



## **Temporary clustering of strong earthquakes or lack of data?**

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The Issyk-Ata fault is a major thrust that coincides with the northern boundary of the Tien Shan mountains in Kyrgyzstan. The fault separates the Kyrgyz range from the Chu (foreland) basin. Abundant evidence of surface ruptures, as well as secondary structures, like cracks and rock slides, exist in the southern Chu basin. Combined, they indicate that at least 4 strong earthquakes occurred during the last 5 ka along the Issyk-Ata fault and neighboring Chonkurchak fault. In addition, age dating of large landslides that might be seismically triggered provide a time window for activity between 11 and 15 ka. To date, no indicator for seismic activity exist for the time in between. Does the lacking evidence of strong earthquakes between 5 and 11 ka indicate a temporary clustering of events along the Issyk-Ata and surrounding faults? Or is the gap in knowledge rather reflecting the limited data? Here, we present an overview of primary and secondary paleoseismic evidence together with a quality rating for their usefulness in addressing the paleoearthquake timing. Such an assessment is especially important with regard to a recent earthquake cluster that started along the Issyk-Ata fault (AD1770, M6.6; AD1885, M6.9) and culminated in two  $M > 8$  events further east and that could possibly be the beginning of a next cluster or the end of the previous.