SCG68-P04　　　　　　　　Room:Poster　　　　　　　　Time:April 30 18:15-19:30

Onshore offshore, deep seismic survey across the Toyama trough

ISHIYAMA, Tatsuya[1]* ; KATO, Naoko[1] ; SATO, Hiroshi[1] ; SHIRAISHI, Kazuya[2] ; ABE, Susumu[2] ; TAKEDA, Tetsuya[3] ; KURASHIMO, Eiji[1]

[1]Earthquake Research Institute, University of Tokyo, [2]R&D Department, JGI, Inc, [3]NIED

To estimates Tsunami and seismic hazards along the coastal area of Sea of Japan, more detailed survey to identify source faults are needed. A new research project funded by MEXT named " the integrated research project on seismic and tsunami hazards around the Sea of Japan " began in FY 2013. To obtain the information of source faults, we performed onshore offshore deep seismic reflection profiling across the Toyama trough. The seismic line extends from Unazuki at the foot hill of the Hida mountains to the shoreline for 15 km and connected with bay cable of 3 km in length. Seismic signals produced by four vibroseis trucks were recorded by onshore receivers and bay cable. For offshore, we used two vessels; a gun-ship with 3020 cu. inch air-gun and a cable-ship with a 2-km-long, streamer cable with 156 channels and 480 cu. inch air-gun. The P-wave velocity profile by refraction tomography, suggests that the upper surface of Vp 5 km/sec is located 5 km below the mean sea level at the Toyama trough. Vertical offset of Vp 5 km/sec layer is about 8 km. Trough fill sediments beneath the Kurobe alluvial fan show northward dipping. Beneath the apex of this fan, velocity profile and reflection profile suggest the existence of south dipping thrust at 4 km in depth. This fault extends northward as a blind thrust. The seismic section suggests the reverse fault at the northern edge of Toyama trough. Based on the distribution of 5e coastal terraces along the southern part of Noto peninsula, the reverse fault prayed a significant roll for the uplift of Noto peninsula. Such basin structure is analogues to the Niigata sedimentary basin, and northern Fossa magna basin. The survey results contributed to construct source faults models of Tsunami and seismic hazards estimation.