

Microearthquakes beneath Sapporo Urban Area Observed by Using Borehole Seismometers

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On May, 1997, Sapporo municipality installed three borehole seismometers in Sapporo city to observe microearthquakes in and in its vicinity of Sapporo. Ueyama Company has installed strong-motion and high-gain seismometers at three borehole stations in and around Sapporo since 1999. We have collected seismic records from these borehole stations as well as other high-gain seismic stations operated by various organizations and have determined hypocenters of 128 microearthquakes ($M=0.2-2.8$) occurring beneath Sapporo urban area from May, 1997 to January, 2004. Hypocentral distribution shows clusters of earthquakes near the central part and the eastern-southeastern part of Sapporo. A focal mechanism for one earthquake estimated from P-wave first motion polarities has nearly east-west pressure axis.