
Casablanca, 06th June 2024

To: Editor of Copernicus Publications

Review of the paper: Post-hercynian ultra-high temperature tectono-metamorphic evolution of the Middle Atlas lower crust (Central Morocco) revealed by metapelitic granulites xenoliths

Author(s): Abdelkader El Maz et al.

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Dear Editor,

The paper is well written with good data, especially the part where authors use the petrographic and geothermobarometric data to compare the evolution of granulites in two different tectonic contexts: the Rif and the Middle Atlas belt which can constrain the evolution of the middle crust in North Africa.

The language is properly and correctly used except few paragraphs which can be reorganized and reduced. All the important comments are listed below:

- 1- The figure 1 (and in my opinion all figures) could be highly improved, the authors talk about the North Middle Atlas fault which is not indicated on the figure, its location can be deduced but readers not familiar with the geology of Morocco can be lost;
- 2- There are paragraphs and descriptions which require significant improvement in the English style as for example the use of "Several tens" on line 107...;
- 3- Petrographic photos are lacking in the manuscript, the authors use time to time few photos to indicate some textures, but I believe that studying such nice rocks require the use of good photos showing the beautiful reactional textures of these rocks;

- 4- At the beginning of the paper, the authors describe the presence of coronas around garnet without explaining the reaction that led to this reactional texture. The authors explain briefly such reaction at the end of the paper;
- 5- The Cartoon of the figure 12 is not clear for me;
- 6- I am really confused about the composition of garnet, authors describe it as homogeneous compositions without zoning even in the garnet is highly resorbed and replaced by the coronitic minerals. It is the case of all garnet analyzed and how many profiles did you done on garnets?
- 7- The section about geothermobarotry of the studied rocks must be improved and the authors must explain to the reader what compositions of garnet is used to calculate the first and the second events of the evolution adopted for these rocks, which plagioclase was used (inclusion, matrix or the reactional texture one...). If the garnet is homogenous in composition, there is no problem but if it is zoned, the composition used in calculation (rim or core) can affect strongly the P-T calculated..

Reviewing all those comments will improve highly the quality of the manuscript .

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