

## Highlights

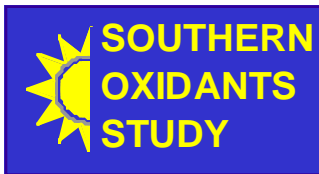
- Window of opportunity opens for Friday flights.
- Proposed flight plans for G-1, P-3, and Caribou.
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# The Daily Plan-it

*The SOS Field Study  
Newsletter  
Issue 8  
June 24, 1999*



Transcendent wisdom and universal compassion from around the SOS world!

## SOS Flies Friday

Apparently, we may be so fortunate as to have a brief window of opportunity for some plume oriented flights as one low pressure short wave moves out and, possibly, another moves in. According to Lisa and Dick's Thursday meteorological briefings, Friday afternoon should bring light (<10 knots) but persistent west-northwesterly winds and clearing skies. Late Friday night should bring a return to southerly flow and a chance of generally unsettled conditions, with possible convective activity on Saturday and Sunday.

## Flight Plans

The Department of Energy **Grumman Gulfstream G-1** (tail number N701BN), the National Oceanic & Atmospheric Administration **DeHavilland Caribou** (tail number N6080) and the **Lockheed WP-3D Orion** (tail number N43) are planning flights on Friday, June 25, 1999.

In the absence of low clouds and precipitation, the **G-1** proposes to fly two missions on Friday, June 25<sup>th</sup>. The goal of these flights is to characterize the urban air mass late in the afternoon and to characterize the same air mass following sunset after it has moved downwind.

The first mission will depart BNA at approximately 1500 CDT and sample at 2700 ft MSL along the 5 DME and 10 DME circles. Next, three transects will be made southeast (downwind) of BNA at 10, 15, and 20 DME at 2700 ft MSL. The G-1 will then return to BNA.

The second **G-1** mission will depart BNA at approximately 2100 CDT and proceed southeast (downwind) of the airport to conduct crosswind transects between 40 and 60 DME at elevations between 2500 and 3000 ft MSL.

The **Caribou**, operating out of John Tune Airport, plans to 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 Tune. The aircraft proposes to operate at 12500 ft MSL. The foru-hour flight will commence at about 2:00 PM CDT.

The **P-3** proposes to fly a combined land-use characterization and power plant/urban plume characterization study in its transit flight from Tampa-St. Petersburg FL to BNA. Leaving FL at 12:00 to 1:00 PM EDT, the P-3 will proceed to the Owensboro KY area before turning southwest and conducting a series of crosswind transects beginning northwest of the TVA Cumberland

Steam Plant and progressing southeast across and about 50 miles downwind of Nashville before returning to BNA at between 6:00 and 7:00 PM CDT. The majority of the flight will take place within the boundary layer between 1000 and 7000 ft MSL.

## 2nd Science Team Meeting

**Status Reports:** Our second Science Team Meeting was held Wednesday night at 8:00 PM. The meeting began with a series of brief status reports, given by the Science Team members, concerning the various activities in the 1999 SOS Nashville Study. These status reports indicated that most measurements were on-line and operating well. The few problems that have been encountered are being quickly resolved. In addition, Alan Brewer gave a short presentation describing some interesting profiler results from Comelia Fort. These results will be described in greater detail in the next issue of the Daily Plan-it.

**Weather Update:** The status reports were followed by an update on the weather that we can expect in this area over the next several days (the haunting refrain of Johnny Ray's version of "Walking in the Rain" could be heard in the background during the presentation). The report was given by the crack SOS meteorological team of Lisa Darby, Dick McNider, Tim Coleman, and

Benjie Norris. We have come to rely heavily on this group's guidance in planning our research this summer.

**FTP Site / Data Format:** On Tuesday many of the measurements group from the Comelia Fort site gathered to discuss some of the interesting results that have been obtained thus far. Many who attended this meeting expressed interest in gaining access to the results contained in this rich data set. In order to make preliminary results available to the participants and to promote the analysis, interpretation and synthesis of the results, a secure FTP site has been established by Cathy Burgdorf. Participants may access the SOS 99 preliminary data archive at [ftp.al.noaa.gov](ftp://ftp.al.noaa.gov) with the required username and password. Data is organized within the [/SOS99/site/group/](#) directory structure and posted using the data format specifications.

Eventually, final versions of much of the data obtain during this study will be placed in the NARSTO/SOS data archive. The formatting protocol for incorporation of the data files can be found in the NARSTO Data Management Handbook. This document is available in pdf format from the NARSTO Quality Systems Management Plan Home Page at <http://cdiac.esd.ornl.gov/programs/NARSTO/narsto.html#qsmp> (note case). For additional information concerning this data format and translation software or services that might be available to facilitate use of the archive, please contact Les Hook at Oak Ridge National Laboratory, Oak Ridge TN. His phone number is (423) 241-4682.

**Meetings:** In its first meeting, the Science Team decided that several smaller specialty groups should be established. The purpose of these groups is to address specific issues attendant to the measurement of certain important compounds. In addition the members of the groups could use their experience to judge how the chemical composition in the Nashville area this summer compares with similar measurement that have been made at other locations and at different times.

Several Specialty Groups have been identified. The Comelia Fort Measurement Group met at 2:00 PM July 22nd (noted above). The NO<sub>x</sub>/NO<sub>y</sub> Group met this morning at 11:00 AM in the Gassaway Building to compare measurements and discuss their findings. The VOC Group is scheduled to meet at 2:00 PM Saturday, June 26th in the Gassaway Building to have a "first look" at the results of the informal VOC intercomparison. We are gratified by the response of the group leaders in bringing their groups together and the progress that is being made in of these first meetings. These groups are following a "same-time, same-place" weekly schedule with their meetings.

In addition to the Specialty Groups, the Science Team has also recommended that a series of Science Symposia be held. These symposia are intended for all interested participants of the study. The first of the symposia will be held next Tuesday, July 29, at 3:30 PM following the meeting of the Comelia Fort Group. Several of the people who led the planning of the 1999 SOS Nashville will discuss the goals of the study and the principal factors that led them to defined these goals. Beyond this first meeting subsequent meetings will focus on some of the interesting new finding emerging from the current study.

### Cherokee - Wonder Dog

#### By Hunter Daughtery

Cherokee, the SOS Cornelia Fort mascot, got to come to Nashville because his owner, Herb Jacumin, lost his dog sitter a week before he left Carolina. Herb, a member of the EPA/ManTech VOC team, scrambled to find a hotel that would accept dogs as guests and still be within government-approved rates.

Cherokee, an almost six-year-old greyhound, recently ended his racing career and was adopted by Herb. Cherokee likes most of the humans he's met at Cornelia Fort, but is still not sure about the cows.



Captain D's - Are you kidding?

#### By Wayne Angevine

I'm a Westerner through and through, but I do like catfish and hush puppies, and the **best** hush puppies I've had come from the unlikely source of Captain D's Seafood. It's fast food, but apparently made to order, at least sometimes you have to wait a few minutes. Captain D's is everywhere, including at Stafford and Gallatin (on the way out of Comelia Fort) and across from the Opryland Hotel. Margaret Pippin, now at Western Michigan University (and Dickson during the 1999 SOS field study), taught me in 1994 that you can have all the hush puppies you want just by substituting them for other items on your dinner. So if you order a catfish dinner that normally comes with slaw, beans, fries, and pups, you can have it with pups, pups, pups, and pups. Even if you don't want to go that far, at least you can substitute pups for fries--they're probably healthier and they're lots tastier. Captain D's pups are not too greasy and they're just lightly spiced, a lot like my mother's corn fritters (she was from Illinois). The generic fish and the shrimp are nothing to write home about (even by email) but the catfish is actually quite good, very lightly breaded and fried just right. Check it out sometime when you're not dressed or showered for a gourmet dinner!