

Near Field Anomalies of Yiliang $M5.7$, 5.6 Earthquakes on Sep. 7, 2102

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Abstract

Research on seismic activity and precursory anomalies in the near field before the $M5.7$, 5.6 earthquakes in Luoze River of Yiliang County in Zhaotong on Sep. 7, 2012, we summarized the main characteristic of seismic activity before Yiliang $M5.7$, 5.6 earthquakes is that the increasing of $M4.0$ earthquakes activity and small earthquake activity gap appeared before the earthquake, ‘signal shock’ appeared in the early stage of earthquake preparation and the impending earthquakes appeared in a short time. Precursory anomalies had begun in one year before the earthquake and fluid anomalies occurred earlier than deformation anomalies. In the short-term and impending stages, the precursory anomalies migrated from the periphery to epicenter and the appearance time of impending anomalies mainly focused on Sep. 1 and Sep. 5 in 2012.

Key words: Yiliang $M5.7$, 5.6 earthquakes; near field region; earthquake activity anomaly; precursory anomaly