A detailed record of the geomagnetic field direction for the last 600 yrs from a sedimentary sequence in Sayama-ike Pond, SW Japan

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A secular variation record of the geomagnetic field direction for the last 600 years was obtained from the magnetization of oriented samples from a 6.3-m sedimentary sequence in Sayama-ike Pond, SW Japan. A secular variation curve was constructed using characteristic remanent magnetizations from 873 samples over 122 horizontal levels, and was dated based on palynological age controls for pollen fossils of Gossypium indicum and Cryptomeria. The secular variation revealed many large swinging motions in both declination and inclination curves before 1750 AD. The swings around 1430 AD and 1550 AD show quite similar patterns of field vector motion at a maximum rate of 10deg./yr.