A Big Earth Data Platform for Three Poles

**WATER: Dataset of ground-based RPG-8CH-DP microwave radiometers and ground truth observations for snow in the Binggou watershed foci experimental area on March 24 and March 25, 2008**

1、Description

The dataset of ground-based RPG-8CH-DP microwave radiometers (6.925H/V, 18.7H/V and 36.5H/V) and ground truth observations for snow was obtained in the Binggou watershed foci experimental area on Mar. 24 (time-continuous from 11:42 to 17:28 BJT) and Mar. 25, 2008 (short-time multi-angle observations). A gentle slope of 10° was chosen as the observation site, where there was firn snow and the snow layer and the ice layer appeared alternately. The radiometer beam was set from -20° to -55°, with the steplength 5°.
 Observation items included:
 (1) The brightness temperature by the microwave radiometer in .BRT and .txt (the ASCII format). Each row in .txt was listed by year, month, date, hour, minute, second, 6.925GHz (h), 6.925GHz (v), 10.65GHz (h), 10.65GHz (v) , 18.7GHz (h), 18.7GHz (v), 36.5GHz (h), 36.5GHz (v), the elevation angle, and the azimuth angle. Values for 6.925GHz and 10.65GHz were zero due to the absence of these two radiometers.
 (2) Snow parameters including the snow profile temperature by the probe thermometer and the handheld infrared thermometer, the snow grain size by the handheld microscope, snow moisture, snow density, and snow permittivity by the snow fork.
 Five subfolders are archived, including the brightness temperature and the profiles of liquid water content, the snow grain size, snow density and the snow temperature.

2、Keywords

Theme：Snow/ice temperature,Snow depth,Snow,Snow particle size,Snow density,Remote Sensing Technology,Ground-based microwave radiometer
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：1.35MB

4.Data format：

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--2008-04-04 16:00:00+00:00

6、Reference method

References to data:

ZHENG Yue, ZHANG Zhiyu. WATER: Dataset of ground-based RPG-8CH-DP microwave radiometers and ground truth observations for snow in the Binggou watershed foci experimental area on March 24 and March 25, 2008. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0096.db2013

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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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