

## 厚さ 2 km におよぶ漸新世のエチオピア洪水玄武岩から得られた古地磁気記録に関する予察的報告

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### A preliminary report on the paleomagnetic records from 2km long section of Oligocene Ethiopian flood basalts

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Paleomagnetic observations of the Continental flood basalts (CFBs) can provide much more complete and complex high-fidelity records for understanding Earth's magnetic field (e.g., Jarboe et al., 2011).

We focus on the Oligocene Ethiopian flood basalts, which cover a large portion of Western Ethiopian Plateau because there are several good sections revealing almost complete flow-on-flow exposures but only sparse paleomagnetic sampling was conducted (Rochette et al., 1998). Indeed, it may be said that they are with much potential to develop understandings of Earth's magnetic field. Especially, Lima-Limo (LL) section which located 450km to the north of Addis Ababa is long exposures of 2km thick.

In 2012, we sampled a successive of 93 basaltic flows and 5 interlayered acidic units in the section for paleomagnetic measurements, as against the 42 flows reported by the previous work. Stratigraphic distances between sites have some variations but the mean is ~20m. Four blocks was sampled from each flow except for one flow (only 2 blocks was sampled). 186 specimens (93 basaltic flows) have been conducted the pilot measurements by both progressive thermal (Th) and alternative field (AF) demagnetization techniques. We report some paleomagnetic results on the features of the initial natural remanent magnetizations (NRMs) and the paleodirections. The main results are about as follows:

According to the calculated pilot virtual geomagnetic poles (VGPs), (1) the LL section apparently consists of 67 reversed flows, 16 normal flows, and 10 excursions or transitional flows when defined as a lower VGP latitude than  $\pm 45^\circ$ . As with the previous work, (2) it seems to contain a succession of only three stable polarity chrons with a large swing of VGP(s) between 2500m and 2600m, and an excursions record in the middle of the older reversed chron. On the other hand, we also have apparently new and interesting findings that (3) five rapid polarity switch are recognized in the reversed-to-normal polarity transition, so that the duration of the normal chron may be slightly much longer, and (4) large fluctuations in the VGP latitudes are identified throughout the whole polarity chrons, and (5) the transitional VGP clusters and separate VGPs appear to have either preferred longitudinal bands (e.g., Laj et al., 1991) or geographically preferred patches (e.g., Hoffman et al., 2008).

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