A Big Earth Data Platform for Three Poles

**Data set of temporal and spatial distribution of metal element concentrations in snow and ice at Zhongshan Station Dome A Section, Antarctica (1990-2017)**

1、Description

Based on the 33rd Antarctic Scientific Expedition in China, the data set of temporal and spatial distribution of metal element concentrations in snow and ice obtained on the section from Zhongshan Station to Dome A in East Antarctica mainly includes: 1. A shallow ice core obtained 202 km away from Zhongshan Station. The ice core covers the period from 1990 to 2017 with a resolution of years, including metal element iron, hydrogen and oxygen isotopes and other data. 2. Collect a sample every 10km along the Zhongshan Station Dome A section in East Antarctica. The metal elements include rare earth elements, barium and other elements. The data can be used to study the pollution and contribution of natural sources and human activities to Antarctic snow and ice.

2、Keywords

Theme：Sonwfall  
Discipline：Cryosphere  
Places：Antarctica  
Time：1990-2017, year

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.1MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：69.62 | - |
| west：76.72 | - | east：77.1 |
| - | south：80.42 | - |

5、Time frame:None--None

6、Reference method

References to data:

Du Zhiheng. Data set of temporal and spatial distribution of metal element concentrations in snow and ice at Zhongshan Station Dome A Section, Antarctica (1990-2017). A Big Earth Data Platform for Three Poles, doi:10.11888/Cryos.tpdc.2728882022

References to articles:

Du, Z., Xiao, C., & Handley, et al. (2019). Fe variation characteristics and sources in snow samples along a traverse from Zhongshan Station to Dome A, East Antarctica. Science of The Total Environment, 675, 380-389.  
  
Du, Z., Xiao, C., & Mayewski, P.A., et al. (2020). The iron records and its sources during 1990–2017 from the Lambert Glacial Basin shallow ice core, East Antarctica. Chemosphere, 251, 126399.

7、Supporting project information

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

8、Data resource provider

name: Du Zhiheng  
unit: Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences  
email: duzhiheng10@163.com