

Anomalous variation in the wireless signals propagation associated with earthquake preparation processes

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propagation correlated with earthquake preparation processes. Our observations revealed a phenomena associated with the artificially enhancement of the intensity 3.5GHz signals by using WiMax technology (no change in the transmitting level) as a result of electric and electrochemical processes in atmosphere over the regions of ongoing earthquake preparation. To illustrate the nature of such variations in the range of 3.5GHz in relation to earthquake processes we present two case studies: 1/ for 5.8 of May 22, 2012 in Bulgaria and 2/ for M6.9 of May 24, 2014 in Aegean Sea. Concerning the 5.8 of May 22, 2012 the abnormal intensity modulation started on 05.17.2012 (five days in advance) and reached 200% increase. Epicenter of the M5.8 of May 25 was on 15 km from the wireless receiver. Concerning and M6.9 of May 24, 2014 in Aegean Sea abnormal signal was observed on May 22 (two days in advance) with 30% intensity increase. Epicenter of M6.9 of May 24 was at 260 km from the wireless receiver.

Most likely the observed increase in the intensity is a direct result of the change in the atmospheric properties in the Atmospheric boundary level (ABL) triggered by intensification of radon and other gases release, which lead to change in lowers atmosphere conductivity, already suggested by Lithosphere-Atmosphere-Ionosphere Coupling concept (Pulinets and Ouzounov, 2011). Another possible reason is the forward scattering of WiMax signal (similar to meteor wakes scattering) on aerosol layers formed over the earthquake preparation zone. We are registering an effect of systematic increase (with different rate) at 3.5 GHz associated with the regional seismicity and no significant intensify modulation with an absence of major seismicity in the region.