A Big Earth Data Platform for Three Poles

**Annual average monthly wind speed in Heihe river basin (1961-2010)**

1、Description

The station data information of 21 regular meteorological observation stations in Heihe River Basin and surrounding areas and 13 national benchmark stations around Heihe River provided by Heihe plan data management center are used to make statistics and collation of daily wind speed and calculate the monthly wind speed data of 1961-2010 for many years. The spatial stability analysis is carried out to calculate the variation coefficient. If the variation coefficient is greater than 100%, the geographical weighted regression is used to calculate the relationship between the station and the geographical terrain factors, and the monthly wind speed distribution trend is obtained; if the variation coefficient is less than or equal to 100%, the common least square regression is used to calculate the relationship between the station wind speed value and the geographical terrain factors (longitude and latitude, elevation, slope, aspect, etc.) The trend of monthly wind speed distribution is obtained, and the residual after removing the trend is fitted and corrected by HASM (high accuracy surface modeling method). Finally, the monthly average wind speed distribution of the Heihe River Basin in 1961-2010 is obtained by adding the trend surface results and the residual correction results. Time resolution: monthly average wind speed for many years from 1961 to 2010. Spatial resolution: 500M.

2、Keywords

Theme：Winds,wind speed  
Discipline：Atmosphere  
Places：Heihe River Basin  
Time：1961-2010

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：12.0MB

4.Data format：img

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：42.0 | - |
| west：98.0 | - | east：101.5 |
| - | south：38.0 | - |

5、Time frame:1961-01-07 08:03:00+00:00--2011-01-06 08:03:00+00:00

6、Reference method

References to data:

ZHAO Na, YUE Tianxiang. Annual average monthly wind speed in Heihe river basin (1961-2010). A Big Earth Data Platform for Three Poles, doi:10.11888/Meteoro.tpdc.2705652016

References to articles:

TianXiang Yue. 2011. Surface Modelling: High Accuracy and High Speed Methods. New York: CRC Press (Taylor & Francis group)

7、Supporting project information

8、Data resource provider

name: YUE Tianxiang  
unit: Institute of Geographic Sciences and Natural Resources Research,Chinese Academy of Sciences  
email: yue@lreis.ac.cn  
  
name: ZHAO Na  
unit:   
email: zhaon@lreis.ac.cn