عنوان مقاله:

CRUSTAL VELOCITY STRUCTURE IN NORTH-EAST OF IRAN, USING ITERATIVE TIME-DOMAIN DECONVOLUTION RECEIVER FUNCTIONS

محل انتشار:

پنجمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1386)

تعداد صفحات اصل مقاله: 9

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خلاصه مقاله:

The tectonics of North-east of Iran is a key to understanding the closure processes of the Paleo-tethys oceanics realm as well as associated continental deformation and the crustal study is very important in understanding the tectonic evolution of an area. There is no a number of studies on crustal structure in this area then less is known and little has been published on this problem. This paper presents the results of seismic experiment aimed at the crustal structure beneath the 20 broadband and middle-band seismic stations in Northeast of Iran, using the teleseismic waveform receiver functions technique. An iterative time-domain deconvolution approach is applied to estimate receiver functions. Depth of the Moho and three main parts for crustal structure in northeast of Iran is suggested as: The upper part of crust has an S-wave velocity between 2.4–3.4 km/s and a 11 km thickness as an average with a 2.0 km standard deviation, the middle part of crust has an S-wave velocity between 3.1–3.6 km/s and a 21 km thickness with a 3.3 km standard deviation, the lower crust has an S-wave velocity between 3.6– 4.3 km/s and a 16 km thickness with a 3.3 km standard deviation. The Moho depth is 49 km with 2.0 km standard deviation.

کلمات کلیدی:

North-east of Iran, Depth of Moho, Crustal velocity structure, Teleseismic, Receiver function, Iterative time-domain deconvolution

لینک ثابت مقاله در پایگاه سیویلیکا:

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