Geophysical Research Abstracts
Vol. 13, EGU2011-4552-3, 2011
EGU General Assembly 2011

The seismo-acoustic array of Tengchong in southwest of China and its record analysis

Wei Su and Songyong Yuan
Institute of Geophysics, China Earthquake Administration, Beijing,China(suweidc@hotmail.com)

The seismo-acoustic array of Tengchong is located in southwest of China for monitoring volcanic and earthquake activity. The array consists of four MB2005 microbarometers with bandwidth 0.01-27Hz and four BBVS-60 seismometers with bandwidth 0.01667-50Hz arranged in a centered triangle with an aperture of about 1.8 km. The co-located microbarometers and seismometers are installed in a vault and the central element is collocated with a weather station equipped with Vaisala WXT510 Transmitter and QML201 Logger. The sensor data are recorded by a 24-bit EDAS24IP-6 digitizer with 50Hz sampling rate and transmitted via 3G wireless broadband to IGP, Beijing for archiving and analysis.
So far the array has been running nearly a year and recorded a number of earthquakes and lightning events. The array recorded local infrasound and epicentral infrasound of Ms7.1 Yushu earthquake on April 14, 2010 occurred in Qinghai Province. We analyzed the infrasound data using PMCC provided by CEA/DASE. The results showed that the azimuth of epicentral infrasound is consistent with the azimuth of earthquake. As for the lightning events, seismic and infrasonic records show same arrival time and similar waveform characteristics.
As Dr. Läslo G. Evers said: the combined measurement of seismic and infrasound signals are certainly beneficial for gaining more knowledge on processes related to earthquakes, explosions etc.
This work is supported by the fundamental research and development project of the Institute of Geophysics, CEA(DQJB07B02).