

TITLE

CAMP_KoreanHaenam_Haenam_20021001_20030930.sfc.doc

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DATE OF THIS DOCUMENT

31 Aug. 2004 (for EOP3 First half)

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1. 0 DATASET OVERVIEW

1.1 Introduction

To improve the understanding and model prediction accuracy of heavy rainfall system along the Changma (rainy season in Korea), the intensive field-based regional experiment was carried out. This intensive observation in 2002 is called as "KEOP-2002".

Objectives

- 1) Production of 3-dimensional observational data in collaboration with international projects (e.g. CEOP/CAMP and FluxNet (KoFlux)).
- 2) Improvement of the understanding and prediction skill of meso-scale severe weather systems in summer based on the development of application technologies of observational data.

1.2 Time period covered by the data

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

1.3 Temporal characteristics of the data

All parameters are recorded every 30 minutes.

1.4 Physical location of the measurement

Latitude : 34.55381 N
Longitude : 126.56992 E
Elevation : 13.7 m a.s.l.
Landscape : The Rice/ Farm land (Mixed Cropland).
The fetch from southeast to southwest is about 2000m
Canopy height : Less than 1 m
Soil Characteristics: silt loam/loam

1.5 Data source

1.6 WWW address references

<http://koflux.org>
<http://keop.metri.re.kr/WEB/eng/index.html>

2.0 INSTRUMENTATION DESCRIPTION

2.1 Platform

The sensors are mounted on several heights.

2.2 Description of the instrumentation

Parameter	Model	Manufacturer
Station Pressure	CS7500	CAMPBELL
Air Temperature	CSAT3	CAMPBELL
Wind Speed	CSAT3	CAMPBELL
Wind Direction	CSAT3	CAMPBELL
Incoming Shortwave	CNR-1	Kipp & Zonen
Outgoing Shortwave	CNR-1	Kipp & Zonen
Incoming Longwave	CNR-1	Kipp & Zonen
Outgoing Longwave	CNR-1	Kipp & Zonen
Net Radiation	CNR-1	Kipp & Zonen

2.3 Instrumentation specification

Station Pressure (20.8m) : Station Pressure at the 20.8 m height (hPa)
Air Temperature (20.8m) : Air Temperature at the 20.8 m height (deg.C)
Wind Direction (20.8m) : Wind Direction at the 20.8m height (deg.)
U Wind Component (20.8m) : U Wind component velocity average at the 20.8m height (m/s)

V Wind Component (20.8m) : V Wind component velocity average at the 20.8m height (m/s)
Incoming Shortwave (19.3m): Shortwave Downward Radiation at the 19.3m height (W/m²)
Outgoing Shortwave (19.3m): Shortwave Upward Radiation at the 19.3m height (W/m²)
Incoming Longwave (19.3m) : Longwave Downward Radiation at the 19.3m height (W/m²)
Outgoing Longwave (19.3m) : Longwave Upward Radiation at the 19.3m height (W/m²)
Net Radiation (19.3m) : Net Radiation at the 19.3m height (W/m²)

3.0 DATA COLLECTION AND PROCESSING

3.1 Description of data collection

Data are downloaded from the data logger once a month. Then, data are sent to Seoul.

3.2 Description of derived parameters and processing techniques used

Station Pressure, Air Temperature, U wind component, V wind component, Wind direction, Incoming Short wave, Outgoing Short wave, Incoming Long wave, Outgoing Long wave and Net Radiation are averaged over the previous 30 minutes.

The Wind_Speed data was computed by using

"CEOP Derived Parameter Equations:

http://www.joss.ucar.edu/ghp/ceopdm/refdata_report/eqns.html .

and put the data flag "I",

Compute Wind Speed (GEMPAK):

Wind_speed = square_root(U*U + V*V);

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 (UTC)

Missing Data Periods were listed in the Chapter 9.0

7.0 REFERENCE REQUIREMENTS

Original data was collected and is provided by the Yonsei university through the “The Eco-Technopia 21 Project” supported by the Ministry of Environment of Korea under the framework of Coordinated Enhanced Observation Period (CEOP) Asian Monsoon Project (CAMP) .

8.0 REFERENCES

9.0 Missing data period

at EOP3- First Half

2002/10/26 21:00 - 2002/10/27 17:30
2002/10/28 06:00 - 2002/10/29 04:00
2002/11/08 07:00 - 2002/11/09 01:00
2002/11/09 22:00 - 2002/11/10 17:00
2002/11/14 02:00 - 2002/11/14 06:30
2003/01/08 03:00 - 2003/01/11 00:30
2003/01/30 07:30 - 2003/02/02 22:00
2003/02/09 00:00 - 2003/02/09 21:00
2003/02/17 04:00 - 2003/02/18 01:30
2003/03/11 09:30 - 2003/03/12 01:30
2003/03/27 00:00 - 2003/03/27 21:30

at EOP3- Second Half

(up, down, long, short ,net radiation and air pressure)

2003/04/07 09:30 - 2003/04/07 21:00
2003/04/08 01:00 - 2003/04/08 01:30
2003/04/08 09:30 - 2003/04/08 21:00
2003/04/09 06:30 - 2003/04/09 07:00
2003/04/24 13:30 - 2003/04/24 21:30
2003/05/01 02:30 - 2003/05/01 05:30
2003/05/05 01:00 - 2003/05/05 20:30
2003/05/16 07:00 - 2003/05/17 01:30
2003/06/14 06:30 - 2003/06/18 05:00
2003/06/20 07:30
2003/06/21 06:00 - 2003/06/22 07:00
2003/07/14 00:30 - 2003/07/16 04:30
2003/07/16 07:30 - 2003/07/18 21:00
2003/07/20 02:00 - 2003/07/20 21:00
2003/07/28 02:00 - 2003/07/29 22:00
2003/07/30 01:00 - 2003/07/30 06:00
2003/07/31 01:00 - 2003/07/31 21:30
2003/08/01 01:30 - 2003/09/04 06:30

(U, V, Wind_Component, Wind direction and Air Temperature)

2003/04/07 09:30 - 2003/04/07 21:00
2003/04/08 01:00 - 2003/04/08 01:30
2003/04/08 09:30 - 2003/04/08 21:00
2003/04/09 06:30 - 2003/04/09 07:00
2003/04/11 16:30 - 2003/04/11 19:00
2003/04/11 20:00 - 2003/04/12 02:00
2003/04/18 15:00 - 2003/04/18 15:30
2003/04/18 17:30
2003/04/18 19:30
2003/04/18 21:30 - 2003/04/18 22:30
2003/04/20 00:00 - 2003/04/20 01:00
2003/04/22 22:30 - 2003/04/23 09:30
2003/04/24 13:30 - 2003/04/24 21:30
2003/04/26 22:00
2003/04/26 23:00 - 2003/04/27 00:00
2003/04/29 06:00
2003/04/29 07:00 - 2003/04/29 09:30
2003/04/29 10:30 - 2003/04/29 11:00
2003/05/01 02:30 - 2003/05/01 05:30
2003/05/05 01:00 - 2003/05/05 20:30
2003/05/07 12:30 - 2003/05/07 13:00
2003/05/07 21:30 - 2003/05/08 23:00
2003/05/16 07:00 - 2003/05/17 01:30
2003/05/24 21:00
2003/05/29 15:30 - 2003/05/29 17:30
2003/06/12 00:30
2003/06/14 06:30 - 2003/06/18 05:00
2003/06/18 08:30
2003/06/19 02:00 - 2003/06/19 03:30
2003/06/20 07:30
2003/06/21 06:00 - 2003/06/22 07:00
2003/06/30 13:30 - 2003/06/30 14:30
2003/06/30 18:00
2003/06/30 19:30 - 2003/06/30 20:00
2003/06/30 21:00 - 2003/07/01 00:00
2003/07/02 20:30 - 2003/07/02 21:00
2003/07/02 22:00 - 2003/07/03 00:00
2003/07/04 06:30 - 2003/07/04 09:00
2003/07/05 00:30
2003/07/07 11:30 - 2003/07/07 12:00
2003/07/10 23:30 - 2003/07/11 02:30
2003/07/11 19:00 - 2003/07/11 20:00
2003/07/11 21:30 - 2003/07/11 23:00
2003/07/14 00:30 - 2003/07/16 04:30
2003/07/16 07:30 - 2003/07/18 21:00
2003/07/20 02:00 - 2003/07/20 21:00
2003/07/22 18:00
2003/07/22 19:30
2003/07/22 20:30 - 2003/07/22 21:30
2003/07/28 02:00 - 2003/07/29 22:00
2003/07/30 01:00 - 2003/07/30 06:00

2003/07/31 01:00 - 2003/07/31 21:30
2003/08/01 01:30 - 2003/09/04 06:30