A Big Earth Data Platform for Three Poles

**Atmospheric circulation data set output by climate feedback simulation under different geographical patterns of 60Ma and 25Ma**

1、Description

Numerical test: The climate model used is the regional climate model RegCM4.1. RegCM4.1 developed by the Italian Research Center for Theoretical Physics (ICTP). In the test of regional model simulation, the horizontal resolution of the atmospheric model is 50 km and the vertical direction is 18 layers; Online coupling sand dust module. Sea surface temperature The sea surface temperature interpolated by OISST is used. The test includes two groups: the Middle Paleocene topographic test (MP,~60Ma BP, test name 60ma\_regcm4.1\_xxx. nc) and the Late Oligocene (LO,~25Ma BP, test name 25ma\_regcM4.1\_xxx. nc) The MP regional terrain modification test removed the northern part of the plateau and approximately replaced the terrain distribution of Asian land during the 60Ma period. BP regional terrain modification test only removed the terrain of Pamirs Plateau, approximately replacing the terrain distribution of Asian land during the 25Ma period. The sand and dust source areas of the two tests have not changed, and the sand and dust circulation process has been opened online.
Output time: All tests were integrated for 22 years, using the average results of the last 20 years of each test.
The data can be used to explain the difference of drought evolution in different regions around the plateau.

2、Keywords

Theme：Precipitation,Topography,Aerosol,Dust aerosols,Uplift,Aridification
Discipline：Atmosphere,Terrestrial Surface
Places：northern Tibetan Plateau, Pamirs
Time：miocene

3、Data details

1.Scale：None

2.Projection：

3.Filesize：152.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：90.0 | - |
| west：0.0 | - | east：180.0 |
| - | south：-90.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

SUN Hui . Atmospheric circulation data set output by climate feedback simulation under different geographical patterns of 60Ma and 25Ma. A Big Earth Data Platform for Three Poles, doi:10.11888/Atmos.tpdc.2729082022

References to articles:

Sun, H., Liu, X. (2022). Control of the aridification of the Taklimakan and Thar deserts by asynchronous tectonic uplift of the Pamirs and northern Tibetan Plateau since the Miocene. Palaeogegr Palaeocl. https://doi.org/10.1016/j.palaeo.2022.111251

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program

8、Data resource provider

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