Investigation of mineralogical and microstructural changes of Chah Zard granites (East of Jandagh) during mylonitization: using anisotropy of magnetic susceptibility method (AMS)

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Abstract: Chah Zard granitoid pluton with 535.4±3.2 Ma age (U-Pb zircon method, carried on the Zircon) intruded into Jandagh –Arousan metamorphic complex, and strongly mylonitized during later events. For the first time, Chah Zard granitoid pluton investigated by anisotropy of magnetic susceptibility (AMS) method. Mean magnetic susceptibility (Km) of biotite granites (the main constituent of Chah Zard granitoid pluton) is 112 μSI. Biotite is the most important magnetic carrier in biotite granites. During of mylonitization, considerable volume of biotite altered or evolved to muscovite and then Km values of their bearing rocks strongly decreased. Magnetic lineation and foliation have low plunge and dip, respectively, and also field evidences confirmed this finding. Magnetic lineations, mostly oriented toward northwest. Since the intensity of mylonitization is very high, microstructures which resulted in relation to tectonically stresses, had overcome to magmatic microstructures and partially to completely obliterated them.

Keywords: Granite; Anisotropy of magnetic susceptibility (AMS); mylonitization; Chah Zard; Jandagh.