

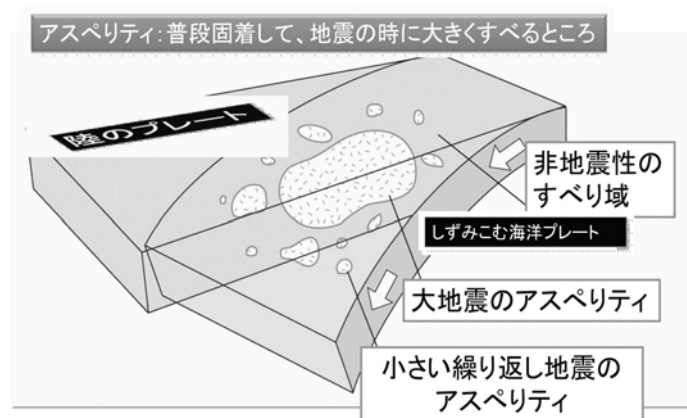
## Future Research Plan for Prediction of Earthquakes and Volcanic Eruptions

Naoshi Hirata<sup>1\*</sup>

<sup>1</sup>ERI, University of Tokyo

The current prediction research program named "The observation and research program for prediction of earthquake and volcanic eruption (2009-2013)" consists of the following four objectives:

- 1) Development of forecasting system of processes of earthquake and volcanic eruption
- 2) Comprehensive understanding of earthquake and volcanic eruption
- 3) Development of new technology
- 4) Organizing structures of administration, research, education, and outreach



We focus on development of the system based on physics and chemistry that control earthquake generation and volcanic eruptions. The system should follow general ideas of prediction sciences, where we first estimate current state variables and then forecast development of the state. We still know a little about the real physical mechanism of generation and preparation of earthquake, but now we are getting more about the physical property of plate boundary.

Keywords: Earthquake Prediction, Prediction of Volcane Eruption, Prediction Sciences, Disaster Mitigation, Complex system