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**Little Ice Age on the Tibetan Plateau and its bordering mountains:
Evidence from moraine chronologies**

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Abstract

Knowledge of the Little Ice Age (LIA) on the Tibetan Plateau (TP) is of critical importance for understanding the climate changes over past millennium. However, the data associated with the extents and chronologies of TP LIA moraines are highly dispersed in literature. Lack of systematic integrating these data hampers us to further understand the nature of the LIA, especially from a perspective of whole TP. The paper reviews multiple types of dating on LIA moraines to examine the timing and nature of the LIA on the TP. These include ages of radiocarbon ¹⁴C, lichenometry, and cosmogenic radionuclide (CRN), by which we can cross-date the same or morphostratigraphically similar landforms. LIA moraines on the TP are usually present a few hundred to thousand meters beyond the contemporary glaciers. The morphological and stratigraphic evidence indicates multiple periods of glacier advance during the last millennium (LIA). At present, available chronology evidence allows to fully compare the timing of the LIA maximum extents. The glaciers reached and retreated from their LIA maximum extents by an asynchronous pattern between

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