

SSS021-06

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稠密地震観測に基づく濃尾地震震源域の3次元地震波速度構造と震源分布の特徴

Three-dimensional velocity structures and hypocenter distributions in the 1981 Nobi-earthquake source region

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Crustal heterogeneities in and beneath seismogenic zones provide us important clues to reveal the mechanism of devastating intraplate earthquakes. We have conducted a dense seismic observation in the source region for the 1981 Nobi-earthquake (the largest magnitude intraplate earthquake in Japan). We deployed 91 temporary seismometers from the center to the south portion of the source region, from June to November in 2009. The dense seismic network consisted of three arrays. We manually picked first arrival times of P- and S-waves for local and intraslab earthquakes near the dense seismic network, based on the JMA catalog. Applying the tomoDD-code (Zhang and Thurber, 2003) into the first arrivals, both detailed three-dimensional velocity structures and hypocenter distributions are elucidated. At the central part of the fault, hypocenters are roughly aligned vertically and concentrated near the fault trace. In contrast, the hypocenter alignment is not obvious at the southern part. Most of earthquakes appear to be distributed boundaries between slow and fast velocity anomalies. In addition, the lower crust beneath the seismogenic zone shows anomalous slow velocities at the southern edge of the source fault.