

Highlights

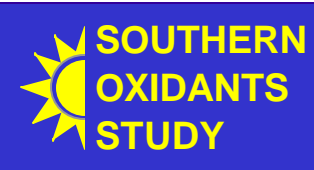
- Weekend looks wet & unsettled. P-3 coming.
- Today's planned G-1 and Caribou Flights.
- Thunderstorm outflow boundary.

Inside

- LATE BREAKING NEWS - G-1 Scare!!!!
- Orchid and Darfons Review
- Recreation - Percy Warner Park

The Daily Plan-it

*The SOS Field Study
Newsletter
Issue 9
June 25, 1999*



News you can use from around the SOS world!

Poor Ozone Weather Saturday

Just as predicted by Lisa Darby and Dick McNider, the Friday window of opportunity—light but persistent west-northwesterly winds with clearing skies—will give way to a meteorologically unsettled weekend.

Today's Flight Plans

by Carl Berkowitz

The Department of Energy **G-1** (tail number N701BN), the National Oceanic & Atmospheric Administration **Caribou** (tail number N6080) will fly today, Friday, June 25, 1999.

The **G-1** will fly two missions to characterize the urban air mass late in the afternoon and to characterize the same airmass following sunset after it has moved downwind.

The first mission will depart BNA at approximately 3:00 PM CDT and sample at 2700 ft MSL along the 5 DME (5 nautical miles from the Nashville VOR) and 10 DME circles. Next, three transects will be made

southeast (downwind) of BNA at 10, 15, and 20 DME at 2700 ft MSL before returning to BNA.

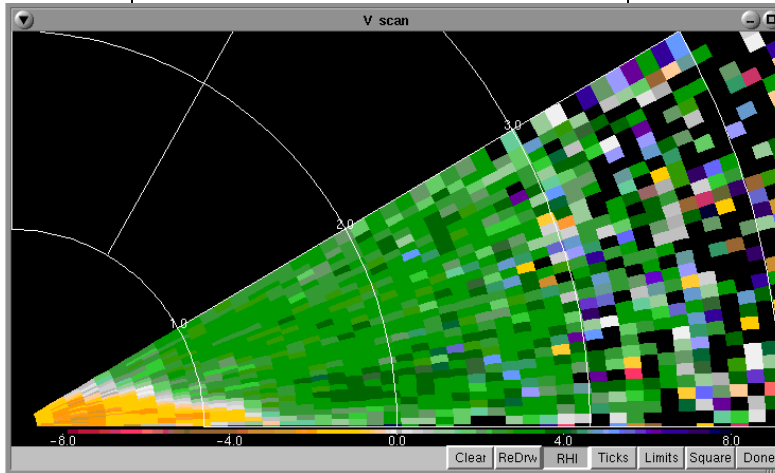
The second **G-1** mission will depart BNA at approximately 9:00 PM CDT and proceed southeast (downwind) of the airport to conduct crosswind transects between 40 and 60 DME at elevations between 2500 and 3000 ft

Tune. The aircraft proposes to operate at 12,500 ft MSL. The four-hour flight will commence at about 2:00 PM CDT.

Thunderstorm Outflow

by Lisa Darby

The Doppler lidar measured a thunderstorm outflow boundary at Cornelia Fort. On Tuesday night, June 22nd, the NOAA/ETL lidar crew were taking ozone and boundary layer wind measurements at Cornelia Fort measuring the changes in ozone and winds associated with the sunset transition and the evolution of the nighttime boundary layer. While performing shallow vertical scans



MSL.

The **Caribou**, operating out of John Tune Airport, will fly a 100 km southwest to northeast-oriented series of crosswind transects characterizing power plant plumes from just downwind (southeast) of the TVA Cumberland and Johnsonville Steam Plants to about 50 km south of Nashville before returning to John

into the wind, the lidar detected the intrusion of a new air mass, outflow from a small thunderstorm northwest of Nashville. The color plot of lidar radial velocity shows the structure of this boundary as it begins to pass Cornelia Fort from NW to SE. The green region represents the mean wind flow (SE at ~4 m/s) and the orange region shows the northwesterly flow

associated with the outflow. As the outflow passed the site, we saw a wave-like structure in the winds. We were curious about how this event affected the chemistry at the site, and asked Eric Williams for the Cornelia Fort ozone data for the corresponding times. A pronounced drop in ozone was associated with the passage of the outflow boundary. A possible mechanism for this decrease in ozone is that the intrusion of the cooler, denser air initiated vertical mixing, momentarily flushing out the ozone.

G-1 in Trouble

The G-1 suffered some mechanical problems shortly after takeoff on Friday afternoon. An engine fire light came on and that engine was shut down immediately. The aircraft returned to BNA. Evidently the operating engine then overheated and the “prop locked up” shortly after landing. This engine is now being evaluated but Carl Berkowitz suggests that we will be lucky to get back into operation before next Friday (July 2).

More news tomorrow!

The Orchid and Darfons

by NOAA ETL Lidar Crew

Last night the ETL lidar crew ate at the Orchid, a Thai restaurant on the west side of town (72 White Bridge Pike, in the Paddock Place Shopping Center). It was difficult to choose an entree as all items on the menu sounded great.

They have vegetarian dishes, flaming dishes, choice of spiciness, and a limited variety of imported beers. Entree prices ranged from \$10 to \$18.

We recommend that you stick with the more traditional Thai items, as they received our 4 star rating, whereas

Darfons, he saw a restaurant cleanliness report on the local news, and Darfons had received a low rating. Joanne, who also saw the report, says that the low rating was due to an employee dipping his finger in a sauce, licking it off, and returning to work without washing his hands. We're hoping that since this report was made public, they will clean up their act.

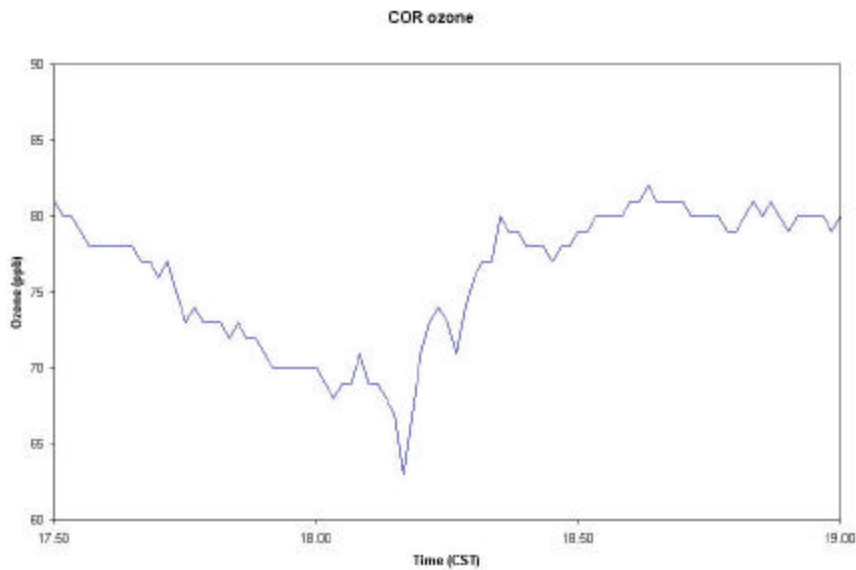
Recreational Activities

by NOAA ETL Lidar Crew

Boulderites that we are, we have discovered a park that has hiking and mountain biking trails. It is the Percy Warner park southwest of the city.

The park is very lush and green to our eyes. If you hike close to sunset, it is dark enough on the trails to see fireflies! There is a pedestrian loop trail that is 2.5 miles long. Adjacent to the park is the Cheekwood Botanical Gardens. The newly opened sculpture

trail is well worth visiting. It's \$8 to get into the Gardens, and the trail is 1 mile long with about 15 sculptures along the way. There is a variety of plant life to see along the trail including bamboo and wild ginger. The neighborhood also has some spectacular homes. Richard found the home of his dreams.



items that were on the fringe of being Thai received lower ratings (3 stars). The coconut and lemongrass soup was really good.

Darfons is close to the Gassaway building and has great tasting food. We've eaten there several times for lunch or dinner.

However, after Mike Hardesty, our fearless leader, ate some leftovers from