A Big Earth Data Platform for Three Poles

**HiWATER: Dataset of scintec flat array sodar in the villiage of Wuxing, Xiaoman Town**

1、Description

This mesurement aims to obtain the wind direction, wind speed, and disturbance characteristics of the lower atmosphere. The observation period is from 25 June to 17 Septemper, 2012 (UTC+8).

Measurement instruments:
Germany Scintec MFAS Flat Array Sodar

Measurement position:
60 meters northwest of Daman Super Station

Measurement period:
25 June to 17 Septemper, 2012.
24 hours of uninterrupted obeservation.
Automatically Recorded Data every half hour.

Data contents:
We obtain one data file every day. The data contents include observation height, wind speed, wind direction, wind speed in east – west direction, wind speed in south – north direction, vertical wind speed, standard deviation of vertical wind speed, backscatter intensity.

Remarks:
The prectical obsevation height changes with the air water vapor content. Our obsevation point is located in the arid region. The air water vapor content is very low. Therefore the maximum obsevation height is about 300 meters.
When it rains or very windy and dusty, the backscatter intensity is very high. Then the data would be miss or only has the vertical wind speed and backscatter intensity.

2、Keywords

Theme：Winds,Wind profiles,Wind direction,wind speed
Discipline：Atmosphere
Places：Heihe River Basin, the artificial oasis experimental area in the middle reaches, Wuxing Village, Daman Superstation
Time：2012, 2012-06-21 to 2012-09-15

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：0.0MB

4.Data format：文本, \*.mnd后缀

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.85466 | - |
| west：100.371813 | - | east：100.371813 |
| - | south：38.85466 | - |

5、Time frame:2012-06-29 23:15:00+00:00--2012-09-23 23:15:00+00:00

6、Reference method

References to data:

HiWATER: Dataset of scintec flat array sodar in the villiage of Wuxing, Xiaoman Town. A Big Earth Data Platform for Three Poles, doi:10.3972/hiwater.025.2013.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.

7、Supporting project information

Heihe Watershed Allied Telemetry Experimental Research (HiWATER)

8、Data resource provider