

# AOB Seminar

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開催日時: 2015年7月10日(金) 10:00 - 11:00

場 所: 地震・噴火予知研究観測センター 別館第1会議室

講演題目&要旨:

## **Observational Approach to Earthquake Prediction with Physical Understanding**

A cellular automata model originally proposed by Sacks and Rydelek (1995) is utilized to explain field observations of crustal processes (anomalies) leading to large earthquakes. This model successfully explains fundamental seismological observations of the Gutenberg-Richter law, asperities, stress drop-magnitude relationship, or rupture propagation adopting the simple Coulomb failure mechanism. There need to be observable anomalies pointing to an impending large earthquake, if earthquake prediction (short-term) is going to have any utility. We incorporated the effect of dilatancy hardening into the model to explain observed seismic quiescence before the main earthquake. The quiescence manifests in larger magnitude events only in many cases but not without exceptions. It is most desirable to make new observations to detect dilatancy breakdown in the crust if we follow this model.