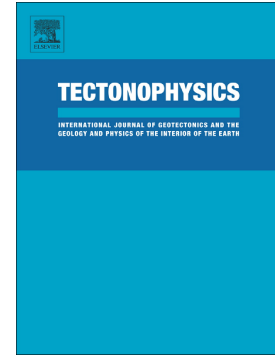


Accepted Manuscript

Crustal velocity structure around the eastern Himalayan syntaxis:
Implications for the nucleation mechanism of the 2017 Ms 6.9
Mainling earthquake and regional tectonics

Shaoqian Hu, Huajian Yao



PII: S0040-1951(18)30231-2
DOI: doi:[10.1016/j.tecto.2018.06.006](https://doi.org/10.1016/j.tecto.2018.06.006)
Reference: TECTO 27864
To appear in: *Tectonophysics*
Received date: 22 March 2018
Revised date: 7 June 2018
Accepted date: 11 June 2018

Please cite this article as: Shaoqian Hu, Huajian Yao , Crustal velocity structure around the eastern Himalayan syntaxis: Implications for the nucleation mechanism of the 2017 Ms 6.9 Mainling earthquake and regional tectonics. Tecto (2018), doi:[10.1016/j.tecto.2018.06.006](https://doi.org/10.1016/j.tecto.2018.06.006)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Crustal velocity structure around the eastern Himalayan syntaxis: Implications for the nucleation mechanism of the 2017 M_s 6.9 Mainling earthquake and regional tectonics

Shaoqian Hu^a, Huajian Yao^{a,b,*}

^aLaboratory of Seismology and Physics of the Earth's Interior, School of Earth and Space Sciences, University of Science of Technology of China, Hefei, Anhui 230026, China

^bMengcheng National Geophysical Observatory, University of Science and Technology of China, Anhui, China

Abstract

A magnitude (M_s) 6.9 earthquake occurred on November 18, 2017, in Mainling, southeastern Tibet, which is the largest earthquake to occur in or around the eastern Himalayan syntaxis within the last 50 years. To further understand the nucleation mechanism of this earthquake, the local seismicity distribution, and the regional tectonics, the detailed crustal velocity structure is obtained by direct ambient noise tomography using the Rayleigh wave phase velocity data ($T=5 \sim 40$ s) in this area. The spatial correlation of the velocity model with the distribution of the seismicity reveals that the nucleation mechanism of the 2017 M_s 6.9 Mainling earthquake is closely related to the local stress condition and velocity structure and to the aqueous fluid and

*Corresponding author at: Laboratory of Seismology and Physics of the Earth's Interior, School of Earth and Space Sciences, University of Science of Technology of China, Hefei, Anhui 230026, China.

Email addresses: husq@ustc.edu.cn (Shaoqian Hu), hjyao@ustc.edu.cn (Huajian Yao)

Download English Version:

<https://daneshyari.com/en/article/8908595>

Download Persian Version:

<https://daneshyari.com/article/8908595>

[Daneshyari.com](https://daneshyari.com)