A Big Earth Data Platform for Three Poles

**DEM data of Jiuzhaigou Xifan gully debris flow (2019-2021)**

1、Description

This data is the DEM data of Xifan gully debris flow in Jiuzhaigou. It is obtained by Pegasus V10 UAV equipped with RIEGL vux-1lr airborne lidar system. The DEM data generated after removing vegetation by airborne lidar technology can obtain the real surface morphology, which provides a new solution for the identification and calculation of debris flow sources; The data adopts terrasolid software developed by Finnish arttu soininen engineers. Through the formation of macro commands, the real surface point cloud data of the study area is obtained after point cloud denoising, filtering and classification, and then the classified ground points are used to build a high-precision digital elevation model; The average density of laser point cloud data obtained is better than 50 points / m2, the resolution of digital elevation model is 0.5m, the coordinate system is CGCS2000 national coordinate system and 1985 National elevation datum; Carry out debris flow provenance identification and calculation based on airborne lidar data. According to the location of the provenance and the color and texture differences on the mountain shadow image, the provenance is divided into landslide provenance, slope provenance and gully provenance, and establish airborne lidar identification marks and remote sensing interpretation methods for various types of provenance, so as to provide theoretical reference and data support for the accurate calculation of debris flow provenance, Further serve the prevention and risk assessment of debris flow.

2、Keywords

Theme：Airborne laser radar,Remote Sensing Technology  
Discipline：Remote Sensing Technology  
Places：jiuzhaigou  
Time：2019-2021

3、Data details

1.Scale：None

2.Projection：GCS\_China\_Geodetic\_Coordinate\_System\_2000

3.Filesize：1044.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：33.31 | - |
| west：104.09 | - | east：104.17 |
| - | south：33.25 | - |

5、Time frame:None--None

6、Reference method

References to data:

DONG Xiujun . DEM data of Jiuzhaigou Xifan gully debris flow (2019-2021). A Big Earth Data Platform for Three Poles, doi:10.11888/RemoteSen.tpdc.2720112022

References to articles:

7、Supporting project information

8、Data resource provider

name: DONG Xiujun   
unit: Chengdu University of Technology  
email: dongxiujun@cdut.cn