A Big Earth Data Platform for Three Poles

**HiWATER: Dataset of GPS radiosonde sounding observations in the middle and upper reaches of the Heihe River Basin in 2012**

1、Description

The dataset generated from the radiosonde observations in middle basin of Heihe River during 2012. The instrument type are RS92-SGP (Vaisala inc., Finland) or CF-06-A (Changfeng Micro-Electroinics, CHINA). Radiosondes were released during aerospace experiment, such as CASI/SAI, TASI, WIDAS sensors. Atmospheric parameters: pressure, temperature, relative humidity, wind speed and wind direction are measured or calculated at different altitude. This atmospheric parameter profiles can back up atmospheric correction in remote sensing. It can support meteorology research.  
Observation Site:  
1. Wuxing Village:   
Latitude: 38°51′11.9″N，Longitude: 100°21′48.8″E，Altitude: 1563 m  
2. Gaoya Hydrological Station  
Latitude: 39°8′7.2″N，Longitude: 100°23′59.0″E，Altitude: 1418 m  
3. A’Rou Super Station  
Latitude: 38°03′17.9″N，Longitude: 100°27′28.1″E，Altitude: 2991 m  
Observation Instrument Type:  
 RS92-SGP manufacture by Vaisala inc., Finland  
CF-06-A manufacture by Beijing Changfeng Micro-Electronics Technology Co., LTD, CHINA.  
Observation Time:  
Simultaneous observation time from 29 June, 2012 to 29 July, 2012 (UTC+8).   
Accessory data:  
Pressure, temperature, relative humidity, wind speed and wind direction profiles data.

2、Keywords

Theme：Temperature,Winds,Surface pressure,Wind direction,Humidity/Dryness,Air temperature,Pressure,wind speed  
Discipline：Atmosphere  
Places：Heihe River Basin, the artificial oasis experimental area in the middle reaches, A’rou Superstation, Wuxing Village, Gaoya Hydrological Station  
Time：2012, 2012-06-01 to 2012-08-31

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：0.0MB

4.Data format：文本, \*.dat后缀

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.13533333 | - |
| west：100.3635556 | - | east：100.4578056 |
| - | south：38.05497222 | - |

5、Time frame:2012-06-11 23:00:00+00:00--2012-09-10 08:00:00+00:00

6、Reference method

References to data:

MA Mingguo, YU Wenping. HiWATER: Dataset of GPS radiosonde sounding observations in the middle and upper reaches of the Heihe River Basin in 2012. A Big Earth Data Platform for Three Poles, doi:10.3972/hiwater.023.2013.db2017

References to articles:

Li, X., Liu, S.M., Xiao, Q., Ma, M.G., Jin, R., Che, T., Wang, W.Z., Hu, X.L., Xu, Z.W., Wen, J.G., Wang, L.X. (2017). A multiscale dataset for understanding complex eco-hydrological processes in a heterogeneous oasis system. Scientific Data, 4, 170083. doi:10.1038/sdata.2017.83.  
  
Che, T., Li, X., Liu, S., Li, H., Xu, Z., Tan, J., Zhang, Y., Ren, Z., Xiao, L., Deng, J., Jin, R., Ma, M., Wang, J., & Yang, X. (2019). Integrated hydrometeorological, snow and frozen-ground observations in the alpine region of the Heihe River Basin, China. Earth System Science Data, 11, 1483-1499

7、Supporting project information

Heihe Watershed Allied Telemetry Experimental Research (HiWATER)

8、Data resource provider

name: MA Mingguo  
unit: Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences  
email: mmg@lzb.ac.cn  
  
name: YU Wenping  
unit:   
email: ywpgis2005@163.com