A Big Earth Data Platform for Three Poles

**Measurement data of horizontal gas exchange of photosynthetic organs of desert plants in different habitats in Heihe River basin (2013)**

1、Description

As determined in mid-august 2013, planting species: bubbly spines (different habitats are mid-range intermountain lowland and gobi), red sand (different habitats are mid-range gobi and downstream gobi).
Using the brother company of LI - 6400 Portable Photosynthesis System (Portable Photosynthesis System, LI - COR, USA) and LI - 3100 leaf area meter, etc., to the desert plant photosynthetic physiological characteristics were observed.
The symbolic meaning of the observed data is as follows:
Obs，observation frequency ； Photo ，net photosynthetic rate，μmol CO2•m–2•s–1；
Cond stomatal conductance，mol H2O•m–2•s–1 ; Ci, Intercellular CO2 concentration, μmol CO2•mol-1；
Trmmol，transpiration rate，mmol H2O•m–2•s–1； Vpdl，Vapor pressure deficit，kPa；
Area，leaf area，cm2； Tair，free air temperature ，℃；
Tleaf，Leaf temperature，℃； CO2R，Reference chamber CO2 concentration，μmol CO2•mol-1；
CO2S，Sample chamber CO2 concentration，μmol CO2•mol-1； H2OR，Reference chamber moisture，mmol H2O•mol-1；
H2OS，Sample chamber moisture，mmol H2O•mol-1； PARo，photon flux density，μmol•m–2•s–1；
RH-R，Reference room air relative humidity，%； RH-S，Relative humidity of air in sample room，%；
PARi，Photosynthetic effective radiation，μmol•m–2•s–1； Press，barometric pressure，kPa；
Others are the state parameters of the instrument at the time of measurement.

2、Keywords

Theme：Photosynthesis,Desert,Vegetation,Desert ecosystem,Physiological indexes
Discipline：Terrestrial Surface
Places：Heihe River Basin
Time：2013

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：0.18MB

4.Data format：EXCEL

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：42.1147 | - |
| west：99.7528 | - | east：101.2831 |
| - | south：38.7069 | - |

5、Time frame:2013-08-23 02:50:29+00:00--2014-01-08 02:50:29+00:00

6、Reference method

References to data:

Measurement data of horizontal gas exchange of photosynthetic organs of desert plants in different habitats in Heihe River basin (2013). A Big Earth Data Platform for Three Poles, doi:10.3972/heihe.201.2013.db2014

References to articles:

高松, 苏培玺, 严巧娣. (2011). 荒漠植物梭梭群体和叶片水平气体交换对不同. 中国科学: 生命科学, 41(3), 226 - 237.

7、Supporting project information

Water use efficiency and related regulation mechanisms of desert vegetation in different scales

8、Data resource provider