A Big Earth Data Platform for Three Poles

**Cloud-free Fractional Snow Cover from Blended MODIS and FY-2 VISSR**

1、Description

The continuous snow cover area in time and space is one of key elements to study of land surface energy and water exhange, mountain hydrology, land surface model, numerical weather forecast and climate change. However, the large number of clouds causes data gaps in the snow cover area from optical remote sensing. The MODIS observations of Terra and aqua, FY-2E and FY-2F VISSR are used to obtain fractional snow cover (subpixel snow cover) which is less affected by the cloud, and the snow cover of the remaining cloud pixels is supplemented according to the time series information. Finally the cloudless daily snow fraction is obtained. This data set includes the daily fractional snow cover at 5 km spatial resolution in the Tibetan Plateau and China.

2、Keywords

Theme：Snow area,Snow,Snowpack
Discipline：Cryosphere
Places：Tibetan Plateau, China
Time：2012/2013 winter, 2013/2014 winter

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：200.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：56.0 | - |
| west：71.0 | - | east：138.0 |
| - | south：15.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

JIANG Lingmei. Cloud-free Fractional Snow Cover from Blended MODIS and FY-2 VISSR. A Big Earth Data Platform for Three Poles, doi:10.11888/Snow.tpdc.2709582019

References to articles:

Wang, G., Jiang, L., Wu, S., Shi, J., Hao, S., & Liu, X. (2017). Fractional Snow Cover Mapping from FY-2 VISSR Imagery of China. Remote Sensing, 9(10), 983.

Wang, G., Jiang, L., Hao, S., Liu, X., Yang, J., & Cui, H. (2018). Cloud-Free Fractional Snow Cover Estimation from Blended MODIS and FY-2 VISSR Measurements. In IGARSS 2018-2018 IEEE International Geoscience and Remote Sensing Symposium (pp. 5191-5194).

7、Supporting project information

Satellite observation and simulation studies of the land surface water and energy exchange processes and its effects on global changes

8、Data resource provider

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