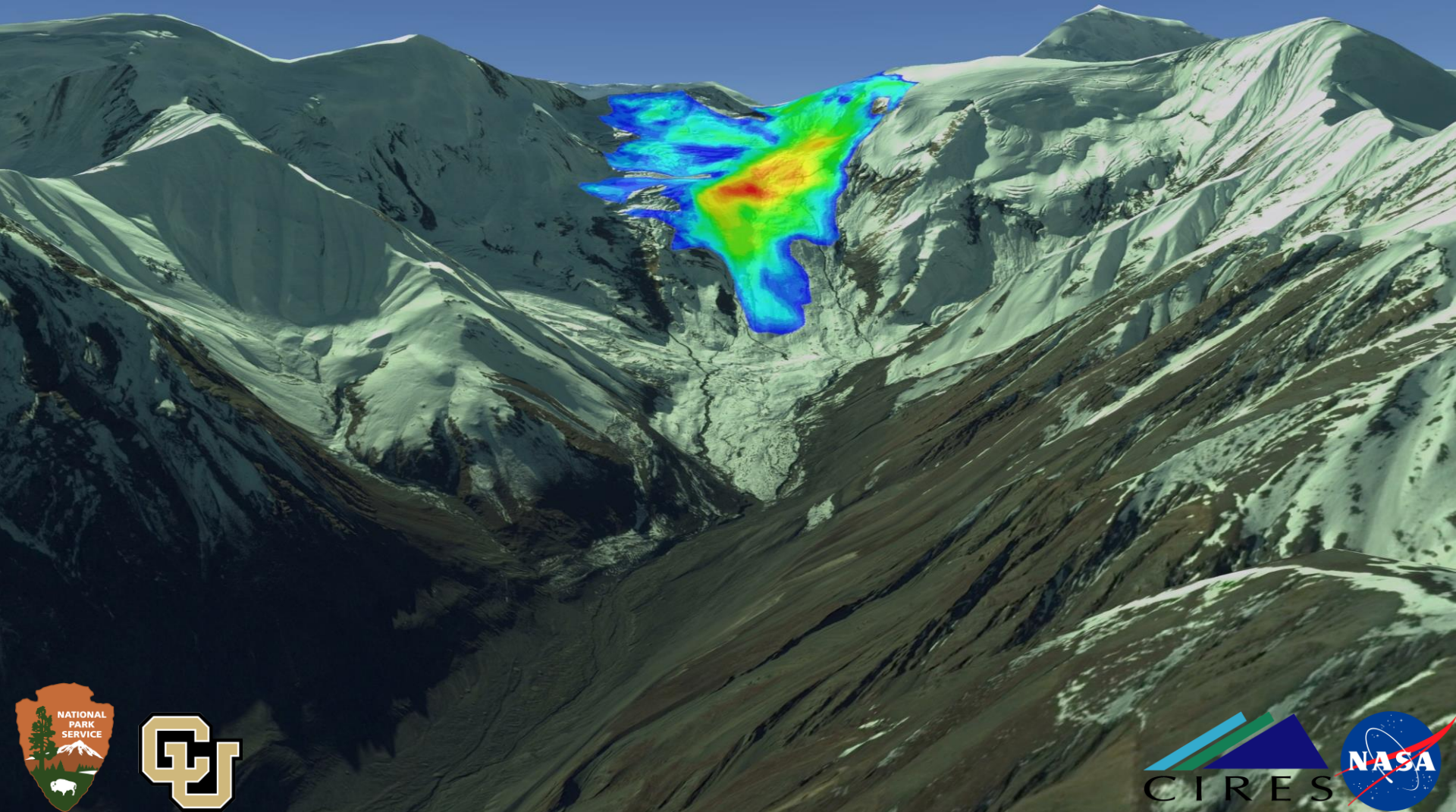
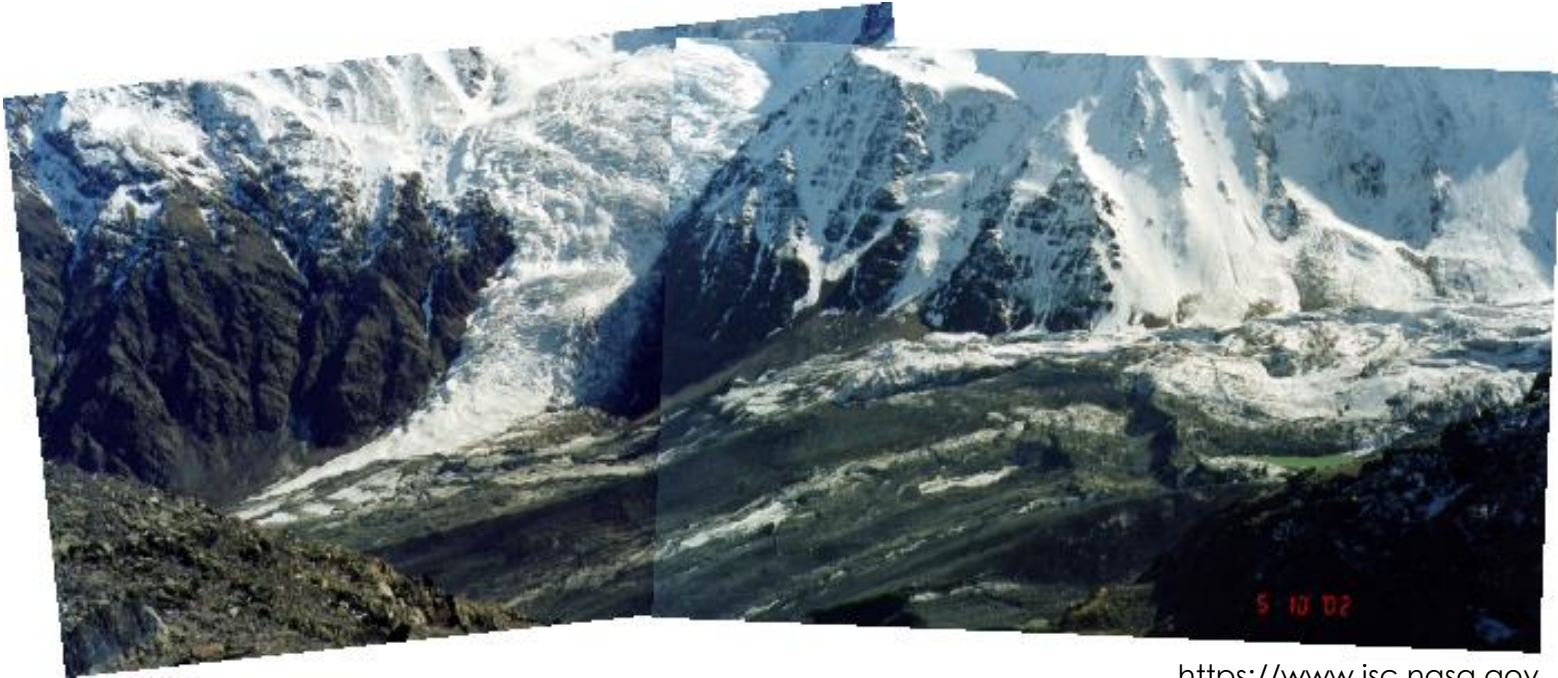


Instantaneous Glacier Loss Through Catastrophic Collapse

Mylène Jacquemart, Michael Loso, Jasmine Hansen, John Sykes, Kristy Tiampo, Mikhail Dokukin

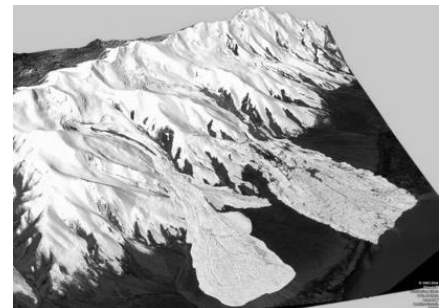


Global relevance

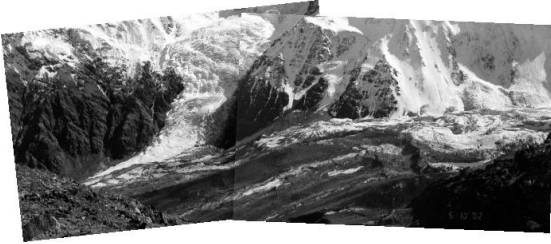


<https://www.jsc.nasa.gov>

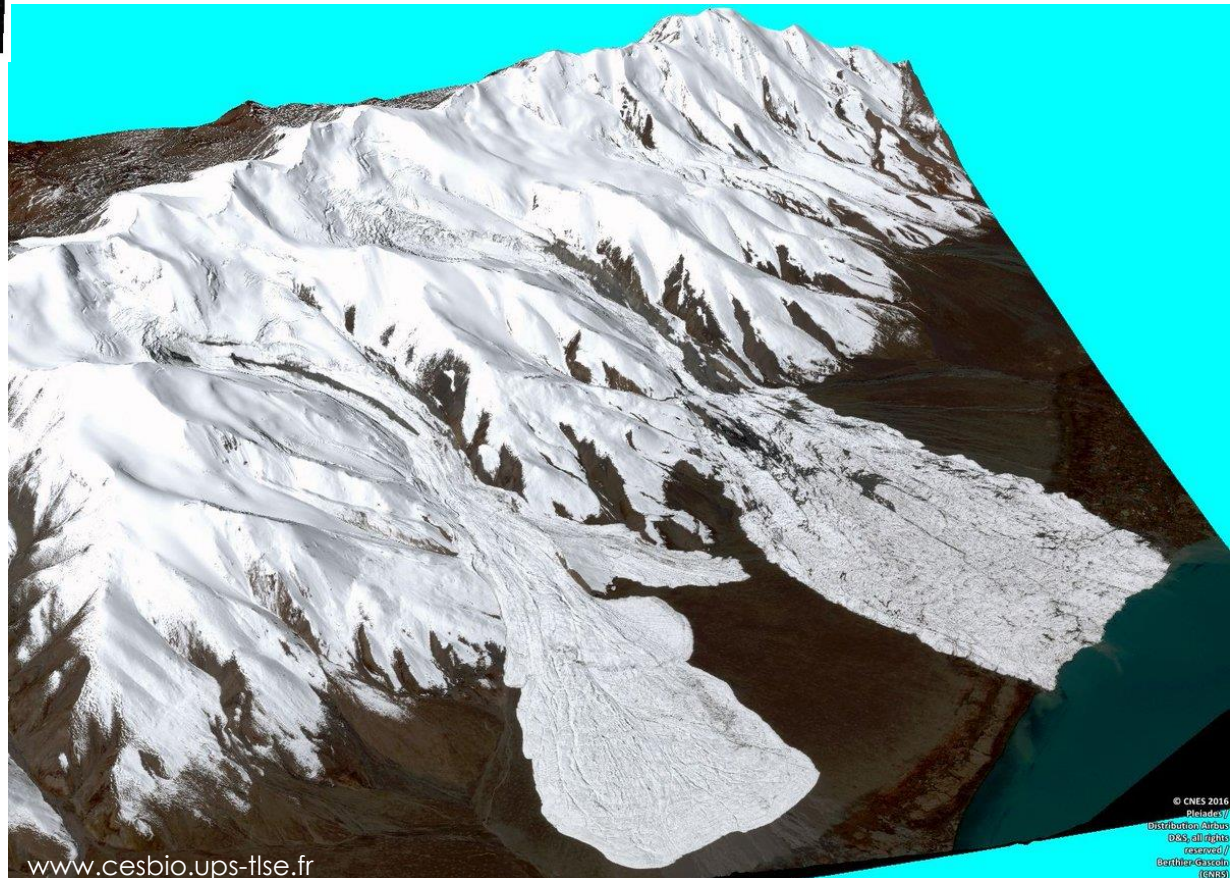
2002 Kolka Glacier detachment, Russian Caucasus
Death toll ~130 people



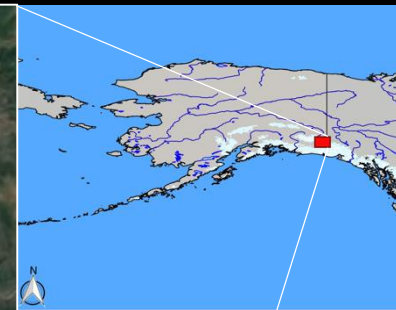
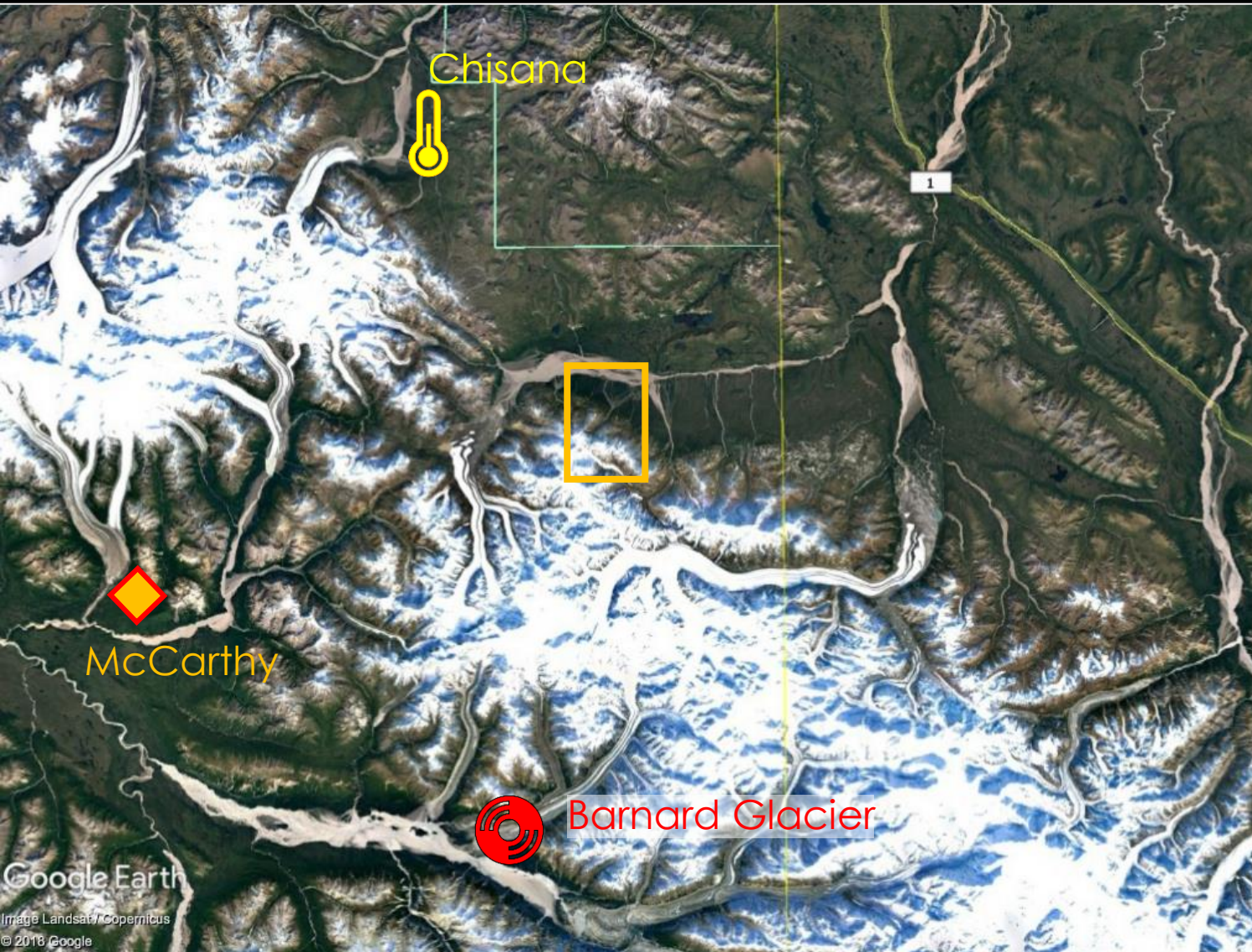
Global relevance



2016 Aru Glacier
detachments
Death toll ~9
herders, hundreds
of animals

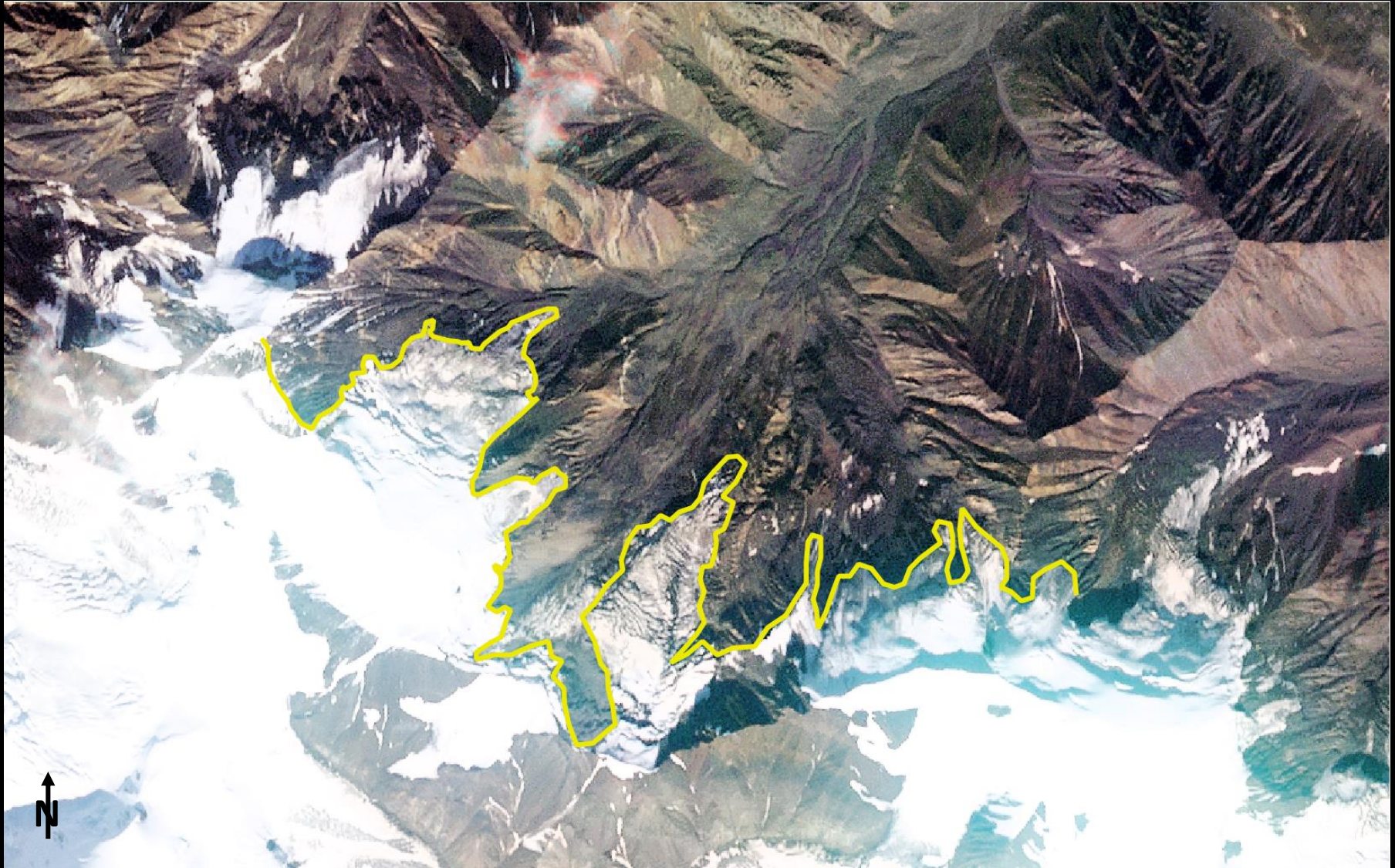


“Flat Creek”

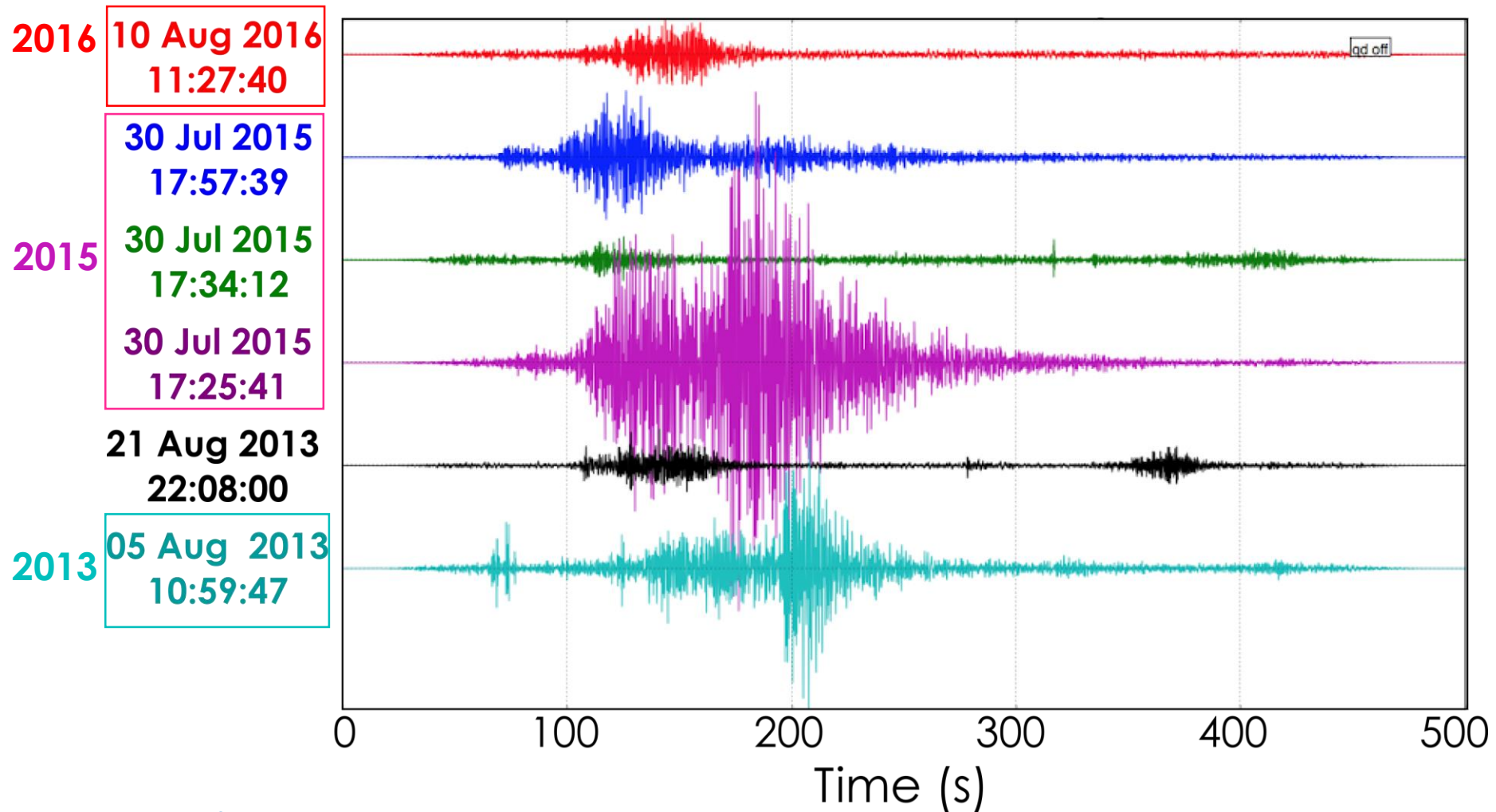




Before – After (Planet Labs)

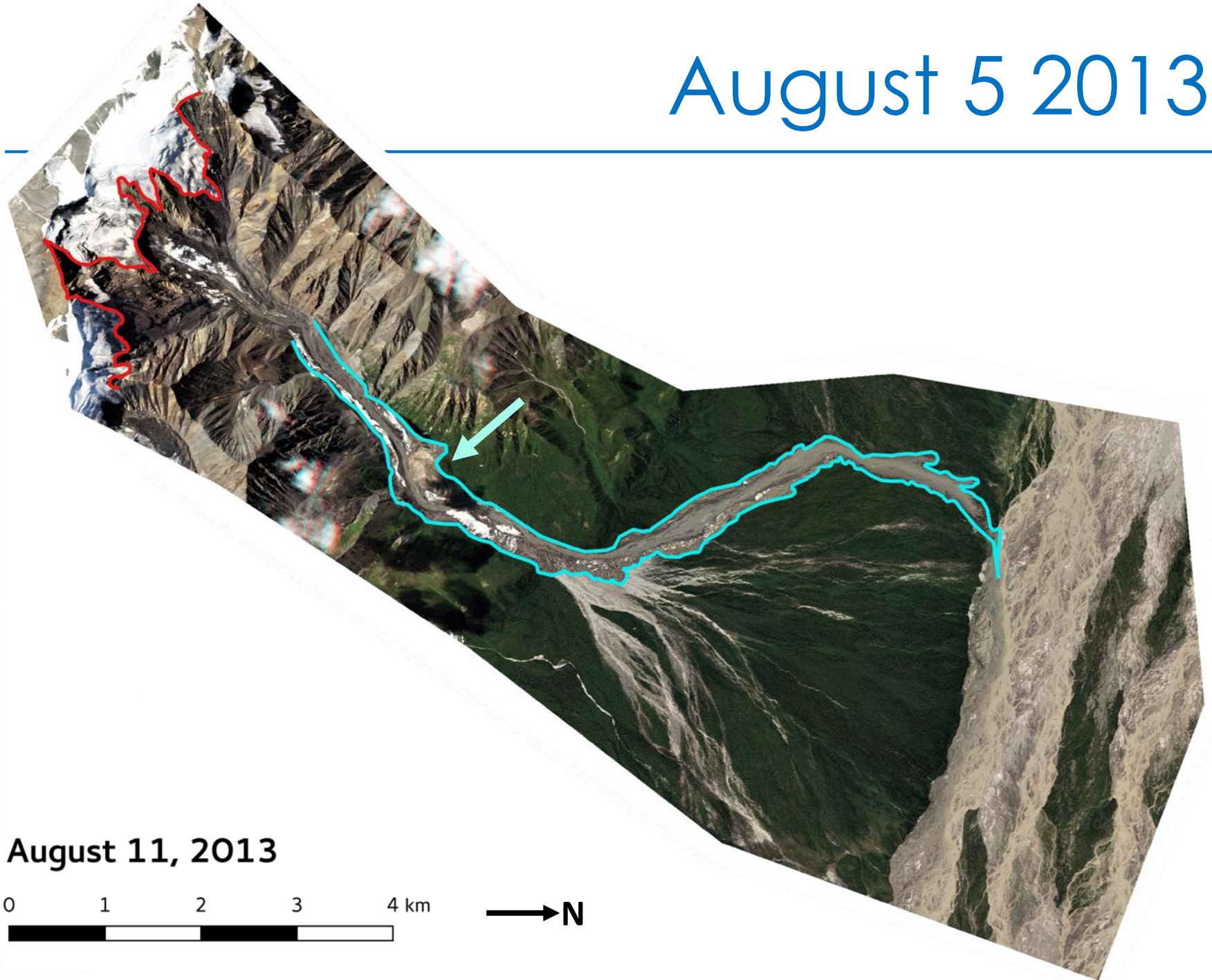


Seismic Data



Data courtesy of Kate Allstadt, USGS

August 5 2013

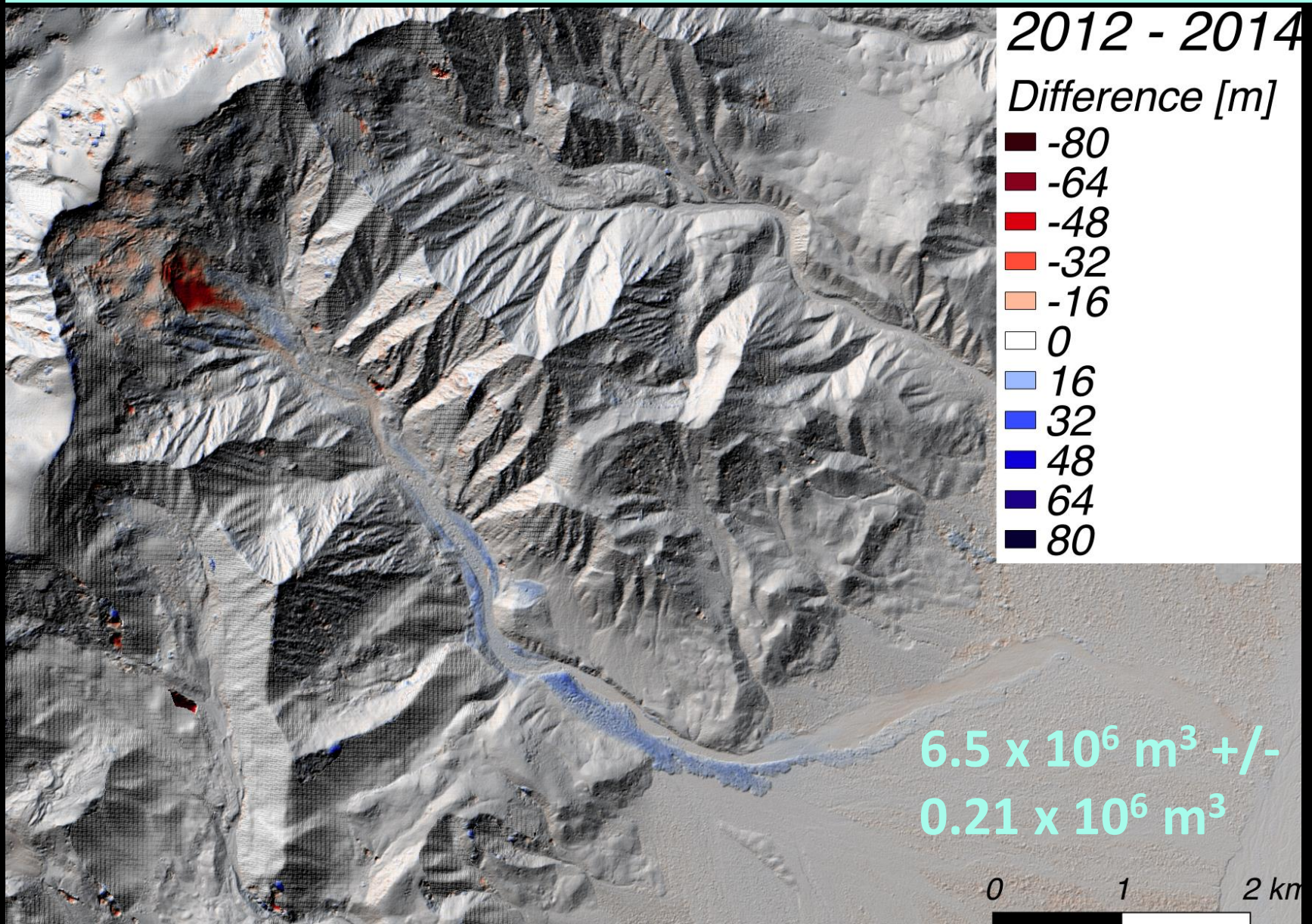


August 11, 2013

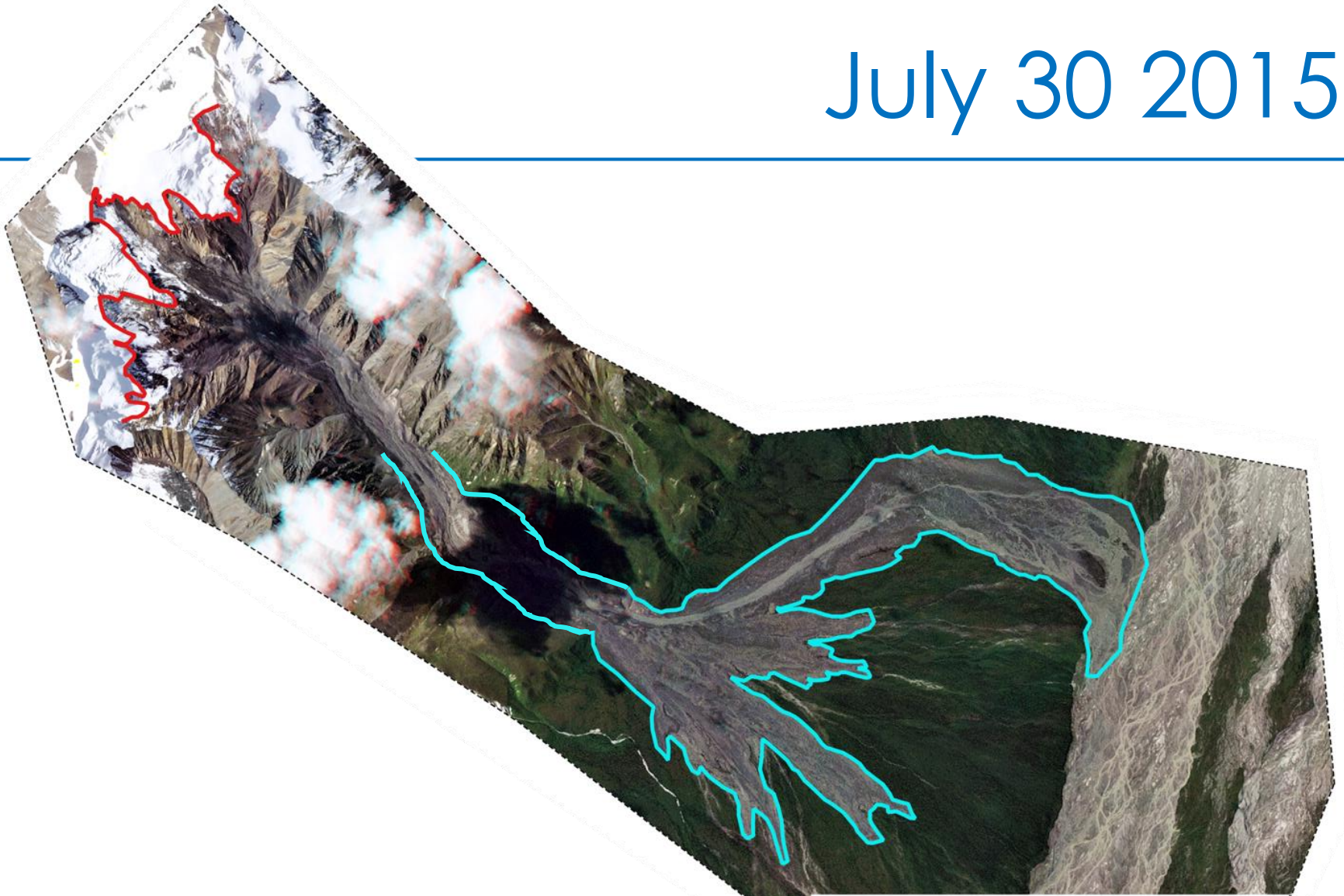
0 1 2 3 4 km



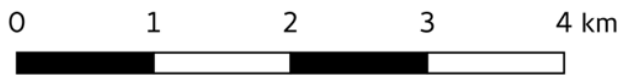
DEM Difference 2013



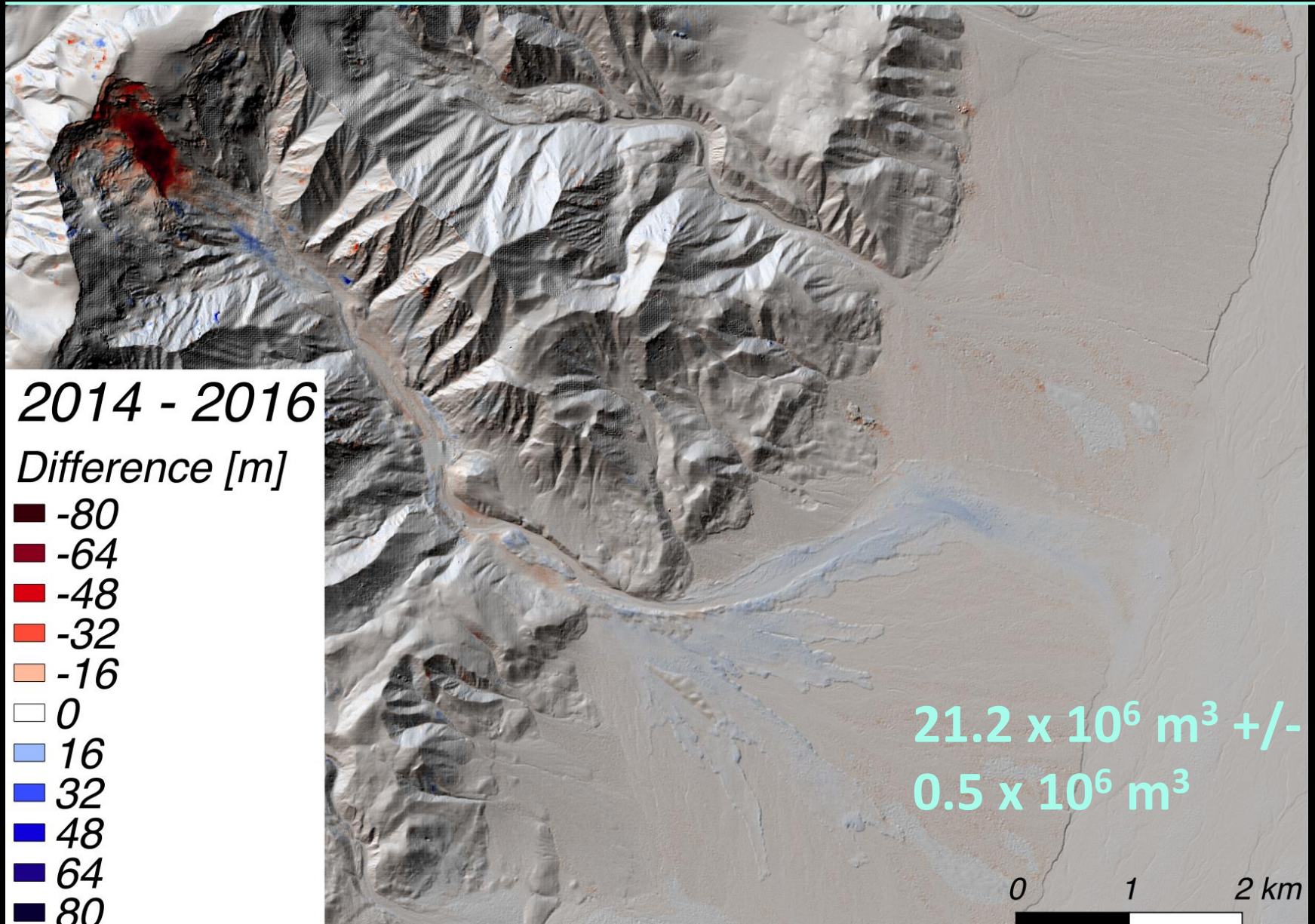
July 30 2015



August 13, 2015

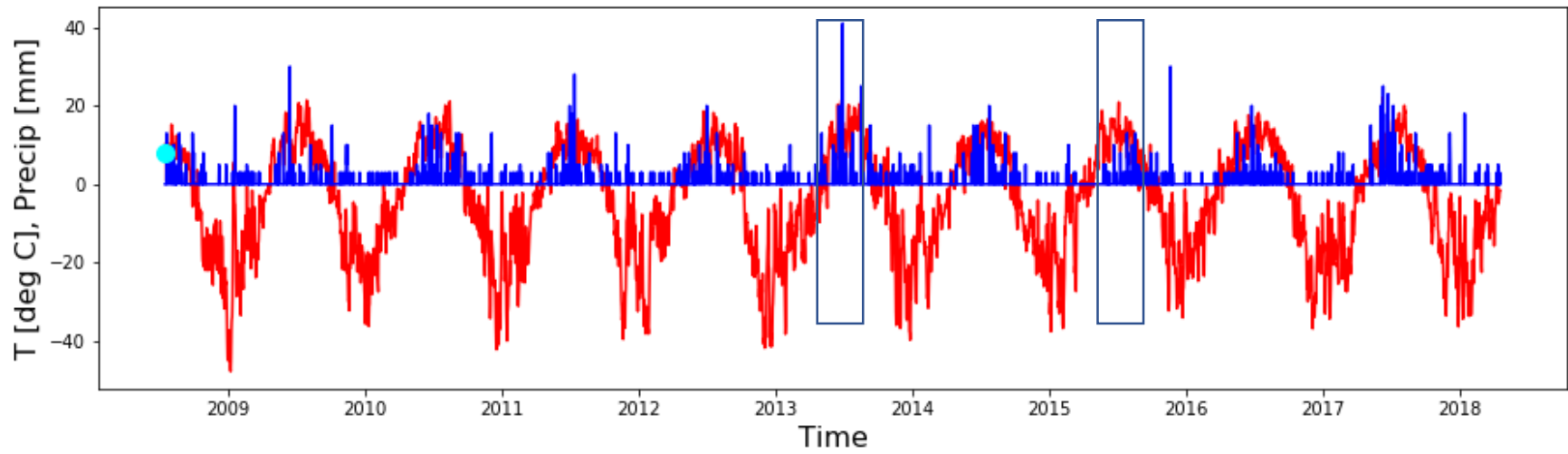
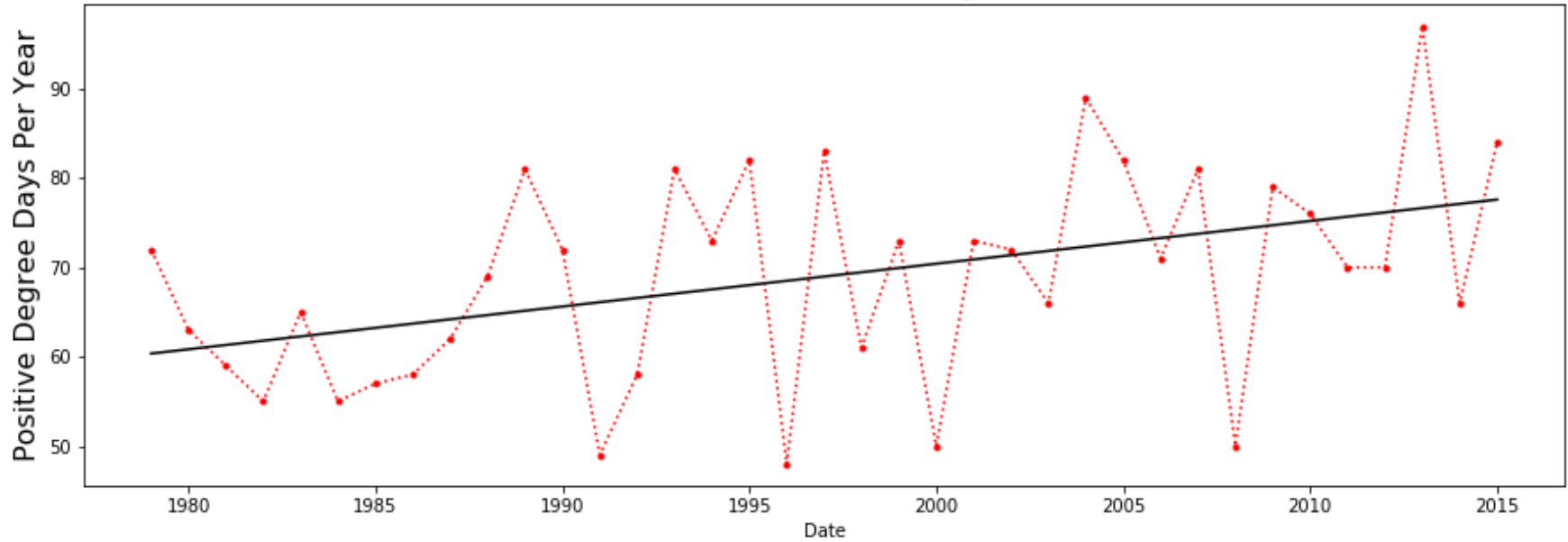


Dem Difference 2015

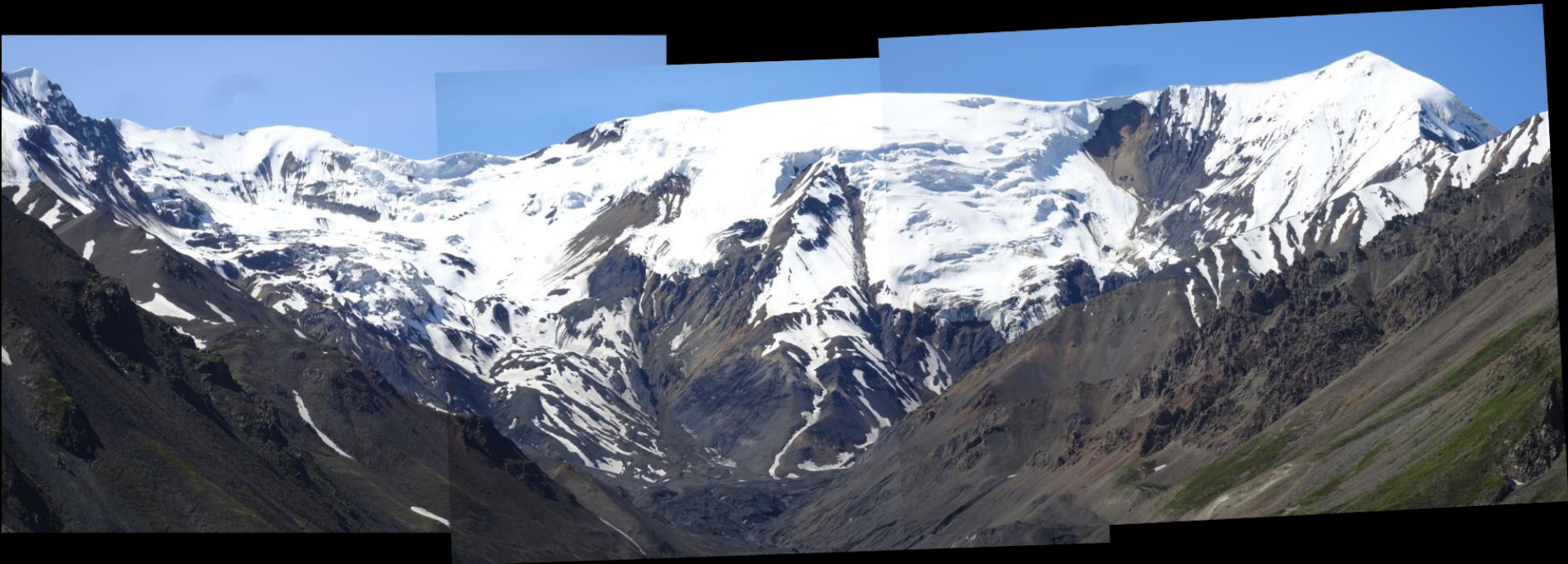


Climate Data

Trend of Positive Degree Days @ Flat Creek

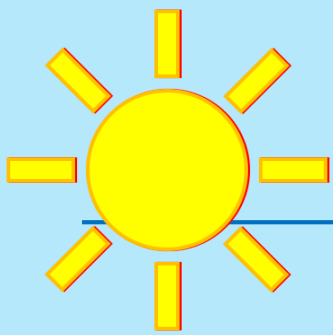


2018 Field Campaign

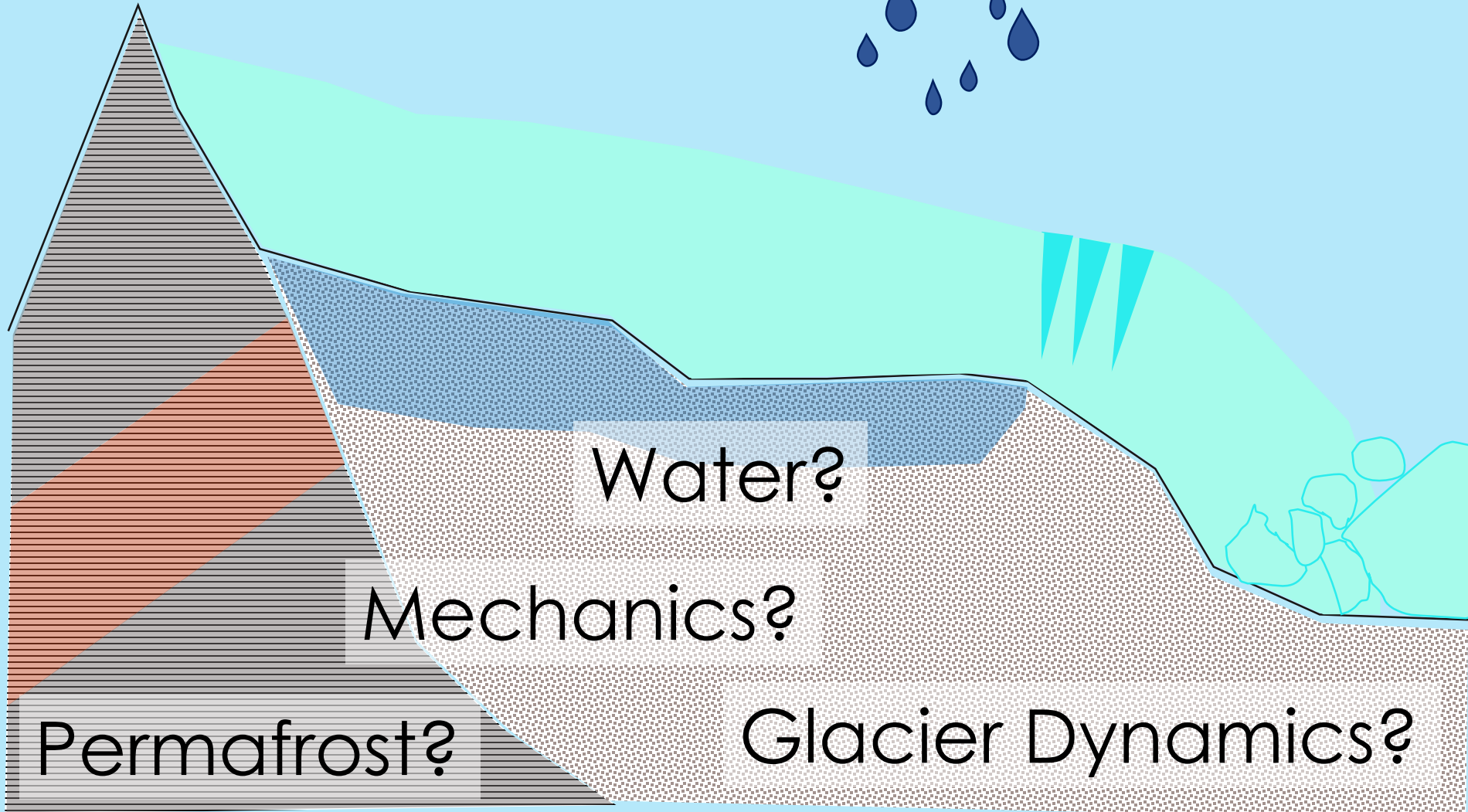
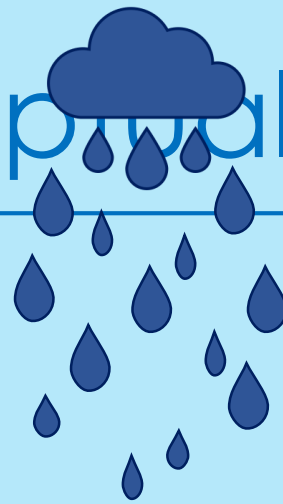


2018 Field Campaign





Conceptual model?



Water?

Mechanics?

Permafrost?

Glacier Dynamics?