A Big Earth Data Platform for Three Poles

**Synchronous observation data set of soil surface roughness in the upstream of Luan River (2018)**

1、Description

The soil surface roughness data set measured simultaneously during the Soil Moisture Experiment in the Luan River (SMELR) in 2018, which covers (1) 30 quadrats in the north-south flight region of 70 km ×12 km typical experimental area, and (2) 8 quadrats in the northeast-southwest flight region of 165 km×5 km complex experimental area. The data were measured on September 17, September 18 and September 20, 2018 respectively. The soil surface roughness along the row (East-West) direction and cross the row (North-South) direction of typical features in each sample area were measured. The surface roughness of the dataset is described using three parameters; root mean square height (RMSH) and correlation length (CL). The root mean square height describes the random surface characteristics, while the correlation length and correlation function describe the periodicity of the surface. The surface roughness was calculated through the steps of soil surface height digitization, slope correction, periodic correction, and roughness calculation.

2、Keywords

Theme：Soil,Surface roughness,Soil moisture,Hydrology,Terrestrial Surface Remote Sensing,Ground verification information
Discipline：Terrestrial Surface
Places：Luan River
Time：2018

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.1MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：43.0 | - |
| west：115.5 | - | east：117.5 |
| - | south：41.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

GUO Peng. Synchronous observation data set of soil surface roughness in the upstream of Luan River (2018). A Big Earth Data Platform for Three Poles, doi:10.11888/Soil.tpdc.2716552021

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7、Supporting project information

Satellite observation and simulation studies of the land surface water and energy exchange processes and its effects on global changes
Research on megered method formulti source soil moisture

8、Data resource provider

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