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2.3-P16. STUDY OF HISTORIC SEISMOGRAMS OF NUCLEAR EXPLOSIONS FROM NOVAYA ZEMLYA TEST SITE BY DATA OF THE USSR STATIONS

The RSE IGR has created a database of the digitized records (720 seismogramms) of nuclear explosions conducted at Novaya Zemlya Test Site and recorded by the USSR stations at epicentral distance from 1270 to 4410 km. The digitized seismograms allowed investigating the parameters of nuclear explosions conducted in different environment (in air, under water and underground); characteristic features of wave pattern of each event class were determined. Temporal variations of S-waves attenuation field structure were investigated for the Test Site region using records of Borovoye seismic station at epicentral distance ~2100-2400 km. Amplitude ratio of S and P waves (S/P) was considered, amplitude attenuation velocity in P-wave coda was studied for narrowband channel with central frequency of 1.25 Hz. By records of UNE conducted at Novaya Zemlya Test Site it was determined that from 1967 to 1990 the average value of S/P parameter decreased significantly. In addition, for the same period, the slope of P-coda increased. Data on temporal variations of the attenuation field at the Test Site region testify the uplift of deep fluids onto the Earth crust and upper mantle as a result of long intensive industrial influence on geological environment.

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