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Paleomagnetism and Geochronology studies of some Early Paleozoic rocks from Sinai Peninsula, Egypt.

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Paleozoic volcanics are mainly found on the stable shelf that borders the Arabian-Nubian Shield, and apparently represent geologic activity related to breakup of Greater Gondwanaland at about 550 Ma. Some of these differences may be accounted for by tectonic movements between South Africa, Egypt, and the Sinai Peninsula. However, some of the differences are so large that more careful study is necessary. High-precision geochronology is also essential in constraining the paleomagnetic data, and in defining the age of measured poles. Unfortunately, few modern geochronologic and paleomagnetic data exist for Egyptian rocks, and for the data that do exist, there are inconsistencies. We propose to conduct a modern paleomagnetic and geochronology study of the crystalline bedrocks of Egypt. $^{40}\text{Ar}/^{39}\text{Ar}$ age and Paleomagnetic study for the Early Paleozoic rocks from Saint Katerina area, Sinai Peninsula, Egypt will be presented in this study. Detailed rock magnetic investigations including the variation of magnetization with temperature and hysteresis loops shows that pseudo single domain (PSD) grain size magnetite is the main magnetic mineral in the studied rocks. Alternating field and thermal demagnetization identify stable and unstable characteristic remanences. Results will be presented.