



Paleomagnetic and AMS data evidencing a polyphased geodynamical evolution in the Ougarta magmatic complexes (Algerian Sahara)

Nacer- eddine MERABET (1), Bernard HENRY (2), Atmane LAMALI (1), Said MAOUCHÉ (1), Khadidja GRAINE-TAZEROUT (3), Abderrahmane MEKKAOUI (4), and Mohamed AYACHE (1)

(1) CRAAG, Geophysics, Algiers, Algeria (n.merabet@craag.dz), (2) Paleomagnetism, IPGP, Paris, France (henry@ipgp.fr), (3) FSTGAT, USTHB, Alger, Algeria, (4) Institut d'Architecture. Centre universitaire, Béchar, Algeria

The Ougarta fold belt is located at the junction between the West African Craton and the Panafrican domain of the Saharan platform. It is mainly related to the Variscan orogeny and was assumed to be of Post-Moscovian age. It mainly consists of NW-SE trending folds system. The magmatic complexes outcrop in the core of exhumed and eroded anticlines. They are identified as ignimbritic, andesitic to basaltic volcanism and as volcano-sedimentary levels

Magnetic fabric and remanent magnetization of these magmatic complexes are carried essentially by secondary hematite, probably related to hydrothermal events at the origin of ore deposits in the Ougarta belt. Magnetic foliation is of tectonic origin, while magnetic lineation could be related to hydrothermalism. The two obtained paleomagnetic directions correspond to syn-folding and post-folding remagnetizations. The comparison with the African APWP indicates Famenian-Tournaisian and Visean ages for these remagnetizations. These different results imply that at least, two deformation phases, with different folding orientations and much older than previously assumed, affected the studied area.