

## **Influence of the DC electrification of the JR Hokuriku line to the observation of crustal movement at Tsuruga station**

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Meteorological Research Institute has continuously observed crustal movement by the borehole-type strainmeters and tiltmeters in Tsuruga City, Fukui Prefecture from June 1996. At this observation station, all observation components have been contaminated with large noises since September 24th in 2006. As a result of the investigation, it was confirmed that the day was when JR Hokuriku line nearby was changed to DC electrification from AC. It thinks that the change of the magnetic field which are created by the DC electricity influenced the sensor in the magnetic storm influences, because magnesensors are used for detection of displacement in the strainmeters and the tiltmeters.

It is also confirm that the magnetic field change at the Tsuruga observation station became larger with DC electrification from the record of the Fluxgate magnetometer which is installed at the Tsuruga observation point. Because the vertical component of the magnetic field change (Z) is remarkable, the tiltmeter which a magnesensor is installed in the vertical direction has a large influence.