Utsu (1961) proposed a modified Omori’s law. Omori’s (1894) law describes the decay of aftershock activity with time: the temporal intensity of the aftershock moment release is about 1.5 orders of magnitude (above) and log-log scale (below). We propose the relation between mainshock rupture process and Omori’s law for aftershock moment release rate (dash-dotted red line), and 1999 M 7.1 Hector Mine earthquake compared to moment release at the end of mainshock rupture (black dashed line). The expected life time for the mainshock rupture is about 200 days. Extrapolating back in time according to the Omori law for aftershock frequency. We note inconsistencies in the standard Omori formula, and propose that the positive value for c found empirically by Omori law for aftershock frequency. We note inconsistencies in the standard Omori formula, and propose that the positive value for c found empirically by Omori (1894) is not necessarily due to the effect of magnitude, but could be due to various other factors such as tectonic stress, fault geometry, and earthquake sequence characteristics.


does not hold for large aftershocks. We argue that the observed saturation in aftershock numbers described by Omori’s law is due to the difficulty of detecting large aftershocks. We propose that the observed saturation in aftershock numbers described by Omori’s law is due to the difficulty of detecting large aftershocks.

B. The threshold for aftershock completeness decreases with time following the mainshock

C. Comparisons of moment release rates during mainshocks (i.e., source time functions) and aftershock sequences

Conclusions:
1. Moment-release rates during mainshocks (i.e., source time functions) are compared with moment-release rates during aftershock sequences.
2. From minutes to months following a mainshock, the moment-release rate of the aftershock sequence follows a power-law decay similar to the mainshock Omori’s law for the mainshock sequence. The shape of the moment-release rate of the aftershock sequence follows a power-law decay similar to the mainshock Omori’s law for the mainshock sequence.

Many empirical studies have found a positive value for c in the Omori formula, which means that the singularity to aftershock completeness occurs at a lower magnitude than expected. We propose that the observed saturation in aftershock numbers described by Omori’s law is due to the difficulty of detecting large aftershocks. We argue that the observed saturation in aftershock numbers described by Omori’s law is due to the difficulty of detecting large aftershocks. We propose that the observed saturation in aftershock numbers described by Omori’s law is due to the difficulty of detecting large aftershocks. We argue that the observed saturation in aftershock numbers described by Omori’s law is due to the difficulty of detecting large aftershocks. We propose that the observed saturation in aftershock numbers described by Omori’s law is due to the difficulty of detecting large aftershocks.