

Investigation of evolution process in focus of tectonic earthquake by semblance of spectral phases method

Epiphansky A.

United Geophysical Survey of Russian Academy of Sciences, Moscow, Russia

e-mail: epiphansky@gmail.com

Presented results of application of development method of semblance of spectral phases of Fourier transform to processing of digital seismic records of tectonic events. The method developed on basis of correlation semblances of spectral phases of Fourier transformation of first motion in P-wave and depth phases pP (and sP) waves. The developed method at first was destined to investigate of depth of crust events.

The method base is a calculation of semblance value by the set seismic station data and set of seismic phases together.

The graphic availability of program permits to create two dimensional diagram of values of semblance function in coordinates depth-relative time (origin time). This also available to receive function value for arbitrary point of that diagram.

This permit to observe the focus structure in given coordinates and investigated evolution of focus in time before entrance of visible pulse on seismic record.

It has been show the complicity of seismic events - this consists of few parts (volumes), each of them involved acceleration movement, and relative quiet zones (slipping). Seismic tools are registering visible motion, that corresponds to unit motion along a crack as a rule. It is presented investigation of spectral composition of different parts of focus. An attempts of estimation of energy emission of observed motions are discussed.

There are note that appears more simples focus processes. It was observed as deep-focus events in Hindu Kush area and North Korea nuclear explosions.