Lightning charge moment changes deduced from highly sensitive ELF magnetic field observations in Southeast Asia

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In 2018 we established the new permanent observation site in Pahang, Malaysia and started continuous recording of horizontal magnetic waveforms in the Extremely Low Frequency (ELF) band by using high sensitivity search coils. We carried out test measurements at four different locations in Malay peninsula and found out that Pahang is the most electromagnetically quiet place for measurement. Initial results indicate a very good performance registering clear waveforms from lightning discharges. We successfully estimated individual lightning charge moment changes (CMCs) with a small lower bound (~few Ckm) with a lightning location data from total lightning network indicative of deducing spatial and temporal dependence of lightning with CMC over Southeast Asia region.

キーワード：Lightning、ELF (Extremely Low Frequency)、Charge Moment Changes
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