

Active faults around the Shimane Peninsula and their tectonic implications, northern Chugoku region, Japan

\*Masayoshi Tajikara<sup>1</sup>, Takashi Nakata<sup>2</sup>, Hiroyuki Tsutsumi<sup>3</sup>, Hideaki Goto<sup>2</sup>, Tokihiko Matsuda<sup>1</sup>, Tadaki Mizumoto<sup>1</sup>

1.Association for the Development of Earthquake Prediction, 2.Hiroshima Univ., 3.Kyoto Univ.

The Shimane Peninsula is located along northern coast of the Chugoku district, and consists of the three mountains, the Seiretsu Mountains, the Churetsu Mountains, and the Toretsu Mountains. The Kashima Fault (Shinji Fault) develops along the southern margin of the western part of the Toretsu Mountains, but existence of certain active faults has not been known in the other area. Based on detailed investigation of aerial photograph and stereoscopic images delivered from 5 m -10 m DEM, we found active faults in the east and west extension of the previous reported active faults. In this presentation, we reported the distribution and characteristics of these active faults, and discuss tectonic implications of these active faults.

Based on the characteristics of the morphology of the Toretsu Mountains, we estimated the existence of northern-side-up concealed active faults with right-lateral slip along the southern margin of the Toretsu Mountains. We mapped three en echelon active faults in the Churetsu Mountains. We estimated that these active faults have right-lateral strike-slip components, based on right-lateral flexion of stream valleys. We estimated that these active faults are secondary faults delivered from submarine active fault along the northern margin of the Churetsu Mountains. Along the southern margin of the Seiretsu Mountains, we estimated existence of northern-side-up concealed active faults, based on the characteristics of the morphology of the Seiretsu Mountain, as in the Toretsu Mountains.

East and west of the Shimane Peninsula, long submarine active faults with east-west strike are known. These active faults develops along the coastal area of the Shimane and Tottori Prefecture, and form large tectonic deformation belt over several 100 km. we estimated that active faults in the Shimane Peninsula are extension of these submarine active faults, and are constitute a part of the large tectonic deformation belt.

Keywords: Kashima fault, active fault, Chugoku, inland earthquake, submarine fault, aerial photograph