

Rock magnetic study of surface sediments from China: a provenance study of eolian dust

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Surface fine sediments collected at 71 sites along the east-west transect between Chinese Loess Plateau and Taklimakan desert were rock magnetically analyzed. Purpose of the study is to elucidate possible source area of eolian dust that has been brought from China to Japan by the westerly since the development of present global circulation system. Among the various rock magnetic parameters, S ratio ($S-0.3T$) is found to be most effective in presenting characteristic of each site. Combined further with magnetic-mineralogy and -granulometry diagnostic parameters, the site with higher S ratio (larger than 0.9) is assumed to have relatively larger grain-sized magnetite and vice versa. The rock magnetic difference may be caused by local accumulation system of the surface material and also by regional geology.