FIRE II Cirrus
Mission Summary

Date: November 20, 1991
Julian Day: 324
Experiment Day: 8

Summary | Active Sensors | Passive Sensors | Sonde and Sfc Met

Mission Scientist: David Starr
Deputy Mission Scientist: None

Mission Description:

Stand-down from flight activities. SPECTRE operations continue.

Weather Synopsis:

After some early morning low and middle clouds, southeast Kansas experienced another cloudless day. Light northerly breezes subsided late in the day as temperatures reached the mid 60's. As the sun set, temperatures droped quickly toward freezing mark with alomost no wind.

Synoptic Situation:

The cut-off low over the lower Mississippi Valley responsible for the morning cloud cover and yesterday's rain drifted very slowly north and east. Another influx of dry air moved into southeast Kansas. Northerly flow at the surface, and southwesterly flow aloft combined to usher in very dry air. Cirrus clouds streaming into the Rockies evaporated all day as they moved over the mountains and approached Kansas. The atmosphere has become somewhat decoupled vertically. A Pacific ridge dominates the lower atmosphere responsible for the northerly flow at the surface, while large-scale flow keeps southwesterly flow at the higher levels.

Aircraft	Depart	Land	Notes
All Aircraft			No flights

Satellite	Hub Overpass Time	Zenith Angle	Azimuth Angle	RAOB
NOAA-11	20:40:06	18.60	72.57	no
	09:04:30	53.92	98.51	yes
NOAA-12	13:46:12	48.96	98.96	yes
	01:06:12	34.38	71.80	yes

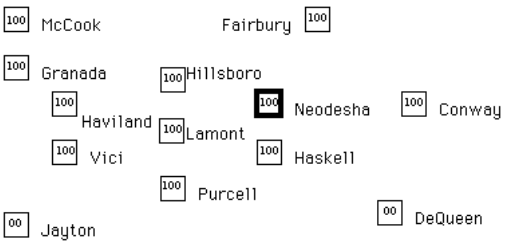
Rawinsonde Operations:

- Inner NWS stations (Type A): Routine @ 12 and 00 UTC
- Outer NWS stations (Type B): Routine @ 12 and 00 UTC
- Hub CLASS station: Satellite overpasses @ 14, 21, 02, and 09 UTC
- Remote CLASS stations: No launches
- Hub GSFC/WFF station: Launches @ 18, 22, 23, 02, 05 UTC
- CSU Parsons station: No launches

FIRE Profiler Status:

- CSU 405 MHz @ Parsons: Continuous operations
- PSU 50 MHz @ Coffeyville: Testing new components
- NOAA 405 MHz @ Coffeyville: Not operational

NWS Wind Profiler Status



SPECTRE Operations:

Excellent dry, clear sky data collection period for SPECTRE. Raman lidar did collect some daytime data with limited success. Measurements of total ozone have been changing quite a bit from day to day. Repair efforts on the 50 Mhz RASS may yield some favorable result in the next day or two. The 400 Mhz RASS has been moved to 402 Mhz after complaints from SARSAT.

Highlights of FIRE Operations:

- Good SPECTRE operations.

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Instrument Logs

Active Sensors

Active Sensor	UTC Hour																								Notes
	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	
Utah Lidar H																									NO OBSERVATIONS
LaRC Laser Ceilometer H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Wisc HSR LidarH																									NO OBSERVATIONS
Wisc Vol Image Lidar																									NO OBSERVATIONS
GSFC RAMAN Lidar H													X	X	X	X	X	X	X	X	X	X	X	X	NOISY ABOVE 7 KM
NOAA CO2 Lidar H						X	X					X													CALIBRATIONS AND STRATOSPHERIC AEROSOLS
NOAA Radar H																									NO OBSERVATION
PSU Radar H				X	X																				
PSU Laser Ceilometer H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PSU 50 MHZ Wind Prof H																									NOT OPERATIONAL
PSU/NOAA 50 MHz RASS H																									NOT OPERATIONAL
NOAA 405 MHz RASS H																									NOT OPERATIONAL
LaRC Lidar P				X	X																				
CSU Wind Prof/RASS P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	RASS FROM 15 TO 00 UTC
CSU Laser Ceilometer P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

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Passive Sensors

Passive Sensor	UTC Hour																								Notes
	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	
NOAA μ-wave Radiometer H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
NOAA Sun Photometer H							X	X																	
NOAA H20 Photometer																									NO OBSERVATIONS
NOAA IR Flux Radiom. H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
NOAA Dobson Ozone H						X	X																		
NOAA Surface Ozone H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
NOAA Trace Gas H								CF					CF												
PSU μ-wave Radiometer H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	SOME NOISE PROBLEMS
PSU Sun Photometer H										X															
PSU Solar Flux Radiom. H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PSU IR Flux Radiometers H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PSU Sky Video H				X	X																				
Utah IR-Window Radiom. H																									NO OBSERVATIONS
Utah Sky Video H																									NO OBSERVATIONS
LaRC Video H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
AFGL Sky Imager H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Ames Radiometer H	X	X	X	X	X	X	X	X	X	X	X	X													CALIBRATION
Denver Solar Radiom. H							X	X		X	X														
Denver IR-Spectrometers H							X	X	X	X	X	X	X												
GSFC IR-Spectrometer H							X	X	X	X	X	X		X	X	X	X	X							
Wisc. IR-Spectrometer H						X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	
MRI Sun Photometer H								X	X	X	X														
MRI IR Radiometer H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MRI Spectro-Radiom. H								X	X	X	X														
MRI Solar Flux Radiom. H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GSFC Sun Photometer H								X	X	X	X														
CSU Sun Photometer P																									
CSU IR-Window Radiom. P											X	X	X												
CSU Solar Flux Radiom. P	X	X	X	X	X	X	X	X	X	X	X	X	X												
CSU IR Flux Radiometers P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CSU IR-Spectrometer P											X	X	X												
CSU Sky Video P			X	X	X	X	X	X	X	X	X	X	X												

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Sondes and Surface Meteorology

Sondes + Sfc Met Sensor	UTC Hour																							Notes
	12	13	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	
NOAA Ozone Sonde H																X									
WFF Sonde H							X				X	X			X			X							
NCAR Cloud Ice Sonde H																									NO LAUNCHES
NCAR/CLASS Sonde H			X												X							X			
NCAR PAMS H	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X	X	X	
NCAR/CLASS (remote)																									NO LAUNCHES
NCAR PAMS (remote)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	PARSONS DOWN 19 TO 22 UTC
CSU Sonde P																									NO LAUNCHES
CSU Sfc Meteor. P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Type A NWS Sondes	X												X												
Type B NWS Sondes	X												X												
PSU Sfc Meteor H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	