CEOP CPPA SGP (Southern Great Plains) Reference Site

1. IDENTIFICATION INFORMATION

Name	CEOP CPPA SGP (Southern Great Plains) Reference Site
Metadata Identifier	CEOP_CPPA_SGP20230727061134-DIAS20221121113753-en

2. CONTACT

2.1 CONTACT on DATASET

Name	Steven F. Williams
Organization	NCAR/EOL/CDS
Address	P.O. Box 3000, Boulder, Colorado, 80307, USA
TEL	+1- (303)497-8164
FAX	+1-(303)497-2044
E-mail	sfw@ucar.edu

2.2 CONTACT on PROJECT

2.2.1 Data Integration and Analysis System

Name	DIAS Office
Organization	Japan Agency for Marine-Earth Science and Technology
Address	3173-25, Showa-Cho, Kanazawa-ku, Yokohama-shi, Kanagawa, 236-0001, Japan
E-mail	dias-office@diasjp.net

3. DOCUMENT AUTHOR

Name	Steven F. Williams
Organization	NCAR/EOL/CDS
E-mail	sfw@ucar.edu

4. DATASET CREATOR

Name	Steven F. Williams
Organization	NCAR/EOL/CDS
E-mail	sfw@ucar.edu

5. DATE OF THIS DOCUMENT

2023-07-27

6. DATE OF DATASET

creation : 2010-08-13

7. DATASET OVERVIEW

7.1 Abstract

The Southern Great Plains (SGP) site was the first field measurement site established by DOE's Atmospheric Radiation Measurement (ARM) Program. Scientists are using the information obtained from the SGP to improve cloud and radiative models and parameterizations and, thereby, the performance of atmospheric general circulation models used for climate research.

Deployment of the first instrumentation to the SGP site occurred in the spring of 1992, just 24 months after the program was approved. The site was dedicated in November 1992. Additional instrumentation and data processing capabilities have been incrementally added in the succeeding years. The site was recently rededicated in the name of Dr. Frederick Luther (1943-1986), who made outstanding contributions to the field of atmospheric research and furthering our understanding of atmospheric radiation and its interactions with clouds, aerosols, and gases.

The SGP was chosen as the first ARM field measurement site for several reasons including its relatively homogeneous geography and easy accessibility, wide variability of climate cloud type and surface flux properties, and large seasonal variation in temperature and specific humidity. It also already had a large, existing network of weather and climate research and instrumentation.

The SGP site consists of in situ and remote-sensing instrument clusters arrayed across approximately 55,000 square miles (143,000 square kilometers) in north-central Oklahoma. The ARM SGP site is the largest and most extensive climate research field site in the world and can be viewed as a real "laboratory without walls."

The heart of the SGP site is the heavily instrumented central facility located on 160 acres of cattle pasture and wheat fields southeast of Lamont, Oklahoma. A staff of 30 scientists and technicians collect and monitor data from the central facility instruments and from smaller, unstaffed facilities throughout the site.

The instruments throughout the site automatically collect data on surface and atmospheric properties, routinely providing data to the Site Data System, which is linked by high-speed communications to the ARM Archive and Data Center. The Data Center acquires additional data from other sources, such as National Weather Service satellite and surface data, and provides tailored data packages to ARM Science Team members.

More than 30 instrument clusters have been placed around the SGP site, at the central facility and at boundary, extended, and intermediate facilities. The locations for the instruments were chosen so that the measurements reflect conditions over the typical distribution of land uses within the site.

The continuous observations at the SGP site are supplemented by intensive observation periods, when the frequency of measurements is increased and special measurements are added to address specific research questions. During such periods, approximately 2 gigabytes or more of data (two billion

bytes) is generated daily. Both during intensive observation periods and at other times, scientists bring their own specialized instruments to the SGP site, typically for several weeks.

7.2 Topic Category(ISO19139)

climatologyMeteorologyAtmosphere

7.3 Temporal Extent

Begin Date	2002-10-01 00:00:00
End Date	2009-12-31 23:59:59
Temporal Characteristics	30minute

7.4 Geographic Bounding Box

North bound latitude	39.000000
West bound longitude	-100.500000
Eastbound longitude	-94.500000
South bound latitude	34.000000

7.5 Grid

7.6 Geographic Description

7.7 Keywords

7.7.1 Keywords on Dataset

Keyword Type	Keyword	Keyword thesaurus Name
theme	Climate, Water	GEOSS

7.7.2 Keywords on Project

7.7.2.1 Data Integration and Analysis System

Keyword Type	Keyword	Keyword thesaurus Name
theme	DIAS > Data Integration and Analysis System	No_Dictionary

7.8 Online Resource

CPPA: SGP Surface Meteorology and Radiation Data Set : http://data.eol.http://data.eol.ucar.edu/codiac/dss/id=76.097

CPPA: SGP Meteorological Tower Data Set : http://data.eol.ucar.edu/codiac/dss/id=76.101

CPPA: SGP Soil Temperature and Soil Moisture Data Set : http://data.eol.ucar.edu/codiac/dss/id=76.112

CPPA: SGP Flux Data Set : http://data.eol.ucar.edu/codiac/dss/id=76.098

DOE ARM SGP Radiosonde (2-sec vertical resolution) Data : http://data.eol.ucar.edu/codiac/dss/id=71.006

C1 (Central Facility, Lamont, OK) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/C1/

E1 (Extended Facility 1, Larned, KS) Station inactive as of 15 October 2009). : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E1/

E2 (Extended Facility 2, Hillsboro, KS) Station inactive as of 20 October 2009. : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E2/

E3 (Extended Facility 3, LeRoy, KS) Station inactive as of 28 October 2009). : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E3/

E4 (Extended Facility 4, Plevna, KS) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E4/

E5 (Extended Facility 5, Halstead, KS) Station inactive as of 2 November 2009. : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E5/

E6 (Extended Facility 6, Towanda, KS) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E6/

E7 (Extended Facility 7, Elk Falls, KS) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E7/

E8 (Extended Facility 8, Coldwater, KS) Station inactive as of 10 November 2009. : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E8/

E9 (Extended Facility 9, Ashton, KS) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E9/

E10 (Extended Facility 10, Tyro, KS) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E10/

E11 (Extended Facility 11, Byron, OK) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E11/

E12 (Extended Facility 12, Pawhuska, OK) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E12/

E13 (Extended Facility 13, Lamont, OK) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E13/

E14 (Extended Facility 14, Lamont, OK) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E14/

E15 (Extended Facility 15, Ringwood, OK) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E15/

E16 (Extended Facility 16, Vici, OK) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E16/

E18 (Extended Facility 18, Morris, OK) This station inactive as of 17 November 2009. : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E18/

E19 (Extended Facility 19, El Reno, OK) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E19/

E20 (Extended Facility 20, Meeker, OK) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E20/

E21 (Extended Facility 21, Okmulgee, OK) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E21/

E22 (Extended Facility 22, Cordell, OK) Station inactive as of 1 December 2009. : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E22/

E24 (Extended Facility 24, Cyril, OK) This station inactive as of 24 November 2009). : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E24/

E26 (Extended Facility 26, Cement, OK) This station inactive as of 16 December 2009. : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E26/

E27 (Extended Facility 27, Earlsboro, OK) : http://www.eol.ucar.edu/projects/ceop/dm/insitu/sites/cppa/SGP/E27/

file download : https://data.diasjp.net/dl/storages/filelist/dataset:128

7.9 Data Environmental Information

7.10 Distribution Information

name	version	specification
PRN	no information	CEOP Unified Format

8. DATA PROCESSING

8.1 Data Processing (1)

8.1.1 General Explanation of the data producer's knowledge about the lineage of a dataset

8.1.2 Data Source

Data Source Citation Name	Description of derived parameters and processing techniques used

9. DATA REMARKS

Data were obtained from the Atmospheric Radiation Measurement

(ARM) Program sponsored by the U.S. Department of Energy, Office

of Science, Office of Biological and Environmental Research,

Environmental Sciences Division."

10. DATA POLICY

10.1 Data Policy by the Data Provider

1. No financial implications are involved for the CEOP reference site data exchange.

2. Commercial use and exploitation of CEOP reference site data is prohibited.

3. Any re-export or transfer of the original data received from the CDA archive to a third party is prohibited.

4. The origin of CEOP reference site data being used for publication of scientific results must be acknowledged and referenced in the publication.

5. CEOP reference site data users are strongly encouraged to establish direct contact with data providers for complete interpretation and analysis of data for publication purposes.

6. Co-authorship of data users and CEOP reference site Principle Investigators on papers making extensive use of CEOP data is justifiable and highly recommended.

see http://www.eol.ucar.edu/projects/ceop/dm/documents/ceop_policy.html

10.2 Data Policy by the Project

10.2.1 Data Integration and Analysis System

If data provider does not have data policy, DIAS Terms of Service (https://diasjp.net/en/terms/) and DIAS Privacy Policy (https://diasjp.net/en/privacy/) apply.

If there is a conflict between DIAS Terms of Service and data provider's policy, the data provider's policy shall prevail.

11. LICENSE

12. DATA SOURCE ACKNOWLEDGEMENT

12.1 Acknowledge the Data Provider

A minimum requirement is to reference CEOP as:

The in-situ data is provided under the framework of the "Coordinated Energy and Water Cycle Observations Project (CEOP)."

for the Coordinated Energy and Water Cycle Observations Project data (2005), and as:

The satellite data is provided under the framework of the "Coordinated Enhanced Observing Period (CEOP)."

for the Coordinated Enhanced Observing Period data (2001 - 2004).

12.2 Acknowledge the Project

12.2.1 Data Integration and Analysis System

If you plan to use this dataset for a conference presentation, paper, journal article, or report etc., please include acknowledgments referred to following examples. If the data provider describes examples of acknowledgments, include them as well.

”In this study, [Name of Dataset] provided by [Name of Data Provider] was utilized. This dataset was also collected and provided under the Data Integration and Analysis System (DIAS), which was developed and operated by a project supported by the Ministry of Education, Culture, Sports, Science and Technology. ”

13. REFERENCES

http://www.joss.ucar.edu/data/ceop/docs/GAPP/GAPP_SGP_SMOS.pdf

http://www.joss.ucar.edu/data/ceop/docs/GAPP/GAPP_SGP_SIRS.pdf

http://www.joss.ucar.edu/data/ceop/docs/GAPP/GAPP_SGP_IRT.pdf