

Review of Frequently used Seismic P Wave Detection and Picking Algorithms

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Seismic signal detection and phase arrival picking had been initially carried out manually by qualified analysts. Currently, the introduction of large digital seismic monitoring networks has led to the necessity of automatic detection and picking tasks. The latter are extremely important, not only because an earthquake or a nuclear explosion must be detected and located automatically, but also to optimize the necessary storage memory. Moreover, an automatic picking task can considerably reduce the analyst effort and make picking faster and more objective. The need for automatic seismic signal detection and picking algorithms has led many researchers to investigate various techniques, ranging from simple to sophisticated procedures. Each procedure has advantages and disadvantages. The choice of an appropriate algorithm depends on the performance required and the type of the expected signal (repeating sources, low/high SNR, emergent, impulsive). The aim of this study is to discuss the most popular and frequently employed automatic detection and picking algorithms.

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Promotional text

This presentation is a literature review of the most popular and frequently employed automatic detection and picking algorithms. The goal is to discuss their advantages and disadvantages with other researches and scientist so that they can be improved or others created.

Oral preference format

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