A Big Earth Data Platform for Three Poles

**Dataset of sedimentary characteristics of unconsolidated sediments in the Yarlung Tsangpo River Basin (2022)**

1、Description

This dataset includes the schematic diagrams and lithologic histograms of the measured sections of typical unconsolidated sediments in Shigatse, Yarlung Tsangpo River Basin, as well as the statistical table of measured sections. The source data comes from a two-month field measurement in Shigatse, Tibet. 16 sections of unconsolidated sediments were measured, and 128 samples were collected, including 89 cosmic nuclide samples and 39 optically stimulated luminescence samples. 16 schematic diagrams and 38 lithologic histograms were shown. The dataset primarily shows the genetic types of typical unconsolidated sediments in the Shigatse area, such as alluvium, eluvium, diluvium, colluvium, and moraine deposits. The exposed range of measured sediment thickness is about 1.6–70 m, the average thickness is about 29 m, and the horizontal distribution is 41–9059 m. The dataset demonstrates the discrete, porous, sandy and weakly cemented structural characteristics of the unconsolidated sediments with high gravel content (80%–95%), and the main gravel diameter distribution is 0.05–0.1m; sorting and roundness of alluvium are good, while the colluvial materials are poor. Fining-upward trends are commonly seen in most sections, and parallel and tabular cross-bedding are occasionally developed. Untangling the sedimentary characteristics of unconsolidated sediments in the Yarlung Tsangpo River Basin is vital to reveal the storage of fluvial solid matter across the basin, and provide important instructions for disaster warning and prevention and control of related features caused by sliding, unloading, and collapse of the ground surface. It is also of great scientific value to reveal the source-sink process and evolution of fluvial and alluvial systems in the Tibet Plateau and its surrounding basins.

2、Keywords

Theme：Unconsolidated sediments,Fluvial sediments,Quaternary sediments,Land Use/Land Cover,Earth SurFace Processes,Depositional record,Sedimentary Record
Discipline：Terrestrial Surface,Solid earth
Places：Shigatse, Yarlung Tsangpo River
Time：Quaternary

3、Data details

1.Scale：None

2.Projection：

3.Filesize：10.8MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：29.95 | - |
| west：89.3 | - | east：90.76 |
| - | south：28.84 | - |

5、Time frame:None--None

6、Reference method

References to data:

ZHANG Jian, WANG Chengshan , LIN Zhipeng, MA Xinduo, BAI Yalige, HAN Zhongpeng, WANG Xinhang. Dataset of sedimentary characteristics of unconsolidated sediments in the Yarlung Tsangpo River Basin (2022). A Big Earth Data Platform for Three Poles, doi:10.11888/SolidEar.tpdc.2725072022

References to articles:

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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