

Referees Report on the ms npg-2015-16

I carefully went through the manuscript of Toledo et al as well as considered the relevant discussion in NPGD. Since it contains original material and interesting conclusions, I think that it certainly merits publication in npg. However, although the authors discuss their findings by invoking a self-organized criticality model (this is also mentioned in their abstract), they do not mention very recent literature dealt also with the occurrence of the Tohoku M9.0 earthquake in the frame of a criticality model. Thus, I would strongly recommend to the authors to improve their manuscript by adding at the end of Section 3 the following:

"Recent studies on these systems (e.g., see Sarlis et al. 2011a) including the Olami-Feder-Christensen model (Sarlis et al. 2011b) revealed a striking similarity of the fluctuations of the order parameter of seismicity. Focusing on these fluctuations before the Tohoku earthquake, it has been found that they exhibit an unprecedented minimum almost two months before, i.e., in the beginning of January 2011 (Sarlis et al. 2013, 2015; Varotsos et al. 2011, 2014)".

The above citations are the following:

N. V. Sarlis, E. S. Skordas, and P. A. Varotsos, " Similarity of fluctuations in systems exhibiting Self-Organized Criticality", Europhysics Letters (EPL),), Vol. 96 (2011), 28006(6)

N. V. Sarlis, E. S. Skordas, and P. A. Varotsos, "The change of the entropy in natural time under time-reversal in the Olami-Feder-Christensen earthquake model" Tectonophysics, Vol.513 (2011), 49-53

Nicholas V. Sarlis, Efthimios S. Skordas, Panayiotis A. Varotsos, Toshiyasu Nagao, Masashi Kamogawa, Haruo Tanaka and Seiya Uyeda " Minimum of the order parameter fluctuations of seismicity before major earthquakes in Japan ", Proceedings of the National Academy of Sciences of the United States of America, Vol.110 (2013), 13734-13738

Nicholas V. Sarlis, Efthimios S. Skordas, Panayiotis A. Varotsos, Toshiyasu Nagao, Masashi Kamogawa, and Seiya Uyeda " Spatiotemporal variations of seismicity before major earthquakes in the Japanese area and their relation with the epicentral locations", Proceedings of the National Academy of Sciences of the United States of America, Vol.112 (2015), 986-989

P.A. Varotsos, N. V. Sarlis and E. S. Skordas, "Scale-specific order parameter fluctuations of seismicity in natural time before mainshocks", Europhysics Letters (EPL), Vol. 96 (2011), 59002(6).

P. A. Varotsos, N. V. Sarlis, and E. S. Skordas. "Study of the temporal correlations in the magnitude time series before major earthquakes in Japan" *J. Geophys. Res. Space Physics*, Vol. 119 (2014), 9192-9206, doi: 10.1002/2014JA0205800.

In short, I gladly recommend the publication of this interesting paper if the aforementioned improvement will be made.