

## TITLE

CAMP\_SiberiaTaiga\_Viluy\_20021101\_20030331.sfc

## CONTACT

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## DATE OF THIS DOCUMENT

Updated 5 October 2006

### 1. 0 DATASET OVERVIEW

#### 1.1 Introduction

##### Objectives

The purpose of snow depth measurements is to obtain ground truth data for validation of a snow satellite algorithm for the Advanced Microwave Scanning Radiometer (AMSR) and the AMSR for Earth Observation System (AMSR-E).

#### 1.2 Time period covered by the data

Start: 01 November 2002, 01:00  
End: 31 March 2003, 23:00

#### 1.3 Temporal characteristics of the data

All parameters are recoded every 2 hours.

#### 1.4 Physical location of the measurement

Latitude : 62.06389 N  
Longitude : 129.09917 E  
Elevation : 233.000 m a.s.l.  
Landscape : Pine Forest

Canopy height : About 20 m  
 Density of canopy: About 0.25 number /m<sup>2</sup>  
 Soil Characteristics: Sandy soil

### 1.5 Data source

Original data provided by the University of Tokyo supported by the Japan Aerospace Exploration Agency (JAXA).

### 1.6 WWW address references

N/A

## 2.0 INSTRUMENTATION DESCRIPTION

| Parameter       | Range           | Model                 | Manufacturer | Platform |
|-----------------|-----------------|-----------------------|--------------|----------|
| Air Temperature | 0 - 200cm       | 107 Temperature Probe | CAMBEL       | 1.35 m   |
| Snow Depth      | -50 - +100deg.C | SR-50                 | CAMBEL       |          |

### 2.3 Instrumentation specification

Air Temperature (1.35m) : Air Temperature at the 1.35 m height (deg.C)

Snow Depth (1.35m) : Snow depth at the 1.35 m height (cm)

## 3.0 DATA COLLECTION AND PROCESSING

Snow depth sensor set has three components:

- Snow depth sensor
- Data logger
- Air temperature sensor

The sensor is based on a 50 kHz (Ultrasonic) electrostatic transducer. The SR50 determines the distance to a target by sending out ultrasonic pulses and listening for the returning echoes that are reflected from the target.

Data logger is CR10X. This data logger is a fully programmable data logger controller with non-volatile memory and a battery backed clock in a small, rugged sealed module.

Air temperature is used to compensate the snow data which is measured by using snow depth sensor. A temperature compensated distance from SR50 to snow surface is obtained by multiplying the SR50 reading by the square root of the air temperature in degree Kelvin divided by 273.15.

$$\text{DISTANCE} = \text{READINGSR50} \times \text{root}( T (K) / 273.15(K) )$$

## **4.0 QUALITY CONTROL PROCEDURES**

For all parameters, the data has been visually checked using the CAMP Quality Control Web Interface. The quality control flags follow the CEOP data flag definition document.

## **5.0 GAP FILLING PROCEDURES**

Filled in gap by the Missing value "-999.99".

## **6.0 DATA REMARKS**

### **6.1 PI's assessment of the data**

#### **6.1.1 Instruments problems**

None.

#### **6.1.2 Quality issues**

None.

### **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 AMSR/AMSR-E verification experiment of the Japan Aerospace Exploration Agency (JAXA), financially supported by JAXA.

## **8.0 REFERENCES**

N/A

## **9.0 Missing Data Periods**

None

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## DATE OF THIS DOCUMENT

17 May 2006  
(Updated 5 October 2006)

## 1. 0 DATASET OVERVIEW

### 1.7 Introduction

#### Objectives

The purpose of snow depth measurements is to obtain ground truth data for validation of a snow satellite algorithm for the Advanced Microwave Scanning Radiometer (AMSR) and the AMSR for Earth Observation System (AMSR-E).

### 1.8 Time period covered by the data

Start: 16 October 2003, 01:00  
End: 31 March 2004, 23:00

### 1.9 Temporal characteristics of the data

All parameters are recoded every 2 hours.

### 1.10 Physical location of the measurement

Latitude : 62.06389 N  
Longitude : 129.09917 E  
Elevation : 233.000 m a.s.l.

Landscape : Pine Forest  
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## 9.0 Missing Data Periods

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File Name : CAMP\_SiberiaTaiga\_Viluy\_20031016\_20040331.sfc  
Data Period : 2003/10/16 01:00 - 2004/03/31 23:00  
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Air Temperature  
2003/10/16 01:00

Snow Depth  
2003/10/16 01:00