A Big Earth Data Platform for Three Poles

**Long-term series of daily snow depth dataset in China (1979-2021)**

1、Description

This data set is an upgraded version of "China snow depth long time series data set (1978-2012)".
The long time series data set of snow depth in China (1979-2021) adopts longitude and latitude projection, and the data is floating-point. Data sets are stored by year. Each year is a compressed package, and each compressed package contains daily snow depth files. The daily snow depth is stored in a TXT file named "yyyyddd.txt", where yyyy stands for year, DDD stands for Julian date, and the unit of snow depth is cm. For example, 2005001 Txt represents this ASCII file to describe the snow cover in China on the first day of 2005. The ASCII code file of the data set is composed of a header file and the main content. The header file consists of 6 lines of description information, such as the number of rows, the number of columns, the coordinates of the x-axis center point, the y-axis center point, the grid size, and the label value of the no data area. The main content is a two-dimensional group composed of the number of rows and columns. The unit of snow depth is cm. Because the space described by all ASCII files in the data set is nationwide in China, the header files of these files are unchanged. Now the header files are excerpted as follows (where xllcenter, yllcenter and cellsize are in degrees):
Ncols 321
Nrows 161
Xllcenter 60
Yllcenter 15
Cellsize 0.25
NoData\_ Value -1

2、Keywords

Theme：Microwave remote sensing,Snow depth,Snow,Cryosphere remote sensing products,Surface Freeze-thaw Cycle/state Remote Sensing
Discipline：Cryosphere
Places：China
Time：1979-2019

3、Data details

1.Scale：None

2.Projection：lon-lat

3.Filesize：5493.0MB

4.Data format：文本数据

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：55.0 | - |
| west：60.0 | - | east：140.0 |
| - | south：15.0 | - |

5、Time frame:1979-04-25 08:00:00+00:00--2020-04-23 08:00:00+00:00

6、Reference method

References to data:

CHE Tao. Long-term series of daily snow depth dataset in China (1979-2021). A Big Earth Data Platform for Three Poles, doi:10.11888/Geogra.tpdc.2701942015

References to articles:

Che, T., Li, X., Jin, R., Armstrong, R., &Zhang, T.J. (2008). Snow depth derived from passive microwave remote-sensing data in China. Annals of Glaciology, 49, 145-154.

Dai, L.Y., Che, T., &Ding, Y.J. (2015). Inter-calibrating SMMR, SSM/I and SSMI/S data to improve the consistency of snow-depth products in China. Remote Sensing, 7(6), 7212-7230.

Dai, L.Y., Che, T., Ding, Y.J., &Hao, X.H. (2017). Evaluation of snow cover and snow depth on the Qinghai–Tibetan Plateau derived from passive microwave remote sensing. The Cryosphere, 11(4), 1933-1948.

7、Supporting project information

CASEarth:Big Earth Data for Three Poles（grant No. XDA19070000）

8、Data resource provider

name: CHE Tao
unit:
email: chetao@lzb.ac.cn