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Type: **Poster**

## Monitoring earthquake Precursor in Sumatra

Since 2016 BMKG has been monitoring earthquake precursors in Sumatra. Observation of these precursors used geomagnetic data that we installed along the Sumatra fault and Megathrust Sumatra in stages, in 2012 install 3 stations namely Gunung Sitoli (GSI), Nias; Sicincin (SCN), Padang; and Liwa (LWA), Lampung. Then in 2017 and 2018 the BMKG installs in Meuloboh (MLB), Aceh; Sabang (SBG), Aceh; Simalungun (SML), Lake Toba; Kepahiyang (KPY), Bengkulu and Muara Jambi (MRJ), Jambi. Currently in Sumatra we have 8 earthquake precursor stations. The method we developed is processing Geomagnetic data using ULF emission to obtain earthquake precursor anomalies. The result is an earthquake precursor parameter consisting of when? That is obtained from an onset time anomaly that has a range of 30 days after onset time, then Where? That is obtained from the direction of azimuth source conductivity in the earthquake preparation zone with a susceptibility of  $\pm 22.50$  from the azimuth and the last one is How Big is the Impact? That is by statistical calculation of the predicted magnitude to be produced. During the period of 2016-2018 the results of the validation of the earthquake precursors that we made produced a very optimistic value of 63%.

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**Track Classification:** Theme 1. The Earth as a Complex System