

地震台阵对2010 M8.8智利地震 破裂过程的直接成像

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Imaging the rupture of the 2010 M8.8 Chile earthquake with a

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摘要

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摘要 对2010年2月27日智利近海发生的M8.8级巨震,本文反向投影美国地震台网宽频带台站记录到的远震P波辐射能量,得前缘随时间的变化关系.图像表明,智利M8.8级强震破裂过程是一次不均匀的双向破裂过程,整个破裂过程持续了近150 s,破越震中南端80 km,北北东向上近200 km.

关键词: 2010 M8.8智利地震 反向投影法 破裂过程 震源辐射能量

Abstract: The major earthquake occurred off the coast of the Maule region of Chile on February 27, 2010, rated 8.8 on the moment magnitude scale. The rupture front of the earthquake was imaged by back projection of teleseismic P-wave energy recorded by United States National Seismic Network. It is found that this earthquake had an asymmetrical bilateral rupture with a dominant direction from south to north. The rupture continued for at least 150 s and extended about 80 km in the south and 200 km in the north direction along Chilean coast.

Keywords: 2010 M8.8 Chile earthquake Back-projection method Rupture process Radiated energy

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