

Ring-like arrangement of faults accompanied by shallow and deep earthquakes in central Honshu, Japan

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The ring-like arrangement of faults accompanied by shallow earthquakes in central Honshu are shown, and runs parallel to those of deep ones, and it must be due to the vertical deep roots of ring-like arrangement.

Asahi, Iide, Echigo and Abukuma Mountains mainly composed of granitic rocks are dormant in shallow and deep earthquakes, though the shallow earthquakes are active in the north part of the mountains. The general trends of faults accompanied by shallow and deep earthquakes encircle the granitic rocks, and suggest the deep vertical roots of those mountains. The faults deduced from the P-wave radiation pattern of shallow and deep earthquakes run parallel to the Quaternary volcanoes.

Hida, Kiso, Ryohaku, Suzuka, Nunobiki, Kasagi, Ikoma and Rokko Mountains composed of granitic rocks are about 400km in E-W direction and 200km in N-S direction. Central part is composed of Cretaceous Nohi rhyolite encircled by the granitic rocks. It is about 60km in N-S direction and about 40km in E-W direction. The boundary is cut by the deep faults accompanied by deep earthquakes. The deep earthquakes encircling the granitic rocks suggest the deep origin of granitic rocks

The general trends of faults accompanied by shallow and deep earthquakes run roughly parallel each other, so ring-like arrangement from shallow to deep is deduced.

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