

Geomagnetic pulsations caused by the disturbances in lower atmosphere

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It has been assumed that most (or all) of geomagnetic pulsations are generated in space plasmas and the energy source is the solar wind. However, the lower atmosphere has enough energy to generate various electromagnetic phenomena in the ionosphere and magnetosphere, although quantitative estimation or observationally reliable confirmation has actually not been done. At the great Sumatra earthquake, we found a clear evidence of electromagnetic effects, i.e., geomagnetic pulsations and