A Big Earth Data Platform for Three Poles

**HiWATER: Simultaneous continuous observation dataset of differential GPS with LiDAR and WIDAS airborne flying in the middle and upper reaches of the Heihe River Basin in 2012**

1、Description

During lidar and widas flight in summer 2012, the ground synchronously carried out the continuous observation of differential GPS of ground base station, and obtained the synchronous GPS static observation data, which is used to support the synchronous solution of aviation flight data.   
Measuring instrument:   
Two sets of triple R8 GNSS system.   
Zgp8001 sets   
Time and place of measurement:   
On July 19, 2012, EC matrix lidar flew and observed at mjwxb (northwest of Maojiawan) and sbmz (shibamin) two base stations at the same time   
On July 25, 2012, lidar of hulugou small watershed and tianmuchi small watershed in the upper reaches flew, observed in XT Xiatang, lidar of Zhangye City calibration field in the middle reaches, and observed in mjwxb (northwest of Maojiawan)   
On July 26, 2012, lidar flight of hulugou small watershed and tianmuchi small watershed in the upper reaches was observed in XT Xiatang, lidar flight of Zhangye City calibration field in the middle reaches was observed in HCZ (railway station)   
On August 1, 2012, the upper east and West branches of widas flew and observed in yng (yeniugou)   
On August 2, 2012, the midstream EC matrix test area widas flew and observed in HCZ (railway station)   
On August 3, 2012, the midstream EC matrix test area widas flew and observed in mjwxb (northwest Maojiawan)   
Data format:   
Original data format before differential preprocessing.

2、Keywords

Theme：Terrestrial Surface Remote Sensing,Ground verification information  
Discipline：Terrestrial Surface  
Places：Heihe River Basin, the artificial oasis experimental area in the middle reaches, Daman Superstation  
Time：2012-07-19, 2012, 2012-08-01, 2012-07-25, 2012-08-03, 2012-08-02, 2012-07-26

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：493.0MB

4.Data format：文本, \*.dat, \*.T02, \*.12n, \*.12o后缀

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.97 | - |
| west：99.12 | - | east：100.58 |
| - | south：38.15 | - |

5、Time frame:2012-08-01 02:17:00+00:00--2012-08-16 09:00:00+00:00

6、Reference method

References to data:

LIU Xiangfeng, MA Mingguo. HiWATER: Simultaneous continuous observation dataset of differential GPS with LiDAR and WIDAS airborne flying 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.040.2013.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

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