

Japan Archaeomagnetic Database

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Geomagnetic field generated by the MHD geodynamo processes in the Earth's outer core has a complicated change both in temporal and spatial dimensions and there is little or no evidence for a periodic fluctuation. In order to obtain the ancient geomagnetic field behavior, therefore, it is necessary to measure the magnetization remaining in rocks and ancient objects with paleomagnetic procedures as well as the manual magnetic observations which can track back to several hundred years. In case of paleomagnetic investigations for the past hundreds to thousands years, it is powerful way to use archaeological remains. Archaeological samples baked by early humans such as clay vessels, tiles and kilns in which they were baked are able to be carriers of stable and highly reliable thermoremanent magnetization, so that they are likely suitable for good paleomagnetic targets. Archaeomagnetism, meaning such province of academic, has been well developed in Japan from 1950s. However there was no publication of archaeomagnetic database for worldwide purpose of geomagnetic secular variation studies after Hirooka (1983). So now we have a project to construct a new archaeomagnetic database including reliable direction and intensity datasets with reliable independent dating both before and after Hirooka's work. Moreover, we are also constructing a new web-based database and its online services not only for geomagnetic researchers but also for archaeologist and people who are interested in archaeology. Here we will introduce the Japan Archaeomagnetic Database online version, which has been implemented since 2012.

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