A Big Earth Data Platform for Three Poles

**Spatiotemporal evolution of cultural sites in Qinghai Tibet Plateau since Holocene and its driving forces**

1、Description

The data used in this paper are: the range and boundary data of the Qinghai Tibet Plateau [12]; 90 m in the international scientific data mirror website of computer network information center of Chinese Academy of Sciences (http: / / www.gscloud. CN) × DEM data products with 90 m spatial resolution; The site data is mainly based on the results of the second national cultural relic survey, combined with the cultural relic Atlas of relevant provinces. In the process of data processing, firstly, the specific location of the site is determined, and the site with unknown longitude and latitude is interpreted with google satellite map; Secondly, according to the identification standard of China's cultural relics census, the sites are classified and dated (excluding the points with unknown age), and a small number of cross age sites are calculated repeatedly. Finally, according to the characteristics of archaeology, history and chronology system, the sites in the study area are counted according to the comprehensive division method of cultural type and history. The application of GIS and RS in the research of settlement and regional archaeology is becoming more and more mature. The shortest path in GIS is used to simulate the prehistoric traffic route of the Qinghai Tibet Plateau, and the kernel density estimation method is used to calculate the data aggregation of the whole region according to the input feature data set, so as to produce a continuous density surface. The results show that the distribution probability of the research object can be directly expressed, and the size of the kernel density represents the agglomeration degree of the site in the spatial distribution. The larger the kernel density estimation is, the denser the distribution density of the site is. The distance between the centroid of each element and its nearest element is measured by the average nearest neighbor index, and the average value of all the nearest distances is calculated, and compared with the average distance in the hypothetical random distribution, so as to judge whether the studied elements are clustered distribution. The description of the spatial distribution characteristics of attributes in the whole region is used to judge whether a certain element or phenomenon in the study area has aggregation characteristics in space. In this paper, the global Moran's I index is used to measure the global spatial autocorrelation degree of the sites in the Qinghai Tibet Plateau.

2、Keywords

Theme：Marine Sediments
Discipline：Palaeoenvironment
Places：Qinghai-Tibetan plateau
Time：15,000 years ago - 1,000 years ago

3、Data details

1.Scale：None

2.Projection：

3.Filesize：8.91MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.465 | - |
| west：73.1852 | - | east：104.4659 |
| - | south：26.0012 | - |

5、Time frame:None--None

6、Reference method

References to data:

HOU Guangliang. Spatiotemporal evolution of cultural sites in Qinghai Tibet Plateau since Holocene and its driving forces. A Big Earth Data Platform for Three Poles, doi:10.11888/Paleoenv.tpdc.2712772021

References to articles:

7、Supporting project information

Qinghai Provincial Key Laboratory of Geospatial Information Technology and Application Foundation Project
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8、Data resource provider

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