

TITLE

CAMP_SiberiaTundra_Tiksi_20021001_20030331.stm

CONTACT

Tetsuo Ohata
Hokkaido University / Frontier Observational Research System for Global Change
Kita-19, Nishi-8, Kita-ku, Sapporo 060-0819, JAPAN
TEL: +81-11-706-5488
FAX: +81-11-706-5488
E-mail: ohata@pop.lowtem.hokudai.ac.jp

Hironori Yabuki
Frontier Observational Research System for Global Change
3173-25 Showa-machi Kanazawa-ku Yokohama-city Kanagawa 236-0001, JAPAN
TEL: +81-45-778-5645
FAX: +81-45-778-5706
E-mail: yabuki@jamstec.go.jp

DATE OF THIS DOCUMENT

13 April 2004

1. 0 DATASET OVERVIEW

1.1 Introduction

Objectives

The goal of the GAME-Siberia project is to clarify the characteristics and processes of water accumulation and transfer and their relation with the energy cycle, in the atmosphere-land surface interface of cold environments from the seasonal to the inter-annual time scale. This study will contribute to one of the primary GAME objectives

- To understand multi-scale interactions in the energy and hydrologic cycles in the Asian Monsoon Region

and one scientific objective

- To assess the impact of monsoon variability on the regional hydrologic cycle.

The objectives of tundra study subgroup include:

1. Develop seasonal and inter-annual variation of one-dimensional energy and water vapor fluxes over tundra.
2. Characterize the water balance components in these tundra watersheds.
3. Determine the areal distribution of ground surface properties.

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 : 71.617 N
Longitude: 128.750E
Elevation: 38.0m a.s.l.

1.5 Data source

Original data provided by the Frontier Observational Research System for Global Change (FORSGC), Japan Marine Science and Technology Center (JAMSTEC) under the research collaboration with Japan Science and Technology Agency (JST).

1.6 WWW address references

Website: <http://www.hyarc.nagoya-u.ac.jp/game/siberia/tundra/home.html>

2.0 INSTRUMENTATION DESCRIPTION

2.1 Platform

The sensors are mounted on several heights.

2.2 Description of the instrumentation

Parameter	Model	Manufacturer
Soil temperature	Pt100	Hayashi denko
Soil moisture	Trime-P2	IMKO

2.3 Instrumentation specification

SoilTempWest_0cm : Soil Temperature of West side at the 0cm depth (deg.C)
SoilTempWest_5cm : Soil Temperature of West side at the 5cm depth (deg.C)
SoilTempWest_10cm : Soil Temperature of West side at the 10cm depth (deg.C)
SoilTempWest_20cm : Soil Temperature of West side at the 20cm depth (deg.C)
SoilTempWest_30cm : Soil Temperature of West side at the 30cm depth (deg.C)
SoilTempWest_47cm : Soil Temperature of West side at the 47cm depth (deg.C)
SM0cm(W) : Soil Moisture of West side at the 0cm depth (%)
SM15cm(W) : Soil Moisture of West side at the 15cm depth (%)
SM30cm(W) : Soil Moisture of West side at the 30cm depth (%)

3.0 DATA COLLECTION AND PROCESSING

3.1 Description of data collection

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

3.2 Description of derived parameters and processing techniques used

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_soils_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.

4.1 UCAR/JOSS QA Procedures

UCAR/JOSS conducted two primary quality assurance/control procedures on the reference site data. First the data have 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

6.2 Missing data periods

7.0 REFERENCE REQUIREMENTS

Original data was collected and is provided within the framework of the research collaboration between Frontier Observational Research System for Global Change

(FORSGC), Japan Marine Science and Technology Center (JAMSTEC) and Japan Science and Technology Agency (JST), financially supported by the Japanese Ministry of Education, Science and Culture.

8.0 REFERENCES

Ohata,T., Fukushima,Y. 1999. Progress of GAME-Siberia 1997-98. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p1 – 5.

Kodama,Y. 1999. The outline of the field observation in Tundra Region in 1998. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p7 – 12.

Ishii,Y., Kodama,Y., Sato,N., Nakamura,R., Nomura,M. 1999. Summertime Water Balance in a Siberian Tundra Basin. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p13 – 16.

Hinzman,L., Kodama,Y. 1999. Hydrologic Modeling Analyses in GAME/Siberia. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p17 – 24.

Nomura,M., Kodama,Y., Nakamura,R. 1999. Heat balance of snowpack in early snowmelt season in Siberia tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p25 – 26.

Kodama,Y., Sato,N., Yabuki,H., Ishii,Y. 1999. Seasonal Change in the Heat Fluxes over Siberian Tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p27 – 34.

Mizoguchi,M., Watanabe,K., Fukumura,K., Kiyosawa,H. 1999. Spatial Distribution of Active Layer on a Hillslope in Siberian Tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p35 – 36.

Watanabe,K., Mizoguchi,M. 1999. Pit Observations of Active Layer in Tundra Wetland Near Tiksi, Siberia. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p37 – 42.

Sato,T., Hayasaka,Y., Kodama,Y. 1999. Perspective of spatial distribution patterns and frequency of cryospheric vascular plants of tundra in micro scales at Tiksi, northernmost Sakha (Yakutia). GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p43 – 48.

Hayasaka,Y., Kanda,H., Sato,T. 1999. Distribution patterns of bryophytes in micro-scales of tundra in relation to water levels. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p49 – 52.

Kiyosawa,H., Mizoguchi,M. 1999. Soil Temperature Analysis of Active Layer in Siberian Tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p53 – 54.

TITLE

CAMP_SiberiaTundra_Tiksi_20030401_20030930.stm.doc

CONTACT

Tetsuo Ohata
Independent Administrative Institution Japan Agency for Marine-Earth Science and
Technology
Institute of Observational Research for Global Change
2-15 Natsushima-cho, Yokosuka, 237-0061, JAPAN
TEL: +81-46-867-9250
FAX: +81-46-867-9255
E-mail: ohatat@jamstec.go.jp

Hironori Yabuki
Independent Administrative Institution Japan Agency for Marine-Earth Science and
Technology
Institute of Observational Research for Global Change
2-15 Natsushima-cho, Yokosuka, 237-0061, JAPAN
TEL: +81-46-867-9268
FAX: +81-46-867-9255
E-mail: yabuki@jamstec.go.jp

DATE OF THIS DOCUMENT

20 January 2005

1. 0 DATASET OVERVIEW

1.7 Introduction

Objectives

The goal of the GAME-Siberia project is to clarify the characteristics and processes of water accumulation and transfer and their relation with the energy cycle, in the atmosphere-land surface interface of cold environments from the seasonal to the inter-annual time scale. This study will contribute to one of the primary GAME objectives

- To understand multi-scale interactions in the energy and hydrologic cycles in the Asian Monsoon Region

and one scientific objective

- To assess the impact of monsoon variability on the regional hydrologic cycle.

The objectives of tundra study subgroup include:

1. Develop seasonal and inter-annual variation of one-dimensional energy and water vapor fluxes over tundra.
2. Characterize the water balance components in these tundra watersheds.
3. Determine the areal distribution of ground surface properties.

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 : 71.617 N
Longitude: 128.750E
Elevation: 38.0m a.s.l.
Landscape : Tundra (moss and sedge)
Canopy height : Moss : Thickness of maximum 20cm, sedge : less than 30cm
Soil Characteristics: clayey silt

1.11 Data source

Original data provided by the Institute of Observational Research for Global Change (IORGC), Independent Administrative Institution Japan Agency for Marine-Earth Science and Technology (JAMSTEC) financially supported by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT).

1.12 WWW address references

Website: <http://www.hyarc.nagoya-u.ac.jp/game/siberia/tundra/home.html>

2.0 INSTRUMENTATION DESCRIPTION

2.1 Platform

The sensors are mounted on several heights.

2.2 Description of the instrumentation

Parameter	Model	Manufacturer
Soil temperature	Pt100	Hayashi denko
Soil moisture	Trime-P2	IMKO

2.4 Instrumentation specification

SoilTempWest_0cm : Soil Temperature of West side at the 0cm depth (deg.C)
SoilTempWest_5cm : Soil Temperature of West side at the 5cm depth (deg.C)
SoilTempWest_10cm : Soil Temperature of West side at the 10cm depth (deg.C)
SoilTempWest_20cm : Soil Temperature of West side at the 20cm depth (deg.C)
SoilTempWest_30cm : Soil Temperature of West side at the 30cm depth (deg.C)
SoilTempWest_47cm : Soil Temperature of West side at the 47cm depth (deg.C)
SM0cm(W) : Soil Moisture of West side at the 0cm depth (%)
SM15cm(W) : Soil Moisture of West side at the 15cm depth (%)
SM30cm(W) : Soil Moisture of West side at the 30cm depth (%)

3.0 DATA COLLECTION AND PROCESSING

3.1 Description of data collection

Data are downloaded from the Tower twice every year, in spring and autumn. Then, data are sent to Japan, 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

Soil moisture sensor at the all depth(0, 15 and 30cm depth) had a problem during latter half EOP-3.

6.1.2 Quality issues

6.2 Missing data periods

Soil Moisture : 2003/04/01 00:00:00 - 2003/09/30 23:00:00

Soil Temperature : 2003/09/30 16:00:00 - 2003/09/30 23:00:00

7.0 REFERENCE REQUIREMENTS

Original data was collected and is provided within the framework of the Institute of Observational Research for Global Chang (IORGC), Independent Administrative Institution Japan Agency for Marine-Earth Science and Technology (JAMSTEC), financially supported by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT).

8.0 REFERENCES

- Ohata,T., Fukushima,Y. 1999. Progress of GAME-Siberia 1997-98. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p1 – 5.
- Kodama,Y. 1999. The outline of the field observation in Tundra Region in 1998. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p7 – 12.
- Ishii,Y., Kodama,Y., Sato,N., Nakamura,R., Nomura,M. 1999. Summertime Water Balance in a Siberian Tundra Basin. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p13 – 16.
- Hinzman,L., Kodama,Y. 1999. Hydrologic Modeling Analyses in GAME/Siberia. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p17 – 24.
- Nomura,M., Kodama,Y., Nakamura,R. 1999. Heat balance of snowpack in early snowmelt season in Siberia tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p25 – 26.
- Kodama,Y., Sato,N., Yabuki,H., Ishii,Y. 1999. Seasonal Change in the Heat Fluxes over Siberian Tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p27 – 34.
- Mizoguchi,M., Watanabe,K., Fukumura,K., Kiyosawa,H. 1999. Spatial Distribution of Active Layer on a Hillslope in Siberian Tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p35 – 36.
- Watanabe,K., Mizoguchi,M. 1999. Pit Observations of Active Layer in Tundra Wetland Near Tiksi, Siberia. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p37 – 42.
- Sato,T., Hayasaka,Y., Kodama,Y. 1999. Perspective of spatial distribution patterns and frequency of cryospheric vascular plants of tundra in micro scales at Tiksi, northernmost Sakha (Yakutia). GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p43 – 48.
- Hayasaka,Y., Kanda,H., Sato,T. 1999. Distribution patterns of bryophytes in micro-scales of tundra in relation to water levels. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p49 – 52.
- Kiyosawa,H., Mizoguchi,M. 1999. Soil Temperature Analysis of Active Layer in Siberian Tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p53 – 54.

TITLE

CAMP_SiberiaTundra_Tiksi_20031001_20040331.stm

CONTACT

Hironori Yabuki
Independent Administrative Institution Japan Agency for Marine-Earth Science and
Technology
Institute of Observational Research for Global Change
2-15 Natsushima-cho, Yokosuka, 237-0061, JAPAN
TEL: +81-46-867-9268
FAX: +81-46-867-9255
E-mail: yabuki@jamstec.go.jp

Tetsuo Ohata
Independent Administrative Institution Japan Agency for Marine-Earth Science and
Technology
Institute of Observational Research for Global Change
2-15 Natsushima-cho, Yokosuka, 237-0061, JAPAN
TEL: +81-46-867-9250
FAX: +81-46-867-9255
E-mail: ohatat@jamstec.go.jp

DATE OF THIS DOCUMENT

16 May 2006

1. 0 DATASET OVERVIEW

1.13 Introduction

Objectives

The goal of the GAME-Siberia project is to clarify the characteristics and processes of water accumulation and transfer and their relation with the energy cycle, in the atmosphere-land surface interface of cold environments from the seasonal to the inter-annual time scale. This study will contribute to one of the primary GAME objectives

- To understand multi-scale interactions in the energy and hydrologic cycles in the Asian Monsoon Region

and one scientific objective

- To assess the impact of monsoon variability on the regional hydrologic cycle.

The objectives of tundra study subgroup include:

1. Develop seasonal and inter-annual variation of one-dimensional energy and water vapor fluxes over tundra.
2. Characterize the water balance components in these tundra watersheds.
3. Determine the areal distribution of ground surface properties.

1.14 Time period covered by the data

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

1.15 Temporal characteristics of the data

All parameters are recorded every hour.

1.16 Physical location of the measurement

Latitude : 71.617 N
Longitude: 128.750E
Elevation: 38.0m a.s.l.

1.17 Data source

Original data provided by the Frontier Observational Research System for Global Change (FORSGC), Japan Marine Science and Technology Center (JAMSTEC) under the research collaboration with Japan Science and Technology Agency (JST).

1.18 WWW address references

Website: <http://www.hyarc.nagoya-u.ac.jp/game/siberia/tundra/home.html>

2.0 INSTRUMENTATION DESCRIPTION

2.1 Platform

The sensors are mounted on several heights.

2.2 Description of the instrumentation

Parameter	Model	Manufacturer
Soil temperature	Pt100	Hayashi denko
Soil moisture	Trime-P2	IMKO

2.5 Instrumentation specification

SoilTempWest_0cm : Soil Temperature of West side at the 0cm depth (deg.C)
SoilTempWest_5cm : Soil Temperature of West side at the 5cm depth (deg.C)
SoilTempWest_10cm : Soil Temperature of West side at the 10cm depth (deg.C)
SoilTempWest_20cm : Soil Temperature of West side at the 20cm depth (deg.C)
SoilTempWest_30cm : Soil Temperature of West side at the 30cm depth (deg.C)
SoilTempWest_47cm : Soil Temperature of West side at the 47cm depth (deg.C)
SM0cm(W) : Soil Moisture of West side at the 0cm depth (%)
SM15cm(W) : Soil Moisture of West side at the 15cm depth (%)
SM30cm(W) : Soil Moisture of West side at the 30cm depth (%)

3.0 DATA COLLECTION AND PROCESSING

3.1 Description of data collection

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

3.2 Description of derived parameters and processing techniques used

Soil temperature and moisture data are instantaneous values.

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

The missing data period are listed in chapter 9.0.

7.0 REFERENCE REQUIREMENTS

Original data was collected and is provided within the framework of the research collaboration between Frontier Observational Research System for Global Change (FORSGC), Japan Marine Science and Technology Center (JAMSTEC) and Japan Science and Technology Agency (JST), financially supported by the Japanese Ministry of Education, Science and Culture.

8.0 REFERENCES

Ohata,T., Fukushima,Y. 1999. Progress of GAME-Siberia 1997-98. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p1 – 5.

Kodama,Y. 1999. The outline of the field observation in Tundra Region in 1998. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p7 – 12.

Ishii,Y., Kodama,Y., Sato,N., Nakamura,R., Nomura,M. 1999. Summertime Water Balance in a Siberian Tundra Basin. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p13 – 16.

Hinzman,L., Kodama,Y. 1999. Hydrologic Modeling Analyses in GAME/Siberia. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p17 – 24.

Nomura,M., Kodama,Y., Nakamura,R. 1999. Heat balance of snowpack in early snowmelt season in Siberia tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p25 – 26.

Kodama,Y., Sato,N., Yabuki,H., Ishii,Y. 1999. Seasonal Change in the Heat Fluxes over Siberian Tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p27 – 34.

Mizoguchi,M., Watanabe,K., Fukumura,K., Kiyosawa,H. 1999. Spatial Distribution of Active Layer on a Hillslope in Siberian Tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p35 – 36.

Watanabe,K., Mizoguchi,M. 1999. Pit Observations of Active Layer in Tundra Wetland Near Tiksi, Siberia. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p37 – 42.

Sato,T., Hayasaka,Y., Kodama,Y. 1999. Perspective of spatial distribution patterns and frequency of cryospheric vascular plants of tundra in micro scales at Tiksi, northernmost Sakha (Yakutia). GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p43 – 48.

Hayasaka,Y., Kanda,H., Sato,T. 1999. Distribution patterns of bryophytes in micro-scales of tundra in relation to water levels. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p49 – 52.

Kiyosawa,H., Mizoguchi,M. 1999. Soil Temperature Analysis of Active Layer in Siberian Tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p53 – 54.

9.0 Missing Data Periods

File Name : CAMP_SiberiaTundra_Tiksi_20031001_20040331.stm
Data Period : 2003/10/01 00:00 - 2004/03/31 23:00

Soil Temperature (-0.47m)
2003/10/01 00:00
2004/03/31 16:00 - 2004/03/31 23:00 (8)

Soil Temperature (-0.30m)
2003/10/01 00:00
2004/03/31 16:00 - 2004/03/31 23:00 (8)

Soil Temperature (-0.20m)
2003/10/01 00:00
2004/03/31 16:00 - 2004/03/31 23:00 (8)

Soil Temperature (-0.10m)
2003/10/01 00:00
2004/03/31 16:00 - 2004/03/31 23:00 (8)

Soil Temperature (-0.05m)
2003/10/01 00:00
2004/03/31 16:00 - 2004/03/31 23:00 (8)

Soil Temperature (0.00m)
2003/10/01 00:00
2004/03/31 16:00 - 2004/03/31 23:00 (8)

Soil Moisture (-0.47m)
2003/10/01 00:00 - 2004/03/31 23:00 (ALL)

Soil Moisture (-0.30m)
2003/10/01 00:00 - 2004/03/31 23:00 (ALL)

Soil Moisture (-0.20m)
2003/10/01 00:00 - 2004/03/31 23:00 (ALL)

Soil Moisture (-0.10m)
2003/10/01 00:00 - 2004/03/31 23:00 (ALL)

Soil Moisture (-0.05m)
2003/10/01 00:00 - 2004/03/31 23:00 (ALL)

Soil Moisture (0.00m)
2003/10/01 00:00 - 2004/03/31 23:00 (ALL)

TITLE

CAMP_SiberiaTundra_Tiksi_20040401_20041231.stm

CONTACT

Hironori Yabuki
Independent Administrative Institution Japan Agency for Marine-Earth Science and
Technology
Institute of Observational Research for Global Change
2-15 Natsushima-cho, Yokosuka, 237-0061, JAPAN
TEL: +81-46-867-9268
FAX: +81-46-867-9255
E-mail: yabuki@jamstec.go.jp

Tetsuo Ohata
Independent Administrative Institution Japan Agency for Marine-Earth Science and
Technology
Institute of Observational Research for Global Change
2-15 Natsushima-cho, Yokosuka, 237-0061, JAPAN
TEL: +81-46-867-9250
FAX: +81-46-867-9255
E-mail: ohatat@jamstec.go.jp

DATE OF THIS DOCUMENT

18 July 2006

1. 0 DATASET OVERVIEW

1.19 Introduction

Objectives

The goal of the GAME-Siberia project is to clarify the characteristics and processes of water accumulation and transfer and their relation with the energy cycle, in the atmosphere-land surface interface of cold environments from the seasonal to the inter-annual time scale. This study will contribute to one of the primary GAME objectives

- To understand multi-scale interactions in the energy and hydrologic cycles in the Asian Monsoon Region

and one scientific objective

- To assess the impact of monsoon variability on the regional hydrologic cycle.

The objectives of tundra study subgroup include:

1. Develop seasonal and inter-annual variation of one-dimensional energy and water vapor fluxes over tundra.
2. Characterize the water balance components in these tundra watersheds.
3. Determine the areal distribution of ground surface properties.

1.20 Time period covered by the data

Start: 1 April 2004, 00:00
End: 31 December 2004, 23:00

1.21 Temporal characteristics of the data

All parameters are recoded every hour.

1.22 Physical location of the measurement

Latitude : 71.617 N
Longitude: 128.750E
Elevation: 38.0m a.s.l.

1.23 Data source

Original data provided by the Frontier Observational Research System for Global Change (FORSGC), Japan Marine Science and Technology Center (JAMSTEC) under the research collaboration with Japan Science and Technology Agency (JST).

1.24 WWW address references

Website: <http://www.hyarc.nagoya-u.ac.jp/game/siberia/tundra/home.html>

2.0 INSTRUMENTATION DESCRIPTION

2.1 Platform

The sensors are mounted on several heights.

2.2 Description of the instrumentation

Parameter	Model	Manufacturer
Soil temperature	Pt100	Hayashi denko
Soil moisture	Trime-P2	IMKO

2.6 Instrumentation specification

SoilTempWest_0cm : Soil Temperature of West side at the 0cm depth (deg.C)
SoilTempWest_5cm : Soil Temperature of West side at the 5cm depth (deg.C)
SoilTempWest_10cm : Soil Temperature of West side at the 10cm depth (deg.C)
SoilTempWest_20cm : Soil Temperature of West side at the 20cm depth (deg.C)
SoilTempWest_30cm : Soil Temperature of West side at the 30cm depth (deg.C)
SoilTempWest_47cm : Soil Temperature of West side at the 47cm depth (deg.C)
SM0cm(W) : Soil Moisture of West side at the 0cm depth (%)
SM15cm(W) : Soil Moisture of West side at the 15cm depth (%)
SM30cm(W) : Soil Moisture of West side at the 30cm depth (%)

3.0 DATA COLLECTION AND PROCESSING

3.1 Description of data collection

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

3.2 Description of derived parameters and processing techniques used

Soil temperature and moisture data are instantaneous values.

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

The missing data period are listed in chapter 9.0.

7.0 REFERENCE REQUIREMENTS

Original data was collected and is provided within the framework of the research collaboration between Frontier Observational Research System for Global Change (FORSGC), Japan Marine Science and Technology Center (JAMSTEC) and Japan Science and Technology Agency (JST), financially supported by the Japanese Ministry of Education, Science and Culture.

8.0 REFERENCES

Ohata,T., Fukushima,Y. 1999. Progress of GAME-Siberia 1997-98. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p1 – 5.

Kodama,Y. 1999. The outline of the field observation in Tundra Region in 1998. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p7 – 12.

Ishii,Y., Kodama,Y., Sato,N., Nakamura,R., Nomura,M. 1999. Summertime Water Balance in a Siberian Tundra Basin. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p13 – 16.

Hinzman,L., Kodama,Y. 1999. Hydrologic Modeling Analyses in GAME/Siberia. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p17 – 24.

Nomura,M., Kodama,Y., Nakamura,R. 1999. Heat balance of snowpack in early snowmelt season in Siberia tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p25 – 26.

Kodama,Y., Sato,N., Yabuki,H., Ishii,Y. 1999. Seasonal Change in the Heat Fluxes over Siberian Tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p27 – 34.

Mizoguchi,M., Watanabe,K., Fukumura,K., Kiyosawa,H. 1999. Spatial Distribution of Active Layer on a Hillslope in Siberian Tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p35 – 36.

Watanabe,K., Mizoguchi,M. 1999. Pit Observations of Active Layer in Tundra Wetland Near Tiksi, Siberia. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p37 – 42.

Sato,T., Hayasaka,Y., Kodama,Y. 1999. Perspective of spatial distribution patterns and frequency of cryospheric vascular plants of tundra in micro scales at Tiksi, northernmost Sakha (Yakutia). GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p43 – 48.

Hayasaka,Y., Kanda,H., Sato,T. 1999. Distribution patterns of bryophytes in micro-scales of tundra in relation to water levels. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p49 – 52.

Kiyosawa,H., Mizoguchi,M. 1999. Soil Temperature Analysis of Active Layer in Siberian Tundra. GAME Publication No.14 Activity Report of GAME-Siberia, 1998, p53 – 54.

9.0 Missing Data Periods

File Name : CAMP_SiberiaTundra_Tiksi_20040401_20041231.stm
Data Period : 2004/04/01 00:00 - 2004/12/31 23:00

Soil Moisture (-0.10m)
2004/04/01 00:00 - 2004/12/31 23:00 (ALL)

Soil Moisture (-0.05m)
2004/04/01 00:00 - 2004/12/31 23:00 (ALL)

Soil Moisture (0.00m)
2004/04/01 00:00 - 2004/12/31 23:00 (ALL)