High temporal and spatial resolution precipitation data of Upper Brahmaputra River Basin (1981-2016)

Wang,Yuanwei; Wang,Lei; Li,Xiuping; Zhou,Jing

Brief introduction：

This data set describes the temporal and spatial distribution of precipitation in the Upper Brahmaputra River Basin. We integrate (CMA, GLDAS, ITP-Forcing, MERRA2, TRMM) five sets of reanalysis precipitation products and satellite precipitation products, and combine the observation precipitation of 9 national meteorological stations from China Meteorological Administration (CMA) and 166 rain gauges of the Ministry of Water Resources (MWR) in the basin. The time range is 1981-2016, the time resolution is 3 hours, the spatial resolution is 5 km, and the unit is mm/h. The data will provide better data support for the study of Upper Brahmaputra River Basin, and can be used to study the response of hydrological process to climate change.

How to use：

For the convenience of users, the data is stored in the format of TXT, one file per month. The name is "prec_integrated_yyyymm.txt", where yyyy represents the year and mm represents the month. Each file is internally stored with 248 (January, March, May, July, August, October, December), 240 (April, June, September, November), 224 or 232 (February) precipitation spatial distribution. The number of rows and columns of each distribution is 292 * 79, arranged in time sequence (0, 3, 6, 9...o'clock). Add the header file information to each image to open it with ArcGIS. The header file information is as follows:

ncols 292

nrows 79

xllcorner 20968.258085928

yllcorner 3078203.0630637

cellsize 5000

NODATA_value -9999

Data structure:

One .txt file

```
************
************        292*79

************
************        292*79

************
************        292*79

            .
            .
            .

************
************        292*79
```

Every 3 hours, total 248 (Jan. Mar. May. Jul. Aug. Oct. Dec.) or 240 (Apr. Jun. Sep. Nov.) or 224/232 (Feb.)