A Big Earth Data Platform for Three Poles

**WATER: Dataset of ground truth measurements for snow synchronizing with EO-1 Hyperion in the Binggou watershed foci experimental area on Mar. 22, 2008**

1、Description

The dataset of ground truth measurements for snow synchronizing with EO-1 Hyperion was obtained in the Binggou watershed foci experimental area on Mar. 22, 2008. Those provide reliable data for retrieval of snow parameters from remote sensing approaches.
 Observation items included: (1) snow surface emissivity by the portable emissivity determinator near the Binggou cold region hydrometerological station; (2) snow density, snow complex permittivity, snow volumetric moisture and snow gravimetric moisture by the snowfork in BG-A from 11:20-13:53 (BJT) on Mar. 2, 2008; (3) snow parameters in BG-A, BG-B, BG-C, BG-D, BG-E and BG-F, and variables including the snow layer temperature by the probe thermometer, the snow grain size by the handheld microscope, snow density by the aluminum case and the snow surface temperature and the snow-soil interface temperature by the handheld infrared thermometer simultaneous with the satellite; (4) the land surface infrared temperature in BG-D, BG-E, BG-B and BG-F during the airborne mission; (5) fresh snow albedo by the total radiometer east to A2; (6) snow spectrum by the portable ASD from Xinjiang Meteorological Administration and Nanjing University, GPS recordings enclosed.
 Two files including raw data and preprocessed data were archived.

2、Keywords

Theme：Albedo,Snow/ice temperature,Snow depth,Snow,Snow particle size,Snow density,Remote Sensing Technology,Snow analyzer,Visible remote sensing,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：914.9MB

4.Data format：EXCEL

4、Space scope

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

5、Time frame:2008-04-03 16:00:00+00:00--2008-04-03 16:00:00+00:00

6、Reference method

References to data:

SHU Lele, HAN Xujun, ZHANG Pu, LIU Yan, ZHU Shijie, MA Hongwei, WANG Xufeng, MA Mingguo, GU Juan, CHANG Cun, JIANG Tenglong, HAO Xiaohua, CAO Yongpan, XIAO Pengfeng , DOU Yan, LI Hua, FANG Li, BAI Yunjie, SUN Jicheng, XU Zhen, MA Zhongguo, GE Chunmei, WU Lizong, HUANG Chunlin, BAI Yanfen, LIANG Ji. WATER: Dataset of ground truth measurements for snow synchronizing with EO-1 Hyperion in the Binggou watershed foci experimental area on Mar. 22, 2008. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0089.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.

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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