

## Magnetic Properties of Core Sediments from Lake Pumayum Co in the Tibetan Plateau

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During the Sino-Japan Scientific Research Expedition of Lake Pumayum Co in 2001, located in the southeastern part of the Tibetan Plateau, a sediment core sample (PY104) of about 380 cm long was recovered at a water depth of 46 m. The bottom part of the core sediment is dated at about 18,000 yr B.P. by AMS radiocarbon dating, suggesting that this core is eligible for providing paleoenvironmental record from the last glacial period to the Holocene. We have investigated magnetic properties of this core sample, using cubic specimens obtained at about 2.5 cm intervals. Measurements of natural remanent magnetization with alternating field demagnetization show that samples above 220 cm have relatively stable magnetization which may reflect paleomagnetic secular variation, while the magnetic directions are scattered at the interval between 220 and 300 cm due to weak remanence intensity. Three types of magnetic concentration parameters, low-field magnetic susceptibility, anhysteretic remanent magnetization and isothermal remanent magnetization at 1 T indicate that between 220 and 300 cm magnetic minerals are diluted by non-magnetic materials including large amount of plant fragments. The sediments above 220 cm are characterized by presence of paramagnetic or diamagnetic minerals along with fine-grained magnetic minerals which carry natural and anhysteretic remanent magnetizations. The variation of fine-grained magnetic minerals suggests changes of depositional flux, while the downward decrease may reflect gradual dissolution of magnetic minerals in diagenetic process.