

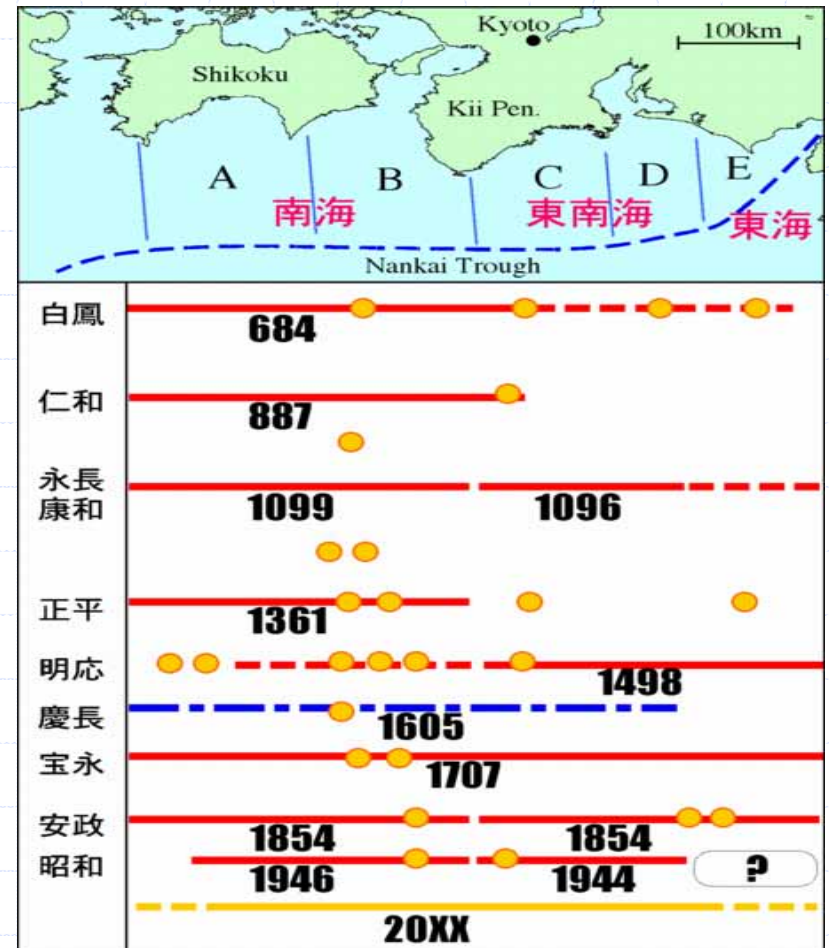
# Research Center for Earthquake Prediction (RCEP)

## Targets

1. Prediction of next Nankai Earthquake
2. Evaluation of Future Onshore Earthquakes
3. Science Information for Outreach Efforts

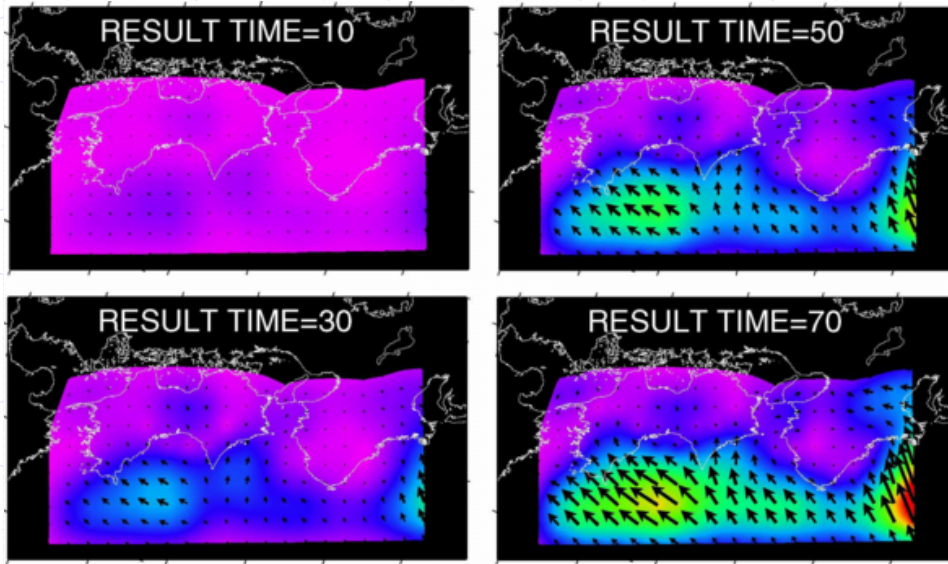
# 1. Earthquake Prediction Research – Subduction Zone Events

- Next Nankai Earthquake
- Theoretical and Process-oriented Research
- Research supported by MEXT ‘New Program of the Study and Observations for Earthquake Prediction’



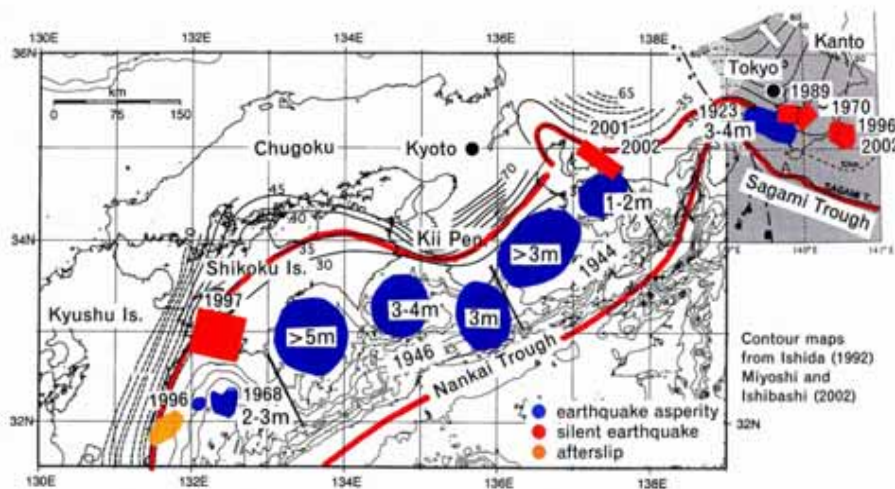
History of Nankai Earthquakes

# 1. Earthquake Prediction Research – Subduction Zone Events



Visco-elastic modeling of the Earthquake cycle

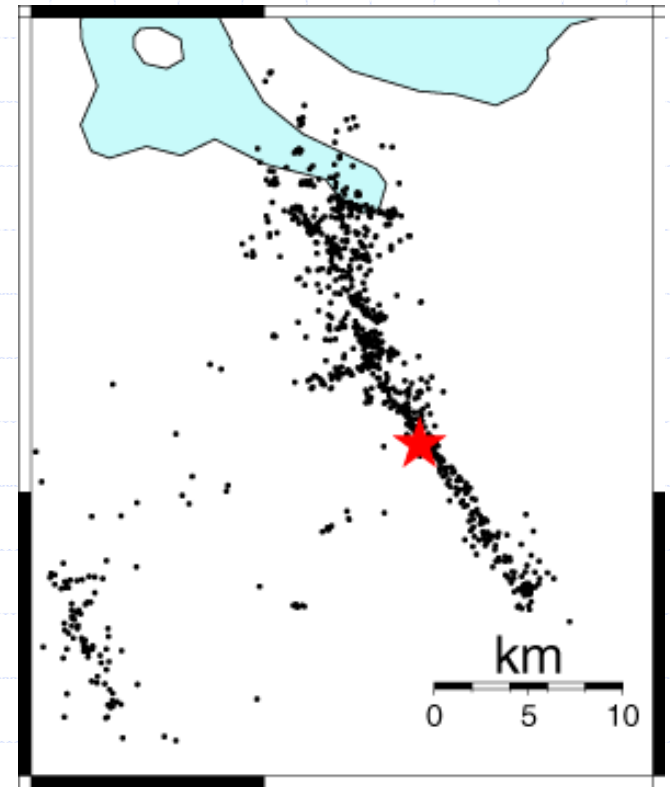
Slow slip events and seismic asperities



Slow-slip events along the Nankai Trough

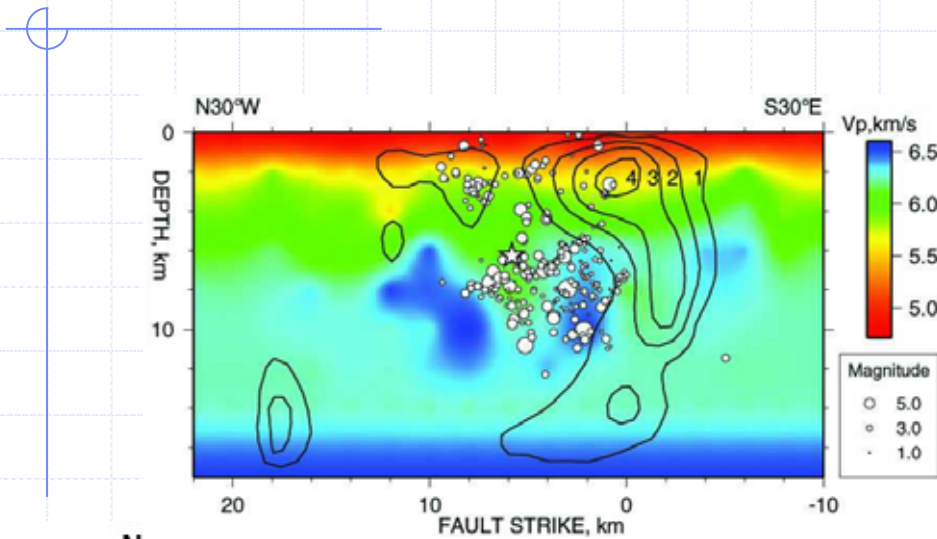
## 2. Earthquake Prediction Research – Onshore Events

- Smaller and less frequent, but potentially more damaging earthquakes (1948 Fukui, 1995 Kobe)
- Detailed Observational Research
- Research mainly supported by MEXT ‘New Program of the Study and Observations for Earthquake Prediction’

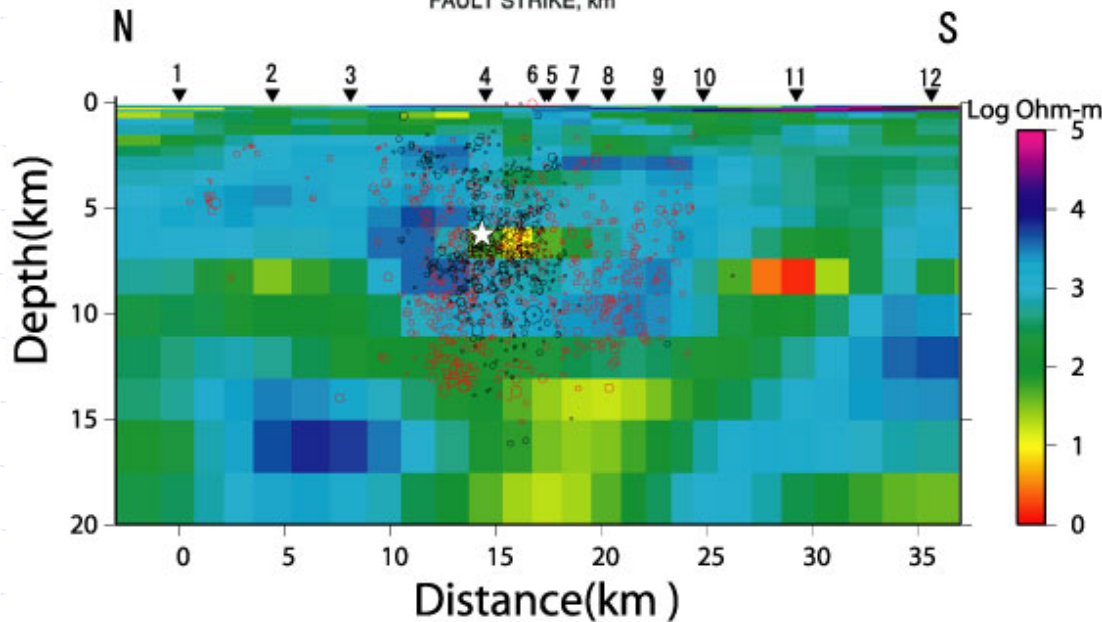


2000 Western Tottori Earthquake  
Mw6.6

## 2. Earthquake Prediction Research – Onshore Events



Velocity structure along the fault of the 2000 Western Tottori earthquake

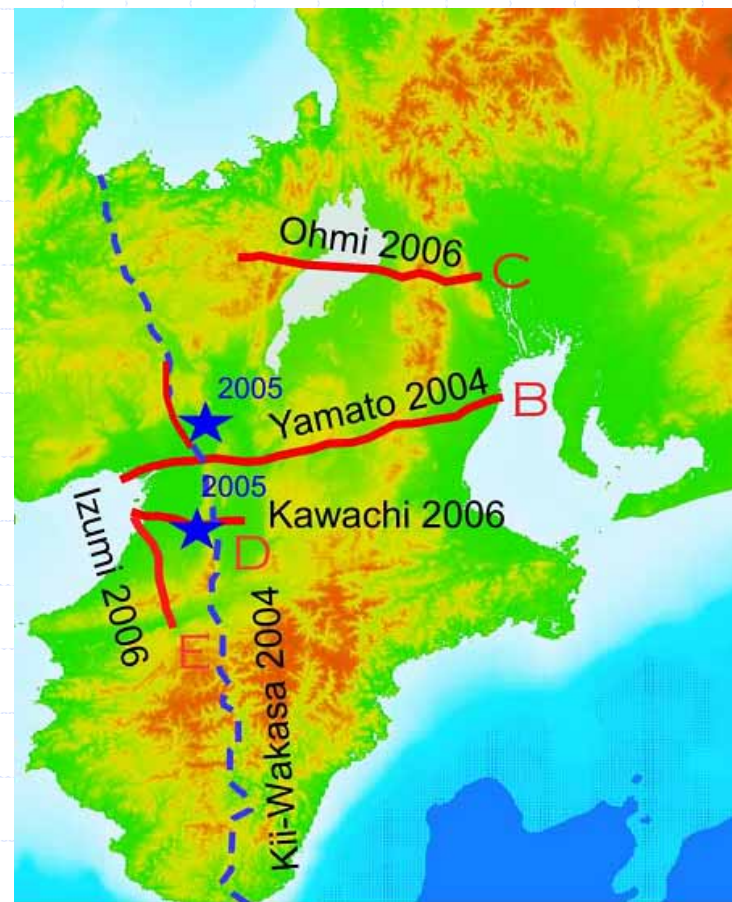


Resistivity structure along the fault of the 2000 Western Tottori Earthquake

### 3. Information for Crustal Activity Research

Special Project for Earthquake  
Disaster Mitigation  
in Urban Areas (MEXT)

Regional Characterization of the  
Crust in Metropolitan Areas for  
the Prediction of Strong Ground  
Motion



Seismic lines planned for Kinki  
region to determine crustal and  
plate structure

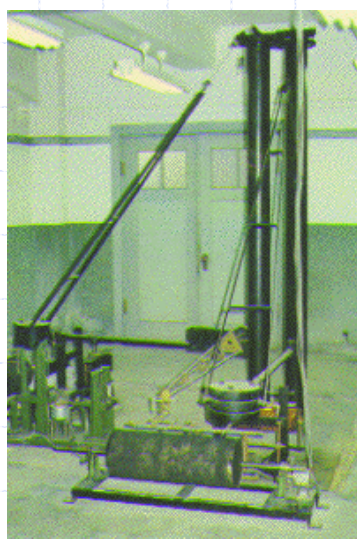
### 3. Information for Crustal Activity Research

#### Outreach efforts

- Monthly columns in Newspapers
- Public Lectures
- TV and Radio Interviews
- Information on current seismic activity on webpages

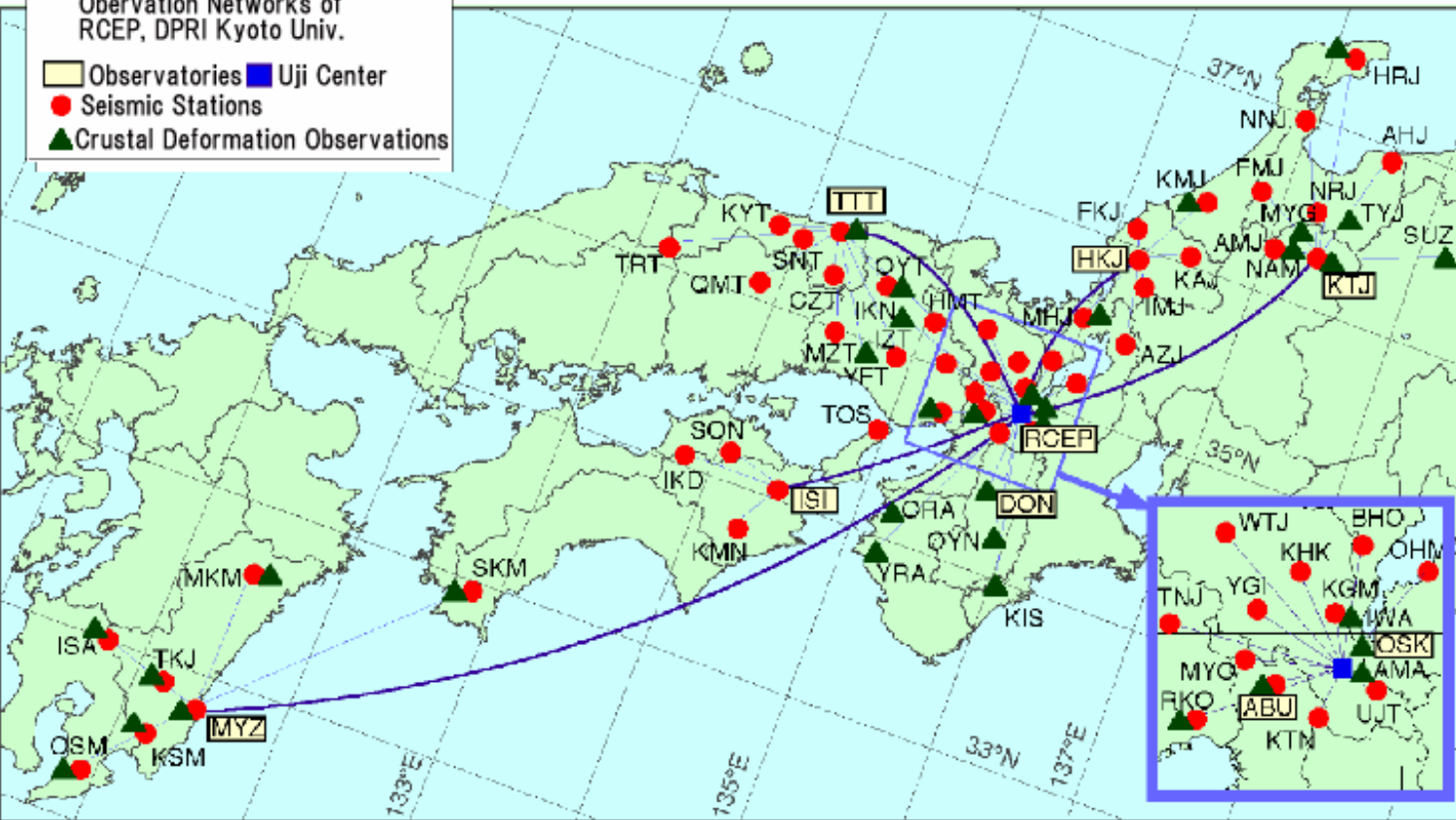


# Observatories



Observation Networks of RCEP, DPRI Kyoto Univ.

- Observatories
- Uji Center
- Seismic Stations
- Crustal Deformation Observations





# Other Projects

## *Taiwan Chelungpu Fault Drilling Project*

1 km borehole to obtain sample of fault that slipped 10 meters during 1999 Chichi, Taiwan earthquake



## *Semi-Controlled Experiment in South Africa Mines*

Very close (within several meters)  
multidisciplinary observations of  
induced small earthquakes in deep mines



# Cooperative Institutes

## *National Earthquake Prediction Program (MEXT)*

Many joint research and observational projects with Hokkaido Univ., Tohoku Univ., Tokyo Univ., Nagoya Univ. and others

## *Special Project for Earthquake Disaster Mitigation in Urban Areas (MEXT)*

Joint research with Tokyo Univ. (ERI) and NIED, others

## *International Collaborations*

International Seismic Sys., Int., South Africa  
National Central University, Taiwan  
Kandilli Observatory, Turkey

# Education

2000-2002

15 Master Degrees

9 PhD Degrees



Class at DPRI



Preparing Equipment for  
Seismic Explosion Survey

# Research Center for Earthquake Prediction (RCEP)

- Science-based
- Project-oriented
- Flexible Operations