A Big Earth Data Platform for Three Poles

**Characteristics of black carbon, primary and secondary Brown carbon in different regions of Qinghai Xizang Plateau (2018-2020)**

1、Description

The Qinghai Tibet Plateau is surrounded by regions with high global carbon aerosol emissions, and the surrounding black carbon and brown carbon can be transmitted to the plateau. Light absorbing black carbon and brown carbon have warming effect, and their settlement on the surface of ice and snow will also accelerate the melting of glaciers and snow. At present, there is little research on brown carbon in this area, and the research on the correlation between brown carbon components and optics is in its infancy. Therefore, the study of Atmospheric Black Carbon and brown carbon in the Qinghai Tibet Plateau has important climate and environmental significance. The aerosol optical absorption characteristics of Atmospheric Black Carbon and brown carbon were obtained by observing in different regions of the Qinghai Tibet Plateau. It reveals the spatial differences of optical absorption of black carbon, primary Brown carbon and secondary Brown carbon aerosols in different regions of the Qinghai Tibet Plateau.

2、Keywords

Theme：Carbonaceous aerosols,Aerosol,black carbon,Atmospheric Trace Gase  
Discipline：Atmosphere  
Places：Beiluhe, Qinghai, Ngari  
Time：2018-2020

3、Data details

1.Scale：None

2.Projection：

3.Filesize：1.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.0 | - |
| west：80.0 | - | east：110.0 |
| - | south：30.0 | - |

5、Time frame:2018-06-30 16:00:00+00:00--2020-07-30 16:00:00+00:00

6、Reference method

References to data:

ZHU Chongshu. Characteristics of black carbon, primary and secondary Brown carbon in different regions of Qinghai Xizang Plateau (2018-2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Meteoro.tpdc.2718112021

References to articles:

Zhu, C.S., Qu, Y., Huang, H., Chen, J., Dai, W.T., Huang, R.J., & Cao J.J. (2021). Black carbon and secondary brown carbon, the dominant light absorption and direct radiative forcing contributors of the atmospheric aerosols over the Tibetan Plateau. Geophysical Research Letters, doi: 10.1029/2021GL092524

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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