The age and origin of block deposits in the Victorian Alps, Australia

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Periglacial activity was widespread in southeastern Australia during the last glaciation. Periglacial landforms can be found down to 600 m in the Southern Tablelands and lower than this further to the south. Block deposits in the form of blockstreams and block slopes become common at higher elevations. The form and size of these deposits varies widely and their mode of formation is enigmatic. In Victoria, large-scale deposits occur above 900 m in the Mt Hotham region. In this talk we will describe the morphology of these deposits and their surface architecture. 3D modelling supports the idea that pits in the surface are ice segregation features. We present new exposure ages for blocks in these deposits using the cosmogenic nuclides 36Cl and 10Be. The re-establishment of forest at the end of the Pleistocene in the area is dated using radiocarbon. Weathering rind analysis is used on several deposits to explore its utility as a relative dating tool in the region. Lastly, based on modern analogues, we estimate that mean temperatures were at least 8 °C colder than at present when the deposits formed.