

## 岩手・宮城内陸地震の震源域近傍における地震動と電場の同時観測

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### Simultaneous observations of ground velocity and electric-field variations near the fault of the Iwate-Miyagi-Inland earthquake

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On June 14, 2008, an earthquake of Magnitude 7.2 occurred near the boarder of Iwate and Miyagi Prefectures. Soon after its occurrence, we set up two sites for simultaneous observations of ground velocity and electric-field variations associated with aftershocks. At one site we installed a three-component seismometer of velocity type together with two pairs of electrodes for NS and EW electric field measurements. At the other site we used a single-component (vertical) seismometer. Cables connecting electrodes were directly connected to the data logger, LS7000, together with the outputs of seismometers. The sampling interval was set at 200 Hz so as to ensure time resolution for high-frequency variations. During observations, more than ten aftershocks larger than magnitude 4.0 occurred mostly within 30 km distance. One typical example was obtained on June 16, two days after the main shock, in association with one of the largest aftershocks (M5.2) and clear records were obtained at both the sites. The onset of P-wave is characterized by a large vertical component, compared with horizontal components. Seemingly associated with this vertical component, clear electric variations were observed with a phase shift between the NS and EW electric components, suggesting a circular polarization as was the case for an M4.3 aftershock in the Noto region. It is important to note that the EW component is simultaneous with the vertical ground velocity, but the NS component precedes the ground velocity by about 0.3 sec.