A Big Earth Data Platform for Three Poles

**The monthly MODIS snow cover product of the Tibetan Plateau (2001-2005)**

1、Description

The parameter inversion study project of soil moisture and snow water equivalent on the Tibetan Plateau in the past 20 years is part of the key research plan of Environmental and Ecological Science for West China of the National Natural Science Foundation of China. The person in charge is Jiancheng Shi, a researcher at the Institute of Remote Sensing Applications of the Chinese Academy of Sciences. The project ran from January 2004 to December 2007.
The data collection of the project: the Monthly MODIS Snow Cover Product of Tibetan Plateau (2001-2005).
Based on the image data acquired by MODIS, combined with ASTER image data, the data set carried out snow cover area classification and change analysis at a subpixel level on the Tibetan Plateau. The research mainly focused on studying the subpixel snow cover area classification algorithm, including the statistical regression method and the mixed-pixel decomposition method using the normalized snow index. In the mixed-pixel decomposition, a linear mixed model was adopted, and snow and non-snow end members were automatically extracted using the normalized snow index and the normalized vegetation index. On the basis of the subpixel snow cover area classification algorithm, the snow cover area variation on the Tibetan Plateau was analyzed. Using the method of establishing a decision tree, clouds and snow were detected, cloud-removal was performed, and the subpixel of the Tibetan Plateau was formed by synthesis and mosaicking of the time series images.
The snow cover area classification database analyzes and describes the spatial distribution and variation characteristics of the snow cover area of the Tibetan Plateau.

2、Keywords

Theme：Snow,Cryosphere remote sensing products,Surface Freeze-thaw Cycle/state Remote Sensing,Snow facies
Discipline：Cryosphere
Places：Tibetan Plateau
Time：

3、Data details

1.Scale：None

2.Projection：

3.Filesize：13200.0MB

4.Data format：ENVI Standard

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：49.36 | - |
| west：73.45 | - | east：111.2 |
| - | south：20.9 | - |

5、Time frame:2001-01-07 17:54:00+00:00--2006-01-06 17:54:00+00:00

6、Reference method

References to data:

SHI Jiancheng, XU Lina. The monthly MODIS snow cover product of the Tibetan Plateau (2001-2005). A Big Earth Data Platform for Three Poles, doi:10.11888/Snow.tpdc.2700152011

References to articles:

7、Supporting project information

8、Data resource provider

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