



## **Infrasonic and seismic signals from Mw7.8 Nepal earthquake of April 25,2015**

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On April 25, 2015, at 06:11:26 UTC (14:11:26 Beijing Time), a powerful earthquake ( $M_w=7.8$ ) occurred in Nepal near Tibet of China. The epicenter ( $28.24^{\circ}\text{N}, 84.74^{\circ}\text{E}$ , focal depth 15 km) was about 82 km NW of Kathmandu, Nepal. The earthquake was related to collision between the India plate and the Eurasian plate. At a distance of 1400 km from the epicenter, infrasonic and seismic signals were recorded by Tengchong seismo-acoustic array located in southwest of China. Ground-coupled air waves generated at the station by the vertical displacement of the seismic waves which arrival time and waveform characteristics are same as seismic waves. The PMCC results indicated that the infrasonic waves showed a consistent acoustic trace velocity of approximately 0.392 km/s from 14:33 to 15:07(Beijing Time) but the azimuth of arrival decreased with time from 340 to 260 degrees. The azimuth variations and the expansion of the signal duration suggested that the Mountains of eastern Tibet Plateau acted as sources of infrasonic waves and radiated the infrasound that traveled to Tengchong seismo-acoustic array. For large earthquakes occurring in mountainous regions, infrasonic measurements are valuable for the analysis of the remote effects of earthquakes.