Improvement in Rapidness of Earthquake Early Warning using Ocean Bottom Seismic Data

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This paper proposes two earthquake early warning (EEW) methods for ocean bottom seismic (OBS) data system of railways. The one is that the P-wave warning method, which has been used in the conventional Shinkansen system, can be applied also to the OBS data. Using multiple-station data, the other method enables us to issue an earthquake alert to areas far from the source region earlier than the conventional technique while an extremely large rupture is in progress. We conclude that the OBS data system can be improved in terms of the rapidness of EEW using the methods proposed in this study.