

Wu, H., Zhu, W., and Ge, R., 2023, Garnet growth and diffusion zoning during the late Paleoproterozoic metamorphism, North Altyn area, SE Tarim Craton, NW China: Implications for a long-lived hot orogen: GSA Bulletin, <https://doi.org/10.1130/B36511.1>.

Supplemental Material

Figure S1. Garnet composition profiles.

Figure S2. Mode isopleth (%) of garnet and biotite for assemblages with liq–g–pl–bi–q–ilm as a subset.

Figure S3. $\Sigma\text{HREE-Dy}_\text{N}/\text{Yb}_\text{N}$ diagram for zircons from sample 18alt43–2 (A) and 18alt45 (B).

Figure S4. Ca(pl) isopleth of 0.3 for peak plagioclase superposed on the peak assemblage (polygon in gray) for the equilibrium vs fractional crystallization model of sample 17alt08.

Supplemental Data S1. Results of mineral EMPA analysis.

Supplemental Data S2. Zircon U–Pb–trace element analysis.

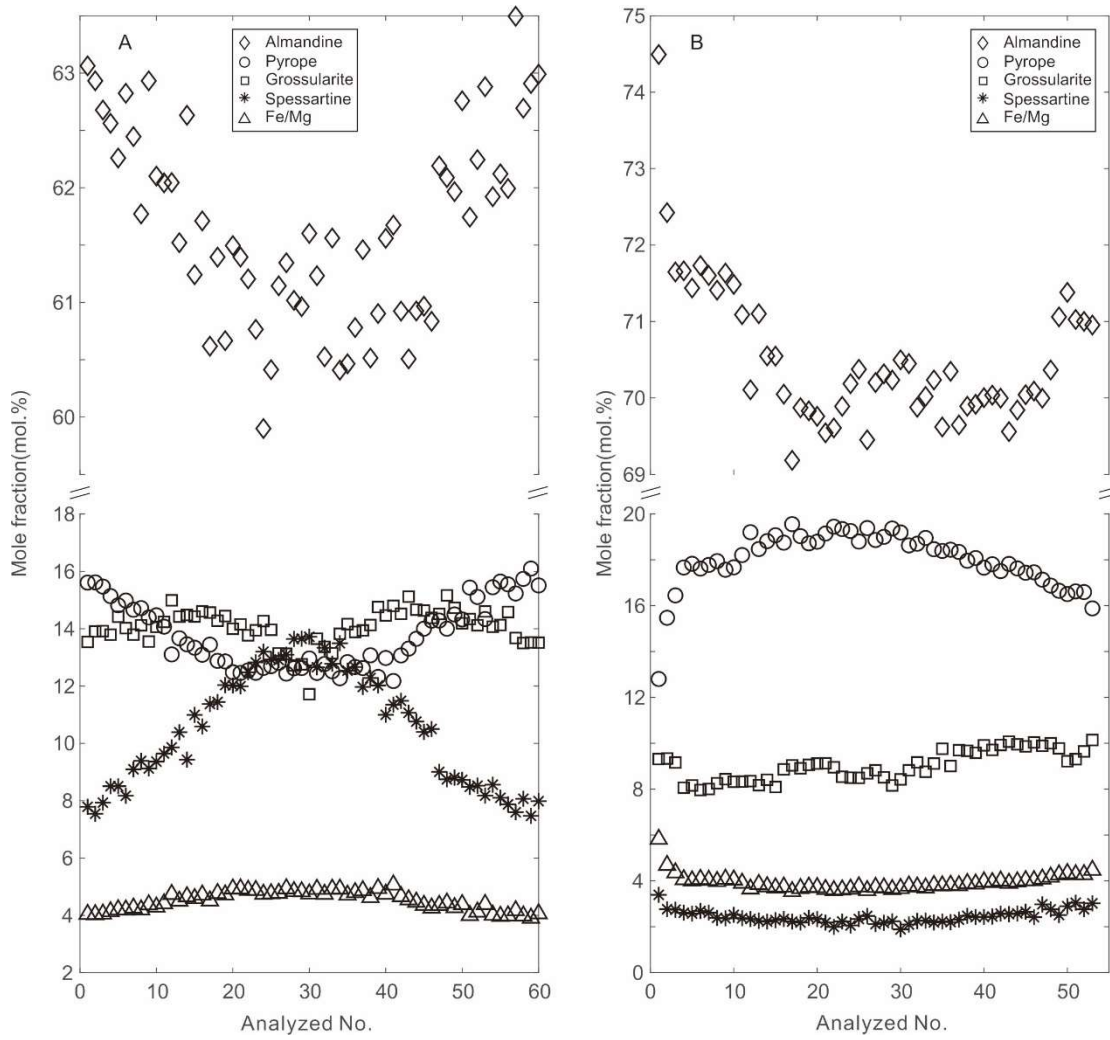


Figure S1. Garnet composition profiles. (A) Growth zoning of garnet-2 for sample 17alt08 from Kalatashtagh of North Altyn area. (B) Diffusion zoning of the garnet for sample 18alt43-2 from Aktashtagh of North Altyn area. The abscissa is the analysis number. Fe/Mg represent the ionic ratios (based on 12 oxygens).

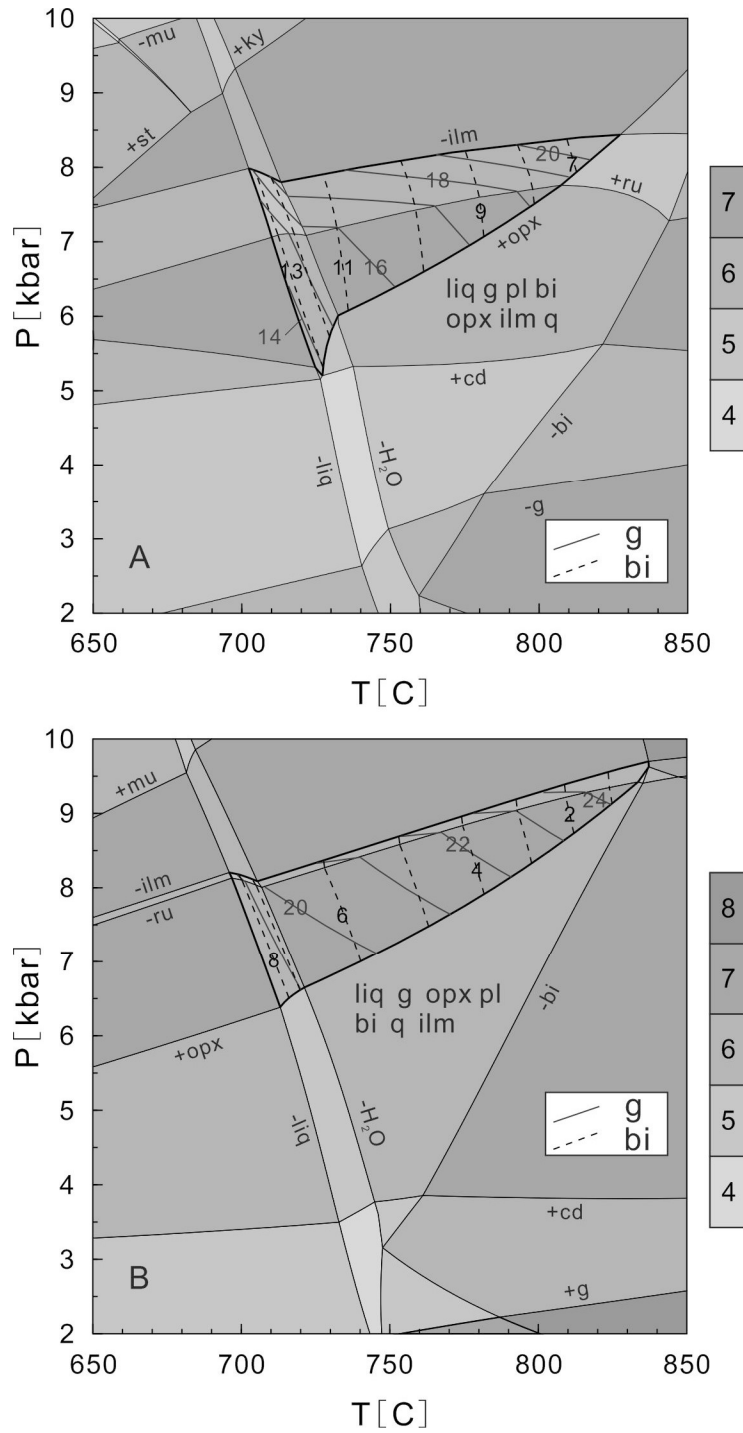


Figure S2. Mode isopleth (%) of garnet and biotite for assemblages with liq–g–pl–bi–q–ilm as a subset. (A) Sample 18alt45. (B) Sample 18alt43–1. The color bar on the right shows the variance of the assemblage.

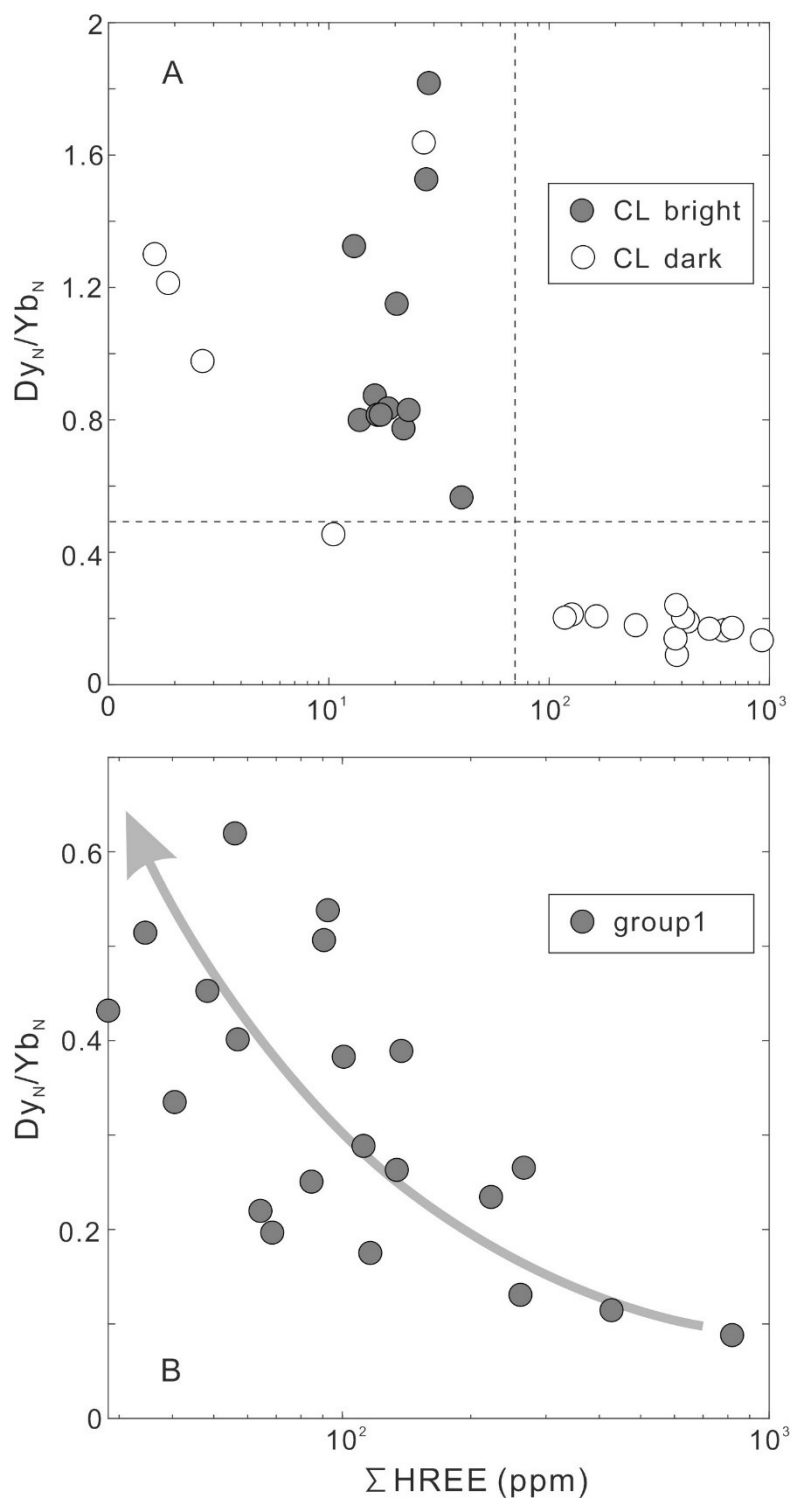


Figure S3. Σ HREE-Dy_N/Yb_N diagram for zircons from sample 18alt43-2 (A) and 18alt45 (B).

The dotted lines in (A) separate the CL bright group from CL dark group. In addition, some grains in CL dark group have a flat HREE normalization pattern similar to CL bright zircons.

The gray line with arrow in (B) show the negative correlation trend. The chondrite values of Dy and Yb for normalization are from [Boynton \(1984\)](#).

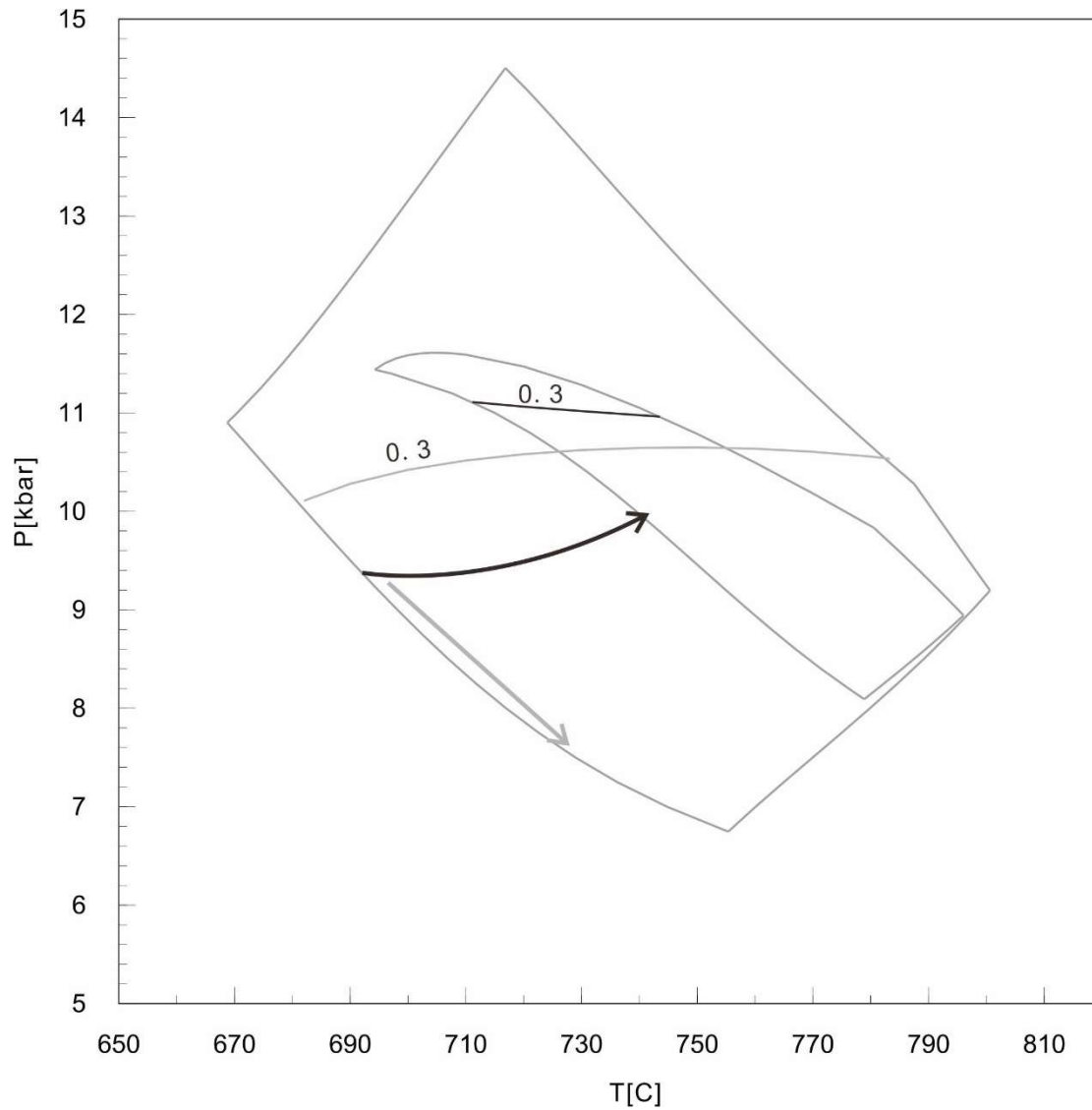


Figure S4. Ca(pl) isopleth of 0.3 for peak plagioclase superposed on the peak assemblage (polygon in gray) for the equilibrium vs fractional crystallization model of sample 17alt08.

REFERENCES CITED

Boynton, W.V., 1984, Cosmochemistry of the Rare Earth Elements: Meteorite Studies:
Developments in Geochemistry, 2: 63-114.