A Big Earth Data Platform for Three Poles

**HiWATER：Dataset of the chamber soil respiration in the middle of Heihe River Basin (2012)**

1、Description

During the period of middle stream experiment in 2012, closed chamber and gas chromatography method was used to measure soil respiration of different land surface, including farmland, orchard, wetland, sparse grassland (Huazhaizi), Gobi, desert.
Instrument: Assimilation Chamber
Measuring method: Assimilation chamber consists of two parts: the base and the box. Base made of PVC material, the bottom buried in the soil. The box is made of stainless steel cubes, with one open side. When measuring the box cover on the base, air in the box was sampled using injector. The extracted air was injected into the gas sampling bag, and shipped back to the laboratory analysis of the concentration of CO2 by gas chromatography in Institute of Botany, The Chinese Academy of Sciences. Using the difference of concentration of CO2 at two times to calculate soil respiration. Each measurement points are located three repeat. After five minutes sealed box cover start mining the 1st sample, and then taken once every sample interval of 10 minutes, four times in total mining.
Date content: Data content includes header information and once every 10 days three times repeated observations and the average of the three times.
Measuring location: Gobi (Bajitan Gobi station), Wetland (Zhangye wetland Station), Sparse grassland (Huazhaizi desert steppe Station), Desert (Shenshawo sandy desert Station), Orchard (site No.17 eddy covariance system), Maize Farmland (Daman Superstation)
Measuring time: 16-6-2012, 28-6-2012, 9-7-2012, 18-7-2012, 30-7-2012, 11-8-2012, 21-8-2012, 2-9-2012, 13-9-2012, 22-9-2012 (UTC+8).

2、Keywords

Theme：Soil,Soil respiration
Discipline：Terrestrial Surface
Places：Heihe River Basin, the artificial oasis experimental area in the middle reaches, flux observation matrix
Time：2012, 2012-06-16 to 2012-09-22

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：0.0MB

4.Data format：文本

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.918 | - |
| west：100.3058 | - | east：100.4925 |
| - | south：38.7652 | - |

5、Time frame:2012-06-30 17:29:00+00:00--2012-10-06 17:29:00+00:00

6、Reference method

References to data:

MA Mingguo. HiWATER：Dataset of the chamber soil respiration in the middle of Heihe River Basin (2012). A Big Earth Data Platform for Three Poles, doi:10.3972/hiwater.035.2013.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

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