

Four Cimel sites were operated along the daytime track (yellow line), with numerous successfully principal plane scans (cloud-free or nearly cloud-free) suitable for joint inversion purposes and a substantial number of good AOD measurements at all sites.

The Mobile MPL was operated without problem for both day and night overpass in Pennsylvania. The HSRL (Chris Hostetler) was flown with successful acquisition.

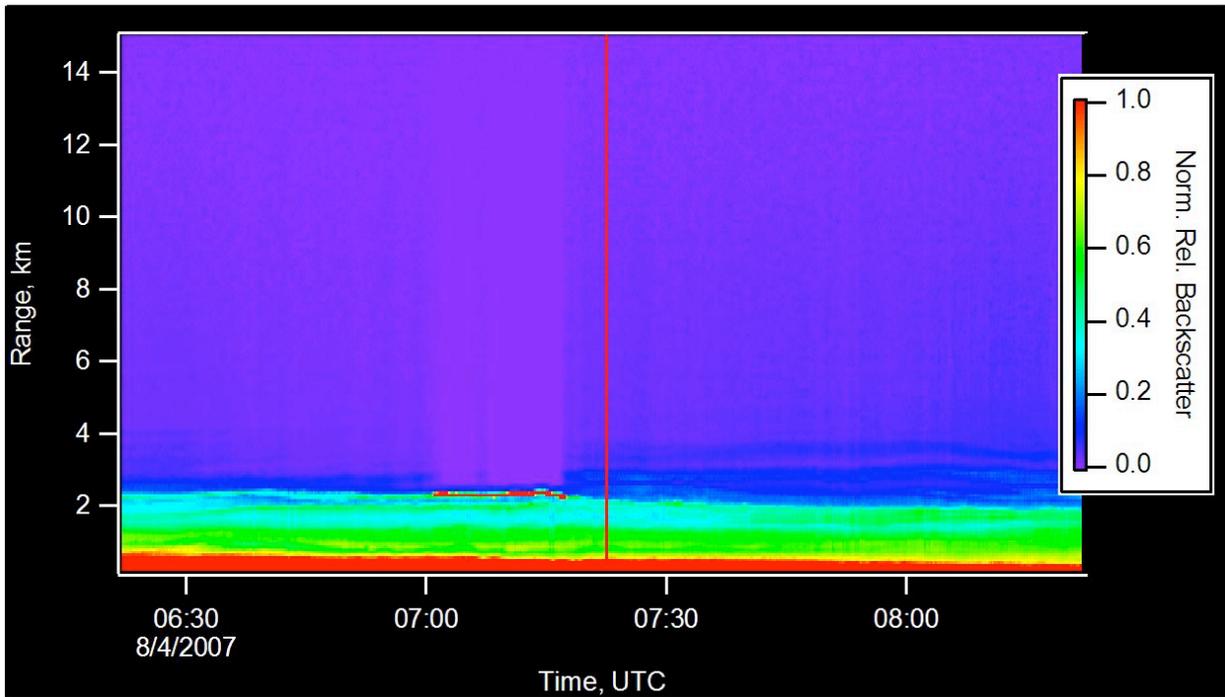
Site comments:

Mobile MPL at St Thomas, PA (N39 56.332' W077 47.315')

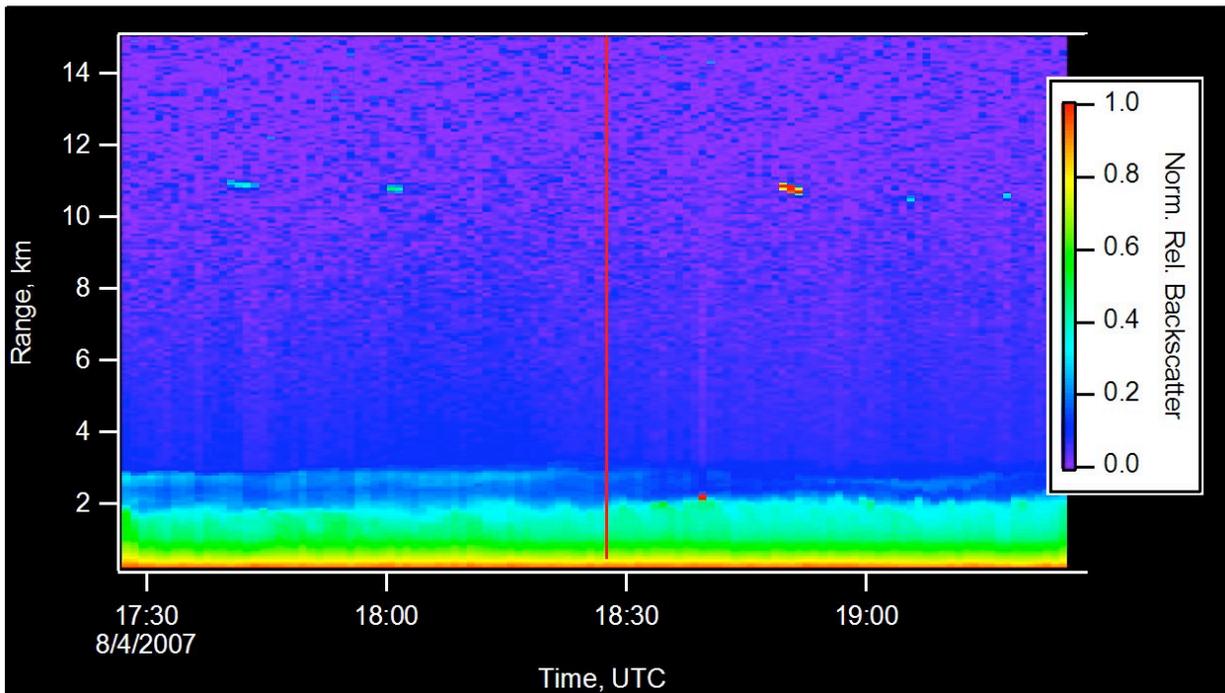
Both day and night overpass data were collected at the St. Thomas location. Nighttime data included lunar AOD measurements and lidar. A relatively thick aerosol/haze layer was observed up to 2.2 km, with a cloud feature clouds at the top of the boundary layer were present just before the overpass time (7:22:35 UTC). The CALIPSO sky-flash was observed, which appeared as a line (scattered) without distinct separated spots, except for a single bright pulse for the direct overhead position.

Daytime results had similar aerosol conditions, although some occasional cirrus were present in the lidar observation as well as a low cloud at 2 km just after the overpass time. (quick look lidar images below).

MPL404 4 Aug. 2007 AM overpass
St. Thomas (N 39° 56.332' W 077° 47.315', Elev. 705 feet)



MPL404 4 Aug. 2007 PM CALPISO overpass
St. Thomas (N 39° 56.332' W 077° 47.315', Elev. 705 feet)



Ormond:

Conditions for field observations were generally very favorable. Hot, hazy, 98 deg. The site was spot on the Calipso path, but also on a fairly active approach path to Dulles (with planes passing about every 20-30 minutes).

I had a nearly ideal cloud-free, high AOD morning. The afternoon had increasing shallow cumulus (often on the periphery) which were numerous at times, but the majority of the AOD measurements were cloud-free. The sun was obscured by cloud right at overpass, but only briefly. Many moderately unobstructed principal plane (PP) measurements before and after overpass time. A few of these were perfectly cloud free for the full PP view path.

Pennsylvania - Louder Rd - collocated with the lidar)

The weather was cloudless but after 11am cirrus clouds started moving in. They did not affect direct sun measurements though. Clouds dissipated mainly after 12-1230 pm and everything seemed to be almost perfect but about the overpass time the clouds showed up again, this time on the disk. Direct sun data show that.

Instrument did not work well. During a principal plane sequence it usually finished successfully runs of two or three filters and started doing the last one and then did not return to the right position but rather looked into the ground. Any attempts to park it were unsuccessful.

We resolved the "gain issue" and currently several good almucantars are available (since early morning). Sky measurements in the Principal Plane were successful on a number of occasions.

August 4, Westfield High School :

Was very hazy, with no clouds until ~ 1600.

I had an instrument in auto mode until 1600 , then switched to BCLSUN with manual PPs for the aircraft.

Scattered clouds were present after 1600. During overpass had cloud on the sun at 18:18 and 18:24.

At 1900 I put instrument to auto mode.

After 1900 some more clouds moved in

Sanders Elementary:

Hazy but clear mornings. Partially cloudy mid-day that did not affect measurements with overpass much the same, clouds began to move over during the final automatic phase around 3:30PM and later, therefore the final PP and almucantar might not be perfect.