

Notice to Data Users:
The documentation for this data set was provided solely by the Principal Investigator(s) and was not further developed, thoroughly reviewed, or edited by NSIDC. Thus, support for this data set may be limited.

SMEX04 Meteorological Network Data: Arizona

Summary

This data set contains the meteorological data collected as part of the Walnut Gulch Micronet during the SMEX04 Experiment in Arizona.

Citing These Data:

The following example shows how to cite the use of this data set in a publication. List the principal investigators, year of data set release, data set title, publisher: NSIDC, and digital media.

Keefer, T., D. Goodrich, and S. Moran. 2009. *SMEX04 Meteorological Network Data: Arizona*. Boulder, Colorado USA: National Snow and Ice Data Center. Digital media.

Overview Table

Category	Description
Data format	ASCII tab-delimited text
Spatial coverage	31.422° N to 31.112° N, 109.718° W to 110.239° W
Temporal coverage	01 June 2004 to 30 September 2004
File naming convention	SMEX04_Meteorological_xxx.txt
File size	2 MB
Parameter(s)	Relative Humidity, Temperature, Wind Speed, Wind Vector, Wind Direction, Standard Deviation of Wind Direction, Barometric Pressure, Solar Radiation, Photosynthetically Active Radiation (PAR) incoming, PAR reflected, Soil Heat Flux, Soil Temperature, Net

	Radiation, Soil Moisture.
Procedures for obtaining data	Data are available via FTP.

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1. Contacts and Acknowledgments:

Investigator(s) Name and Title:

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Acknowledgements:

The USDA ARS Southwest Watershed Research Center, especially John Smith and the many graduate students and volunteers who collected the field data.

2. Detailed Data Description:

Format:

The data set consists of four ASCII tab-delimited text files, with a column heading for each data type.

File Naming Convention:

These files are named according to the following convention and are further described in Table 1:

SMEX04_Meteorological_xxx.txt

Table 1. Description of File Name Variables

Variable	Description
SMEX04	Soil Moisture Experiment 2004
Meteorological	Indicates meteorological data
xxx	Indicates site name (such as Kendallmet), or metadata file
.txt	Indicates that this is an ASCII text file

File Size:

File sizes range from 1 KB to 778 KB.

Spatial Coverage:

Southernmost Latitude: 31.112° N
Northernmost Latitude: 31.422° N
Westernmost Longitude: 110.239° W
Easternmost Longitude: 109.718° W

Temporal Coverage:

01 June 2004 to 30 September 2004

Temporal Resolution:

Meteorological data is recorded every 20 minutes.

Parameter or Variable:

Relative Humidity, Temperature, Wind Speed, Wind Vector, Wind Direction, Standard Deviation of Wind Direction, Barometric Pressure, Solar Radiation, Photosynthetically Active Radiation (PAR) incoming, PAR reflected, Soil Heat Flux, Soil Temperature, Net Radiation, Soil Moisture. These data have been quality controlled and suspect or missing data have been removed. Consequently, these data are not continuous.

3. Data Access and Tools:

Data Access:

No special tools are required to view these data. Any text reader or web browser is suitable.

Related Data Collections:

See related information on the Soil Moisture Experiment (SMEX) Web site:
http://nsidc.org/data/amsr_validation/soil_moisture/index.html

4. Data Acquisition and Processing:

The following data are 20-minute averages of 10-second samples.

RH and temperature at 2 m AGL using Vaisala/CSI HMP45-C.

Wind Speed, Vector, Direction and standard deviation of direction measured at about 3.5 m AGL using RMYoung/CSI Wind Sentry.

Barometric Pressure in mBar measured at 2m using CSI/Vaisala CS105.

Solar radiation measured at about 3.5 m using LiCor/CSI LI200X.

PAR in coming or reflected measured at about 3.5m using LiCor/CSI Quantum sensor LI190SB.

Soil Heat Flux measured with CSI/REBS HFT3 at 8cm depth.

Soil Temperature measured with Type T thermocouple wire at 1, 2 and 6 cm depth.

Net radiation measured with REBS Q7 at about 3.5 m.

The soil moisture data are 20-minute average of 1-minute samples.

Soil Moisture measured with Dynamax Theta Probe at 5 cm and 15 cm (center tine at nominal depth), recorded as Volumetric Water Content (VWC).

5. References and Related Publications:

Please see the SMEX04 site to access data:
http://nsidc.org/data/amsr_validation/soil_moisture/smex04/index.html