

## ***Interactive comment on “Anomalous frequency characteristics of groundwater levels before major earthquakes in Taiwan” by C.-H. Chen et al.***

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The constructive comments and valuable suggestions are greatly appreciated. We will modify our manuscript accordingly.

The series books of “Earthquake cases in China” are very important references in our study; we will incorporate the relevant ones in our text.

We agree that the variations of groundwater level may contain long-term and short-term signals in searching the precursory of earthquakes. Due to the relative short establishment periods in our groundwater monitoring system (starting from 1997) and

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the uneven and sporadic occurrences of strong earthquakes ( $M > 6$ ) in Taiwan, we have mainly focused on the short-term anomalous signals at present. The long-term anomalous features will be developed along with the research course.

Indeed, the anomalies of groundwater level records in Taiwan can be found in various aquifers and can be served as a good strain meter (for example, see Lai et al., 2010 and references therein). Further study is certainly needed in this respect.

Reference

Lai, W.C., Hsu, K.C., Shieh, C.L., Lee, Y.P., Chung, K.C., Koizumi, N. and Matsumoto, N., 2010. Evaluation of the effects of ground shaking and static volumetric strain change on earthquake-related groundwater level changes in Taiwan. *Earth Planets Space*, 62, 391-400.

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