
Description of the NOAA **Surface Met Data** Collected during Mid-latitude Continental Convective Cloud Experiment (MC3E) 22 April – 6 June 2011

Surface Met Station

1 Installation

A propeller wind monitor was mounted on a 10-m tower to measure the wind speed and direction. A temperature sensor and a humidity sensor were placed on the ground along with a tipping bucket rain gauge. A description of the instruments can be found on the NOAA Earth System Research Laboratory (ESRL) web page <http://www.esrl.noaa.gov/psd/data/obs/instruments/SurfaceMetDescription.html>.

2 Archived Data Files

The raw surface met data are saved in daily files in ASCII format. The filenames follow the DOE filename convention with the following naming format:

sgpsurfmct1.00.YYYYMMDD.raw.mc3e_noaa_txt.asc

The naming structure is:

sgp	- site identifier – Southern Great Plains
surfmct	- instrument identifier – surface met station
C1	- facility designation – Central Facility
00	- data level – raw data
YYYY	- year
MM	- month
DD	- day of month
raw	- data level – raw data
mc3e	- field experiment name
noaa	- instrument owner
txt	- ASCII data
asc	- ASCII data

All daily files for the MC3E field campaign are zipped into one file with the following format:

sgpsurfmct1.00.YYYYMMDD.through.YYYYMMDD.raw.mc3e_noaa_txt.asc.zip

3 Data Format

The surface met data were recorded at 2-minute intervals and saved in daily ASCII data files. The daily data files contained 14 comma delimited fields in each row with the following format.

Table 1. Format of daily ASCII Surface Met data files.

Field	Description
1	Data Logger ID (constant at 108)
2	Year
3	Day of Year
4	HoursMinutes (at the end of the average) (Leading zeros are suppressed)
5	Pressure (mb) offset by -400 mb. True Pressure = recorded value + 400 mb
6	Air Temperature (C)
7	Relative Humidity (percent)
8	Scalar Wind Speed (m/s) at 10 meters
9	Vector Wind Speed (m/s) at 10 meters
10	Wind Direction (degrees) at 10 meters
11	Wind Direction Standard Deviation (degrees) at 10 meters
12	Battery Voltage (Volts)
13	Precipitation (mm)
14	Maximum Wind Speed (m/s)