

Quantitative evaluation of the caldera's shape: Relation between geometric features of outlines and the tectonic stress conditions

Akihiko Terada[1], Yoshiaki Ida[2]

[1] ERI, Univ. Tokyo, [2] Earthq. Res. Inst., Univ. of Tokyo

We have developed two methods to analyze some geometric features of the caldera's outlines quantitatively. One of them, 'Azimuth histogram' method is usable to detect linear parts and their characteristic azimuths and to evaluate the ratios of their lengths in the total length of outline. The other is 'Ellipse approximation' method is applied to the gross features of the caldera's outline including elongated direction and aspect ratio. According to the analysis, the geometric features of the caldera's outlines is related to the tectonic stress condition around the caldera.