

TITLE

CAMP_Tongyu_Cropland_20021001_20030331.flx

CONTACT

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DATE OF THIS DOCUMENT

30 Aug. 2004

1. 0 DATASET OVERVIEW

1.1 Introduction

The field experiment of energy and mass exchange process between the land and atmosphere in semi-arid area, northeast china.

Objectives

Based on the observation data to analysis the facts and mechanisms of the water and heat flux transfer in the ecosystem in semiarid areas.

By comparing the different transfer process over different land surface, we study the effects of the land use on the aridification in the north of China.

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 30 minutes.

1.4 Physical location of the measurement

Latitude : 44.416 N

Longitude : 122.867 E
 Elevation : 184.0m a.s.l.
 Landscape : The cropland surface
 Canopy height : Corn, canopy height: 120cm (in winter there is no any corn).
 From May to Oct. the height of the corn is change with the growing season, while the maximum height is 120cm.
 Soil Characteristics: sand, light chernozem

1.5 Data source

Original data was provided by the Chinese Academy of Sciences (CAS).

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
Sensible Heat Flux	LI-COR CS7500	CAMPBELL
Latent Heat Flux	FW05	CAMPBELL
CO2_Flux	CSAT3	CAMPBELL
Soil Heat Flux	HFP01SC_L50	HUKSEFLUX

2.3 Instrumentation specification

H_3.5m : Sensible Heat Flux at the 3.5 m height (W/m²)
 IE_3.5m : Latent Heat Flux at the 3.5 m height (W/m²)
 CO2_3.5m : CO2 Flux at the 3.5 m height (micro mol/m²/s)
 G_5cm : Soil Heat Flux at the 5cm depth (W/m²)
 G_10cm : Soil Heat Flux at the 10cm depth (W/m²)

3.0 DATA COLLECTION AND PROCESSING

3.1 Description of data collection

Data are downloaded from the Tower once each month. Then, data are sent to Beijing, where they are processed.

3.2 Description of derived parameters and processing techniques used

3.3 Data format

These data are in the CEOP EOP-3 data format agreed to by the CEOP Scientific Steering Committee. This format is described in detail as part of the CEOP

Reference Site Data Set Procedures Report which is available at the following URL:

http://www.eol.ucar.edu/projects/ceop/dm/documents/refdata_report/ceop_flux_form_at.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 through the CAMP Quality Control Web Interface.

The quality control flags follow the CEOP data flag definition document.

4.2 UCAR/JOSS Quality Control Procedures

UCAR/JOSS conducted two primary quality assurance/control procedures on the reference site data. First, the data has been evaluated by a detailed QA algorithm that verifies the format is correct, examines any QC flags, and conducts basic checks on data values. Second, JOSS conducts a manual inspection of time series plots of each parameter.

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

The Soil Temperature at the 80cm depth had some problem from 2002/10/08 to 2002/10/19. Then the Quality Flag was put "D".

6.2 Missing data periods

There are nine missing periods indicated below;

2002/10/01 00:00 - 2002/10/08 03:30
2002/11/07 15:30 - 2002/12/20 08:00
2003/01/03 09:00 - 2003/01/03 19:00
2003/01/26 13:30 - 2003/01/28 01:30
2003/03/06 22:30 - 2003/03/08 04:00
2003/03/11 12:00 - 2003/03/13 02:30
2003/03/31 16:30 - 2003/03/31 23:30

7.0 REFERENCE REQUIREMENTS

These data was collected and is provided "Predictive Study of Aridification in Northern China in association with Life-supporting Environment Changes" projects funded by National Key Basic Research Development Program G1999043404.

8.0 REFERENCES

None.

TITLE

CAMP_Tongyu_Cropland_20030401_20030930.flx.doc

CONTACT

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DATE OF THIS DOCUMENT

14 Jan. 2005

1. 0 DATASET OVERVIEW

1.7 Introduction

The field experiment of energy and mass exchange process between the land and atmosphere in semi-arid area, northeast china.

Objectives

Based on the observation data to analysis the facts and mechanisms of the water and heat flux transfer in the ecosystem in semiarid areas.

By comparing the different transfer process over different land surface, we study the effects of the land use on the aridification in the north of China.

1.8 Time period covered by the data

Start: 1 April 2003, 00:00

End: 30 September 2003, 23:30

1.9 Temporal characteristics of the data

All parameters are recoded every 30 minutes.

1.10 Physical location of the measurement

Latitude : 44.416 N
 Longitude : 122.867 E
 Elevation : 184.0m a.s.l.
 Landscape : The cropland surface
 Canopy height : Corn, canopy height: 120cm (in winter there is no any corn).
 From May to Oct. the height of the corn is change with the growing season, while the maximum height is 120cm.
 Soil Characteristics: sand, light chernozem

1.11 Data source

Original data was provided by the Chinese Academy of Sciences (CAS).

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
Sensible Heat Flux	LI-COR CS7500	CAMPBELL
Latent Heat Flux	FW05	CAMPBELL
CO ₂ Flux	CSAT3	CAMPBELL
Soil Heat Flux	HFP01SC_L50	HUKSEFLUX

2.4 Instrumentation specification

H_3.5m : Sensible Heat Flux at the 3.5 m height (W/m²)
 IE_3.5m : Latent Heat Flux at the 3.5 m height (W/m²)
 CO₂_3.5m : CO₂ Flux at the 3.5 m height (micro mol/m²/s)
 G_5cm : Soil Heat Flux at the 5cm depth (W/m²)
 G_10cm : Soil Heat Flux at the 10cm depth (W/m²)

3.0 DATA COLLECTION AND PROCESSING

3.1 Description of data collection

Data are downloaded from the Tower once each month. Then, data are sent to Beijing, where they are processed.

3.2 Description of derived parameters and processing techniques used

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

6.2 Missing data periods

There are **six** missing periods indicated below;

2003/04/08 10:00	-	2003/04/13 05:30
2003/04/16 03:00	-	2003/04/19 03:00
2003/07/26 18:30	-	2003/07/26 20:30
2003/07/27 11:30	-	2003/07/27 14:30
2003/07/28 04:30	-	2003/07/28 05:00
2003/09/30 16:00	-	2003/09/30 23:30

7.0 REFERENCE REQUIREMENTS

These data was collected and is provided "Predictive Study of Aridification in Northern China in association with Life-supporting Environment Changes" projects funded by National Key Basic Research Development Program G1999043404.

8.0 REFERENCES

None.

TITLE

CAMP_Tongyu_Cropland_20031001_20040331.flx

CONTACT

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DATE OF THIS DOCUMENT

18 May. 2006

1. 0 DATASET OVERVIEW

1.13 Introduction

The field experiment of energy and mass exchange process between the land and atmosphere in semi-arid area, northeast china.

Objectives

Based on the observation data to analysis the facts and mechanisms of the water and heat flux transfer in the ecosystem in semiarid areas.

By comparing the different transfer process over different land surface, we study the effects of the land use on the aridification in the north of China.

1.14 Time period covered by the data

Start: 1 October 2003, 00:00

End: 31 March 2004, 23:30

1.15 Temporal characteristics of the data

All parameters are recoded every 30 minutes.

1.16 Physical location of the measurement

Latitude : 44.416 N

Longitude : 122.867 E

Elevation : 184.0m above sea level.

Landscape : The cropland surface

Canopy height : Corn, canopy height: 120cm (in winter there is no any corn).

From May to Oct. the height of the corn is change with the growing season, while the maximum height is 120cm.

Soil Characteristics: sand, light chernozem

1.17 Data source

Original data was provided by the Chinese Academy of Sciences (CAS).

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
Sensible Heat Flux	LI-COR CS7500	CAMPBELL
Latent Heat Flux	FW05	CAMPBELL
CO ₂ Flux	CSAT3	CAMPBELL
Soil Heat Flux	HFP01SC_L50	HUKSEFLUX

2.5 Instrumentation specification

H_3.5m : Sensible Heat Flux at the 3.5 m height (W/m²)
IE_3.5m : Latent Heat Flux at the 3.5 m height (W/m²)
CO₂_3.5m : CO₂ Flux at the 3.5 m height (micro mol/m²/s)
G_5cm : Soil Heat Flux at the 5cm depth (W/m²)
G_10cm : Soil Heat Flux at the 10cm depth (W/m²)

3.0 DATA COLLECTION AND PROCESSING

3.1 Description of data collection

Data are downloaded from the Tower once each month. Then, data are sent to Beijing, where they are processed.

3.2 Description of derived parameters and processing techniques used

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 through 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

6.2 Missing data periods

The missing data period are listed in chapter 9.0.

7.0 REFERENCE REQUIREMENTS

These data was collected and is provided "Aridification in Northern China in association with human being's adpatation" projects funded by National Key Basic Research Development Program G2006CB400501.

8.0 REFERENCES

None.

9.0 Missing Data Periods

File Name : CAMP_Tongyu_Cropland_20031001_20040331.flx
Data Period : 2003/10/01 00:00 - 2004/03/31 23:30

Sensible Heat Flux (-0.10m)
2003/10/01 00:00 - 2004/03/31 23:30 (ALL)

Sensible Heat Flux (-0.05m)
2003/10/01 00:00 - 2004/03/31 23:30 (ALL)

Sensible Heat Flux (3.50m)
2003/10/19 07:00 - 2003/10/19 08:30 (4)
2004/03/31 16:00 - 2004/03/31 23:30 (16)

Latent Heat Flux (-0.10m)
2003/10/01 00:00 - 2004/03/31 23:30 (ALL)

Latent Heat Flux (-0.05m)
2003/10/01 00:00 - 2004/03/31 23:30 (ALL)

Latent Heat Flux (3.50m)
2003/10/19 07:00 - 2003/10/19 08:30 (4)
2004/03/31 16:00 - 2004/03/31 23:30 (16)

CO2 Flux (-0.10m)
2003/10/01 00:00 - 2004/03/31 23:30 (ALL)

CO2 Flux (-0.05m)
2003/10/01 00:00 - 2004/03/31 23:30 (ALL)

CO2 Flux (3.50m)
2003/10/19 07:00 - 2003/10/19 08:30 (4)
2004/03/31 16:00 - 2004/03/31 23:30 (16)

Soil Heat Flux (-0.10m)
2003/10/19 07:00 - 2003/10/19 08:30 (4)
2004/03/31 16:00 - 2004/03/31 23:30 (16)

Soil Heat Flux (-0.05m)
2003/10/19 07:00 - 2003/10/19 08:30 (4)
2004/03/31 16:00 - 2004/03/31 23:30 (16)

Soil Heat Flux (3.50m)
2003/10/01 00:00 - 2004/03/31 23:30 (ALL)

TITLE

CAMP_Tongyu_Cropland_20040401_20041231.flx

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DATE OF THIS DOCUMENT

29 Jun. 2006

1. 0 DATASET OVERVIEW

1.19 Introduction

The field experiment of energy and mass exchange process between the land and atmosphere in semi-arid area, northeast china.

Objectives

Based on the observation data to analysis the facts and mechanisms of the water and heat flux transfer in the ecosystem in semiarid areas.

By comparing the different transfer process over different land surface, we study the effects of the land use on the aridification in the north of China.

1.20 Time period covered by the data

Start: 1 April 2004, 00:00

End: 31 December 2004, 23:30

1.21 Temporal characteristics of the data

All parameters are recoded every 30 minutes.

1.22 Physical location of the measurement

Latitude : 44.416 N

Longitude : 122.867 E

Elevation : 184.0m above sea level.

Landscape : The cropland surface

Canopy height : Corn, canopy height: 120cm (in winter there is no any corn).

From May to Oct. the height of the corn is change with the growing season, while the maximum height is 120cm.

Soil Characteristics: sand, light chernozem

1.23 Data source

Original data was provided by the Chinese Academy of Sciences (CAS).

1.24 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
Sensible Heat Flux	LI-COR CS7500	CAMPBELL
Latent Heat Flux	FW05	CAMPBELL
CO ₂ Flux	CSAT3	CAMPBELL
Soil Heat Flux	HFP01SC_L50	HUKSEFLUX

2.6 Instrumentation specification

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IE_3.5m : Latent Heat Flux at the 3.5 m height (W/m²)
CO₂_3.5m : CO₂ Flux at the 3.5 m height (micro mol/m²/s)
G_5cm : Soil Heat Flux at the 5cm depth (W/m²)
G_10cm : Soil Heat Flux at the 10cm depth (W/m²)

3.0 DATA COLLECTION AND PROCESSING

3.1 Description of data collection

Data are downloaded from the Tower once each month. Then, data are sent to Beijing, where they are processed.

3.2 Description of derived parameters and processing techniques used

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 through 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

6.2 Missing data periods

The missing data period are listed in chapter 9.0.

7.0 REFERENCE REQUIREMENTS

These data was collected and is provided "Aridification in Northern China in association with human being's adpatation" projects funded by National Key Basic Research Development Program G2006CB400501.

8.0 REFERENCES

None.

9.0 Missing Data Periods

File Name : CAMP_Tongyu_Cropland_20040401_20041231.flx
Data Period : 2004/04/01 00:00 - 2004/12/31 23:30

Sensible Heat Flux (-0.10m)
2004/04/01 00:00 - 2004/12/31 23:30 (ALL)

Sensible Heat Flux (-0.05m)
2004/04/01 00:00 - 2004/12/31 23:30 (ALL)

Sensible Heat Flux (3.50m)
2004/04/16 07:30 - 2004/04/16 08:00 (2)
2004/10/31 16:00 - 2004/11/30 04:00 (1417)
2004/11/30 06:30 - 2004/12/02 05:30 (95)
2004/12/12 22:00 - 2004/12/27 01:30 (680)

Latent Heat Flux (-0.10m)
2004/04/01 00:00 - 2004/12/31 23:30 (ALL)

Latent Heat Flux (-0.05m)
2004/04/01 00:00 - 2004/12/31 23:30 (ALL)

Latent Heat Flux (3.50m)

2004/04/16 07:30 - 2004/04/16 08:00 (2)
2004/10/31 16:00 - 2004/11/30 04:00 (1417)
2004/11/30 06:30 - 2004/12/02 05:30 (95)
2004/12/12 22:00 - 2004/12/27 01:30 (680)

CO2 Flux (-0.10m)

2004/04/01 00:00 - 2004/12/31 23:30 (ALL)

CO2 Flux (-0.05m)

2004/04/01 00:00 - 2004/12/31 23:30 (ALL)

CO2 Flux (3.50m)

2004/04/16 07:30 - 2004/04/16 08:00 (2)
2004/10/31 16:00 - 2004/11/30 04:00 (1417)
2004/11/30 06:30 - 2004/12/02 05:30 (95)
2004/12/12 22:00 - 2004/12/27 01:30 (680)

Soil Heat Flux (-0.10m)

2004/11/02 00:00 - 2004/11/02 03:30 (8)

Soil Heat Flux (-0.05m)

2004/11/02 00:00 - 2004/11/02 03:30 (8)

Soil Heat Flux (3.50m)

2004/04/01 00:00 - 2004/12/31 23:30 (ALL)

