

GPR surveys for an extension of the Koyo Fault beneath the urban area of Ashiya City, southwest Japan

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An important for mitigation of earthquake disaster in megacities is to research the concealed (hidden) active faults beneath the megacities. We used the ground-penetrating radar (GPR) method in order to clarify an extension of the Koyo active fault beneath the urban area of Ashiya City, east of Kobe. The following results were obtained: (1) a monoclinial flexure or discontinuity was found on each GPR profile. (2) These detected anomalies are located just above the concealed fault, which was found by a seismic reflection survey. (3) These detected anomalies appear to the southwest extension from the Koyo active fault. Judging from these results and the formation mechanism of the monoclinial flexure, it is concluded that the Koyo active fault is hidden beneath the urban area of Ashiya City.