

Surface fault traces of isolated short faults and their subsurface structure

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Length of active faults are one of the important parameters for the evaluation of the size of earthquakes. In some case, longer seismogenic faults may exist beneath the isolated short faults. Here "Isolated short fault" is defined as 1) separated from other active faults > 5 km and 2) its length is shorter than 15 km. Affected faults are picked up from the active faults maps of Japan published by the Research Group for Active Fault of Japan (1991) and Nakata and Imaizumi (2002). We checked the surface fault trace using large scale airphotos and the relationships in the length between the surface trace of active faults (Ls) and subsurface structures inferred from the geological faults (Lgl) and the gravity anomaly distributions (Lgv). Based on the surface trace analysis, 47 faults could be elongate than those in previous maps and average of "Extended Ratio" is calculated as 1.64. About the subsurface structures, average of "Extended Ratio" is 1.69 (Lgl/Ls) and 2.01 (Lgv/Ls), respectively. These value means average ratio of the part of the indistinct surface fault trace along the isolated short faults. This study was apart of the project supported by JNES in 2010FY.

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