

Japanese National Research Program for Earthquake Prediction and Disaster Mitigation

NAOSHI HIRATA

Earthquake Research Institute, The University of Tokyo

The Japanese national earthquake prediction program started in 1962 with a blue print for the scope and direction of research to follow. Substantial time and efforts were subsequently devoted to the construction of new observation networks and the study on the earthquake generation mechanisms. An important result has been the recognition of the great difficulty in identifying creditable precursors due to a diversity of earthquake generation process. After the 1995 Kobe earthquake, a new age of near real time observations of Earth's crustal processes by dense arrays of seismic and the GPS (Global Positioning System) stations has arrived. The results of the real time monitoring may lead to a new approach in the earthquake prediction research, i.e., the quantitative forecasting of the crustal activities. The new national program, which inherits its essential observational network from all the previous programs, emphasizes the importance of modeling as well as monitoring for a sound scientific development of earthquake prediction research. The current prediction research program is integrated with that of volcanic eruptions since 2009. I will discuss the recent results and achievement of the program, which may be seriously reviewed after the 2011 M9 Off-Tohoku earthquake; it is not really forecasted and hit the entire part of the northeast Japan. We have started to discuss if we can improve the program or completely change it.

References

- [1] N. Hirata , Past, current and future of Japanese national program for earthquake prediction research, *Earth Planets Space*, **56**, xliii–1, 2004