Determination of paleostress from mesoscale faults; case study in the Niigata fold belt, Japan

Makoto Otsubo[1]; Atsushi Yamaji[1]

[1] Div. Earth Planet. Sci., Kyoto Univ.

In order to understand the evolution of stress field in fold belts, the numerical method by Yamaji & Otsubo (see abstract in this session) was applied to the Niigata oil and gas gield where young (Pleistocene to Late Miocene) strata are folded.

It was found that most mesoscale faults in this area were activated in the middle of folding phase. Since folding causes horizontal shortening and vertical extension of a sedimentary rock mess, reverse faulting stress regime is most probable for regional state of stress. However, it was shown that normal faulting and strike-slip faulting stress regimes were dominant in the Niigata fold belt.