A Big Earth Data Platform for Three Poles

**WATER: Dataset of ground truth measurements for snow synchronizing with airborne microwave radiometers (K&Ka bands) mission in the Binggou watershed foci experimental area on Mar. 29, 2008**

1、Description

The dataset of ground truth measurements for snow was obtained, synchronizing with airborne microwave radiometers (K&Ka bands) mission in the Binggou watershed foci experimental area on Mar. 29, 2008. Those provide reliable ground data for retrieval of snow properties and parameters, especially snow depth and snow water equivalent study.
 Observation items include (1) snow density, snow complex permittivity, snow volumetric moisture and snow gravimetric moisture by the snowfork in BG-A; (2) snow parameters in BG-A (18 points), BG-B (20 points), BG-EF (20 points) and BG-I (20 points): snow depth by the ruler, the snow temperature (mean of two measurements) by the probe thermometer, snow grain size by the handheld microscope, snow density by the cutting ring for each snow layer, and the snow surface temperature and the snow-soil interface temperature by the handheld infrared thermometer. For each snow pit, the snowpack was divided into several layers with 10-cm intervals of snow depth.
 Two files including raw data and pre-processed data were archived.

2、Keywords

Theme：Snow/ice temperature,Snow depth,Snow,Snow particle size,Snow density,Snow water equivalent,Terrestrial Surface Remote Sensing,Ground verification information
Discipline：Terrestrial Surface,Cryosphere
Places：Heihe River Basin, the cold region hydrology experimental area in the upper reaches, ice-channel watershed encryption observation area
Time：2008,

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：96.8MB

4.Data format：EXCEL

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.18839 | - |
| west：100.096381 | - | east：100.286566 |
| - | south：38.01113 | - |

5、Time frame:2008-04-17 08:00:00+00:00--2008-04-17 08:00:00+00:00

6、Reference method

References to data:

DOU Yan, BAI Yunjie, XU Zhen, MA Zhongguo, GE Chunmei, LI Zhe, BAI Yanfen, LIANG Ji, SHU Lele, HAN Xujun, ZHANG Pu, LIU Yan, ZHU Shijie, WANG Xufeng, MA Mingguo, LI Hongyi, GU Juan, CHANG Cun, JIANG Tenglong, HAO Xiaohua, CAO Yongpan. WATER: Dataset of ground truth measurements for snow synchronizing with airborne microwave radiometers (K&Ka bands) mission in the Binggou watershed foci experimental area on Mar. 29, 2008. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0091.db2013

References to articles:

郝晓华, 王建, 车涛, 张璞, 梁继, 李弘毅, 李哲, 白云洁, 白艳芬. 祁连山区冰沟流域积雪分布特征及其属性观测分析. 冰川冻土, 2009, 31(2): 284-292.

Li X, Su ZB, Wu BF. Retrieval of key eco-hydrological parameters for cold and arid regions. International Journal of Applied Earth Observation and Geoinformation, 2012, 17: 1-2, doi:10.1016/j.jag.2012.03.001.

7、Supporting project information

The CAS (Chinese Academy of Sciences) Action Plan for West Development Project
National Program on Key Basic Research Project (973 Program

8、Data resource provider

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