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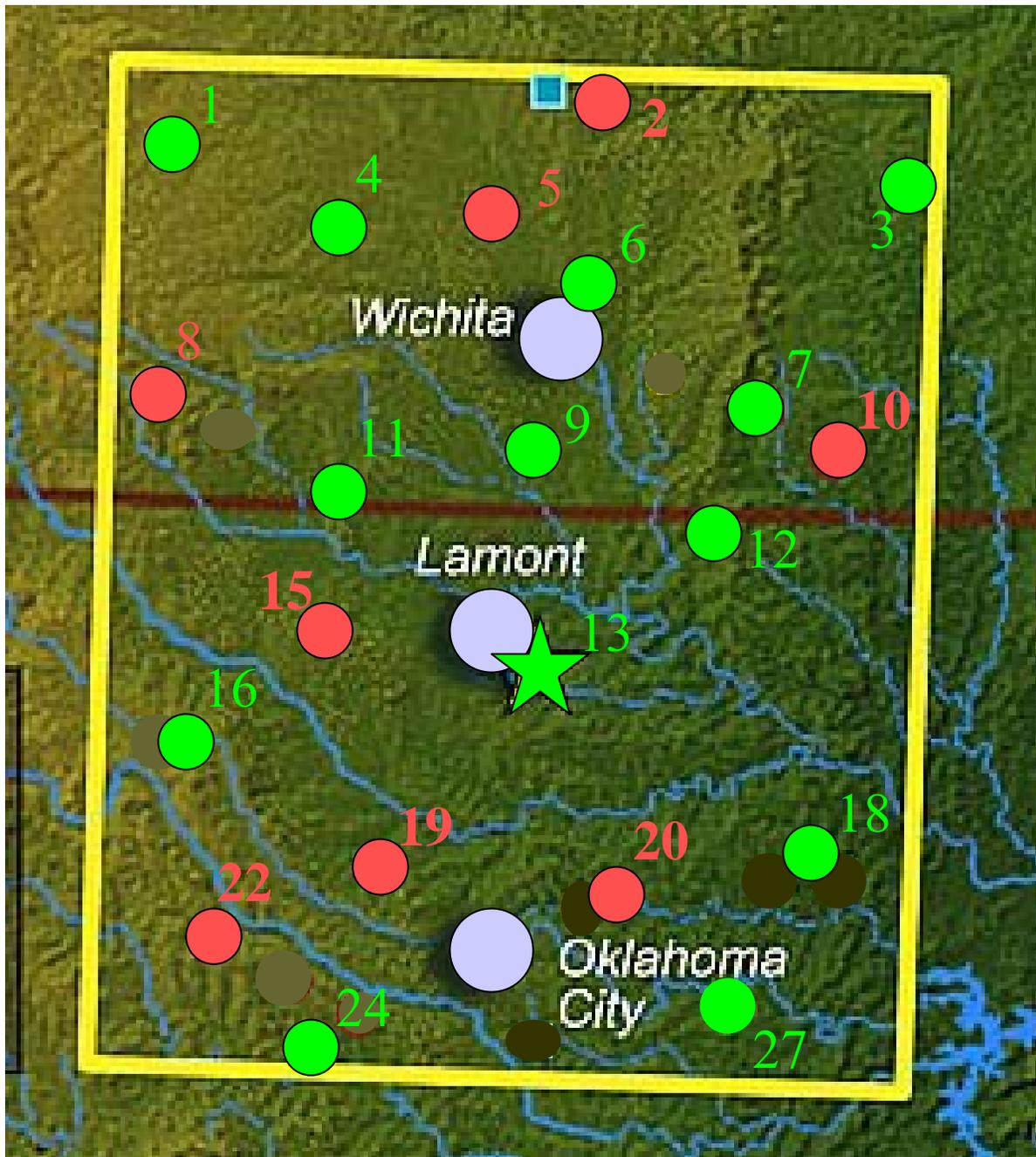
MFRSR Status

Southern Great Plains

- 21 Sites w/MFRSR
- 13 Operational Instrument
- 8 Pulled from Service

NSA and TWP

- 5 Sites w/MFRSR
- 5 Operational Instrument



Status of Head Refurbishing

- Filter samples met spec and order was placed earlier this year
- Currently have 35 complete filter-detector sets in hand
- ~40 Heads have been partially refurbished
- ~80 Cubes are built and waiting for filter-detectors
- 5 Heads are near completion and possibly ready as soon as Oct

Converting to Campbell Data Loggers

- Less costly to purchase than proprietary loggers
- Easier to maintain
- Programming flexibility

Path to Deployment

- Currently have two functioning systems at PNL
- Side-by-side comparisons w/Yankee are being done
- Available components to build ~20 systems on hand
- May be able to install 1st operational system mid Oct

Preparing for the Upgrades

- New ingest software has been written
- MFRSRs have been reconfigured to collect alltime data to assess nighttime offsets
- Offset info will be used to correct historical data.

Filename Change

Data processed with the new ingest have the format:

sgpmfrsr**vb**E13

Once we're completely satisfied with the new ingest, the filename will revert back.

Calibrated Data

- b1 data are now nominally calibrated
- c1 data will be Langley calibrated
- Historical data will be reprocessed

Shading Issues

- More shading issues than expected
- Bubble levels on stands don't indicate movement
- Will be visiting several EFs in October

NIMFR Update

NSA

- C2 Atqasuk channel 940 is dead. Decision was made to leave in place and repair this winter.
- Otherwise, NSA NIMFRs have operated well.

SGP

- Head amplifier and channel 840 failed in April. Was repaired and operating again in May.
- Cable hung in June and disconnected the Head and Tube heaters.

MFR Update

NSA

- Early problems with Cal files. Resolved.
- No major operational problems

SGP

- Operated continuously without problems

Cessna Mounted MFR

(ECR/ECO-00584)

Purpose: For albedo measurements over the SGP

- The ECR review has been completed and the ECO is in progress.

Mounting Locations

1. Wingtip Extenders

- a. Pros – Easy Mount, Increased Lift
- b. Cons – Fuselage in FOV ($\sim 15^\circ$), Instability

2. Fuselage

- a. Pros – Simple installation, Inexpensive
- b. Cons – Wheels in FOV ($\sim 15^\circ$), Possible eng wash

3. Tail Cone

- a. Pros – Best FOV of three ($< 8^\circ$), Cleaner location
- b. Cons – Expensive, Possible FAA approval







NO SMOKING



Data Acquisition

- The MFR will be connected to a CR1000 acting as an analog→serial converter.
- Serial stream will then be recorded with all the aerosol and ozone instruments using Ogren's data acquisition software.

Lost MFRSRs and related instruments per year since 2000

- 2000 0
- 2001 1
- 2002 0
- 2003 3
- 2004 1
- 2005 2
- 2006 2

MFRSR DQR Overview (All Sites)

20040101 to Current

Shading/Alignment	33
Weather Related	12
Logger Failure	4
Ch 415 Problems	4
Questionable Data	4
Missing Data	2
Head Temp	2
Instrument Failure	2
Ch 500 Problems	1