Geophysical Research Abstracts
Vol. 19, EGU2017-8330, 2017
EGU General Assembly 2017

The Eburnean Tinguicht pluton (Yetti domain, Algeria) emplacement evidenced by geological and geophysical data.

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The Tinguicht pluton is part of the ∼2.07 Ga post-collisional magmatic suites that intruded the Yetti Paleoproterozoic volcano-sedimentary series of the western part of the Eglab Shield (West African Craton). It represents one of the most recent units of these suites. The deformation of the structures is restricted to fracturing and faulting practically in this NW-SE elliptic and unfoliated pluton.
New geological and geophysical (structural, microstructural, magnetic and aeromagnetic) data are shown in order to analyze the relationship between the Eburnean Tinguicht pluton emplacement and the related NNW-SSE major mega-shear zone, separating the Yetti and Eglab domains, in particular. A structural analysis was performed by mapping the magnetic structures (foliation and lineation) using AMS to constrain the context of the regional post-collisional evolution of the Eglab shield. The combination of the results of all the used approaches leads to a new and enriched image of this granitic pluton and of its tectonic emplacement context. The elliptic shape of the granitic body and the AMS strain pattern are consistent with the presence of a NNW-SSE major structure. NNW-SSE is also one of the major directions highlighted by the aeromagnetic data.
This study thus evidences the role of the pre-existing major shear zones in controlling emplacement of post-collisional Paleoproterozoic plutons like Tinguicht, as shown for Drissa pluton in the Eglab domain earlier.