[EJ] Evening Poster | S (Solid Earth Sciences) | S-SS Seismology

[S-SS08]Active faults and paleoseismology

convener:Mamoru Koarai(Earth Science course, College of Science, Ibaraki University), Hisao Kondo(Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology), Ryosuke Doke(神奈川県温泉地学研究所, 共同), Nobuhisa Matsuta(Okayama University Graduate School of Education)

Tue. May 22, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

Geologic and historic information on seismic cycles and on the magnitude and source faults of past earthquakes is essential information to understand future large earthquakes. The study of past faulting and seismicity is an important issue for an interdisciplinary community of seismologists, geologists, geomorphologists, archaeologists, and historians.

[SSS08-P13]Basement structure beneath western offshore of Noto peninsula estimated from gravity anomaly and sedimental layer structure by acoustic explorations

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Keywords:gravity anomaly, sedimental structure

Acoustic explorations beneath western offshore of Noto peninsula were conducted along many profiles, and the location of faults and the structure of velocity have been determined. But the structure of velocity indicates only till upper depth of layer that made from pre-tertiary to Pliocene, and it do not indicate the depth of granite basement.

We made the 4 layered 3-D sedimental structure model from the data of velocity profiles by acoustic explorations. And we estimate the structure of basement with gravity inversion analysis. In this analysis, we use the 3-D sedimental structure model to compensate difference of density among many upper layers. We make the 2 layered model to increase the accuracy with simulated gravity effects from all sedimental layers and estimated densities.

In this study, the depth distribution of a basement beneath western offshore of Noto peninsula. This result shows a thick sediment layer at western part of flexure off east Hakui and western part of the northwest flexure. And it indicates that the fault along the flexure off east Hakui is limited by shallow basement spreading from Hodatsu mountain and by northern lower basement. We consider that lower basement at eastern part of flexure off east Hakui was constructed in inversion structure under changing tectonics from expansion to compression about Japan sea.