A Big Earth Data Platform for Three Poles

**WATER: Dataset of photosynthesis observed by Li-6400 in the Yingke oasis, Huazhaizi desert steppe and Linze grassland foci experimental areas**

1、Description

The dataset of photosynthesis observed by Li-6400 was obtained in the Yingke oasis, Huazhaizi desert steppe and Linze grassland foci experimental areas.   
 Parameters included:   
 CO2R\_µml: CO2 viscosity inside the reference lab (µmol CO2 mol-1); CO2S\_µml: CO2 viscosity inside the sample room (µmol CO2 mol-1); H2OR\_mml: H2O viscosity inside the reference lab (mmol H2O mol-1); H2OS\_mml: H2O viscosity inside the sample room (mmol H2O mol-1); Flow\_CV%: variation coefficient of Flow\_µml (%); RH\_R\_%: relative humidity inside the reference lab (%); RH\_S\_%: relative humidity inside the sample room (%); Td\_R\_%: dew-point temperature inside the reference lab (C); Td\_S\_%: dew-point temperature inside the sample room (C); Prss\_kPa: air pressure (kPa); ParIn\_µm: active radiation of interior photosynthesis (µmol m-2 s-1); c: active radiation of interior photosynthesis (µmol m-2 s-1); BLC\_moll: boundary layer conductance (mol m-2 s-1); Tblock°C: temperature inside the sample room (°C) (mmol H2O mol-1); Tleaf°C: leaf temperature (°C); HH:MM:SS: time; Program: automatic program mode; CHPWMF：Status word (summary of line J); Battery: battery voltage (V); CO2: CO2 IRGAs; H2O: IRGAs; Pump: pump; Flow: air flow controller; Mixr: CO2 mixer; Fan: fan; Program: automatic program mode; ProgPrgs: AutoProgram step counter; FwMxCrLp: Numerical summary of the four stability flags; totalCV% : See totalCV% under E above; CRagc\_mv: Reference CO2 AGC (automatic gain control) signal, in mV; CSagc\_mv: Sample CO2 AGC signal; HRagc\_mv: Reference H2O AGC signal; HSagc\_mv: Sample H2O AGC signal.  
 Observations were carried out as follows:  
 (1) Photosynthesis synchronizing with TM in Yingke oasis No. 1 maize plot (three maize plants), No. 4 (5 maize plants) and No. 5 (2 wheat plants) on May 20, 2008.  
 (2) Barley and alfalfa synchronizing with ASAR and MODIS on May 24, 2008.  
 (3) Photosynthesis synchronizing with ASAR and MODIS in Yingke oasis maize plot on May 28, 2008.  
 (4) Photosynthesis synchronizing with WiDAS in Yingke oasis maize plot on May 30, 2008.  
 (5) Photosynthesis synchronizing with OMIS-II in Yingke oasis maize plot on Jun. 4, 2008.  
 (6) Photosynthesis synchronizing with OMIS-II in Yingke oasis maize plot on Jun. 16, 2008.  
 (7) Photosynthesis synchronizing with WiDAS in Yingke oasis maize plot on Jun. 29, 2008.  
 (8) Photosynthesis synchronizing with WiDAS and TM in Yingke oasis maize plot on Jul. 7, 2008.  
 (9) Photosynthesis synchronizing with WiDAS in Yingke oasis maize plot on Jul. 11, 2008.  
 Data, including observation time, instrument parameters and those above mentioned, were archived in the original format of LI-6400, and could be read by .exe and Microsoft Excel.

2、Keywords

Theme：Photosynthetically active radiation,Photosynthesis,LI-6400,Vegetation,Remote Sensing Technology  
Discipline：Terrestrial Surface,Remote Sensing Technology  
Places：Heihe River Basin, Arid Region Hydrology in the Middle Reaches,   
Time：2008,

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：1.44MB

4.Data format：

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.268 | - |
| west：100.037 | - | east：100.46 |
| - | south：38.734 | - |

5、Time frame:2008-05-31 00:00:00+00:00--2008-07-22 00:00:00+00:00

6、Reference method

References to data:

XIA Chuanfu, ZHOU Mengwei. WATER: Dataset of photosynthesis observed by Li-6400 in the Yingke oasis, Huazhaizi desert steppe and Linze grassland foci experimental areas. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0185.db2013

References to articles:

7、Supporting project information

The CAS (Chinese Academy of Sciences) Action Plan for West Development Project  
National Program on Key Basic Research Project (973 Program

8、Data resource provider

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