

APPLICATION OF MAGNETIC SUSCEPTIBILITY ON PALAEOZOIC SEDIMENTARY ROCKS

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Magnetic susceptibility (MS) records from Holocene, Pleistocene and Tertiary sedimentary successions have been widely used as palaeoclimatic proxies. The use of MS in Palaeozoic sediments is becoming more common but still suffers from some controversy. One of the problems is the origin of the magnetic minerals. Most sedimentologists accept the hypothesis that magnetic minerals reflect lithogenic inputs. However, it remains unclear if these inputs are of fluvial or of aeolian nature and if they are influenced by climatic, sea-level or tectonic changes, which act probably at different time-scales. In order to differentiate between different impacts, a strong interdisciplinary characterisation of facies, cyclostratigraphy and the MS signal and MS carriers is required. Furthermore, concerning of Palaeozoic rocks, the influence of diagenesis on the magnetic mineralogy has to be assessed.

We would like to promote the interdisciplinary IGCP-project 850, recently funded by the UNESCO, in order to invite collaborators to possibly join our research. The project aims at compiling published magnetic susceptibility records from Palaeozoic sedimentary rocks and at acquiring new data for testing the correlation between susceptibility and sedimentological parameters. Another goal is to investigate the cause of the magnetic susceptibility signal in different sedimentary environments and its relationship to climate controlled environmental parameters. Finally, magnetic susceptibility records from different globally distributed sites will be correlated for reconstructions of past climatic variations.

The project web-site can be found at <http://www2.ulg.ac.be/geolsed/MS/news.htm>. For further information, please contact one of the authors of this abstract.