



Enigmatic remagnetizations in the Silurian and Lower Devonian formations of the Tassili N-Ajjer (Illizi basin, Algeria)

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With the aim to improve the relatively poorly defined African apparent polar wander path (APWP) curve for the Lower Paleozoic times, a paleomagnetic study has been performed on Silurian and Lower Devonian formations of the Illizi Basin in Algeria. Our paleomagnetic results evidenced two distinct magnetization components "B1" and "B2". Though positive paleomagnetic tests (reversal and fold tests for "B1" and fold test for "B2"), the comparison with the present African APWP however clearly shows that both components "B1" and "B2" are remagnetizations of Cenozoic and Permian ages, respectively. The acquisition of the B1 remagnetization seems to be related to level variations of ground-fluids. The present work also highlights a Cenozoic age for the deformation at the origin of the local dip variations within this mainly monoclinical series. It also confirms the necessary care for using reversal test as a criterion to determine the primary or secondary character of a magnetization.