



利用接收函数方法研究大盈江断裂两侧S波速度结构

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S-wave velocity structures in both sides of Dayingjiang fault inverted by receiver function

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摘要 利用研究区(24.2° ~25.2° N,97.5° ~98.5° E)内大盈江断裂两侧5个流动数字地震台站记录到的宽频带远震P波波波形数据进行接收函数反演,得到台站下方0~100km深度范围内地壳、上地幔S波速度细结构.结果表明:研究区内,以大盈江断裂为界,其西北侧Moho面深度约为38km;东南侧Moho面深度为40~42km.断裂两侧地壳、上地幔S波速度结构存在显著差异,东南侧台站下方地壳和上地幔均存在大范围低速区;西北侧台站下方地壳内存在低速层,而上地幔中无明显低速层.研究区内的S波速度结构存在明显的横向非均匀性.

关键词: 大盈江断裂 接收函数 S波速度结构 地壳 上地幔 云南

Abstract: The studied area is 24.2° —25.2° N,97.5° —98.5° E.The studied five digital seismic stations distributed in the both sides of the Dayingjiang fault in the studied area.The S-wave velocity structures within the depth of 0—100 km beneath five stations are inverted from the broadband teleseismic P waveforms by receiver function.The results show: In the northwest side of the Dayingjiang fault,the depth of Moho is about 38 km,and in the southeast side,the depth of Moho is 40—42 km.The S-wave velocity structures of the crust and upper mantle differ obviously in the both sides of the fault.In the southeast side,there are lower velocity zones in both crust and upper mantle beneath the stations;but in the northwest side,there are lower velocity zones only in the crust beneath the stations.In the studied area,the S-wave velocity structures shows strong horizontal heterogeneity.

Key words: Dayingjiang fault receiver function S-wave velocity structure crust upper mantle Yunnan

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