A Big Earth Data Platform for Three Poles

**Interception data of precipitation for alpine shrubs in Hulu watershed (2012)**

1、Description

In the growing season of 2012, four typical shrub communities observed precipitation stem stream and penetrating rainfall during the experiment period.Data content: test date;Stem flow rate;Penetration rainfall, interception.  
Method of observation: water penetration was measured using a circular iron vessel with a diameter of 15 cm and a height of 10 cm.Since jinrumei, seabuckthorn and jinjijicinus shrub could not be observed on a single plant, after the canopy canopy density of the sample plots was determined, 9 water receivers were placed in each sample plot, so that there were water receivers under different canopy closures.This method of observing rain penetration allows for better collection of rain penetration from different parts of the underbrush.Due to the difficulty of observation and the lack of herbaceous vegetation, the interception of herbaceous under shrub was neglected.Takashima is centered on the stem, which is near the stem. One is placed at the edge of the crown and one at the middle of the crown and spoke. The Angle between each 3 containers is 120°.Six of each shrub were selected for stem flow observation.A single shrub was measured on the lower stems of all branches, and the stem flow of the trunk of the cluster shrub was measured by standard branch method, that is, the basal diameter of each branch of the selected shrub was measured.Under brush all branch stem, the use of polyethylene plastic hose cut open, card on the thickets stems directly, with a plastic adhesive tape and glass, the plastic tube directly connected to the trunk stem flow collection bottle, bottle thickness and plastic pipe, avoid rain and penetrate the rain into the collection bottle, before use after artificial experiments can precisely collect trunk stem flow.In order to reduce the error caused by evaporation in the measurement process, the penetrating rainfall and the flow of the trunk and stem were measured in time after the rain, such as the rain at night, and the samples were taken early in the morning on the second day.  
Data processing: the penetration rainfall is multiplied by 1.78 (conversion coefficient of different diameters of 20 cm and 15 cm) and replaced by the corresponding penetration rainfall (mm) at standard 20 cm.The measured water volume of each trunk flow collection bottle was divided by the projection area of the standard branch to obtain the trunk flow rate of the branch. The trunk flow rate of the standard branch was multiplied by the number of branches of the whole shrub to obtain the trunk flow rate of the whole shrub.According to the principle of water balance, the redistribution process of rainfall by shrub can be divided into three parts: interception, trunk flow and penetrating rainfall:  
IC = P - SF - TF  
Where, P is the rainfall outside the forest;TF is the penetrating rainfall;SF is the flow rate of the trunk.IC is the interception amount of the irrigation layer.According to the measured data of the stem flow through the rain trunk, the interception was obtained by using the above equation.

2、Keywords

Theme：Vegetation,Canopy interception,Shrubs  
Discipline：Terrestrial Surface  
Places：Heihe River Basin, Hulugou Basin  
Time：2012

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：0.03MB

4.Data format：EXCEL

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.28 | - |
| west：99.83 | - | east：99.9 |
| - | south：38.2 | - |

5、Time frame:2012-01-09 10:49:09+00:00--2013-01-08 10:49:09+00:00

6、Reference method

References to data:

SONG Yaoxuan, LIU Zhangwen. Interception data of precipitation for alpine shrubs in Hulu watershed (2012). A Big Earth Data Platform for Three Poles, doi:10.3972/heihe.083.2014.db2014

References to articles:

7、Supporting project information

8、Data resource provider

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