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Preseismic anomalies of LF signal on the radio path Japan-Kamchatka during November - December 2004

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The variations of phase and amplitude of LF signal propagating from transmitter JJY (40 kHz, Fukushima prefecture, Japan) are analyzed. The receiver is situated in Petropavlovsk-Kamchatski (Russia). The interval from July, 1, till January, 10, 2005 is included in the examination. This interval is characterized by quiet seismic conditions up to the beginning of November and enough strong seismic activity in November and December near Hokkaido (Japan) and in the region of northern Kuril Islands. Seismic activity in a zone of sensitivity of our radio path is determined by three series of earthquakes with M =5.6-7.1. Phase and amplitude anomalies of LF signal begin some days before the first earthquake and continue till the last earthquake o this series (Ì=6.2, 11.11.04). Most strongly and obviously anomalies are shown on amplitude of LF signal. After that during about fortnight the period of seismic calm is observed. Then there is following anomaly of LF signal before two earthquakes (Ì=7.1, 28.11.04 and Ì=6.8, 6.12.04). The next LF anomaly is observed before earthquakes December, 18 and 21 (M =5.8 and M =5.6). This result confirms obtained previously results for the same radio path for earthquakes with Ì=5.5-6.0.