A Big Earth Data Platform for Three Poles

**WATER: Dataset of airborne microwave radiometers (L&K bands) mission in the Biandukou flight zone on Mar. 21, 2008**

1、Description

The dataset of airborne microwave radiometers (L&K) mission was obtained in the Biandukou flight zone on Mar. 21, 2008.  
 The frequency of L bands was 1.4 GHz with back sight of 35 degree and dual polarization (H&V) was acquired; and the frequency of K band was 18.7 GHz at the nadir view angle without polarization. The plane took off at Zhangye airport at 8:00 (BJT) and landed at 11:40, from north to south along the scheduled lines at the altitude about 4100m (400m for the low flight) and speed about 290km/hr .   
 The raw data include microwave radiometer (L&K) data and GPS data; the former were instantaneous non-imaging observation recorded in text, which could be converted into brightness temperatures according to the calibration coefficients (filed with raw data together), and the latter were aircraft longitude, latitude and attitude. Moreover, based on the respective real-time clock log, observations by the microwave radiometer and GPS can be integrated to offer coordinates matching for the former. Yaw, flip, and pitch motions of aircraft were ignored due to the low resolution of microwave radiometer observations. Observation information can also be rasterized, as required, after calibration and coordinates matching. L&K bands resolution (x) and footprint can be approximately estimated as x=0.3H (H is relative flight height) for L and x=0.24H for K.

2、Keywords

Theme：Remote Sensing Technology,Microwave radiometer  
Discipline：Remote Sensing Technology  
Places：Heihe River Basin, the cold region hydrology experimental area in the upper reaches, closed observation area of Biandoukou  
Time：

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：4.18MB

4.Data format：

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.35 | - |
| west：100.8 | - | east：101.1 |
| - | south：38.15 | - |

5、Time frame:2008-03-30 16:00:00+00:00--2008-03-30 20:00:00+00:00

6、Reference method

References to data:

CHE Tao. WATER: Dataset of airborne microwave radiometers (L&K bands) mission in the Biandukou flight zone on Mar. 21, 2008. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0230.db2010

References to articles:

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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