The site response of the seismic intensity sites of Japan Meteorological Agency (the Eastern Japan)

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Japan Meteorological Agency has about 600 seismic intensity observation sites now and seismic intensity is not only observed but also the acceleration waveform data is collected. The focus characteristic, the characteristic of the propagation of a seismic wave, and the site response of observation sites are included in the acceleration waveform data. Since a seismic wave is influenced of the structure of the ground, it is important to know the site characteristic of sites in order to use wave data. Although the site response of K-net have been already evaluated by Uetake, et al. (2002), Sato et.al.(1998), site response of Japan Meteorological Agency sites have not been evaluated yet. Since sufficient data was already accumulated, we evaluated the site response of eastern Japan part.

Spectral inversion method by Iwata and Irikura (1986) and Kato et.al.(1998) was used for evaluation of site response. We chose the referrence sites as K-net Erimo for Hokkaido area, K-net Kesennuma for Tohoku area and K-net Hinohara for Kanto area.

Our purpose is to get knowledge of the site response of each site. However, we describe mean site responses of each area. In Hokkaido area, site response of low frequency is larger at Tokachi. In Tohoku area, site response of low frequency is larger at Japan sea side. In Kanto area, site response of low frequency is larger at Tokyo bay area and southern Ibaragi prefecture. We obtained the similar results as the past studies