First ISCCP Regional Experiment (FIRE) Marine Stratocumulus Microwave Radiometer Langley DAAC Data Set Document

Summary:

The First ISCCP Regional Experiments have been designed to improve data products and cloud/radiation parameterizations used in general circulation models (GCMs). Specifically, the goals of FIRE are (1) to improve basic understanding of the interaction of physical processes in determining life cycles of cirrus and marine stratocumulus systems and the radiative properties of these clouds during their life cycles and (2) to investigate the interrelationships between the ISCCP data, GCM parameterizations, and higher space and time resolution cloud data.

To-date, four intensive field-observation periods were planned and executed: a cirrus IFO (October 13 - November 2, 1986); a marine stratocumulus IFO off the southwestern coast of California (June 29 - July 20, 1987); a second cirrus IFO in southeastern Kansas (November 13 - December 7, 1991); and a second marine stratocumulus IFO in the eastern North Atlantic Ocean (July 1 - July 28, 1992). Each mission combined coordinated satellite, airborne, and surface observations with modeling studies to investigate the cloud properties and physical processes of the cloud systems.

This document provides information for the FIRE_MS_MCRW_RAD data set.

Table of Contents:

1. Data Set Overview:

Data Set Identification:

FIRE_MS_MCRW_RAD:	First ISCCP Regional Experiment (FIRE) Marine Stratocumulus Microwave Radiometer Data (FIRE_MS_MCRW_RAD)

Data Set Introduction:

Microwave radiometer with steerable antenna was used for the measurement of column amounts of liquid water in clouds, and precipitable water vapor in the atmosphere. Antenna was directed to the zenith during FIRE I.

Objective/Purpose:

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Summary of Parameters:

Liquid Water Content
Precipitable Water

Discussion:

...

Related Data Sets:

...

2. Investigator(s):

Investigator(s) Name and Title:

...

Title of Investigation:

First ISCCP Regional Experiment (FIRE)

Contact Information:

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3. Theory of Measurements:

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4. Equipment:

Sensor/Instrument Description:

Collection Environment:

...

Source/Platform:

GROUND STATION

Source/Platform Mission Objectives:

...

Key Variables:

Liquid Water Content
Precipitable Water

Principles of Operation:

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Sensor/Instrument Measurement Geometry:

...

Manufacturer of Sensor/Instrument:

...

Sensor/Instrument:

MICROWAVE RADIOMETER

Calibration:

Specifications:

...

Tolerance:

...

Frequency of Calibration:

...

Other Calibration Information:

...

5. Data Acquisition Methods:

...

6. Observations:

Data Notes:

...

Field Notes:

...

7. Data Description:

Spatial Characteristics:

Spatial Coverage:

Data Set Name	Min Lat	Max Lat	Min Lon	Max Lon
FIRE_MS_MCRW_RAD	33.27	33.27	-119.58	-119.58

Spatial Coverage Map:

...

Spatial Resolution:

...

Projection:

...

Grid Description:

...

Temporal Characteristics:

Temporal Coverage:

Data Set Name	Begin Date	End Date
FIRE_MS_MCRW_RAD	07-01-1987	07-19-1987

Temporal Coverage Map:

...

Temporal Resolution:

...

Data Characteristics:

Parameter/Variable:

...

Variable Description/Definition:

...

Unit of Measurement:

...

Data Source:

...

Data Range:

...

Sample Data Record:

...

8. Data Organization:

Data Granularity:

A general description of data granularity as it applies to the IMS appears in the EOSDIS Glossary.
Each data granule consists of a one day of data.

Data Format:

The data are in native binary format.

9. Data Manipulations:

Formulae:

Derivation Techniques and Algorithms:

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Data Processing Sequence:

Processing Steps:

...

Processing Changes:

...

Calculations:

Special Corrections/Adjustments:

...

Calculated Variables:

...

Graphs and Plots:

Images are not available for this data set.

10. Errors:

Sources of Error:

...

Quality Assessment:

Data Validation by Source:

...

Confidence Level/Accuracy Judgement:

...

Measurement Error for Parameters:

...

Additional Quality Assessments:

...

Data Verification by Data Center:

...

11. Notes:

Limitations of the Data:

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Known Problems with the Data:

...

Usage Guidance:

...

Any Other Relevant Information about the Study:

...

12. Application of the Data Set:

...

13. Future Modifications and Plans:

There are no plans to modify these data sets.

14. Software:

Software Description:

Sample read software is available for this data set.

Software Access:

The software can be obtained through the Langley DAAC. Please refer to the contact information below. The software can also be obtained at the same time the user is ordering this data set.

15. Data Access:

Contact Information:

Langley DAAC User and Data Services Office
NASA Langley Research Center
Mail Stop 157D
Hampton, Virginia 23681-2199
USA
Telephone: (757) 864-8656
FAX: (757) 864-8807
E-mail: support-asdc@earthdata.nasa.gov

Data Center Identification:

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Procedures for Obtaining Data:

The Langley DAAC Information Management System (IMS) is an on-line system that features a graphical user interface (GUI) that allows to query the Langley DAAC dataset holdings, to view pre-generated browse products, and to order specific data products. Users may also request data by letter, telephone, electronic mail (INTERNET), or personal visit.

The Langley DAAC User and Data Services (UDS) staff provides technical and operational support for users ordering data. The Langley DAAC Handbook is available in a postscript file through the IMS for users who want detailed information about the Langley DAAC holdings. Users may also obtain a copy by contacting:

Langley DAAC User and Data Services Office
NASA Langley Research Center
Mail Stop 157D
Hampton, Virginia 23681-2199
USA
Telephone: (757) 864-8656
FAX: (757) 864-8807
E-mail: support-asdc@earthdata.nasa.gov
URL: http://eosweb.larc.nasa.gov

Data Center Status/Plans:

The Langley DAAC will continue to archive this data. There are no plans to reprocess.

16. Output Products and Availability:

There are no output products available at this time.

17. References:

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18. Glossary of Terms:

EOSDIS Glossary.

19. List of Acronyms:

NASA - National Aeronautics Space Administration
URL - Uniform Resource Locator

EOSDIS Acronyms.

20. Document Information:

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Document Curator:
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