

## **TITLE**

CAMP\_Tibet\_MS3478-AWS\_20021001\_20030331.stm

## **CONTACT**

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## **DATE OF THIS DOCUMENT**

02 Sep. 2004

## **1. 0 DATASET OVERVIEW**

### **1.1 Introduction**

To clarify the energy and water cycle in the Tibetan Plateau, it is important to understand the characteristics of the basic meteorological elements and surface fluxes.

The purpose of Tibet AWS (Automatic Weather Station) observation is to improve the quantitative understanding of land-atmosphere interactions over the Tibetan Plateau and develop the land surface process models by monitoring these meteorological values.

## 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 recorded every hour.

## 1.4 Physical location of the measurement

Latitude : 31.92623 N  
Longitude : 91.71468 E  
Elevation : 4619.5 m a.s.l.  
Landscape : Grass land  
Canopy height : 15 – 30 cm.  
Soil Characteristics: Silt loam

## 1.5 Data source

## 1.6 Website address references

<http://monsoon.t.u-tokyo.ac.jp/camp/tibets/>

## 2.0 INSTRUMENTATION DESCRIPTION

### 2.1 Platform

This system was constructed in summer 2000. The site is located about 90 km north from the city of Naqu along the highway. The site is to represent cold and flat location in the east middle Tibetan Plateau. The sensors are mounted on several heights.

### 2.2 Description of the instrumentation

Parameter	Model	Manufacturer
Soil Temperature	TS-301(Pt100)	Okazaki
Soil Moisture	Trime EZ	IMKO

### 2.3 Instrumentation specification

Soil Temp\_0cm : Soil Temperature at the 0cm depth (deg.C)  
Soil Temp\_4cm : Soil Temperature at the 4cm depth (deg.C)  
Soil Temp\_10cm : Soil Temperature at the 10cm depth (deg.C)  
Soil Temp\_20cm : Soil Temperature at the 20m depth (deg.C)  
Soil Moist\_4cm : Soil Moisture at the 4cm depth (%)  
Soil Moist\_20cm : Soil Moisture at the 20cm depth (%)

## 3.0 DATA COLLECTION AND PROCESSING

### 3.1 Description of data collection

Original Data are sampled at every 5 seconds (0.2Hz) and average is computed and stored in a data logger (Campbell CR-10X).

Data are downloaded from the Tower twice every year, in spring and summer. Then, data are sent to Japan, where they are processed.

### 3.2 Description of derived parameters and processing techniques used

Soil temperature is averaged over the previous hour.

Soil Moisture instantaneous values of each 1 hour.

There are two Soil Temperature sensors at the 0 cm depth. This time we apply the average of these two data to get the representative value at 0 cm.

## **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

None

## **7.0 REFERENCE REQUIREMENTS**

Original data was collected and is provided within the framework of GAME/CAMP Tibet Scientific and Technological Research Project, funded by the Ministry of Education, Culture, Sports, Science and Technology; the Japan Science and Technology Agency; the Frontier Research System for Global Change; the Japan Aerospace Exploration Agency; the Chinese Academy of Sciences; and the Chinese Academy of Meteorological Sciences.

## **8.0 REFERENCES**

H. Ishikawa and GAME-Tibet Boundary Layer Group, 2001: What has been known and what has not in GAME/Tibet BL observation, Proceedings of the Fifth International Study Conference on GEWEX in Asia and GAME, 691.

Ma, Yaoming, O. Tsukamoto, H. Ishikawa, Z. Su, M. Menenti, J. Wang and J. Wen, 2002: Determination of regional land surface heat flux densities over heterogeneous landscape of HEIFE integrating satellite remote sensing with field observations, Jour. Meteorol. Soc. Japan, 80(3), 485-501.

K. Tanaka, I. Tamagawa, H. Ishikawa, Y. Ma and Z. Hu, 2003: Surface energy and closure of the eastern Tibetan Plateau during the GAME-Tibet IOP 1998, J. Hydrology, vol. 283, pp. 169-183

K. Tanaka and H. Ishikawa, 2001: Long term monitoring of surface energy fluxes of the Amdo PBL site in the eastern Tibetan Plateau, Proceedings of the Fifth International Study Conference on GEWEX in Asia and GAME, 384-388.

Ueno, K., H. Fujii, H. Yamada and L. Liu, (2001) Weak and Frequent Monsoon Precipitation over the Tibetan Plateau. J. Meteor. Soc. Japan, 79, 1B, 419-434.

## TITLE

CAMP\_Tibet\_MS3478-AWS\_20030401\_20030930.stm

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## DATE OF THIS DOCUMENT

19 Apr. 2006

## 1. 0 DATASET OVERVIEW

### 1.7 Introduction

To clarify the energy and water cycle in the Tibetan Plateau, it is important to understand the characteristics of the basic meteorological elements and surface fluxes.

The purpose of Tibet AWS (Automatic Weather Station) observation is to improve the quantitative understanding of land-atmosphere interactions over the Tibetan Plateau and develop the land surface process models by monitoring these meteorological values.

### 1.8 Time period covered by the data

Start: 1 October 2002, 00:00  
End: 30 September 2003, 23:00

### 1.9 Temporal characteristics of the data

All parameters are recorded every hour.

### 1.10 Physical location of the measurement

Latitude : 31.92623 N  
Longitude : 91.71468 E  
Elevation : 4619.5 m a.s.l.  
Landscape : Grass land  
Canopy height : 15 – 30 cm.  
Soil Characteristics: Silt loam

### 1.11 Data source

### 1.12 Website address references

<http://monsoon.t.u-tokyo.ac.jp/camp/tibets/>

## 2.0 INSTRUMENTATION DESCRIPTION

### 2.1 Platform

This system was constructed in summer 2000. The site is located about 90 km north from the city of Naqu along the highway. The site is to represent cold and flat location in the east middle Tibetan Plateau. The sensors are mounted on several heights.

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Soil Moisture	Trime EZ	IMKO

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Soil Temp\_0cm : Soil Temperature at the 0cm depth (deg.C)  
Soil Temp\_4cm : Soil Temperature at the 4cm depth (deg.C)  
Soil Temp\_10cm : Soil Temperature at the 10cm depth (deg.C)  
Soil Temp\_20cm : Soil Temperature at the 20m depth (deg.C)  
Soil Moist\_4cm : Soil Moisture at the 4cm depth (%)  
Soil Moist\_20cm : Soil Moisture at the 20cm depth (%)

## 3.0 DATA COLLECTION AND PROCESSING

### 3.1 Description of data collection

Original Data are sampled at every 5 seconds (0.2Hz) and average is computed and stored in a data logger (Campbell CR-10X).

Data are downloaded from the Tower twice every year, in spring and summer. Then, data are sent to Japan, where they are processed.

### 3.2 Description of derived parameters and processing techniques used

Soil temperature is averaged over the previous hour.

Soil Moisture instantaneous values of each 1 hour.

There are two Soil Temperature sensors at the 0 cm depth. This time we apply the average of these two data to get the representative value at 0 cm.

## **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

Please see the chapter 9.0.

## **7.0 REFERENCE REQUIREMENTS**

Original data was collected and is provided within the framework of GAME/CAMP Tibet Scientific and Technological Research Project, funded by the Ministry of Education, Culture, Sports, Science and Technology; the Japan Science and Technology Agency; the Frontier Research System for Global Change; the Japan Aerospace Exploration Agency; the Chinese Academy of Sciences; and the Chinese Academy of Meteorological Sciences.

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Ma, Yaoming, O. Tsukamoto, H. Ishikawa, Z. Su, M. Menenti, J. Wang and J. Wen, 2002: Determination of regional land surface heat flux densities over heterogeneous landscape of HEIFE integrating satellite remote sensing with field observations, Jour. Meteorol. Soc. Japan, 80(3), 485-501.

K. Tanaka, I. Tamagawa, H. Ishikawa, Y. Ma and Z. Hu, 2003: Surface energy and closure of the eastern Tibetan Plateau during the GAME-Tibet IOP 1998, J. Hydrology, vol. 283, pp. 169-183

K. Tanaka and H. Ishikawa, 2001: Long term monitoring of surface energy fluxes of the Amdo PBL site in the eastern Tibetan Plateau, Proceedings of the Fifth International Study Conference on GEWEX in Asia and GAME, 384-388.

Ueno, K., H. Fujii, H. Yamada and L. Liu, (2001) Weak and Frequent Monsoon Precipitation over the Tibetan Plateau. J. Meteor. Soc. Japan, 79, 1B, 419-434.

## **9.0 Missing data periods**

None



## TITLE

CAMP\_Tibet\_MS3478-AWS\_20031001\_20041231.stm

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## DATE OF THIS DOCUMENT

7 July, 2006

## 1. 0 DATASET OVERVIEW

### 1.13 Introduction

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The purpose of Tibet AWS (Automatic Weather Station) observation is to improve the quantitative understanding of land-atmosphere interactions over the Tibetan Plateau and develop the land surface process models by monitoring these meteorological values.

### 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 : 31.92623 N  
Longitude : 91.71468 E  
Elevation : 4619.5 m a.s.l.  
Landscape : Grass land  
Canopy height : 15 – 30 cm.  
Soil Characteristics: Silt loam

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## **6.0 DATA REMARKS**

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#### 6.1.1 Instruments problems

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### 6.2 Missing data periods

Please see the chapter 9.0.

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K. Tanaka and H. Ishikawa, 2001: Long term monitoring of surface energy fluxes of the Amdo PBL site in the eastern Tibetan Plateau, Proceedings of the Fifth International Study Conference on GEWEX in Asia and GAME, 384-388.

Ueno, K., H. Fujii, H. Yamada and L. Liu, (2001) Weak and Frequent Monsoon Precipitation over the Tibetan Plateau. J. Meteor. Soc. Japan, 79, 1B, 419-434.

## 9.0 Missing data periods

-----  
File Name : CAMP\_Tibet\_MS3478-AWS\_20031001\_20041231.stm  
Data Period : 2003/10/01 00:00 - 2004/12/31 23:00  
-----

Soil Temperature (-0.40m)  
No missing data.

Soil Temperature (-0.20m)  
No missing data.

Soil Temperature (-0.10m)  
No missing data.

Soil Temperature (-0.04m)  
No missing data.

Soil Temperature (0.00m)  
No missing data.

Soil Moisture (-0.40m)  
2003/10/01 00:00 - 2004/12/31 23:00 (ALL)

Soil Moisture (-0.20m)  
No missing data.

Soil Moisture (-0.10m)  
2003/10/01 00:00 - 2004/12/31 23:00 (ALL)

Soil Moisture (-0.04m)  
No missing data.

Soil Moisture (0.00m)

2003/10/01 00:00 - 2004/12/31 23:00 (ALL)