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## Reconstruction geomagnetic secular variation curve from archeomagnetic data during the past 2000 years in Japan

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When we seek geomagnetic secular variation models from 100 to 1000 years scale, paleomagnetic direction data from archeological samples are good for constructing since their ages are well known and accuracy of archeomagnetic sample is generally much better than that of paleomagnetic sample. However, it is difficult to determine a secular variation curve by individual data.

In recent years, many archeomagnetic study has done in Europe, the ways that constructing secular variation by good archeomagnetic data and estimating unknown age of the relics have been developed (e.g. Daly and Le Goff, 1996; Le Goff et al., 2002; Lanos et al., 2005). Whereas in Japan, some studies are known to the world, yet collected archeomagnetic datasets were small (e.g. Hirooka, 1971; Shibuya, 1980). The secular variation curves in those studies were almost drawn by hand (excluding a few studies such as Tsunakawa, 1992).

In this study, one goal is to reconstruct a geomagnetic secular variation curve with confidence cone of mean direction in past 2000 years in Japan, and we would like to discuss the way. We reconstruct a curve applied some ways have made until now, for example, moving average, modified Bivariate Fisher statistics, smoothing, spline functions, to archeomagnetic data set (Hirooka et al., 2006) sampled in Tokai, Hokuriku and Kinki area. We compare them, discuss its problem, and would like to seek the clue to get better ways.

Keywords: geomagnetic secular variation, archeomagnetism