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A new paleointensity result deduced for the Oligocene period fromQatrani basalt, Egypt

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We have conducted paleodirection and paleointensity measurements of basalt flows from Qatrani basalt, Egypt. Published age of Qatrani basat is 25±2 Ma. Various rock magnetic analyses indicate that the main magnetic carriers of samples are one phase of pure magnetite (Ti-poor titanomagnetites), which have pseudo single domain (PSD) sizes. Directional analysis of the Oligocene basalts is very straightforward and updated mean VGPs have been calculated from the Qatrani (68N, 90E; Kappa=274; A^{95}=1.8) which is coincide with the previous Oligocene paleomagnetic studies. The Tsunakawa-Shaw (LTD-DHT Shaw) method yielded five successful results of 12.9-17.5 μTfrom two sites, giving one acceptable site-mean paleointensityof 15.5 μT with a standard deviation of 1.8 μTat the 25±2Ma. In terms of a dipole moment, an average VDM is calculated to be 2.7×10^{22}A $m^2$with a standard deviation of $1.29\times10^{22}Am^2$. This is the first result from Egypt, and is associated with a reasonably high Q_{PI} value (Biggin and Paterson, 2015) of 5. The newly obtained VDM is indistinguishable from an average VDM of $3.55\times10^{22}Am^2$with a standard deviation of $0.67\times10^{22}Am^2$ calculated from theselected 65 site-mean Thellier paleointensity data from the latest paleointensity database, and is about third of the present geomagnetic dipole moment ($\sim8\times10^{22}$ Am^2).