TITLE

CAMP_ChaoPhrayaRiver_Lampang_20021001_20030331.flx

CONTACT

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DATE OF THIS DOCUMENT

31 Aug. 2004
Updated 29 May 2006

1. 0 DATASET OVERVIEW

1.1 Introduction

To clarify the energy and water cycle in the Thailand, it is important to understand the characteristics of the basic meteorological elements.
The purpose of Lampang PBL-Tower (Planetary Boundary Layer -Tower) observation is to monitor these meteorological values and analysis the mechanisms of the energy and water cycle in the Teak Forest in tropical Monsoon areas.

1.2 Time period covered by the data

Start: 1 October 2002, 00:00
End: 31 March 2003, 23:00

1.3 Temporal characteristics of the data

All parameters are recoded every hour.

1.4 Physical location of the measurement

Latitude : 18.40 N
Longitude : 99.47 E
Elevation : 241.0m a.s.l.
Landscape : Deciduous Tropical Monsoon Forest (38 year old Teak plantation)
Canopy height : About 17 m
Soil Characteristics: Sandy soil

1.5 Data source

1.6 WWW address references

None

2.0 INSTRUMENTATION DESCRIPTION

2.1 Platform

The sensors are mounted on several heights.

2.2 Description of the instrumentation

Parameter	Model	Manufacturer
Soil heat flux	P-MF-81	EKO

2.3 Instrumentation specification

Soil heat flux _1cm : Soil heat flux at the 1cm depth (deg.C)
Soil heat flux _2cm : Soil heat flux at the **1cm** depth (deg.C)

3.0 DATA COLLECTION AND PROCESSING

3.1 Description of data collection

Observed Data are sent to the data manager everyday using E-mail tele-communication system established by the Tokyo University of Agriculture and Technology.

3.2 Description of derived parameters and processing techniques used

Soil heat flux is measured using a heat plate. It serves to measure the heat that flows through the object in which it is incorporated. The actual sensor is a thermopile that measures the differential temperature across the body of plate. Assuming that the heat flux is steady, that the thermal conductivity of the body is constant and that the sensor has negligible influence on the thermal flow pattern, the signal of plate is proportional to the local heat flux. There are two heat plates at the 1 cm depth.
(**Note**: In the old first-half data, ground heat flux (at 1 cm depth) was averaged both 1cm depth data. This time, we did not average them but entered separately Soil heat flux _1cm at 1cm depth and Soil heat flux _2cm at 2cm depth. Actually both Soil heat flux _1cm and Soil heat flux _2cm are 1cm data.)

3.3 Description of data format

http://www.atd.ucar.edu/projects/ceop/dm/documents/refdata_report/ceop_flux_format.html

4.0 QUALITY CONTROL PROCEDURES

For all parameters, the data has been visually checked, looking for extremely and unusual low/high values and/or periods with constant values thorough the CAMP Quality Control Web Interface.
The quality control flags follow the CEOP data flag definition document.

5.0 GAP FILLING PROCEDURES

No gap filling procedure was applied.

6.0 DATA REMARKS

6.1 PI's assessment of the data

6.1.1 Instruments problems

None.

6.1.2 Quality issues

7.0 REFERENCE REQUIREMENTS

Original data was collected and is provided by the Coordinated Enhanced Observation Period (CEOP) Asian Monsoon Project (CAMP) supported by Japan Science and Technology Agency (JST).

8.0 REFERENCES

None

9.0 Missing Data Periods

File Name : CAMP_ChaoPhrayaRiver_Lampang_20021001_20030331.flx
Data Period : 2002/10/01 00:00 - 2003/03/31 23:00

Sensible Heat Flux (-0.02m)
2002/10/01 00:00 - 2003/03/31 23:00 (ALL)

Sensible Heat Flux (-0.01m)
2002/10/01 00:00 - 2003/03/31 23:00 (ALL)

Latent Heat Flux (-0.02m)
2002/10/01 00:00 - 2003/03/31 23:00 (ALL)

Latent Heat Flux (-0.01m)
2002/10/01 00:00 - 2003/03/31 23:00 (ALL)

CO2 Flux (-0.02m)
2002/10/01 00:00 - 2003/03/31 23:00 (ALL)

CO2 Flux (-0.01m)
2002/10/01 00:00 - 2003/03/31 23:00 (ALL)

Soil Heat Flux (-0.02m)
No missing data.

Soil Heat Flux (-0.01m)
No missing data.

TITLE

CAMP_ChaoPhrayaRiver_Lampang_20030401_20030930.flx

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DATE OF THIS DOCUMENT

Updated 29 May 2006

1. 0 DATASET OVERVIEW

1.7 Introduction

To clarify the energy and water cycle in the Thailand, it is important to understand the characteristics of the basic meteorological elements.
The purpose of Lampang PBL-Tower (Planetary Boundary Layer -Tower) observation is to monitor these meteorological values and analysis the mechanisms of the energy and water cycle in the Teak Forest in tropical Monsoon areas.

1.8 Time period covered by the data

Start: 1 April 2003, 00:00
End: 30 September 2003, 23:00

1.9 Temporal characteristics of the data

All parameters are recoded every hour.

1.10 Physical location of the measurement

Latitude : 18.40 N
Longitude : 99.47 E
Elevation : 241.0m a.s.l.
Landscape : Deciduous Tropical Monsoon Forest (38 year old Teak plantation)
Canopy height : About 17 m
Soil Characteristics: Sandy soil

1.11 Data source

1.12 WWW address references

None

2.0 INSTRUMENTATION DESCRIPTION

2.1 Platform

The sensors are mounted on several heights.

2.2 Description of the instrumentation

Parameter	Model	Manufacturer
Soil heat flux	P-MF-81	EKO

2.4 Instrumentation specification

Soil heat flux _1cm : Soil heat flux at the 1cm depth (deg.C)
Soil heat flux _2cm : Soil heat flux at the **1cm** depth (deg.C)

3.0 DATA COLLECTION AND PROCESSING

3.1 Description of data collection

Observed Data are sent to the data manager everyday using E-mail tele-communication system established by the Tokyo University of Agriculture and Technology.

3.2 Description of derived parameters and processing techniques used

Soil heat flux is measured using a heat plate. It serves to measure the heat that flows through the object in which it is incorporated. The actual sensor is a thermopile that measures the differential temperature across the body of plate. Assuming that the heat flux is steady, that the thermal conductivity of the body is constant and that the sensor has negligible influence on the thermal flow pattern, the signal of plate is proportional to the local heat flux. There are two heat plates at the 1 cm depth.
(**Note**: This time, we entered separately Soil heat flux _1cm at 1cm depth and Soil heat flux _2cm at 2cm depth. Actually both Soil heat flux _1cm and Soil heat flux _2cm are **1cm** data.)

4.0 QUALITY CONTROL PROCEDURES

For all parameters, the data has been visually checked, looking for extremely and unusual low/high values and/or periods with constant values thorough the CAMP Quality Control Web Interface.
The quality control flags follow the CEOP data flag definition document.

5.0 GAP FILLING PROCEDURES

No gap filling procedure was applied.

6.0 DATA REMARKS

6.1 PI's assessment of the data

6.1.1 Instruments problems

None.

6.1.2 Quality issues

7.0 REFERENCE REQUIREMENTS

Original data was collected and is provided by the Coordinated Enhanced Observation Period (CEOP) Asian Monsoon Project (CAMP) supported by Japan Science and Technology Agency (JST).

8.0 REFERENCES

None

9.0 Missing Data Periods

File Name : CAMP_ChaoPhrayaRiver_Lampang_20030401_20030930.flx
Data Period : 2003/04/01 00:00 - 2003/09/30 23:00

Sensible Heat Flux (-0.02m)
2003/04/01 00:00 - 2003/09/30 23:00 (ALL)

Sensible Heat Flux (-0.01m)
2003/04/01 00:00 - 2003/09/30 23:00 (ALL)

Latent Heat Flux (-0.02m)
2003/04/01 00:00 - 2003/09/30 23:00 (ALL)

Latent Heat Flux (-0.01m)
2003/04/01 00:00 - 2003/09/30 23:00 (ALL)

CO2 Flux (-0.02m)
2003/04/01 00:00 - 2003/09/30 23:00 (ALL)

CO2 Flux (-0.01m)
2003/04/01 00:00 - 2003/09/30 23:00 (ALL)

Soil Heat Flux (-0.02m)

2003/04/29 01:00 - 2003/08/09 17:00 (2465)
2003/08/19 17:00 - 2003/09/03 16:00 (360)

Soil Heat Flux (-0.01m)
2003/04/29 01:00 - 2003/08/09 17:00 (2465)
2003/08/19 17:00 - 2003/09/03 16:00 (360)

TITLE

CAMP_ChaoPhrayaRiver_Lampang_20031001_20041231.flx

CONTACT

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DATE OF THIS DOCUMENT

29 Nov 2006

1. 0 DATASET OVERVIEW

1.13 Introduction

To clarify the energy and water cycle in the Thailand, it is important to understand the characteristics of the basic meteorological elements.
The purpose of Lampang PBL-Tower (Planetary Boundary Layer -Tower) observation is to monitor these meteorological values and analysis the mechanisms of the energy and water cycle in the Teak Forest in tropical Monsoon areas.

1.14 Time period covered by the data

Start: 1 October 2003, 00:00
End: 31 December 2004, 23:00

1.15 Temporal characteristics of the data

All parameters are recoded every hour.

1.16 Physical location of the measurement

Latitude : 18.40 N
Longitude : 99.47 E
Elevation : 241.0m a.s.l.
Landscape : Deciduous Tropical Monsoon Forest (38 year old Teak plantation)
Canopy height : About 17 m
Soil Characteristics: Sandy soil

1.17 Data source

1.18 WWW address references

None

2.0 INSTRUMENTATION DESCRIPTION

2.1 Platform

The sensors are mounted on several heights.

2.2 Description of the instrumentation

Parameter	Model	Manufacturer
Soil heat flux	P-MF-81	EKO

2.5 Instrumentation specification

Soil heat flux _1cm : Soil heat flux at the 1cm depth (deg.C)
Soil heat flux _2cm : Soil heat flux at the **1cm** depth (deg.C)

3.0 DATA COLLECTION AND PROCESSING

3.1 Description of data collection

Observed Data are sent to the data manager everyday using E-mail tele-communication system established by the Tokyo University of Agriculture and Technology.

3.2 Description of derived parameters and processing techniques used

Soil heat flux is measured using a heat plate. It serves to measure the heat that flows through the object in which it is incorporated. The actual sensor is a thermopile that measures the differential temperature across the body of plate. Assuming that the heat flux is steady, that the thermal conductivity of the body is constant and that the sensor has negligible influence on the thermal flow pattern, the signal of plate is proportional to the local heat flux. There are two heat plates at the 1 cm depth.
(**Note**: This time, we entered separately Soil heat flux _1cm and Soil heat flux _2cm.
actually both Soil heat flux _1cm and Soil heat flux _2cm are **1cm** depth data.)

4.0 QUALITY CONTROL PROCEDURES

For all parameters, the data has been visually checked, looking for extremely and unusual low/high values and/or periods with constant values thorough the CAMP Quality Control Web Interface.
The quality control flags follow the CEOP data flag definition document.

5.0 GAP FILLING PROCEDURES

No gap filling procedure was applied.

6.0 DATA REMARKS

6.1 PI's assessment of the data

6.1.1 Instruments problems

None.

6.1.2 Quality issues

7.0 REFERENCE REQUIREMENTS

Original data was collected and is provided by the Coordinated Enhanced Observation Period (CEOP) Asian Monsoon Project (CAMP) supported by Japan Science and Technology Agency (JST).

8.0 REFERENCES

None

9.0 Missing Data Periods

File Name : CAMP_ChaoPhrayaRiver_Lampang_20031001_20041231.flx
Data Period : 2003/10/01 00:00 - 2004/12/31 23:00

Sensible Heat Flux (-0.02m)
2003/10/01 00:00 - 2004/12/31 23:00 (ALL)

Sensible Heat Flux (-0.01m)
2003/10/01 00:00 - 2004/12/31 23:00 (ALL)

Latent Heat Flux (-0.02m)
2003/10/01 00:00 - 2004/12/31 23:00 (ALL)

Latent Heat Flux (-0.01m)
2003/10/01 00:00 - 2004/12/31 23:00 (ALL)

CO2 Flux (-0.02m)
2003/10/01 00:00 - 2004/12/31 23:00 (ALL)

CO2 Flux (-0.01m)
2003/10/01 00:00 - 2004/12/31 23:00 (ALL)

Soil Heat Flux (-0.02m)
2003/10/03 17:00 - 2003/10/04 16:00 (24)

2003/10/24 10:00 - 2003/11/20 16:00 (655)
2003/12/14 17:00 - 2003/12/15 16:00 (24)
2003/12/22 13:00 - 2003/12/24 00:00 (36)
2003/12/31 02:00 - 2003/12/31 16:00 (15)
2004/01/01 08:00
2004/01/18 19:00 - 2004/01/21 09:00 (63)
2004/01/24 17:00 - 2004/01/27 10:00 (66)
2004/04/19 01:00 - 2004/06/30 10:00 (1738)
2004/07/20 10:00 - 2004/07/21 02:00 (17)
2004/07/24 09:00 - 2004/07/28 00:00 (88)
2004/08/15 01:00 - 2004/08/16 07:00 (31)
2004/08/20 01:00 - 2004/08/22 00:00 (48)
2004/08/30 03:00 - 2004/08/31 00:00 (22)
2004/09/02 01:00 - 2004/09/03 00:00 (24)
2004/09/26 10:00 - 2004/09/28 09:00 (48)
2004/10/05 01:00 - 2004/10/06 09:00 (33)
2004/10/24 10:00 - 2004/10/26 09:00 (48)
2004/11/02 01:00 - 2004/11/03 09:00 (33)
2004/11/06 10:00 - 2004/11/12 09:00 (144)
2004/11/13 23:00 - 2004/11/14 01:00 (3)
2004/11/14 18:00 - 2004/11/15 01:00 (8)
2004/11/15 21:00 - 2004/11/16 02:00 (6)
2004/11/20 10:00 - 2004/11/27 09:00 (168)
2004/12/05 02:00 - 2004/12/08 09:00 (80)
2004/12/25 23:00 - 2004/12/26 09:00 (11)
2004/12/31 17:00 - 2004/12/31 23:00 (7)

Soil Heat Flux (-0.01m)
2003/10/03 17:00 - 2003/10/04 16:00 (24)
2003/10/24 10:00 - 2003/11/20 16:00 (655)
2003/12/14 17:00 - 2003/12/15 16:00 (24)
2003/12/22 13:00 - 2003/12/24 00:00 (36)
2003/12/31 02:00 - 2003/12/31 16:00 (15)
2004/01/01 08:00
2004/01/18 19:00 - 2004/01/21 09:00 (63)
2004/01/24 17:00 - 2004/01/27 10:00 (66)
2004/04/19 01:00 - 2004/06/30 10:00 (1738)
2004/07/20 10:00 - 2004/07/21 02:00 (17)
2004/07/24 09:00 - 2004/07/28 00:00 (88)
2004/08/15 01:00 - 2004/08/16 07:00 (31)
2004/08/20 01:00 - 2004/08/22 00:00 (48)
2004/08/30 03:00 - 2004/08/31 00:00 (22)
2004/09/02 01:00 - 2004/09/03 00:00 (24)
2004/09/26 10:00 - 2004/09/28 09:00 (48)
2004/10/05 01:00 - 2004/10/06 09:00 (33)
2004/10/24 10:00 - 2004/10/26 09:00 (48)
2004/11/02 01:00 - 2004/11/03 09:00 (33)
2004/11/06 10:00 - 2004/11/12 09:00 (144)
2004/11/13 23:00 - 2004/11/14 01:00 (3)
2004/11/14 18:00 - 2004/11/15 01:00 (8)
2004/11/15 21:00 - 2004/11/16 02:00 (6)

2004/11/20 10:00 - 2004/11/27 09:00 (168)
2004/12/05 02:00 - 2004/12/08 09:00 (80)
2004/12/25 23:00 - 2004/12/26 09:00 (11)
2004/12/31 17:00 - 2004/12/31 23:00 (7)