A Big Earth Data Platform for Three Poles

**NPP-VIIRS interannual night time light remote sensing dataset for the Sahel-Sudano-Guinean region of Africa (2013-2020)**

1、Description

The data set contains annual NPP-VIIRS night time light data images of equatorial northern Africa and the Sahel region from 2013 to 2020. Based on the monthly average night time light image data of visible infrared imaging radiometer Suite (VIIRS) of national polar orbiting partnership (NPP) satellite, this dataset is generated by separating the unstable night light caused by biomass combustion from the stable night light information caused by human activities. The spatial resolution of the data is 500 m, and the grid data type is GeoTIFF. The grid pixel value is radiance, and the unit is 10 − 9 w ∙ cm − 2 ∙ SR − 1. The data set improves the ability of noctilucent images to identify small-scale, scattered and unstable urban information in northern equatorial Africa and Sahel to a certain extent, and can be further applied to the research on human activities in northern equatorial Africa and Sahel.

2、Keywords

Theme：Night light,Human-nature Remote Sensing,Remote Sensing Product,Human activity,Remote Sensing Technology  
Discipline：Remote Sensing Technology,Human-nature Relationship  
Places：the Sahel Region, the northern Equatorial Africa  
Time：2013-2020

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：134.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：20.0 | - |
| west：-20.0 | - | east：50.0 |
| - | south：0.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

JIANG Min , JIA Li , YUAN Xiaotian . NPP-VIIRS interannual night time light remote sensing dataset for the Sahel-Sudano-Guinean region of Africa (2013-2020). A Big Earth Data Platform for Three Poles, doi:10.11888/HumanNat.tpdc.2720202022

References to articles:

Yuan, X., Jia, L., Menenti, M., Zhou, J., & Chen, Q. (2019). Filtering the NPP-VIIRS nighttime light data for improved detection of settlements in Africa. Remote Sensing, 11(24), 3002, https://doi.org/10.3390/rs11243002.

7、Supporting project information

Driving Mechanisms of Land Use and Cover Change in the Sahel: Impacts and Responses

8、Data resource provider

name: JIA Li   
unit: Aerospace Information Research Institute, Chinese Academy of Sciences  
email: jiali@aircas.ac.cn  
  
name: YUAN Xiaotian   
unit: Aerospace Information Research Institute, Chinese Academy of Sciences  
email: yuanxt@radi.ac.cn  
  
name: JIANG Min   
unit: Aerospace Information Research Institute, Chinese Academy of Sciences  
email: jiangmin@aircas.ac.cn