A Big Earth Data Platform for Three Poles

**Prediction Map of Ground Temperature Distribution in Qinghai Tibet Engineering Corridor (2015-2065)**

1、Description

The Qinghai Tibet Engineering Corridor starts from Golmud in the north and ends at Lhasa in the south. It passes through the core area of the Qinghai Tibet Plateau and is an important channel connecting the mainland and Tibet. Permafrost temperature is not only an important index to study ground thermal state in permafrost regions, but also a key factor to be considered in permafrost engineering construction. The core of GIPL1.0 is the Kudryavtesv method, which considers the thermophysical properties of snow cover, vegetation and different soil layers. However, Yin found that compared with the Kudryavtesv method, the accuracy of TTOP model was higher. Therefore, the model was improved in combination with the freezing/thawing index. Through the verification of field monitoring data, it was found that the simulation error of permafrost temperature was less than 1 ℃. Therefore, the improved GIPL1.0 model is used to simulate the permafrost temperature of the Qinghai Tibet project corridor, and predict the future permafrost temperature under the SSP2-4.5 climate change scenario.

2、Keywords

Theme：Ground temperature,Frozen Ground
Discipline：Cryosphere
Places：Qinghai-Tibet Engineering Corridor, China
Time：2015-2065

3、Data details

1.Scale：None

2.Projection：

3.Filesize：2.58MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：37.0 | - |
| west：90.0 | - | east：95.0 |
| - | south：31.0 | - |

5、Time frame:2014-12-31 16:00:00+00:00--2065-12-30 16:00:00+00:00

6、Reference method

References to data:

NIU Fujun. Prediction Map of Ground Temperature Distribution in Qinghai Tibet Engineering Corridor (2015-2065). A Big Earth Data Platform for Three Poles, doi:10.11888/Cryos.tpdc.2727942022

References to articles:

7、Supporting project information

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

8、Data resource provider

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