

Frequency of aftershocks, magnitude-frequency relation, and magnitude difference between main shock and the largest aftershock

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We studied several distributions relating to mainshocks and their aftershocks in main lands of Japan by using the negative binomial model given by Okada(1979). The frequencies of aftershocks within 2.0 in magnitude difference from mainshock follow very well the negative binomial distribution. The mean frequency dependence on magnitude difference estimated from the distribution of $D1=Mo-M1$ agrees well with the Gutenberg-Richter formula for mean number of aftershocks. These facts means that the negative binomial model is realistic.