

## Brittle Failure in Granitic Rocks for 3-D Quantitative Microcracks Analysis

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It is known that ultimate fracture is taken place by interaction of each crack after fracture nucleation, which is high crack density area, was formed. A formation condition of fracture nucleation is important where an earthquake occurs. In addition, it is necessary to consider the formation condition as crack evolution low that is quantity of change of crack geometry. In this study, we discuss on 3-D microcrack geometry in a neighborhood of the critical microcrack density using crack tensor theory and stereological method. The results show that crack density increase, especially in quartz grain, with brittle fracture and also microscopic observations show that inside of sample be blocked when total density exceeded a critical value.