



Global diagnostics of ionospheric perturbations associated with seismicity using VLF transmitter signals received on DEMETER satellite

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From analysis of reception zones of the signals from sounding VLF transmitters on a board of French DEMETER satellite an effect of VLF signal disappearance related to large earthquakes reveals. These scattering spots have a size of about 1000 km in a case of earthquake series in Europe with magnitude $M \leq 5$, they are about 2-3 thousands km for the Indonesia earthquakes with $M \sim 7$ and they probably have huge extension order of 5000 km for the great Sumatra earthquakes. Method of diagnostics applied here has advantage to be global due to world-wide positioning of the powerful VLF transmitters and satellite reception. However it has specific disadvantage because it requires rather long time period of analysis due to large longitudinal distances between satellite orbits. In result for longitudinal spacing about 100 km we need at least in one month period of registration. The work was supported by ISTC under Grant 2990.