Multi-method dating of ancient permafrost of the Batagay megaslump, East Siberia

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The (world’s largest retrogressive thaw) slump

Murton et al. (in preparation) *A multi-method pilot dating study of ancient permafrost, Batagay megaslump, East Siberia*
The Batagay stratigraphy and dating attempts

Radiocarbon, luminescence and $^{36}$Cl/Cl

Murton et al. (in preparation) A multi-method pilot dating study of ancient permafrost, Batagay megaslump, East Siberia
The Batagay chronology established so far

Cover (MIS 1)

Upper Sand (MIS 3-2)

Upper Ice Complex (MIS 4-2)

Lower Sand (MIS 6)

Lower Ice Complex (MIS 16)

Available chronostratigraphic data of the Batagay megaslump summarised from
1Ashastina et al. (2017), 2Murton et al. (2017a), 3Opel et al. (2019), 4Vasil’chuk and Vasil’chuk (2019), 5Vasil’chuk et al. (2020) and 6this study.
The Batagay megaslump is ...

an exceptional but discontinuous permafrost archive,

second oldest dated permafrost of the Arctic,

proof that old permafrost survived several interglacials,

potentially one of the longest terrestrial records of Pleistocene environments in western Beringia,

a challenge for dating, but promising when methods are combined,

subject to ongoing international research.
Find your colleague!