时空三极环境大数据平台

**1-km daily average air temperature of the Tibetan Plateau (1980-2014)**

英文标题：1-km daily average air temperature of the Tibetan Plateau (1980-2014)

1、摘要

1) Data content (including elements and meanings): Gridded daily average air temperature of the Tibetan Plateau during 1980-2014 at 1-km resolution  
  
2) Data source and processing method: Developed by integrating 8 types of reanalysis data (i.e., NNRP-2, 20CRV2c, JRA-55, ERA-Interim, MERRA2, CFSR, GLDAS and ERA5) downscaled with MODIS-estimated temperature lapse rates based on machine learing   
  
3) Data quality description: According to leave-one-out validation based on stations, the average RMSE at China Adimistration Stations is about 1.7 ℃ and that at high-elevation field stations is about 1.9 ℃  
  
4) Data application results and prospects: This dataset can be used as air temperature input for driving long-term hydrologial modelling or evaluated for use in climate analysis

2、关键词

主题关键词：温度,空气温度  
学科关键词：大气  
地点关键词：Tibetan Plateau  
时间关键词：Daily

3、数据细节

1.比例尺：None

2.投影：WGS84

3.文件大小：240000.0MB

4.数据格式：None

4、空间范围

|  |  |  |
| --- | --- | --- |
| - | 北：40.12 | - |
| 西：105.38 | - | 东：67.88 |
| - | 南：25.12 | - |

5、时间范围1980-01-06 16:00:00+00:00--2015-01-06 03:59:59+00:00

6、引用方式

数据的引用:

ZHANG Fan, ZHANG Hongbo. 1-km daily average air temperature of the Tibetan Plateau (1980-2014). 时空三极环境大数据平台, DOI:10.11888/Meteoro.tpdc.270377, CSTR:18406.11.Meteoro.tpdc.270377, 2020.[1-km daily average air temperature of the Tibetan Plateau (1980-2014). A Big Earth Data Platform for Three Poles, DOI:10.11888/Meteoro.tpdc.270377, CSTR:18406.11.Meteoro.tpdc.270377, 2020]

文章的引用:

Zhang, H., Zhang, F., Zhang, G., Che, T., & Yan, W. (2018). How accurately can the air temperature lapse rate over the Tibetan Plateau be estimated from MODIS LSTs?. Journal of Geophysical Research: Atmospheres, 123(8), 3943-3960.  
  
Zhang, H.B, Immerzeel, W.W., Zhang\*, F., De Kok, R.J., Gorrie, S.J., & Ye, M. (2021). Creating 1-km long-term (1980–2014) daily average air temperatures over the Tibetan Plateau by integrating eight types of reanalysis and land data assimilation products downscaled with MODIS-estimated temperature lapse rates based on machine learning. International Journal of Applied Earth Observations and Geoinformation (accepted).

7、资助项目信息

第二次青藏高原综合科学考察研究（2019QZKK0203）  
国家自然科学基金（41701079）

8、数据资源提供者

姓名: ZHANG Fan  
单位: Institute of Tibetan Plateau Research, CAS  
电子邮件: zhangfan@itpcas.ac.cn  
  
姓名: ZHANG Hongbo  
单位: China Agricultural University  
电子邮件: zhanghongbo@cau.edu.cn