A Big Earth Data Platform for Three Poles

**Basic datasets of the Tibetan Plateau in Chinese Cryospheric Information System**

1、Description

Chinese Cryospheric Information System is a comprehensive information system for the management and analysis of Chinese Cryospheric data. The establishment of Chinese Cryospheric Information System is to meet the needs of earth system science, to provide parameters and validation data for the development of response and feedback model of frozen soil, glacier and snow cover to global change under GIS framework; on the other hand, it is to systemically sort out and rescue valuable cryospheric data, to provide a scientific, efficient and safe management and division for it Analysis tools.  
The basic datasets of the Tibet Plateau mainly takes the Tibetan Plateau as the research region, ranging from longitude 70 -- 105 ° east and latitude 20 -- 40 ° north, containing the following types of data:  
1. Cryosphere data. Includes:  
Permafrost type (Frozengd), (Fromap);  
Snow depth distribution (Snowdpt)  
Quatgla (Quatgla)  
2. Natural environment and resources. Includes:  
Terrain: elevation, elevation zoning, slope, slope direction (DEM);  
Hydrology: surface water (Stram\_line), (Lake);  
Basic geology: Quatgeo, Hydrogeo;  
Surface properties: Vegetat;  
4. Climate data: temperature, surface temperature, and precipitation.  
3. Socio-economic resources (Stations) : distribution of meteorological Stations on the Tibetan Plateau and it surrounding areas.  
4. Response model of plateau permafrost to global change (named "Fgmodel"): permafrost distribution data in 2009, 2049 and 2099 were projected.  
  
Please refer to the following documents (in Chinese): "Design of Chinese Cryospheric Information System.doc", "Datasheet of Chinese Cryospheric Information System.DOC", "Database of the Tibetan Plateau.DOC" and "Database of the Tibetan Plateau 2.DOC".

2、Keywords

Theme：Snow depth,Frozen ground distribution,Snow,Glaciers,Ground Water,Glacier(Ice Sheet),Frozen Ground,Hydrogeology  
Discipline：Terrestrial Surface,Cryosphere  
Places：Tibetan Plateau , the Qinghai-Tibet Railway, the Qinghai-Tibet Highway  
Time：1997

3、Data details

1.Scale：4000000

2.Projection：Albers

3.Filesize：192.75MB

4.Data format：shp

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.0 | - |
| west：73.0 | - | east：105.0 |
| - | south：22.0 | - |

5、Time frame:1997-01-16 00:00:00+00:00--2100-01-15 00:00:00+00:00

6、Reference method

References to data:

LI Xin. Basic datasets of the Tibetan Plateau in Chinese Cryospheric Information System. A Big Earth Data Platform for Three Poles, doi:10.11888/Geogra.tpdc.2700502011

References to articles:

Li, X., Cheng, G.D., Wu, Q.B., & Ding, Y.J. (2003). Modeling Chinese cryospheric change by using GIS technology. Cold Regions Science and Technology, 36(1-3), 1-9.

7、Supporting project information

8、Data resource provider

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