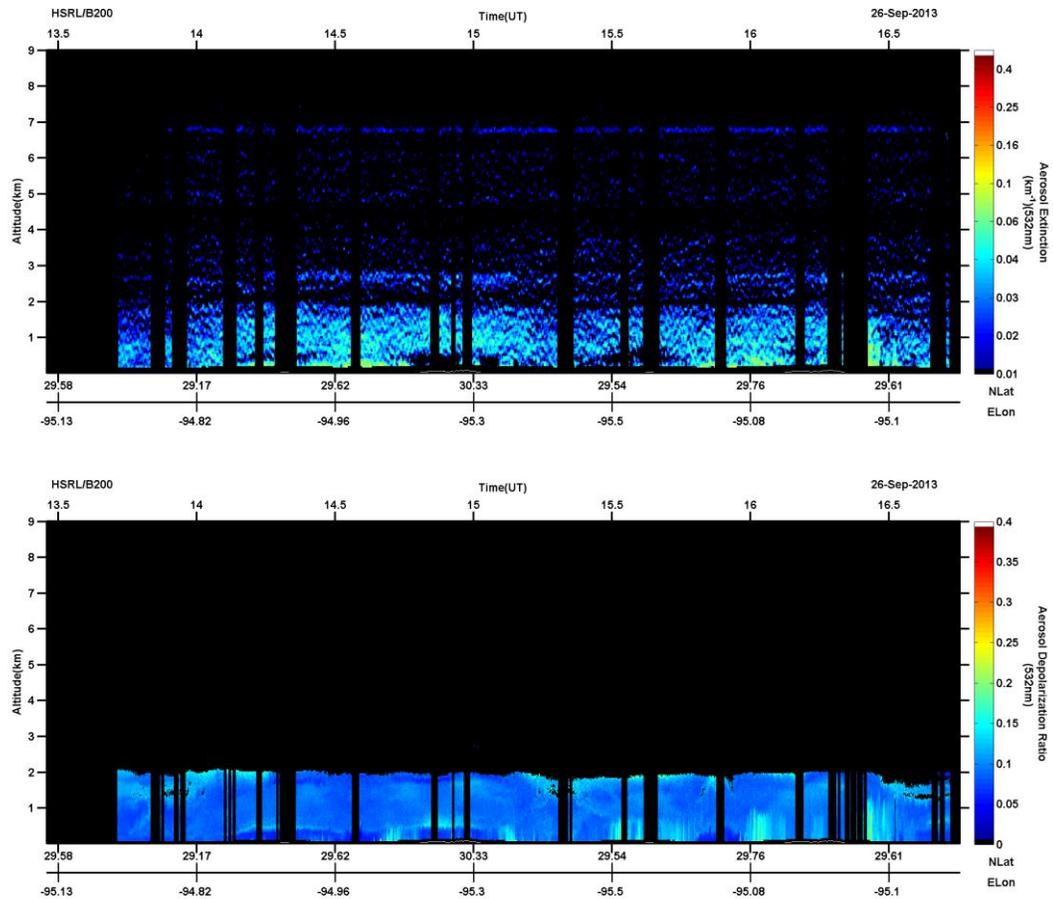
DISCOVER-AQ
HSRL Data Summary

FLIGHT: Morning science flight (1 of 2)
DATE: September 26, 2013

SUMMARY:

There were cloud free conditions for aerosol observations by HSRL-2 this morning. Aerosol optical depth was low with a low boundary layer around 0.5 km in the first loop, beginning to rise by the second pass. An aerosol residual layer was observed up to 2 km, with wispy aerosol features visible in the backscatter signal up to 4 km. A moderate enhancement in aerosol was observed north of Channelview, between Channelview and Conroe. As on several previous flights, the boundary layer aerosol exhibits localized depolarization, indicating non-spherical particles.





Operator Flight Notes, Flight # 1

- OAC cals 1355 UTC
- PGR, I2 cals at 1405 UTC
- Data downlink issue
- OAC, PGR, I2 cals at 1620 UTC
- INF IGR cal at 1639 UTC

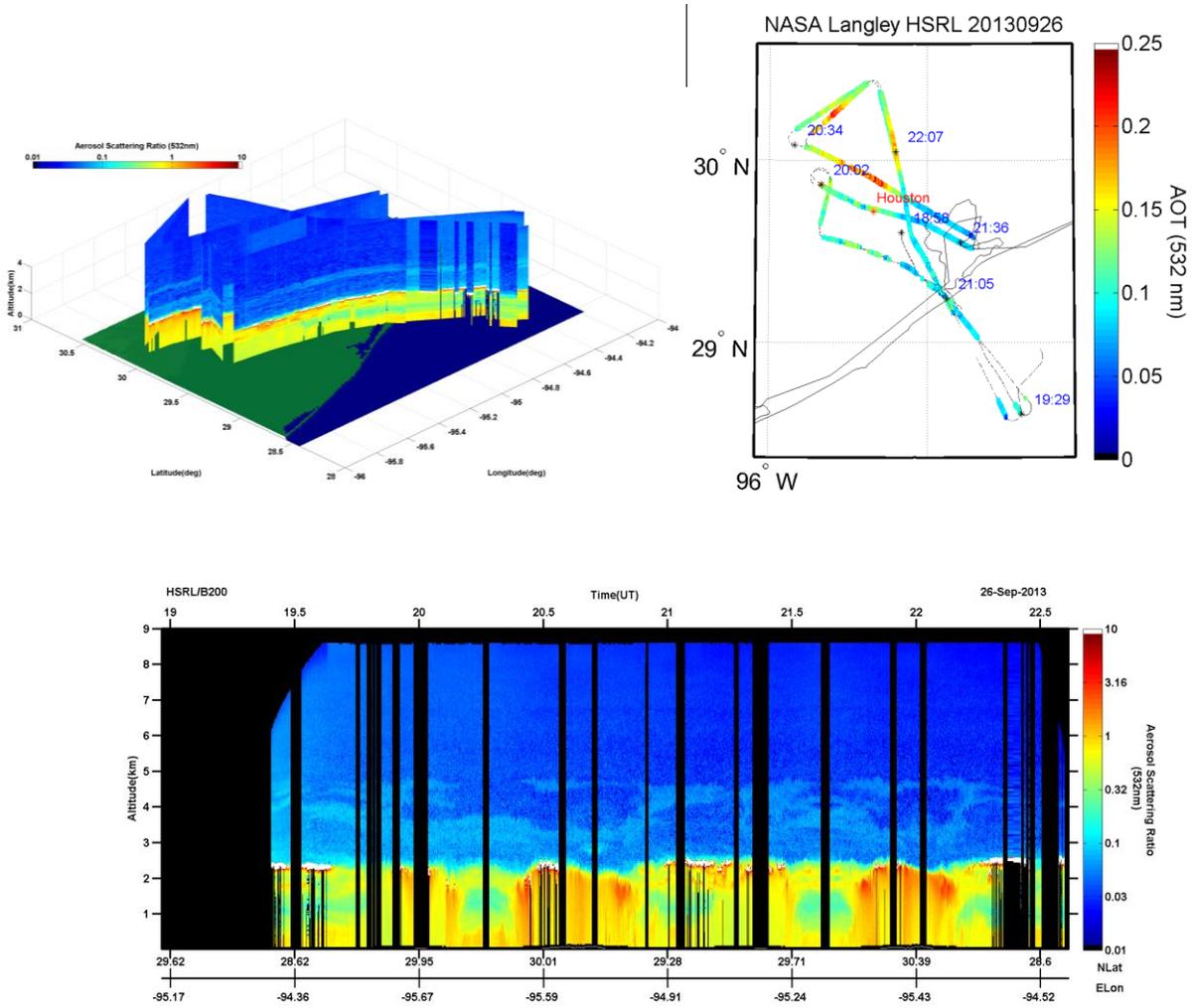
FLIGHT: Afternoon science flight (2 of 2)

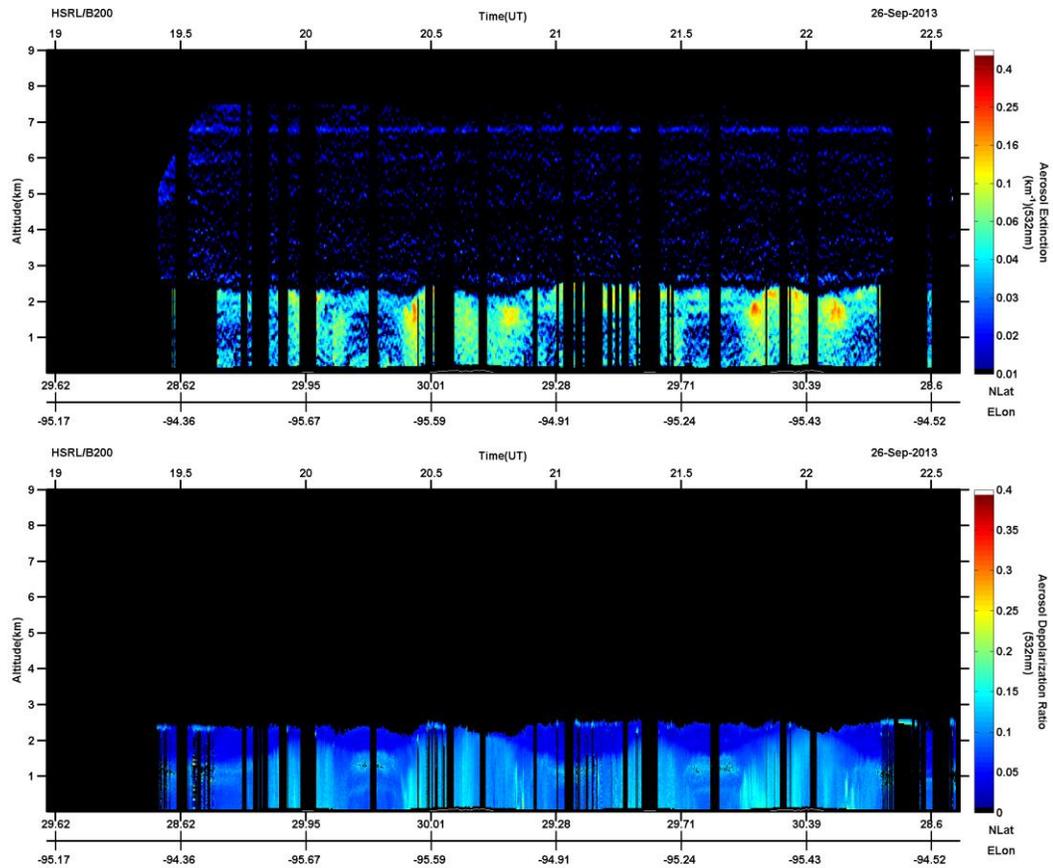
DATE: September 26, 2013

SUMMARY:

In the afternoon, some clouds developed at 2-2.5 km, resulting in occasional blocking of the lidar signal. Aerosol measurements showed some enhancement in AOD over the northern parts of the flight pattern, north of Houston. The boundary layer rose up to 2.5 km in those regions, mixing in the previous residual layer. Yet, on the southern portion of the pattern, the boundary layer

stayed relatively low, resulting in more horizontal and vertical structure than typically seen on the afternoon flight during this campaign.





Operator Flight Notes, Flight # 2:

- OAC, PGR, I2 calcs started at 1944 UTC
- OAC, PGR, I2 calcs started at 2219 UTC
- First OAC on 355 nm did not cal correct, repeating
- OAC 532 nm appears okay
- 355 nm OAC still does not look good, had to stop before descend, issue not resolved
- INF IGR started 2232 UTC
- 355 nm problems may be due to UV detect offset issue