A Big Earth Data Platform for Three Poles

**HiWATER: BNUNET soil moisture and LST observation dataset in the middle reaches of the Heihe River Basin from Sep., 2013 to Mar., 2014**

1、Description

This data set includes 26 bnunet nodes in the 0.5 °× 0.5 ° observation matrix around Zhangye City in the middle reaches of Heihe River from September 2013 to March 2014. The configuration of 26 nodes is the same, including 3 layers of soil temperature probe with depth of 1cm, 5cm and 10cm and 1 layer of soil moisture probe with depth of 5cm. The observation frequency is 2 hours. This data set can provide spatiotemporal continuous observation data set for remote sensing authenticity test of surface heterogeneity and ecological hydrology research. The time is UTC + 8.
Please refer to "bnunet data document. Docx" for details

2、Keywords

Theme：Soil,Soil temperature,Soil moisture/Water content
Discipline：Terrestrial Surface
Places：Heihe River Basin, the artificial oasis experimental area in the middle reaches, flux observation matrix
Time：2014, 2013-09 to 2014-03, 2013

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：2.14MB

4.Data format：文本

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.0 | - |
| west：100.5 | - | east：101.0 |
| - | south：38.5 | - |

5、Time frame:2013-09-14 14:00:00+00:00--2014-04-13 14:00:00+00:00

6、Reference method

References to data:

MA Mingguo, ZHAO Shaojie, CHAI Linna, WANG Qi, LU Zheng. HiWATER: BNUNET soil moisture and LST observation dataset in the middle reaches of the Heihe River Basin from Sep., 2013 to Mar., 2014. A Big Earth Data Platform for Three Poles, doi:10.3972/hiwater.280.2015.db2016

References to articles:

Rui Jin, Xin Li, Baoping Yan, Xiuhong Li, Wanmin Luo, Minguo Ma, Jianwen Guo, Jian Kang, Zhongli Zhu. 2014. A Nested Eco-hydrological Wireless Sensor Network for Capturing Surface Heterogeneity in the Middle-reach of Heihe River Basin, China. IEEE Geoscience and Remote Sensing Letters, 11(11), DOI:10.1109/LGRS.2014.2319085

亢健, 晋锐, 赵少杰, 柴林娜. 异质性地表土壤冻融循环监测网络的优化采样设计——以黑河祁连山山前地区为例. 遥感技术与应用, 2014, 29(5) : 833-838．

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

name: WANG Qi
unit:
email:

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

name: ZHAO Shaojie
unit:
email: geo\_zhao@126.com

name: LU Zheng
unit:
email:

name: CHAI Linna
unit:
email: chai@bnu.edu.cn