A Big Earth Data Platform for Three Poles

**WATER: Dataset of ground truth measurements for snow synchronizing with the airborne microwave radiometers (K&Ka bands) mission in the Binggou watershed foci experimental area on March 30, 2008**

1、Description

The dataset of ground truth measurements for snow synchronizing with the airborne microwave radiometers (K&Ka bands) mission was obtained in the Binggou watershed foci experimental area on Mar. 30, 2008. Those provide reliable data for retrieval of snow parameters and properties, especially for dry and wet snow identification.
 Observation items included:
 (1) Snow density, snow complex permittivity, snow volumetric moisture and snow gravimetric moisture by the snowfork in BG-A;
 (2) Snow parameters including snow depth, the snow surface temperature synchronizing with the airborne microwave radiometers (K&Ka bands), the snow layer temperature, the snow grain size and snow density in BG-A (10 points), BG-B (6 points), BG-F (12 points), BG-H (21 points) and BG-I (20 points); For each snow pit, the snowpack was divided into several layers with 10-cm intervals of snow depth. The layer depth (by the ruler), the snow grain size (by the handheld microscope), snow density (by the cutting ring) and the snow temperature (by the probe thermometer) were obtained at each snow pit.
 Two files including raw data and the preprocessed data were archived.

2、Keywords

Theme：Albedo,Snow depth,Snow,Snow density,Remote Sensing Technology,Snow analyzer,Microwave radiometer,Snow water equivalent
Discipline：Remote Sensing Technology,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：7175.4MB

4.Data format：EXCEL

4、Space scope

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

5、Time frame:2008-10-15 16:00:00+00:00--2008-10-15 16:00:00+00:00

6、Reference method

References to data:

SHU Lele, ZHANG Pu, LIU Yan, ZHU Shijie, WANG Xufeng, MA Mingguo, WANG Jianhua, LI Hongyi, GU Juan, CHANG Cun, JIANG Tenglong, HAO Xiaohua, XIAO Pengfeng , LI Hua, BAI Yunjie, WU Yueru, XU Zhen, MA Zhongguo, GE Chunmei, LI Zhe, BAI Yanfen, CHE Tao, LIANG Ji. WATER: Dataset of ground truth measurements for snow synchronizing with the airborne microwave radiometers (K&Ka bands) mission in the Binggou watershed foci experimental area on March 30, 2008. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0092.db2014

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.

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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