A Big Earth Data Platform for Three Poles

**Near surface atmospheric oxygen content data of Qinghai Tibet Plateau (2017-2021)**

1、Description

1. The total number is the unified number of the survey year, such as 17-001 (the first survey point in 2017), and the field number is the single field number.
2. Time: Beijing time at the time of measurement, such as: 13:25, August 1, 2017 (13:25, August 1, 2017).
3. Geographical location: the longitude and latitude of the measuring point, such as 29.6584101.0884 (29.6584 ° n, 101.0884 ° E), which is measured by Garmin 63sc GPS in the field.
4. Altitude: the absolute altitude of the measuring point, such as 4500m (4500m above sea level), is measured by Garmin 63sc GPS in the field with an accuracy of 1m.
5. Measured vegetation coverage (%): measured in the field with quadrat (1000 m \* 1000 m).
6. Atmospheric pressure: measured by dph-103 intelligent digital temperature and humidity barometer in the field, such as 651.7kpa, accuracy: 0.1 kPa.
7. Air temperature: measured by dph-103 intelligent digital temperature, humidity and barometer in the field, such as 15.61 ℃, accuracy: 0.01 ℃.
8. Relative humidity: measured by dph-103 intelligent digital temperature, humidity and barometer in the field, such as 79.1%, accuracy: 0.1%.
9. Relative oxygen content: measured by td400-sh-o2 portable oxygen detector in the field, such as 20.16%, accuracy: 0.01%.
Among them, the altitude of sampling points 17-001 to 17-065 is measured by Garmin Oregon 450 GPS with an accuracy of 1 m; The atmospheric pressure is measured by Casio prg-130gc barometer with an accuracy of 5 HPA; The relative oxygen content is measured by cy-12c digital oxygen meter, with a range of 0-50.0%, a resolution of 0.1% and an accuracy of ± 1%.

2、Keywords

Theme：atmospheric oxygen concentration,Other
Discipline：Atmosphere
Places：Qinghai-Tibet Plateau
Time：2017-2021

3、Data details

1.Scale：None

2.Projection：

3.Filesize：15.3MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.79 | - |
| west：76.93 | - | east：104.06 |
| - | south：24.83 | - |

5、Time frame:2017-07-27 16:00:00+00:00--2021-11-19 15:00:00+00:00

6、Reference method

References to data:

SHI Peijun . Near surface atmospheric oxygen content data of Qinghai Tibet Plateau (2017-2021). A Big Earth Data Platform for Three Poles, doi:10.11888/Atmos.tpdc.2724232022

References to articles:

Chen, Y.Q., Zhang, G.F., Chen, Z.Y., Yang, X.M., Chen, B., Ma, Y.G., Xie, H.C., Luo, Q.Y., Yang, J., Ye, T., Yu, D.Y., Wang, J.A., Tang, H.P., Chen, Z., & Shi, P.J. (2022). A warming climate may reduce health risks of hypoxia on the Qinghai-Tibet Plateau. Science Bulletin, 67(4), 341-344.

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7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

name: SHI Peijun
unit: Beijing Normal University
email: spj@bnu.edu.cn