

Daily variation of supraglacial lakes in the southern Inylchek Glacier

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In the eastern Himalayas and Karakoram, sudden large-scale drainage and flooding can occur from debris-covered glaciers that lack a large proglacial lake. This type of glacial lake outburst flood (GLOF) differs clearly from large proglacial lakes. Thus, these studies indicate that debris-covered glaciers that lack a large proglacial lake can have one or more supraglacial lakes vanish when a sudden, large drainage occurs through englacial/subglacial channels, sometime leading to dangerous flooding.

It has been clarified that seasonal variation of supraglacial lakes exist as variation of supraglacial lakes, but shorter period variation are not disclosed. Therefore, in this research it is to elucidate the daily variation of supraglacial lakes.

Using field survey in 2017 and 2018 plus satellite data from the 2014-2018 period, we analyze the daily variation of supraglacial lakes on the Southern Inylchek Glacier in the central Tien Shan.

Keywords: supraglacial lake, drainage, debris-covered glacier, englacial channel