A Big Earth Data Platform for Three Poles

**Dataset of microbial abundance, dissolved organic carbon, and total nitrogen in Tibetan Plateau glaciers**

1、Description

This is a comprehensive dataset on microbial abundance, dissolved organic carbon (DOC), and total nitrogen (TN) for glaciers on the TP based on extensive field sampling from 2010. The dataset comprises 5,409 microbial abundance records of ice cores and snow pits from 12 glaciers and 2,532 DOC and TN records of five habitats, including ice core, snow pit, surface ice, surface snow, and proglacial runoff, from 38 glaciers. These glaciers covered broad areas and diverse climate conditions with a multiyear average temperature ranging from -13.4 ℃ (the Guliya glacier) to 2.9 ℃ (the Zhuxigou glacier) and multiyear average precipitation ranging from 76.9 mm (the No.15 glacier) to 927.8 mm (the 24K glacier), which makes this dataset suitable for studies across the entire TP. To the best of our knowledge, this is the first dataset of microbial abundance and TN in glaciers on the TP, and also the first dataset of DOC in ice cores on the TP. These new data could provide valuable information for researches on the glacier carbon and nitrogen cycle and assessing the potential impacts of glacier retreat due to global warming on downstream ecosystems.

2、Keywords

Theme：microorganism,Glacier(Ice Sheet)
Discipline：Cryosphere
Places：Tibetan Plateau
Time：2010s

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：0.5MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.0 | - |
| west：73.0 | - | east：105.0 |
| - | south：26.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

LIU Yongqin. Dataset of microbial abundance, dissolved organic carbon, and total nitrogen in Tibetan Plateau glaciers. A Big Earth Data Platform for Three Poles, doi:10.11888/Cryos.tpdc.2718412021

References to articles:

Liu, Y.Q., Fang, P.C., Guo, B.X., Ji, M.K., Liu, P.F., Mao, G.N., Xu, B.Q., Kang, S.C., & Liu, J.Z. (2022). A comprehensive dataset of microbial abundance, dissolved organic carbon, and nitrogen in Tibetan Plateau glaciers. Earth Syst. Sci. Data, 14, 2303–2314.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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