CATZ-D Summary

The cloud caper
The Calipso Track w/AERONET ground sites
Site summary

- Four Cimels sited; two N of Dulles and two South on the predicted Calipso track
- Optical depth obs: cloud contaminated all sites
- Cld OD retrievals most of day
- Thunderstorm and rain at time of overpass all sites
- Precip measurements at Dulles during overpass (NWS)
- No AERONET sky scans for joint inversions
- No microtops observations were made
Site comments

• **Belmont:** From the time we set up to take down at Belmont Middle School, there was no visible sun. We were able to get 2 BCLSKY measurements between 2 and 3PM. There was slight rain during the overpass so the instrument had to be down during that time.

• **Fincastle:** I set the instrument around 15 into an automatic mode. at around 16:45 I put it into BCLSUN mode for the airplane overflight. Thick cloud moved on after 16:55, and no clearing had happened after that. I took instrument from the BCLSUN mode to automatic. A few droplets of water fell between 18 and 18:15. Thunderstorm began forming around that time also. The very intensive rain started right at the overpass time (18:26), so I very quickly moved control box and battery to the car. The rain stopped after 8 - 9 minutes, and the sky started clearing somewhat, after that I attempted to track the sun, not quite successful, and tried to run in it with automatic mode until about 19:05. The cloud mode was made at least 2 times, then I saw some more clouds moving on, and broke down the site at 19:10. The new rain started right after that, not very hard but I was already driving off.

• **Braddock RD:** Occasionally the Cimel could find the sun for a Sun measurement, but all AOD measurements for the day were cirrus contaminated—no blue sky observed. Most of the time it reverted to the Cloud mode. Light rain began at 2:05. At overpass, I would describe the rain as moderately heavy, and about five minutes later it had become quite heavy. Not a downpour, but enough to get you soaked in about 30 seconds.

• **Kinchaoe:** 18:00:00 Approached by Park Police who ask "What's going on man?" 18:02:00 100 % cover, (looks like rain to the west) 18:05:00 a few drops 18:15:00 Thunder. Stopped taking notes at this point, packed it in 18:26 a steady rain, a summer shower kind of a thing 18:32:00 a hard rain that lasted 15 - 20 minutes. I believe we were looking through cirrus all day when we did see the sun.
Further Notes:
• Dulles MPL is operated by NWS and will be in the Aug. 4 track
• 1 min precip from Dulles to be provided by NWS
• HSRL overflights at ~1700 and ~1730 observed by Joel from Braddock Rd site (OD .8 @ 500 nm)