

## Total Magnetic Field Changes associated with the 2010-2011 seismo-volcanic crisis at Taal Volcano (Philippines)

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A mechanical model was presented which caused the 2010-2011 seismo-volcanic crisis of Taal Volcano, when the total evacuation of the inhabitants was conducted at the initial stage of the crisis in 2010. The model explains the observed magnetic changes as due to the piezomagnetic effect, in which a large hydrothermal reservoir repeated inflation and deflation. This implies that the hydrothermal reservoir plays the most important role in the activity of Taal Volcano.

Keywords: Taal Volcano, 2010-2011 seismo-volcanic crisis, Total Magnetic Field Change, Hydrothermal Reservoir, Curie Point Isotherm, Piezomagnetic Effect