Reversed paleomagnetic directions from the Early Pleistocene tephric loess beds in Shirakawa area, south Northeast Japan

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This study focuses on the paleomagnetic reliability of Japanese tephric loess beds, and shows results of paleomagnetic and rockmagnetic experiments for Early Pleistocene tephric loess beds in Shirakawa area, south Northeast Japan. Few work found geomagnetic excursion from Late Pleistocene tephric loess beds, while it is not discussed as to whether tephric loess beds have stable magnetization or not. Alternation of the tephric loess and air-fall tephra beds totally 5 m thick occurs between the 1.2 Ma Asino and 1.1 Ma Nishigo Pyroclastic Flow Deposits. Oriented core samples were taken from eight tephric loess beds there. Reversed paleomagnetic directions were determined from all beds by stepwise alternating field and thermal demagnetization experiments. The tephric loess beds in Shirakawa area have held primary magnetization for more than one million years, strongly suggesting that Japanese tephric loess beds are useful for paleomagnetic work.