A Big Earth Data Platform for Three Poles

**1km resolution wind energy resource distribution data of Qinghai Tibet Plateau (1979-2008)**

1、Description

The 1km resolution wind energy resource data of Qinghai Tibet Plateau is developed by using the wind energy resource numerical simulation assessment system of China Meteorological Administration (weras / CMA), which includes typical terrain classification module, mesoscale model WRF and Calmet dynamic diagnosis model. Firstly, the typical days are randomly selected from the historical weather types for hourly wind speed simulation, and then the climate average distribution of wind energy resources is obtained according to the statistical analysis of the frequency of weather types. The data set includes wind speed and wind power density over the Qinghai Tibet Plateau. The data accuracy of wind speed is 0.01m/s, the data accuracy of wind power density is 0.01w/m2, and the vertical height of data is 100m. The data have been checked and corrected by the observation data of meteorological stations, and are mainly used for detailed investigation of wind energy resources and macro site selection of wind farms. This data is the output data of the national wind energy resources detailed survey and evaluation project from 2008 to 2012 (the project cost is 290 million yuan), and then becomes the basic data of wind energy resources related research. The Ministry of finance has no plan to invest in extending this data set in the near future.

2、Keywords

Theme：Winds,wind power density,wind speed  
Discipline：Atmosphere  
Places：Qinghai-Tibetan plateau  
Time：1979-2008

3、Data details

1.Scale：None

2.Projection：Lambert\_Conformal\_Conic

3.Filesize：42.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.0 | - |
| west：73.5 | - | east：104.5 |
| - | south：26.0 | - |

5、Time frame:1978-12-31 16:00:00+00:00--2008-12-31 03:59:59+00:00

6、Reference method

References to data:

SUN Chaoyang, ZHU Rong. 1km resolution wind energy resource distribution data of Qinghai Tibet Plateau (1979-2008). A Big Earth Data Platform for Three Poles, doi:10.11888/Meteoro.tpdc.2712752021

References to articles:

中国气象局. (2014). 全国风能资源详查和评价报告. 气象出版社, 北京, 2014年5月.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

name: ZHU Rong  
unit:   
email: rongzhu@cma.gov.cn  
  
name: SUN Chaoyang  
unit:   
email: sunchaoy@cma.gov.cn