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The response of VLF signals to the passage of an atmospheric/ionospheric seismic wave after an earthquake in Chile

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Natural disasters, such as earthquakes, tsunamis, volcanic eruptions, tropical cyclones (typhoons in the Pacific, hurricanes in America), often lead to enormous human casualties, causing great damage to the human environment. This is due to the unpredictable nature of disasters. Investigation of the precursor signs of the development of such dangerous events (including an assessment of their power) allows you to inform the relevant services in advance of a natural disaster. This is often a very urgent task. The experimental and theoretical study of the electromagnetic response of the ionosphere to the development of natural catastrophic events is an important component of furthering disaster preparedness. This includes improvement of methods for event precursor isolation for use in warning and development systems. In this, validation of lithosphere-ionosphere communication models are very important. Therefore, in this work, we consider the amplitude anomalies of VLF signals recorded at a station in Moscow (Russia) during the passage of an atmospheric/ionospheric seismic wave from an earthquake in Chile, which epicenter is removed at a distance of ~ 15 thousand km.

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