Upper Yangtze River Scientific Data Center

**Watershed-scale Soil Moisture/Temperature and Precipitation Observatory in Qingmuguan of Southwest China (2019-2021)**

1、Description

Watershed-scale Soil Moisture/Temperature and Precipitation Observatory in Qingmuguan is an important hydrological and meteorological observation node of the Chongqing Jinfo Mountain Karst Ecosystem National Observation and Research Station. The data set integrates multi-layer soil moisture and temperature of 12 stations in the observation network, as well as precipitation observation data of 8 stations. The observation station adopts the ECH2O soil moisture and temperature measurement system developed by American Meter Company, which cooperates with the Em50 data collector to realize automatic monitoring. The observation network is established in December 2019 with a sampling frequency of 15min. The monitoring depth of soil moisture andtemperature are 0-5 cm, 10 cm, 20 cm, 40 cm and 60 cm respectively. Wherein, soil moisture (volume moisture content, m3 х m-3) is measured by 5TM capacitance sensor, soil temperature (K) is measured by thermistor integrated on 5TM sensor, and precipitation (mm/15min) is measured by ECRN-100 tipping bucket rain gauge. Data is stored in Excel format.

2、Keywords

Theme：Precipitation,Hydrology,Soil Moisture,Soil temperature
Discipline：Terrestrial Surface
Places：Southwest China
Time：2000

3、Data details

1.Scale：None

2.Projection：

3.Filesize：60.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：29.761 | - |
| west：106.292 | - | east：106.325 |
| - | south：29.683 | - |

5、Time frame:None--None

6、Reference method

References to data:

ZHAO Long . Watershed-scale Soil Moisture/Temperature and Precipitation Observatory in Qingmuguan of Southwest China (2019-2021). Upper Yangtze River Scientific Data Center, 2022

References to articles:

彭书艳, 赵龙, 李婷婷, 韩旭军, 马明国, 杨帅, & 杨跃程 (2021). 基于宇宙射线观测的喀斯特槽谷区典型流域土壤水分反演研究. 遥感技术与应用, 36, 997-1008. DOI: 10.11873/j.issn.1004⁃0323.2021.5.0997

7、Supporting project information

National Key R&D Program of China”Stereo observation and remote sensing inversion of global energy cycle and water cycle key parameters” (2018YFA0605400)

8、Data resource provider

name: ZHAO Long
unit: Southwest University
email: zhaol04@swu.edu.cn