

## Strong motion observation and underground structure estimation in Sapporo Urban Districts

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Sapporo urban districts are located on a deep sedimentary basin in the western part of Ishikari depression. We show the existing state of various studies for strong motion prediction in Sapporo urban districts. We have carried out strong motion observations at more than 20 sites. The data show spatial variation of the seismic response and strong excitation of basin surface waves. We have estimated deep underground structures at several sites by using the microtremor exploration method. The basement has a S-wave velocity of about 3000 m/s at a depth of about 3000 m. We have examined the effect of the deep underground structure on seismic motion based on observed S-waves. Micro-earthquake activity that may be related to a blind active fault has been also studied.