Correlation between water level and crustal strain in the Yasutomi observation wells

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We analized correlations between water level and crustal strain recorded at the Yasutomi observation wells, Hyogo Prefecture,central Japan.

The phase differences and the power spectrum density ratios between the strain and the water lebel show three distinct frequency bands which are dominated by effects of earth tides, air pressure fluctuations, and seismic waves, respectively.

Based on the observed frequency dependent correlations between water level and strain, a quasi-statics model of the aquifer-well system at Yasutomi is constructed.