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Reply to the comment on "Geochemistry, Rb-Sr whole rock age and Sr-Nd isotopic constraints on the Variscan A-type granite from Azegour area in the Marrakech High Atlas (Moroccan Meseta) and their geodynamic implications" by Hadani et al. (2024): Geologos 30, 1 (2024): 1–16

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We appreciate the comments made by Loudaoued et al. (2024, this issue). This discussion allows us to elucidate some of the key issues raised by these authors (Loudaoued et al. 2024, this issue):

Despite the strongly differentiated character of Azegour granitic rock samples, their multi-element patterns reveal many similarities to those of I-type granitoids, which fact has led us to postulate that the parental liquids of A1-type were derived from partial melting of mafic magmas. We have here included additional data related to I-type magmas, taken from Brown (1990), in a comparison of multi-element patterns for the Azegour granite samples (Fig. 1).

A clear understanding of the age and geochemical characteristics of the magmatic activity in the Marrakech High Atlas MHA is required to constrain the evolution of this region during the orogenic cycle (i.e., rifting, tectonic inversion to post-collisional time), as follows:

- an early Cambrian age of the Medinet quartz diorite (Pouclet et al., 2008; Ettachfini et al., 2018; Berrada et al., 2022), or even Neoproterozoic dates of arc volcanites (Ouazzani et al., 1998, 2001);
- a Namuro-Westphalian age: U–Pb radioisotopic ages on zircon that constrain the Adassil granite emplacement (Hadani, 2009; Fekkak et al., 2017);
- Permian intrusions in the Azegour region: basic, intermediate and felsic rocks with calc-alkaline affinity (Loudaoued et al., 2023).

The dating of 275–268 Ma reflects the effects of late Variscan hydrothermal activity, because K/Ar and Rb-Sr isotopic systems are both extremely sensitive to temperature. Several mineralisations from the Marrakech High Atlas have yielded 40Ar/39Ar muscovite ages bracketed between 270 and 275 Ma