A Big Earth Data Platform for Three Poles

**Two contrasting exhumation scenarios of deeply subducted continental crust in North Pakistan dataset**

1、Description

Attached tables S1-S14 are the experimental data of Naran Eclogite in Pakistan. Table S1-S3 and table s12-s13 are the main element compositions of minerals analyzed on thin slices using jeol jxa8230 electron microprobe instrument. We used on-line atomic absorption fluorescence (ZAF type) correction and adopted the following standards: jadeite (Na, Al), olivine (mg), diopside (Si, CA), orthoclase (k), rutile (TI), rosaxene (MN), hematite (FE), fluorite (f) and NaCl (CL). The analytical accuracy of CL is ± 0.01wt%, and that of other elements is 0.01-0.2wt%. The amount of Fe3 + was calculated according to stoichiometric constraints using program ax (Holland and Powell et al., 1998). For table S4, Zr in rutile was analyzed in the State Key Laboratory of lithospheric evolution. Cameca sxvive EPMA was used, the ACC voltage was 20kV, the beam current of Ti was 50na, Zr and other trace elements were 300na, and the peak counting time of Ti was 10s, while the peak counting time of Zr and other trace elements was 120s. The detection limit (3sigma) of Zr is 70 ppm. Meanwhile, the reference rutile of r10b detected by LA-ICP-MS was measured, and the EPMA error was less than 10%. For table S5-S6 and table s9-s10, U-Pb dating was carried out by cameca ims-1280 Sims of Institute of Geology and Geophysics, Chinese Academy of Sciences. The operation and data processing procedures were completed according to Li et al. (2009). We use 20 × thirty μ M, and the U-Th-Pb ratio and absolute abundance relative to standard zircon plesovice and 91500 were determined. The long-term measurement error of 206Pb / 238U standard zircon is 1.5% (1rsd) will propagate (Li et al., 2010), although the 206Pb / 238U error of a single measurement is usually 1% (1rsd) or less. Assuming that the source of ordinary Pb is mainly surface pollution, we corrected ordinary Pb using the measured 204Pb and the current average Pb composition (Stacey and Kramers, 1975). The data of individual analysis and summary analysis are calculated with one standard deviation (1) σ) And two standard deviations (2 σ) In the form of. Data reduction was performed using the program isoplot / ex v. 3.23 (Ludwig, 2003). For tables s7-s8, geochronological data and REE components are measured by la-icpmas. Standard samples gj-1 (calibration standard) and plesovice (second standard) are used as external standard samples for U-Pb dating calibration. Plesovice (calibration standard) and NIST 612 (second standard) are used as external standards for trace element content calibration. For table s9-s10, rutile U-Pb dating was obtained on cameca ims-1280 Sims. We determined the U-Th-Pb ratio and absolute abundance relative to standard zircon plesovice and 91500. The long-term measurement error of 206Pb / 238U of standard zircon is 1.5% (1 RSD), although the single measurement error of 206Pb / 238U is 1% (1 RSD) or less. For table S11, a summary of symbiotic assemblages of representative Naran eclogite samples based on the above results is provided. For table S14. The PT condition is calculated by the geological thermobarometer.
Attached figure SF1. (a) PL, BT, AMP and QZ with small particle size are produced in the core of large particle GRT in the form of inclusions, sample sn07. (b) Dol and QZ with small particle size occur in the core of GRT in the form of inclusions. B-B 'represents the chemical composition profile of large grain garnet, sample sn07. (c) Omphacite phenocrysts are replaced by syncrysts after CPX + pl. (d) Omphacite phenocrysts are replaced by the alternating structure of Bt + amp + pl.

2、Keywords

Theme：subduction,dating,Neo-Tethys,eclogite,exhumation,Western Himalayan Syntaxis,Rocks/Minerals,P-T path,Tectonics,HP/UHP,break-off
Discipline：Solid earth
Places：Naran, Northern Pakistan
Time：Eogene, 50 Ma

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.21MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：73.729167 | - |
| west：34.981611 | - | east：34.981611 |
| - | south：73.729167 | - |

5、Time frame:None--None

6、Reference method

References to data:

ZHANG Dingding , ZHANG Dingding, DING Lin. Two contrasting exhumation scenarios of deeply subducted continental crust in North Pakistan dataset. A Big Earth Data Platform for Three Poles, doi:10.11888/SolidEar.tpdc.2719762022

References to articles:

Zhang, D.D., Ding, L., Chen, Y., Schertl, H.P., Qasim, M., Jadoon, U.K., Wang, H.Q., Li, J.X., Zhang, L.Y., Yue, Y.H., & Xie, J. (2022). Two contrasting exhumation scenarios of deeply subducted continental crust in North Pakistan. Geochemistry, Geophysics, Geosystems. Accepted.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program
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泛第三极环境变化与绿色丝绸之路建设专项

8、Data resource provider

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