



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

Céline Hadziioannou (1,2), Eric Larose (1), Yosuke Aoki (3), Tetsuya Takeda (4), and Michel Campillo (1)

(1) Université Joseph Fourier, Grenoble, LGIT, France (hadzioc@obs.ujf-grenoble.fr), (2) Ludwig-Maximilians-Universität, München, Germany, (3) Earthquake Research Institute, University of Tokyo, Japan, (4) NIED, Tsukuba, Japan

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.