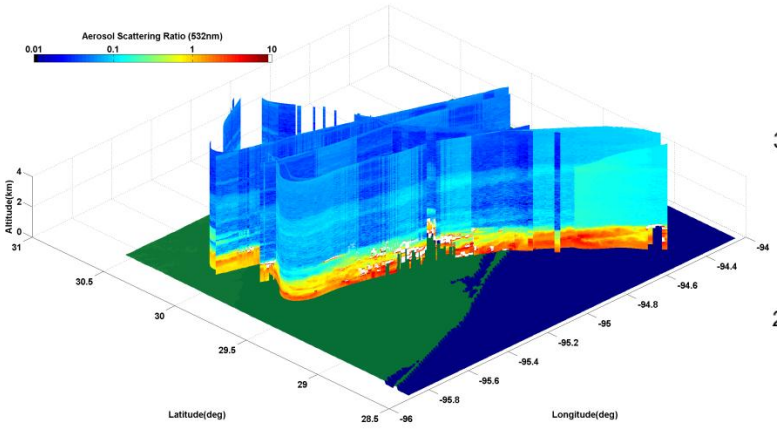
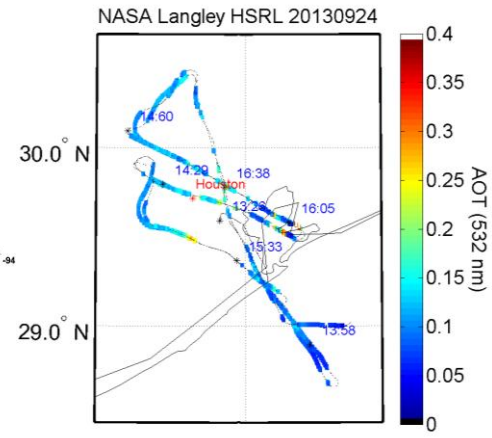
DISCOVER-AQ
HSRL Data Summary

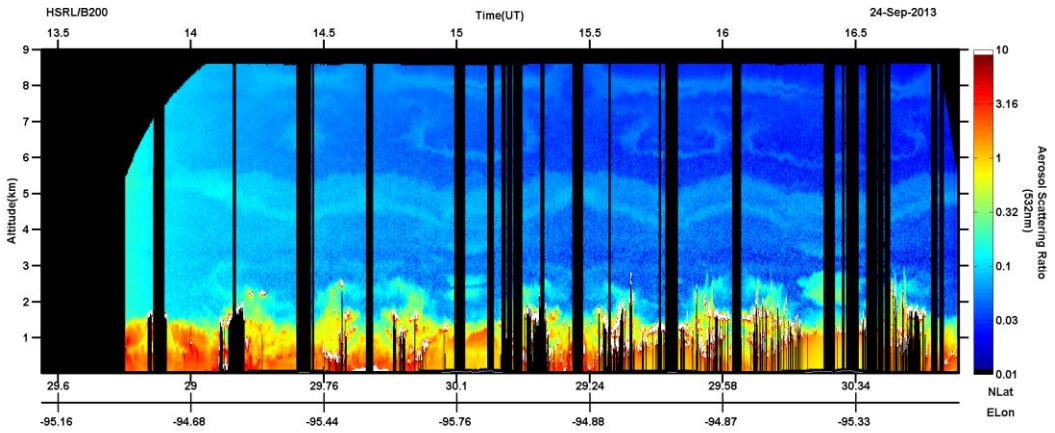
FLIGHT: Morning science flight (1 of 2)
DATE: September 24, 2013

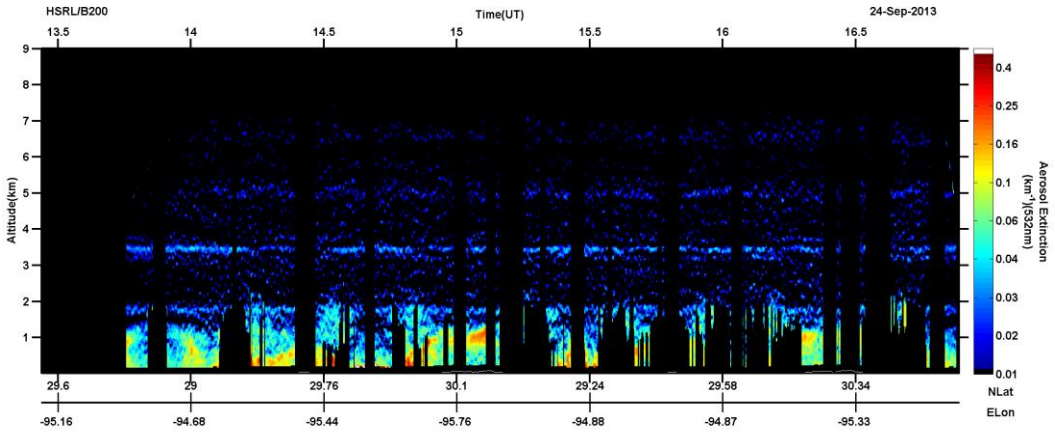
SUMMARY:
AOD <~0.15

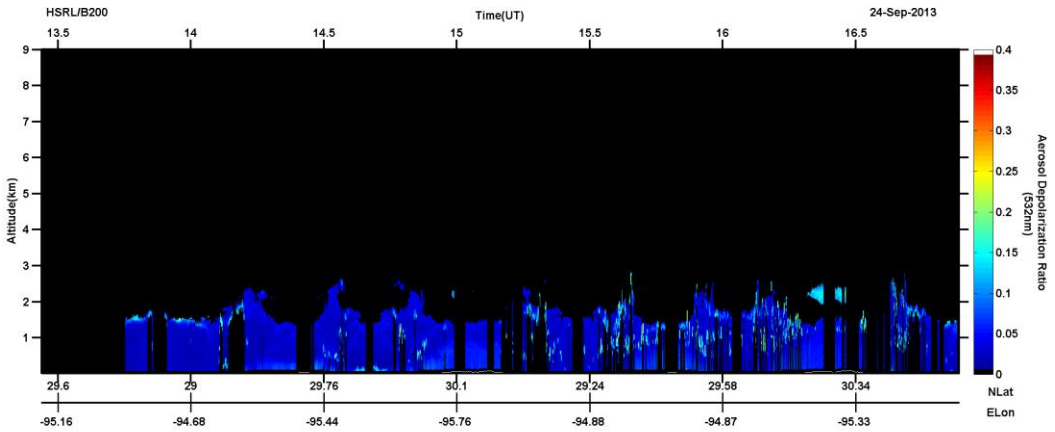
There were frequent clouds in this morning's data, but HSRL-2 was able to make measurements between the clouds over most of the pattern. This morning's HSRL-2 aerosol observations were characterized by low aerosol loading of approximately 0.15 or less. Aerosol heights were generally less than 1.5 km, with fairly abrupt dropoff to clean conditions at higher altitudes with no elevated layers. An exception was a faintly scattering elevated layer with noticeable depolarization appearing in the northern part of the track on the second loop (also see the afternoon flight).











Operator Flight Notes, Flight # 1

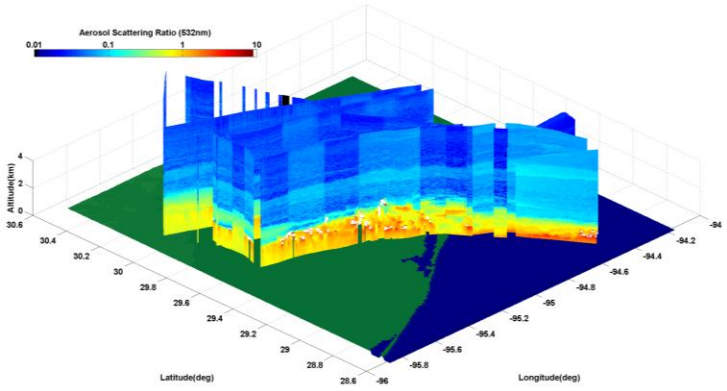
- ACAM heaters on at 1403 UTC
- INF near end of PZ limit 1405 UTC
- Moving FSR on INF to correct PZ issue 1405 to 1414 UTC
- Slight tuning of INF 1429 to 1430 UTC
- OAG, PGR, I2 cals at 1509 UTC
- Slight tuning of INF at 1517 UTC
- Minor tuning of INF at 1554 UTC

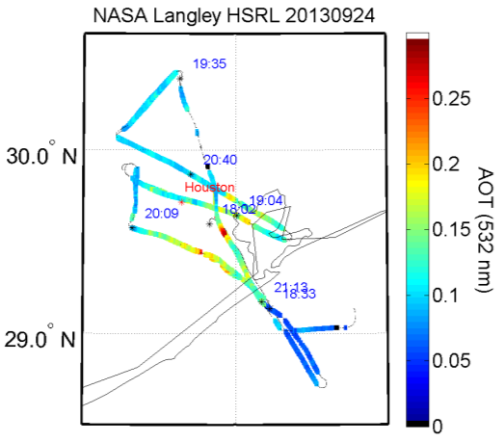
OAG, PGR, I2 cals at 1632 UTC

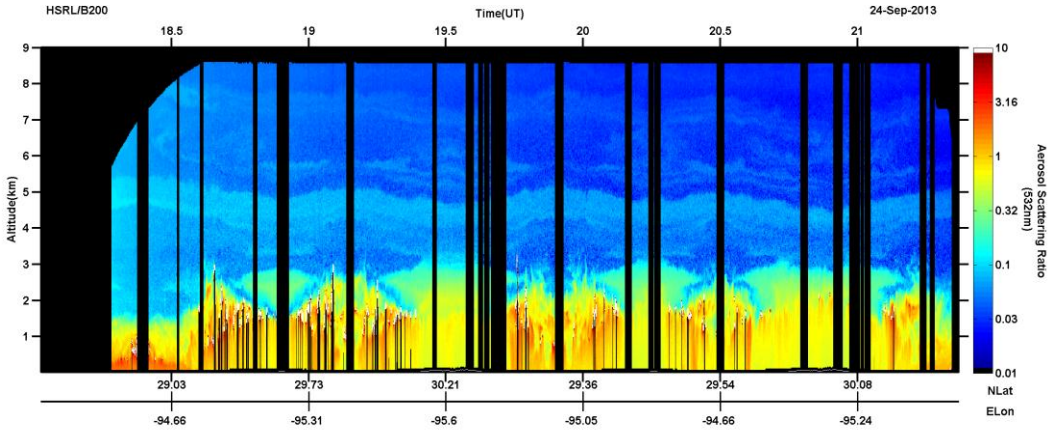
FLIGHT: Afternoon science flight (2 of 2)
DATE: September 24, 2013

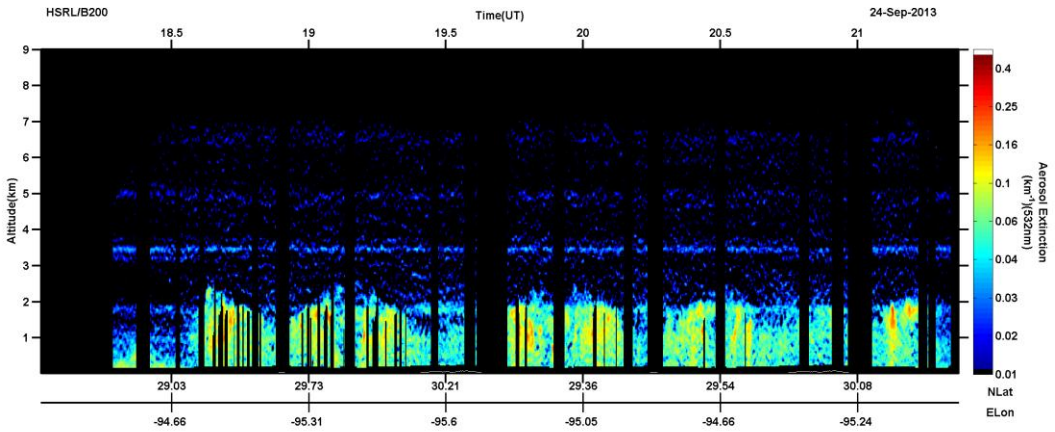
SUMMARY:

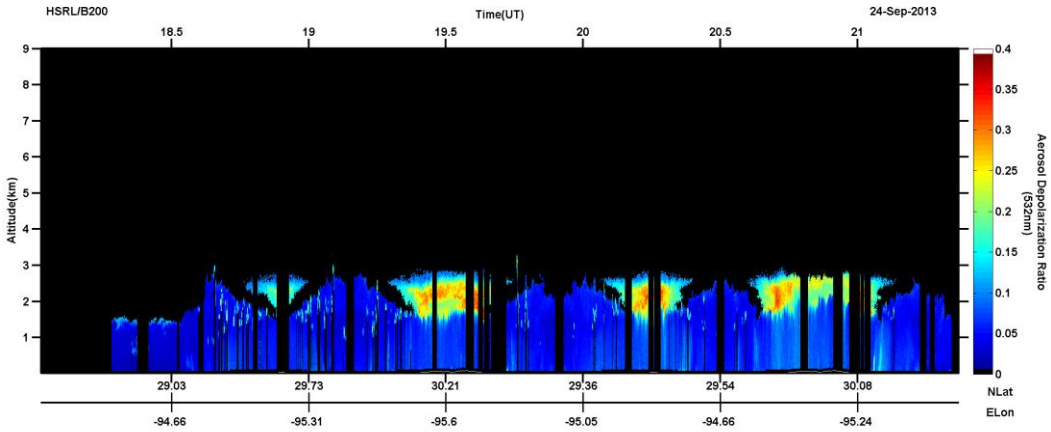
There were still some clouds in the afternoon, but HSRL-2 was able to observe between them throughout the flight pattern. Aerosol loading was still low overall, but with noticeable increases to the southwest of Houston, along with higher boundary layer heights. In the northern parts of the flight pattern, aerosol loading was low, but the elevated layer of dust that was first measured this morning became much more pronounced.











Operator Flight Notes, Flight # 2:

- INF PZ limit issue, having some trouble with alignment, had to move to another fringe 1836 to 1846 UTC
- OAC, PGR, I2 cals at 1937 UTC
- I2 cell position error at end of I2 cal, tried I2 cal again, problem appears resolved
- OAC, PGR, I2 cals started at 2058 UTC
- INF IGR cal at 2113 UTC