A Big Earth Data Platform for Three Poles

**Dataset of alpine timberlines in Southern Tibet (2005-2008)**

1、Description

This data set mainly includes meteorological data and soil moisture data collected from 2005 to 2008 at the Sherjila Mountain Alpine Timberline Observation Site of the Integrated Observation and Research Station of the Alpine Environment in Southeast Tibet.  
The data set of alpine timberline observations in southeast Tibet includes 1) the meteorological data set and 2) the soil moisture data set. The meteorological data set includes wind speed, temperature (1, 3 m), relative humidity (1, 3 m), soil heat flux (-5, -20, -60 cm), soil temperature (-5, -20, -60 cm), air pressure, total radiation, net radiation, photosynthetically active radiation, infrared radiation (660, 730 nm), atmospheric longwave radiation, ground longwave radiation, surface temperature, precipitation, and snow thickness. The soil moisture data set includes vegetation type and soil water content (-5, -20, -60 cm).  
  
Instruments used for each variable:  
Temperature: Air temperature probe, produced in Taiwan, model TRH-S.  
Relative humidity: Model TRH-S, produced in Taiwan.  
Wind speed: Anemoscope, produced in Taiwan, model 03102.  
Barometric Pressure: Barometric pressure sensor, produced in Taiwan, model BP0611A.  
Atmospheric longwave radiation: Pyrgeometer, produced by the Kipp & Zonen Company of the Netherlands, model CG3.  
Ground longwave radiation: Pyrgeometer, produced by the Kipp & Zonen Company of the Netherlands, model CG3.  
Total radiation: Pyranometer, produced by the Kipp & Zonen Company of the Netherlands, model CM3.  
Net radiation: Net radiometer, produced by the Kipp & Zonen Company of the Netherlands, model NR-Lite.  
Photosynthetically active radiation: PAR-Sensor, produced by the Kipp & Zonen Company of the Netherlands, model MS-PAR.  
Infrared radiation: Infrared radiation sensor, produced by the Skye Company of the UK, model SKY110.  
Rainfall: Rain gauge, produced in Taiwan, model 7852 M.  
Snow thickness: Ultrasonic snow depth sensor, produced in the United States, model 260-700.  
Soil temperature: Soil temperature probe, produced by the Onset Company of the United States, model 12-Bit.  
Soil heat flux: Soil heat flux plate, produced by the Hukseflux Company of the Netherlands, model HFP01.  
Soil moisture content: Soil moisture sensor, produced by the Onset Company of the United States, model S-SMA-M003.  
The observations and data acquisition were carried out in strict accordance with the instrument operating specifications. Each instrument was rigorously validated and calibrated by the supplier before installation to ensure the accuracy of the observation data. Data with significant errors were removed when processing the data table.

2、Keywords

Theme：Carbon flux,Soil,Precipitation,Radiation,Temperature,Winds,Soil temperature,Soil moisture/Water content,Pressure  
Discipline：Atmosphere,Terrestrial Surface  
Places：Southeast Tibet, Tibetan Plateau , Sherjila Mountain  
Time：2005-2008

3、Data details

1.Scale：None

2.Projection：

3.Filesize：6.25MB

4.Data format：EXCEL

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：30.0 | - |
| west：94.0 | - | east：95.0 |
| - | south：29.0 | - |

5、Time frame:2005-08-07 00:00:00+00:00--2009-01-06 00:00:00+00:00

6、Reference method

References to data:

LIU Xinsheng, LUO Tianxiang. Dataset of alpine timberlines in Southern Tibet (2005-2008). A Big Earth Data Platform for Three Poles, doi:10.11888/Ecology.tpe.249285.db2018

References to articles:

7、Supporting project information

8、Data resource provider

name: LIU Xinsheng  
unit: Institute of Tibetan Plateau Research, Chinese Academy of Sciences  
email: luotx@itpcas.ac.cn  
  
name: LUO Tianxiang  
unit: Institute of Tibetan Plateau Research, Chinese Academy of Sciences  
email: luotx@itpcas.ac.cn