A Big Earth Data Platform for Three Poles

**Scenario projection data set of heat wave indices in Central Asia（2015-2100）**

1、Description

Based on the historical daily maximum temperature data and reanalysis data set of stations, a daily maximum temperature statistical downscaling model based on first-order autoregressive and multiple linear regression models is developed. Driven by the IPCC cmip6 scenario data of the global climate model (cnrm-cm6-1), the statistical downscaling model predicts the number of five heat wave indexes (heat wave events) of 65 stations in Central Asia from 2015 to 2100 (HWM), heat wave frequency (HWF), heat wave intensity (HWM), maximum duration of heat wave (HWD), heat wave amplitude (HWA)). Finally, the heat wave change scenario data sets of 65 stations in Central Asia under four emission scenarios (ssp126, ssp245, ssp370, ssp585) from 2015 to 2100 were obtained.

2、Keywords

Theme：Maximum/Minimum temperature,Temperature,Heatwave,statistial downscaling,Other,Projection of local climate extremes
Discipline：Atmosphere
Places：Central Asia
Time：21st century

3、Data details

1.Scale：None

2.Projection：

3.Filesize：400.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：55.4 | - |
| west：46.5 | - | east：88.0 |
| - | south：35.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

FAN Lijun. Scenario projection data set of heat wave indices in Central Asia（2015-2100）. A Big Earth Data Platform for Three Poles, doi:10.11888/Atmos.tpdc.2718602021

References to articles:

Fan, L., Yan, Z., Chen, D., & Li, Z. (2021). Assessment of Central Asian heat extremes by statistical downscaling: Validation and future projection for 2015‒2100. Advances in Climate Change Research, Retrieved from https://doi.org/10.1016/j.accre.2021.09.00

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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