Petrology and LA-ICP-MS U-Pb zircon geochronology of high-grade metamorphic rocks from the variscan basement of the Lesser Kabylia, Algeria

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Résumé

This study will present the first quantification of the metamorphism using pseudosection modelling of the high grade paragneiss (kinzigite) from the Lesser Kabylia in Algeria. Preliminary ages from LA-ICP-MS U-Pb zircon geochronology will be also presented. The results will be compared to the ones from the literature in similar basement from the Betic Cordillera Rif-Tell belt in order to discuss their signification in the context of the variscan orogeny. Indeed, the results show the variscan high-grade metamorphism in the Lesser Kabylia is well preserved, and dated at ca. 310 Ma which corresponde to the main collisional orogenic event in the north Gondwana margin, whereas it coincides with late orogenic evolution in the European variscan belt. We speculate that this high-grade metamorphism might reflect the paleo-suture zone of the Paleo-Tethys Ocean or its intracontinental propagator tip at the edge of Gondwana and the southern part of the European variscan belt, closed during the formation of the Pangea super-continent. We are delight to test hypothesis in near future.

Mots-Clés: Variscan belt, Lesser Kabylia, high, grade metamorphism, Paleo, Tethys Ocean

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