

## NVT errors estimates

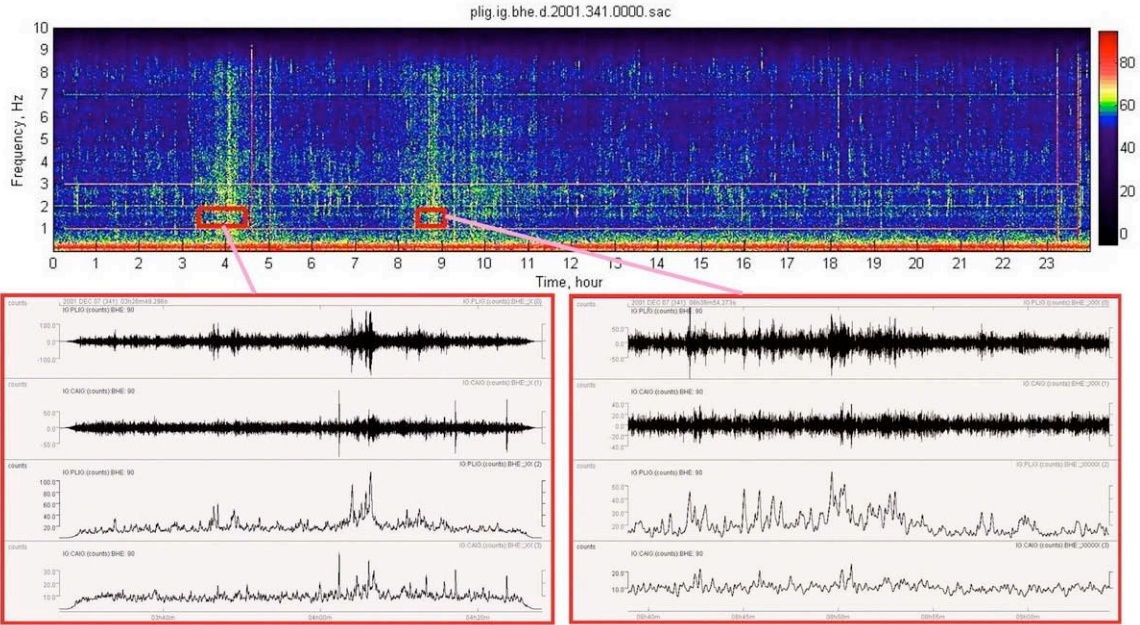
We accepted formal errors of NVT localizations obtained from HYPOINVERCE-2000 [Klein, 2007]. These errors estimated as: "The vertical error ERZ and horizontal error ERH are simplified errors derived from the lengths and directions of the principal axes of the error ellipsoid. Each of the three principal axes (whose lengths are the standard errors) are projected onto a vertical line through the hypocenter, and the largest value is ERZ. ERH is simply the length of the longest of the principal axes when viewed from above and projected onto a horizontal plane. ... error ellipse scales with the estimated error RDERR (represents the aggregate of all un-modeled timing errors) and the earthquakes RMS."

Figure S5 presents NVT events locations and corresponding depth errors (ERZ) projected onto the vertical plane parallel to the trench strike. Normally ERZs are ~ 10 km for the NVT hypocenters located below the MASE network. ERZs increase noticeably for the NVT located sideways on to the MASE profile. Even the NVT depths are rather uncertain the most of reliably located NVT bursts tend to occur in the continental crust.

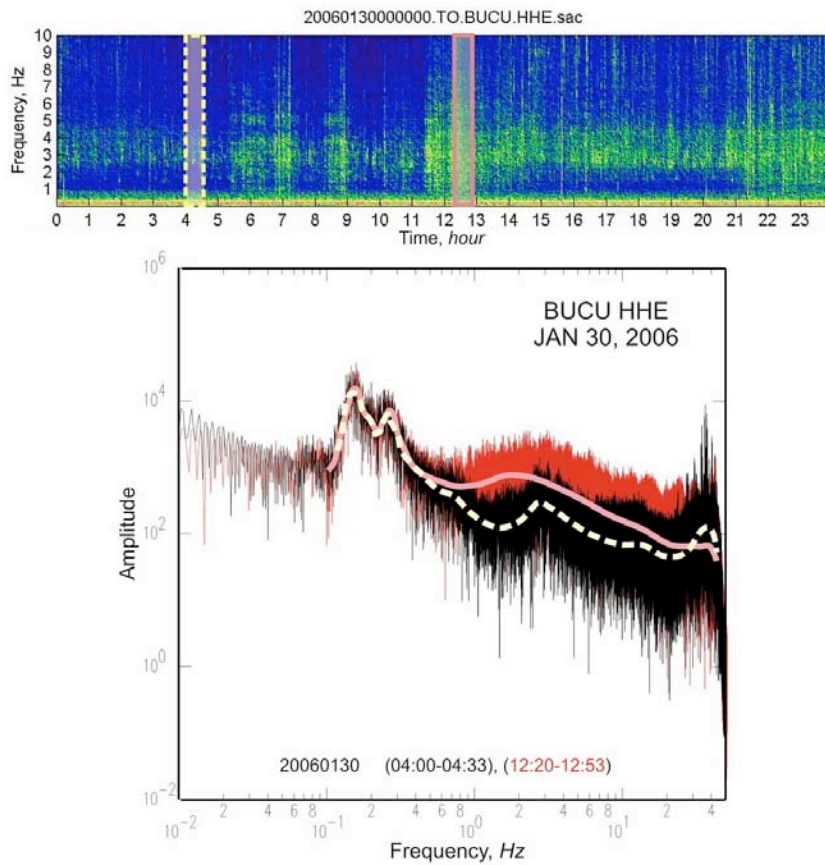
Horizontal errors (ERH) are less for the NVT epicenters located eastward from the MASE profile (Figure S6) than for the tremor events occurred to the west of it. This asymmetry is clearly related to the shape of the seismic stations chain. It is concave to the east at latitude ~18 N where the main cluster of NVT is detected. The most of the NVT locations have  $ERH < 20$  km.

## Reference

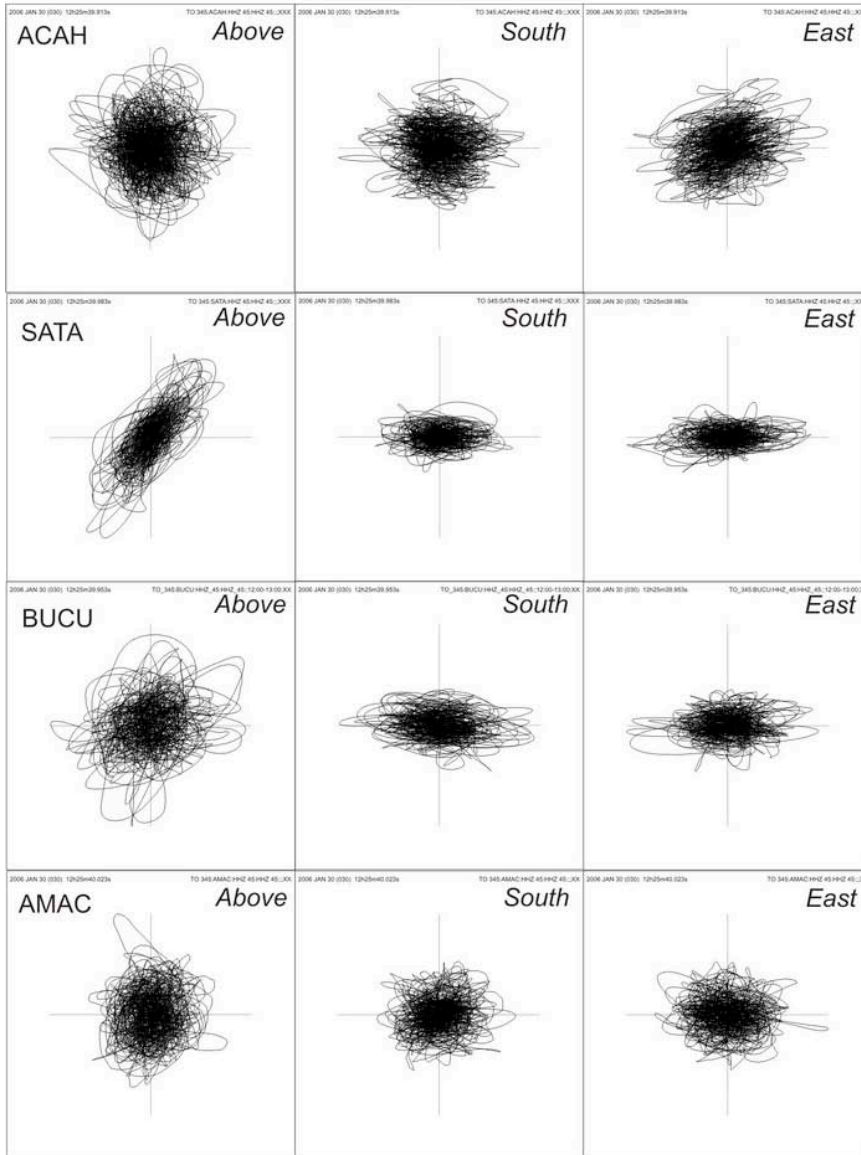
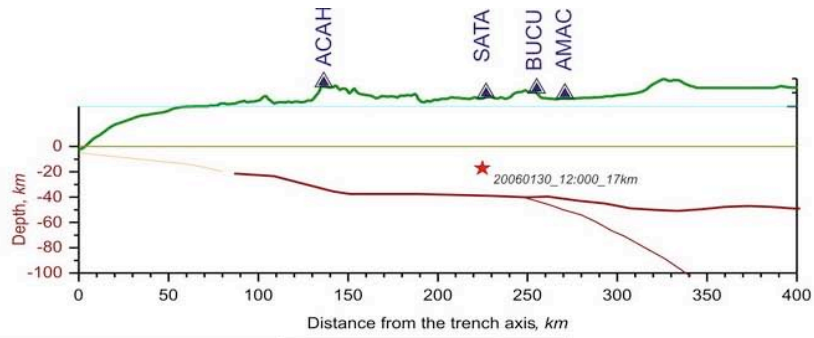
Klein, F.W. (2007), Users Guide to HYPOINVERSE-2000, a FORTRAN Program to Solve for Earthquake Locations and Magnitudes, version 1.1, USGS Open File Report 02-171 revised.



**Figure S1** NVT can be easily identified in daily spectrograms from PLIG and CAIG.

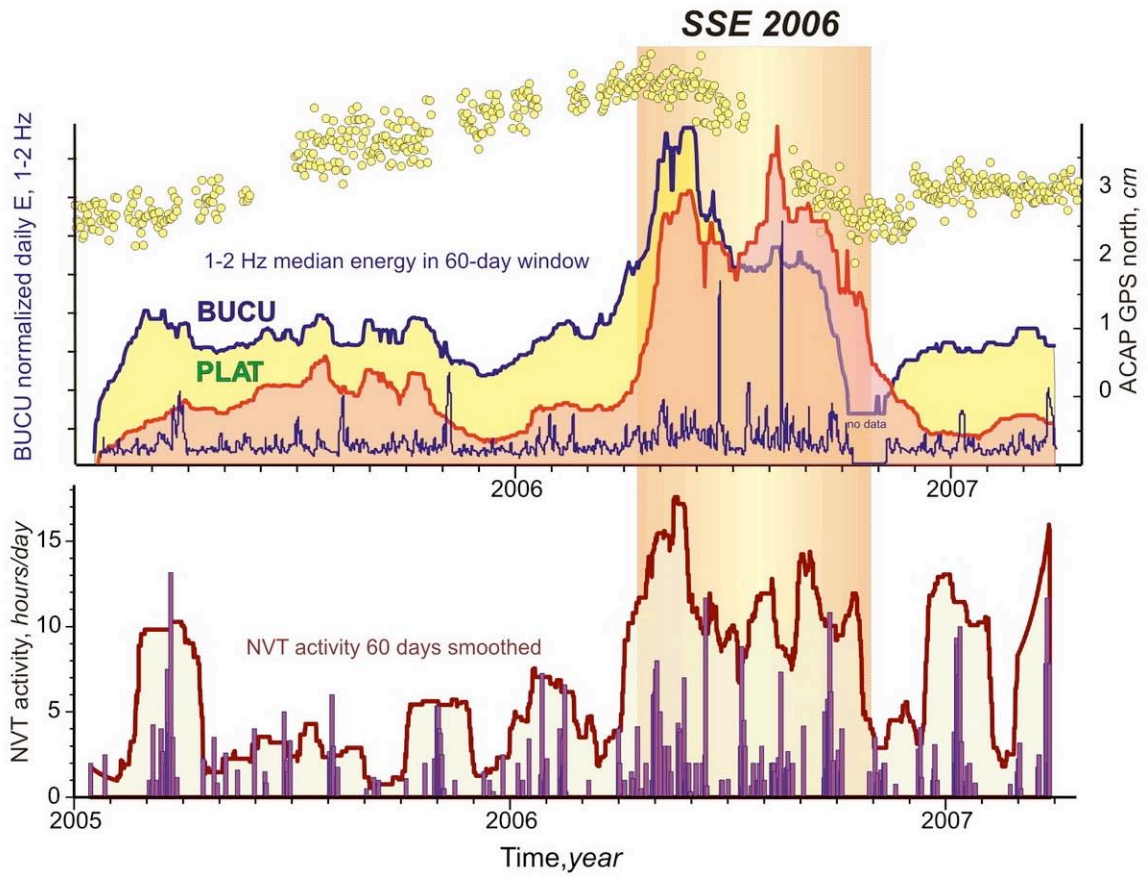


**Figure S2** Spectrogram of the BUCU broadband record on 1 January 2006 and spectral amplitudes corresponding to the noise and NVT.

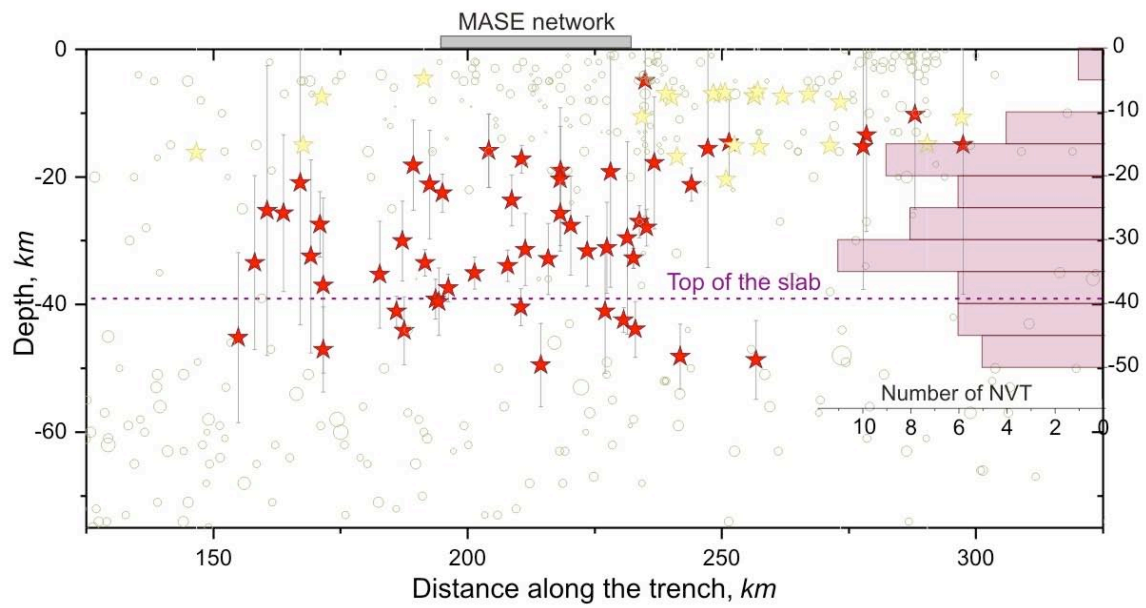


**Figure S3a** Particle motion plots in the horizontal and vertical planes for the 30 January 2006 12:00 NVT burst at the ACAH, SATA, BUCU, and AMAC stations.

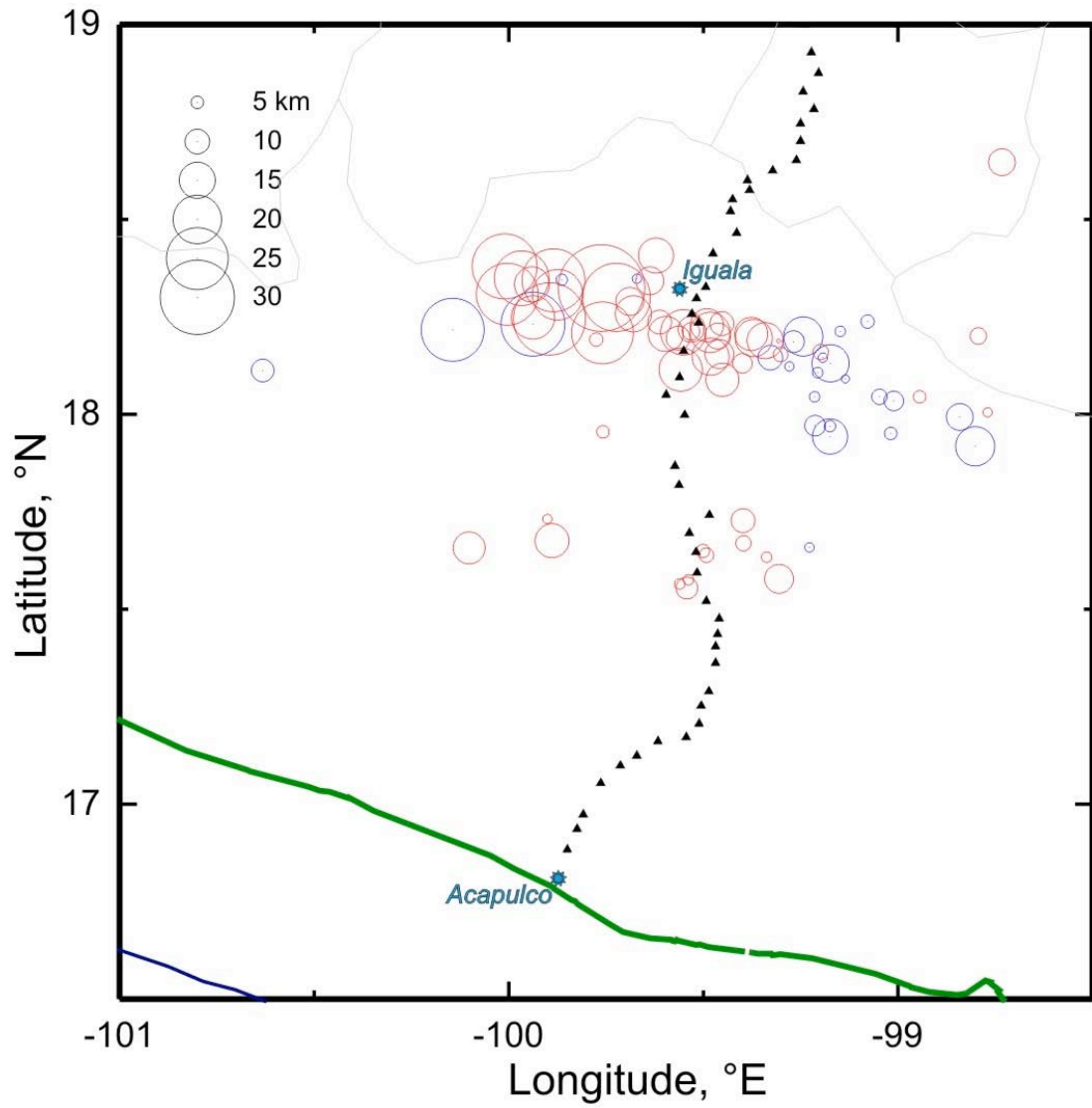
**Figure S3b** Records of 100 Hz sampling rate at several MASE stations on 30 January 2006.



**Figure S4** NVT activity curves.



**Figure S5** NVT hypocenters and 2005–2006 seismicity projected on the vertical plane, which is parallel to the trench strike.



**Figure S6** Distribution of NVT epicenters and their horizontal errors.