A Big Earth Data Platform for Three Poles

**Qilian Mountains integrated observatory network: Dataset of Heihe integrated observatory network (Leaf area index of Daman Superstation, 2021)**

1、Description

This dataset contains the LAI measurements from the Daman superstation in the middle reaches of the Heihe integrated observatory network from July 22 to September 5 in 2021. The site (100.376° E, 38.853°N) was located in the maize surface, near Zhangye city in Gansu Province. The elevation is 1556 m. There are 3 observation samples, each of which is about 30m×30m in size, and the latitude and longitude are (100.374°E, 38.855°N), (100.371° E, 38.854°N), (100.369°E, 38.854°N). Four sub-canopy nodes and one above-canopy node are arranged in each sample.
The data is obtained from LAINet measurements; the four-steps are performed to obtain LAI: the raw data is light quantum (level 0); the daily LAI can be obtained using the software LAInet (level 1); further the invalid and null values are screened and using the 5 days moving averaged method to obtain the processed LAI (level 2); for the multi LAINet nodes observation, the averaged LAI of the nodes area is the final LAI (level 3).
The released data are the post processed LAI products and stored using \*.xls format.
For more information, please refer to Liu et al. (2018) (for sites information), Qu et al. (2014) for data processing) in the Citation section.

2、Keywords

Theme：Vegetation
Discipline：Atmosphere,Terrestrial Surface
Places：Middle reaches of Heihe River
Time：2021

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.2MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.87 | - |
| west：100.36 | - | east：100.39 |
| - | south：38.84 | - |

5、Time frame:2021-07-21 16:00:00+00:00--2021-09-04 16:00:00+00:00

6、Reference method

References to data:

LIU Shaomin, XU Ziwei, Qu Yonghua, TAN Junlei, CHE Tao. Qilian Mountains integrated observatory network: Dataset of Heihe integrated observatory network (Leaf area index of Daman Superstation, 2021). A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2726252022

References to articles:

Liu, S.M., Li, X., Xu, Z.W., Che, T., Xiao, Q., Ma, M.G., Liu, Q.H., Jin, R., Guo, J.W., Wang, L.X., Wang, W.Z., Qi, Y., Li, H.Y., Xu, T.R., Ran, Y.H., Hu, X.L., Shi, S.J., Zhu, Z.L., Tan, J.L., Zhang, Y., & Ren, Z.G. (2018). The Heihe Integrated Observatory Network: A Basin-Scale Land Surface Processes Observatory in China. Vadose Zone Journal, 17(1), 180072.

Qu, Y.H., Zhu, Y.Q., Han, W.C., Wang, J.D., & Ma, M.G. (2014). Crop leaf area index observations with a wireless sensor network and its potential for validating remote sensing products. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 7(2), 431-444.

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program
the National Natural Science Foundation of China “Key Theory and Methods for Validation of Land Surface Remote Sensing Products”
Innovative development of equipments and internet-of-things techniques for ecosystem monitoring and its demonstration

8、Data resource provider

name: XU Ziwei
unit: Beijing Normal University
email: xuzw@bnu.edu.cn

name: Qu Yonghua
unit:
email: qyh@bnu.edu.cn

name: LIU Shaomin
unit: Beijing Normal University
email: smliu@bnu.edu.cn

name: CHE Tao
unit:
email: chetao@lzb.ac.cn

name: TAN Junlei
unit:
email: tanjunlei@lzb.ac.cn