

The Earthquake Sequences were Quantitative Detected the Quiescence Before Large Aftershocks by the Etsa Model

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This paper studies the seismicity as the quiescence and cluster within the aftershocks which are in 7 sequences during 1985-1998, the magnitude for main shocks are range of $M_S=6.2\sim 7.1$ in Xinjiang, China. The epidemic type aftershock sequence (ETAS) model is applied to the data. It is shown that the whole period of Jiashi sequence can be divided into three stages with the seismicity for different levels of quiescence and cluster, the features among of the 7 sequences were quantitative calculated and compared using ETAS model listed by the 5 parameters. Model selection, deciding which model fits the data best, is via the AIC principle, in which models with different form and parameters are compared by AIC computing for each statistics.

To detect if there exists precursory relative quiescence or significant changes before the major aftershocks of Jiashi sequence, there are significant relative quiescence prior to the most of aftershocks $M_S\geq 6.0$. The relative quiescence is being used for aftershock prediction as the indicator.