



## **The Eburnean granitic Djebel Drissa ring complex (Eglab shield, Algeria): post-collisional intrusions in a transtensional tectonic setting**

Nacer-Eddine Merabet (1), Yamina Mahdjoub (2), Abdeslam Abtout (1), Bernard Henry (3), Mohamed Kahoui (2), Said Maouche (1), Atmane Lamali (1), and Mohamed Ayache (1)

(1) CRAAG, BP 63, Bouzaréah 16340, Algiers, Algeria, (2) USTHB, BP 32, El Alia 16111 Bab Ezzouar, Algiers, Algeria, (3) Paleomagnetism, IPGP, PRES Sorbonne Paris Cité and CNRS, 4 avenue de Neptune, 94107 Saint-Maur cedex, France

The Eburnean A-type granitic Djebel Drissa ring complex is part of the 2.08 Ga Aftout magmatic suites that intruded the 2.22–2.09 Ga-old Paleoproterozoic granitoids in the Eglab shield. This post-collisional pluton is composed of unfoliated granitoids disposed in near-concentric zones. The zoning feature is interpreted as intrusions of continuous magmatic pulses, leading to its in situ growing.

New field observations and new geophysical data are presented in order to determine the structural context of Djebel Drissa complex emplacement. The magma internal structures were obtained by mapping the magnetic structures (foliation and lineation) from an Anisotropy of Magnetic Susceptibility (AMS) study. Modeling from together gravimetric and aeromagnetic data yielded its geometry in depth. The combined use of data of these different approaches provides a new and enriched image of the Drissa complex and of its evolution. Indeed, these data point out that the regional deformation controlled the emplacement of this complex. The sub-circular shape of the granitic body and AMS strain pattern are consistent with a transtensional tectonic setting along the NW-SE major Chenachane shear-zone and with an emplacement also controlled by an associated WNW- ESE extension fault. From all these data, a reliable model was inferred for the evolution of this ring complex, which emplacement marked the end of the main Proterozoic history of the Eglab shield.