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Coseismic temperature and level change of hot spring water observed in San-in district

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Coseismic temperature and level changes due to several earthquakes were observed in hot springs in San-in district where we maintain observation network consist of 15 spa sites after the 2000 Tottori-ken Seibu earthquake. Nishida et.al.(2009) investigated a relationship coseismic temperature changes and characteristics of earthquakes. They also suggested that trends of hot spring temperature were related to stress conditions in deep crust. In this study, we tried to estimate these changes using correlation coefficient and AR model. We also observed water level synchronized temperature at several stations and analyzed this phenomenon.

Keywords: hot spring, water temperature change, water level change, earthquake, San-in district