

Groundwater level changes associated with the seismic waves of 2004 off the west coast of northern Sumatra Earthquake (M9.0)

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GSJ, AIST constructed the Observation Well Network in and around Tokai and Kinki regions and have been monitoring the groundwater on observation wells. We research the groundwater changes associated with earthquakes. It is well known that the groundwater changed on the wells far from the hypocenter of the earthquake. It is thought that the cause of the groundwater changes is the seismic waves. After off the west coast of northern Sumatra Earthquake (M9.0) occurred at December 26, 2004, the groundwater levels changed on observation wells of GSJ, AIST. Based on the observation results, we organize the information on the groundwater level responses to the seismic wave. In addition, compared the groundwater level with strain data at HNO observation well, it is found that the areal strain component and the groundwater level are almost similar in shape. We estimated the strain sensitivity of the groundwater level from the responses to the seismic wave.