



Ambient seismic noise monitoring in Chuetsu, Japan and the area affected by wave speed variations

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Ambient noise crosscorrelations have been used on several occasions to monitor temporal variations in seismic velocity. The 24 stations used in this study are a sub-array of the Hi-Net network that covers most of Japan. Approximately 2 years of continuous two-component measurements are available for the tiltmeters of these stations, spanning from the start of 2004 to the end of 2005. On October 23, 2004, a $M_w = 6.6$ event occurred in the Niigata prefecture, in the area of Chuetsu. Using ambient noise crosscorrelation monitoring between 0.1-1.0 Hz, we observe a seismic wave speed drop of approximately 0.15 % coinciding with this event.

In addition, we use the spatial extent of the array to study how far the effect of the wave speed drop is detected.