A Big Earth Data Platform for Three Poles

**Future permafrost distribution over Tibetan Plateau under medium emission scenario (2080-2099)**

1、Description

This data set contains the observation constrained permafrost distribution over the Tibetan Plateau under medium emission scenario (SSP245) at the end of the 21st century (2080-2099). The future permafrost distribution was estimated using the spatial-constrain approach following Chadburn et al. (2017). We developed the permafrost-MAAT relationship using the current permafrost distribution map at 1km spatial resolution (Zou et al., 2017) and mean annual air temprature (MAAT) derived from CMFD dataset. This spatial relationship was than driven by the projected temperture under SSP245 scenario from 10 Earth System Models from CMIP6 to etimate the future permafrost distribution by the end of the 21st century (2080-2099). This observation constrained permafrost distribution indicates future permafrost loss under equilibrium state, and has high relevance to international climate negotiations which are framed in term of climate stabilization.

2、Keywords

Theme：Climate change,Frozen ground distribution,Permafrost,Frozen Ground  
Discipline：Cryosphere  
Places：Tibetan Plateau  
Time：End of the century (2080-2099)

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.07MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：41.75 | - |
| west：71.75 | - | east：105.75 |
| - | south：24.75 | - |

5、Time frame:None--None

6、Reference method

References to data:

WANG Tao, LIU Dan , WEI Jianjun . Future permafrost distribution over Tibetan Plateau under medium emission scenario (2080-2099). A Big Earth Data Platform for Three Poles, doi:10.11888/Cryos.tpdc.2728132022

References to articles:

7、Supporting project information

8、Data resource provider

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