A Big Earth Data Platform for Three Poles

**Remote sensing experimental dataset of dayokou sub basin in Heihe River (2004)**

1、Description

On August 6, 2004, the institute of cold and drought, Chinese academy of sciences, organized a remote sensing experiment in the upper reaches of the heihe river basin, which obtained soil survey data of 14 sections, DEM of 1:500 scale in the drainage ditch basin, spectral data of typical features and synchronous ground observation data of dapingding TM and QuickBird satellite.It mainly includes:
1) spectral measurement data of typical ground objects
The data mainly includes in continental river basin in linze county comprehensive research station near the station (hereinafter referred to as linze) of elaeagnus angustifolia, two poplars, tamarisk, bark, ephedra, sand, alfalfa, corn, cotton and salinization land spectra and dew ditch valley concept-people mei, grass, moss, alpine meadow grass, sword leaf thorns son, the spectra of soil and rock.
2) soil profile survey data
Valley in line according to the altitude and vegetation types were set up 12 soil profile, and also in front of the row of dew ditch forest weather stations and linze weather station set up a soil profile 1, 14 were measured profile of soil moisture content, bulk density, adhering sand content and soil spectrum, dew ditch forest top weather stations and linze profile is measuring the thermal conductivity of soil and water parameters.
3) field measurement data of biophysical parameters of typical ground objects
Standing near the corn, cotton, including linze small pine, alfalfa, and leaf area index measurement data of ephedra row dew in different heights with leaf photosynthesis, leaf area index data and vegetation features data (photosynthetic rate, stomatal conductance, intercellular CO2 concentration, leaf transpiration rate, leaf temperature) and the corresponding environmental factor data (air temperature, air relative humidity and atmospheric CO2 concentration, air, water content, atmospheric pressure, solar total radiation, photosynthetic active radiation).
4) ground synchronization test of remote sensing by large flat-topped satellite
The simultaneous observation experiment of TM and QuickBird satellite was carried out in a relatively flat grass area (big flat roof) beside the drainage ditch watershed.On July 27, 2004, spectra, above-ground biomass and leaf area were measured at intervals of 15 meters in a 150m×150m quadrangular at a large flat roof.

2、Keywords

Theme：Soil,Photosynthetically active radiation,Photosynthesis,Leaf area index,Ground object spectral,Vegetation,Blade water content,Soil horizons/profile,Above-ground biomass,Soil moisture/Water content
Discipline：Terrestrial Surface
Places：Heihe River Basin, Dayekou Basin, Pailugou, Linze
Time：2004

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：1550.73MB

4.Data format：shp

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.6 | - |
| west：100.2 | - | east：100.34 |
| - | south：38.4 | - |

5、Time frame:2004-07-28 22:16:00+00:00--2004-08-18 22:16:00+00:00

6、Reference method

References to data:

Remote sensing experimental dataset of dayokou sub basin in Heihe River (2004). A Big Earth Data Platform for Three Poles, doi:10.3972/heihe.013.2013.db2013

References to articles:

李新, 程国栋, 吴立宗. (2010). 数字黑河的思考与实践1：为流域科学服务的数字流域. 地球科学进展, 25(3): 297-305.

7、Supporting project information

8、Data resource provider