High Mountain Asia Langtang Automatic Weather Station Measurements, Version 1

USER GUIDE

How to Cite These Data

As a condition of using these data, you must include a citation:

Tsay, S. 2019. High Mountain Asia Langtang Automatic Weather Station Measurements, Version 1. [Indicate subset used]. Boulder, Colorado USA. NASA National Snow and Ice Data Center Distributed Active Archive Center. https://doi.org/10.5067/TNQV3XTMP9CP. [Date Accessed].

National Snow and Ice Data Center

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1   DATA DESCRIPTION

This data set is closely related to *High Mountain Asia Langtang Snow Properties*, *High Mountain Asia Langtang Snow Bidirectional Reflectance Factor*, and *High Mountain Asia Langtang Shortwave Downward Irradiance*. All of these data sets feature point measurements that were collected on or near the Yala Glacier in Nepal.

1.1 Parameters

The parameters provided in this data set are air temperature, surface pressure, rainfall rate, relative humidity, wind direction, and wind speed. Each parameter is provided in a separate data file. The parameters are described in more detail in Table 1.

Table 1. Parameter Information

Parameter	Description	Units
AirT	Air temperature	°C
Pressure	Surface pressure	hPa
RainIntensity	Rainfall rate	mm/h
RH	Relative humidity	%
WindDirection	Wind direction	Degrees (North = 0, clockwise)
WindSpeed	Wind speed	m/s

1.2 File Information

1.2.1   Format

The data files are provided in Comma-Separated Values (.csv) format. Each data file contains one of six possible parameters (see Table 1).

1.2.2   Naming Convention

There are six data files in this data set:

HMA_AWS_AirT_ICIMOD_BC_20171022_20181101.csv

HMA_AWS_Pressure_ICIMOD_BC_20171022_20181101.csv

HMA_AWS_RainIntensity_ICIMOD_BC_20171022_20181101.csv

HMA_AWS_RH_ICIMOD_BC_20171022_20181101.csv

HMA_AWS_WindDirection_ICIMOD_BC_20171022_20181101.csv

HMA_AWS_WindSpeed_ICIMOD_BC_20171022_20181101.csv

The files are named according to the following convention, which is described in Table 2:

HMA_AWS_[parameter]_ICIMOD_BC_20171022_20181101.csv

Table 2. File Naming Convention

Variable	Description
HMA_AWS	Data set ID
parameter	Indicates one of six possible parameters (see Table 1): AirT Pressure RainIntensity RH WindDirection WindSpeed
ICIMOD_BC	Indicates the measurement site: ICIMOD BC (see Table 3)
20171022_20181101	Start and end date of collection in YYYYMMDD format
.csv	Indicates file type: Comma-Separated Values file

1.3 Spatial Information

1.3.1 Coverage

Spatial coverage includes one location in Langtang, Nepal, as noted by the spatial extent in Table 3.

Table 3. Information about Measurement Site

Measurement Site Name	Latitude	Longitude	Altitude
ICIMOD BC	28.214° N	85.610° E	4901 m

1.3.2 Resolution

This data set consists of one individual measurement site located in Langtang, Nepal (see Table 3).

1.3.3 Geolocation

Each data file contains measurements for a single site (see Table 3).

1.4 Temporal Information

1.4.1 Coverage

22 October 2017 to 01 November 2018

1.4.2 Resolution

1 s for wind speed and wind direction; 10 s for all other parameters

2 DATA ACQUISITION AND PROCESSING

2.1 Acquisition and Processing

Meteorological data are measured by a commercial weather sensor (Lufft WS700) and a visibility sensor (Biral Visibility Sensor SWS100) operated by ICIMOD.

2.2 Instrumentation

The data were collected using an automatic weather station (AWS).

3 SOFTWARE AND TOOLS

The data files can be opened in any program. However, they are best viewed through a spreadsheet program, such as Microsoft Excel, OpenOffice Calc, or Google Docs.

4 RELATED DATA SETS

High Mountain Asia Langtang Snow Properties
High Mountain Asia Langtang Snow Bidirectional Reflectance Factor
High Mountain Asia Langtang Shortwave Downward Irradiance
High Mountain Asia at NSIDC | Data Sets

5 RELATED WEBSITES

High Mountain Asia at NSIDC | Overview
NASA High Mountain Asia Project
NASA Research Announcement: Understanding Changes in High Mountain Asia

6   CONTACTS

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7   ACKNOWLEDGEMENTS

The data providers are grateful to the NASA MODIS Adaptive Processing System (MODAPS) for processing the satellite data sets used in this product; the Calibration Facility Laboratory (GSFC/Code 618) for their support in calibrating the SMART-r units; and Milton G. Hom at SSAI/GSFC (Code 618) for the reflectance standards of the BRF measurements. The providers also sincerely acknowledge the International Centre for Integrated Mountain Development (ICIMOD) in Kathmandu, Nepal, for logistics support, field site identification, and operating collocated instruments, as well as data sharing. Sincere thanks are also given to all assistants and graduate students operating the sites under harsh environmental conditions and for their technical support, which helped make the field campaigns successful.

8   REFERENCES

Ji, Q., Tsay, S.-C., Lau, K. M., Hansell, R. A., Butler, J. J., & Cooper, J. W. (2011). A novel nonintrusive method to resolve the thermal dome effect of pyranometers: Radiometric calibration and implications. Journal of Geophysical Research: Atmospheres, 116(D24), n/a-n/a. https://doi.org/10.1029/2011jd016466

9   DOCUMENT INFORMATION

9.1 Publication Date

16 January 2019

9.2 Date Last Updated

02 August 2020