Geophysical Research Abstracts
Vol. 21, EGU2019-12170, 2019
EGU General Assembly 2019

Archaeomagnetic study of a Proto-Three Kingdoms Period archaeological site in Jungdo island (South Korea)

Yong Hee Park

Kangwon National University, Division of Geology and Geophysics, Chuncheon, Korea, Republic Of (aegis@kangwon.ac.kr)

Recently the first Korean paleosecular variation directional curve (i.e., KPSV_V1.0) during the past two millennia has been reported based on reliable archaeomagnetic data obtained from the Korean Peninsula and Southwest Japan. In order to test validity of the KPSV_V1.0 curve, archaeomagnetic dating was carried out for three dwelling sites of Proto-Three Kingdoms Period excavated in Jungdo Island, South Korea. A total of 38 oriented samples of well-burnt soil was collected from the hearth relics of three ancient dwelling sites. The characteristic remanent magnetization (ChRM) of each sample was determined using the principal component analysis after the stepwise alternating field demagnetizations. The ChRM directions of individual samples were accepted in calculating site-mean directions if they show a stable grouping with the maximum angular deviation less than 4˚. 33 out of 38 samples were regarded to record a TRM faithfully, and were used to determine the archaeomagnetic age. The ChRM directions of each site are well grouped around the mean direction (α_{95} $\leq$3.0˚). We have dated archaeomagnetic directions of three individual sites using the Matlab *archaeo_dating* tool (Pavón-Carrasco et al., 2011) based on a Bayesian statistical approach. The reference PSV curves were calculated from KPSV_V1.0. Archaeomagnetic ages of three dwelling sites are presented in the range between AD132∼AD431, which show a good agreement with the archaeological and radiocarbon ages.