

Paleomagnetic study of red cherts from the Chichibu Terrane

Koji Uno^{1*}, Saki Hamami¹, Tetsuji Onoue²

¹Okayama University, ²Kagoshima University

Middle Triassic (Anisian) red cherts in the Chichibu Terrane were collected at 54 beds for paleomagnetic study. Progressive thermal demagnetization treatment revealed four distinct remanent magnetization components from the cherts. The first remanent magnetization component is demagnetized at around 250C. The component is similar to that of the present Earth's geomagnetic field. The second component appears at around 250C and is demagnetized at around 420C. The directions of the component, before tilt correction, cluster well and have negative steep inclinations and southwesterly declinations. The third component is revealed between about 480 and 630C. The directions of the component, before tilt correction, cluster well and have positive intermediate inclinations and northwesterly declinations. The fourth component is retrieved at the latest stages of the demagnetization from 650 to 690C. The majority of the directions of this component show steep inclinations before tilt correction and show northerly shallow directions after tilt correction. A few of the directions, after tilt correction, have southerly shallow directions. The observed directions are compared with previously reported red chert directions from the Mino-Tamba Terrane (Inuyama area) that yielded four distinct remanent magnetization components. The directions of the first to third component in this study, before tilt correction, are well correlated with the in-situ directions of the first to third component (referred to as component A to C) from the Mino-Tamba Terrane, although the two regions are 500 km apart from each other.

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