

2.3-P01. Simulation of point explosion's seismic energy by means of the frequency spectrum of body waves

Solve the inverse problem, which is aimed at modeling a discrete frequency spectrum of seismic body waves generated by artificially weak point explosion or a natural earthquake ($M \leq 4$). Proposed a spherical model of the hollow area of the point explosion and used a well-known analytical method for modeling the hydro-mechanical oscillations of a liquid drop. Innovation in the applied work is the use of a complete solution of the radial Euler equation. Such a modification of the classical scheme, which uses only an internal solution is mathematically quite correct, because it means virtuality of seismic source's elastic oscillation. As a result, with the help of the discrete spectrum of seismic body waves can be determined the linear parameters and total energy of point explosion (weak earthquake) that is approximated as a hollow body with spherical shape.

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