Real-time short-term earthquake forecasting after a large earthquake in Japan

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Aftershock forecasting is an important scientific response for reducing seismic risks after a damaging earthquake. We have recently developed a real-time aftershock forecasting system at National Research Institute for Earth Science and Disaster Resilience. In the system, the forecast is generated based on the Hi-net automatic hypocenter catalog, where earthquakes are automatically detected and determined in real-time. Here, we introduce an overview of the system and demonstrate the performance of the real-time forecasting. We also discuss the probability forecasting of earthquakes larger than a main shock based on the aftershock forecasting model.