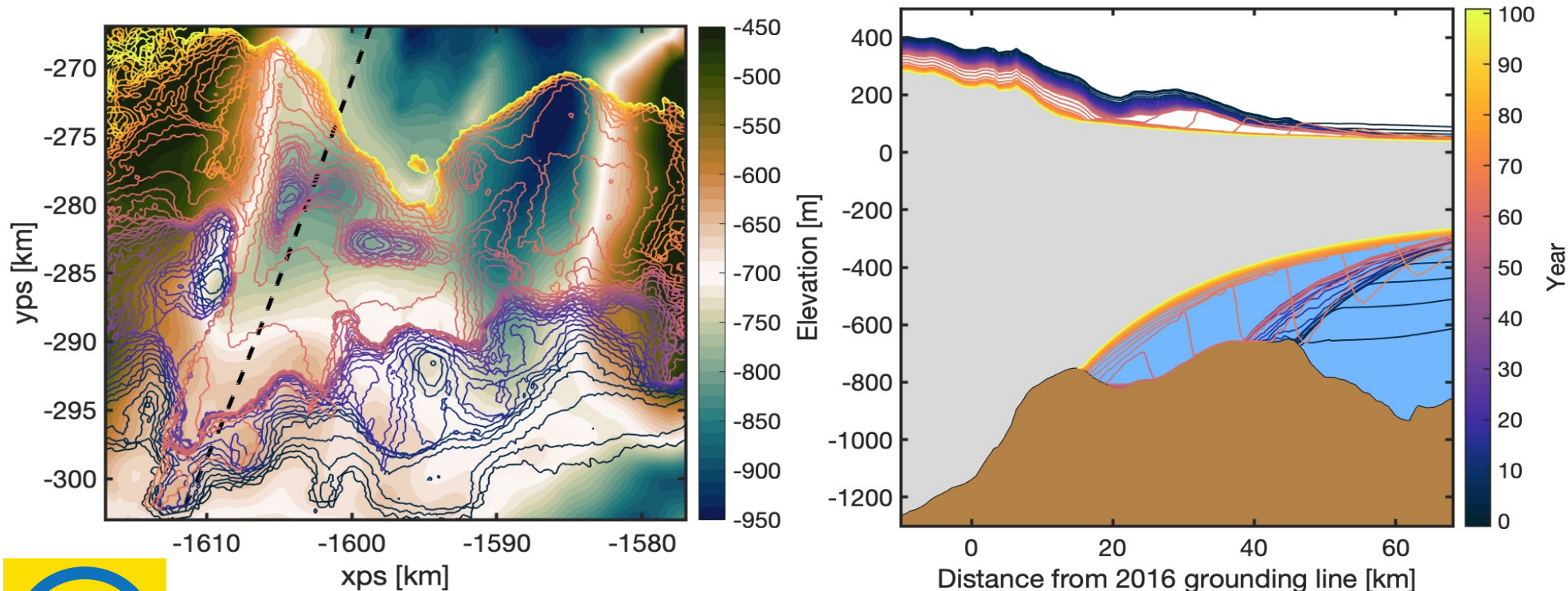


# Recent unstable retreat of Pine Island Glacier

**Bradley Reed<sup>1</sup>**, Mattias Green<sup>1</sup>, Hilmar Gudmundsson<sup>2</sup>, Adrian Jenkins<sup>2</sup>

<sup>1</sup> School of Ocean Sciences, Bangor University

<sup>2</sup> Department of Geography and Environmental Sciences, Northumbria University



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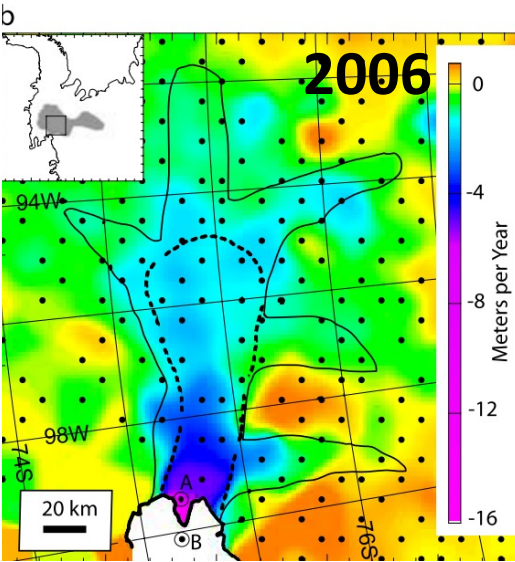
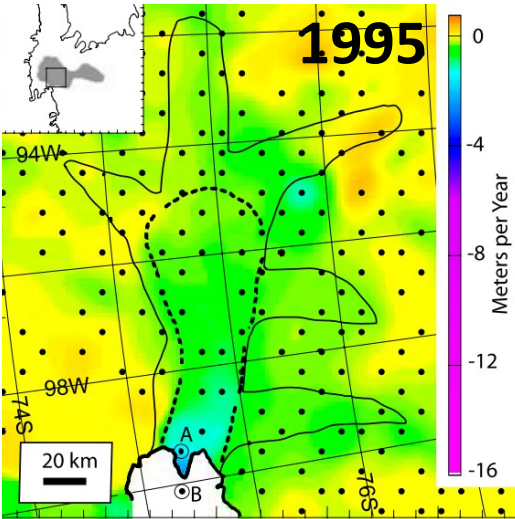
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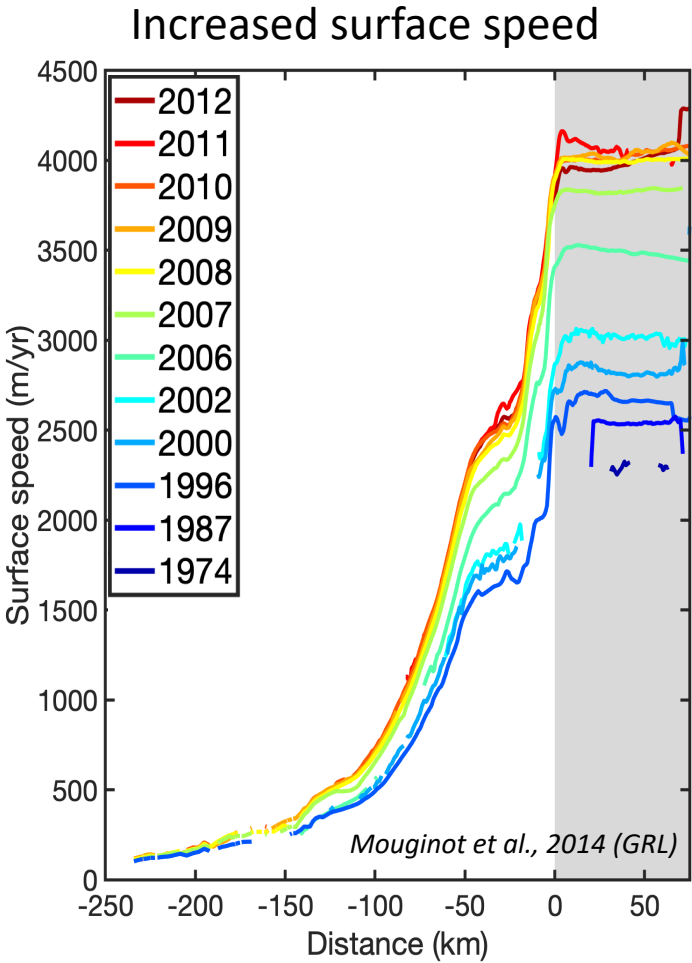
**SUPERCOMPUTING WALES**  
UWCHGYFRIFIADURA CYMRU

# PIG changes

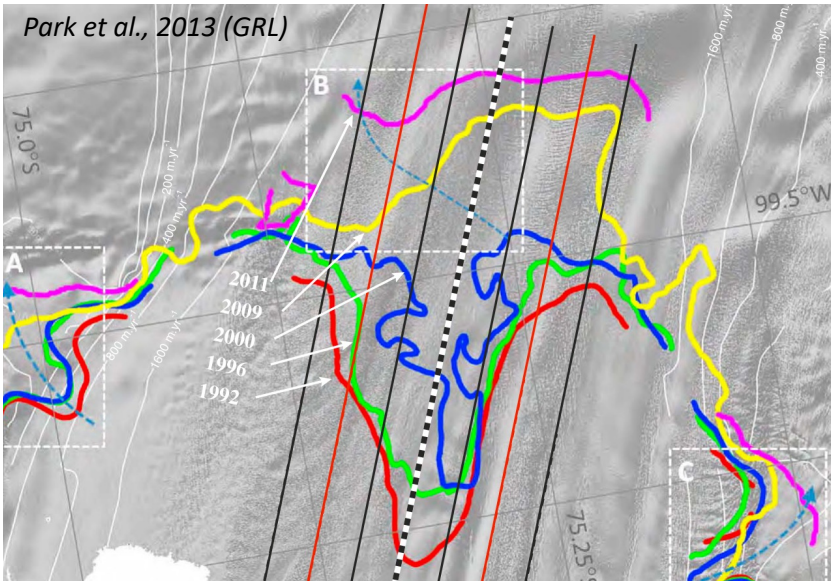
## Inland thinning (1995-2006)



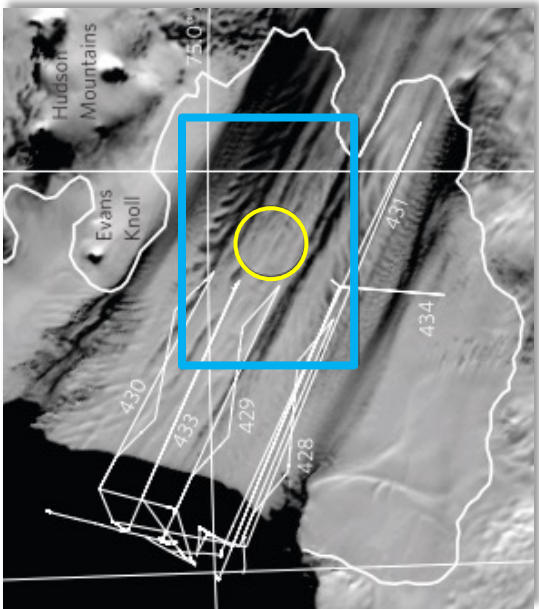
Wingham et al., 2009 (GRL)



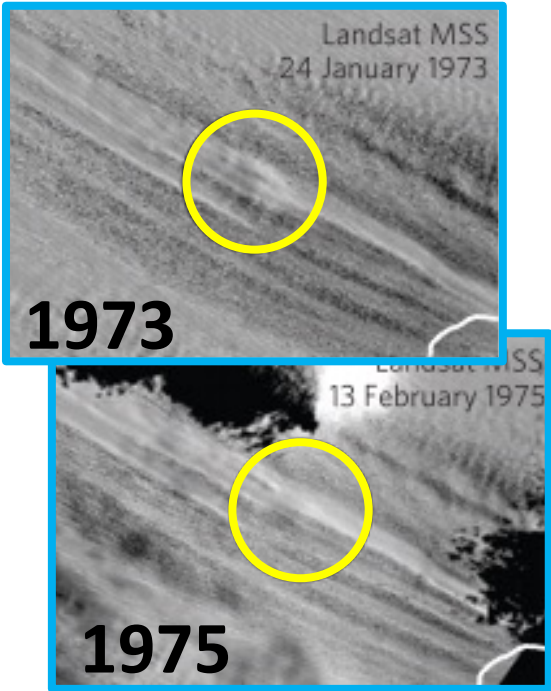
## Rapid GL retreat (~1km/yr)



## Ridge ungrounding

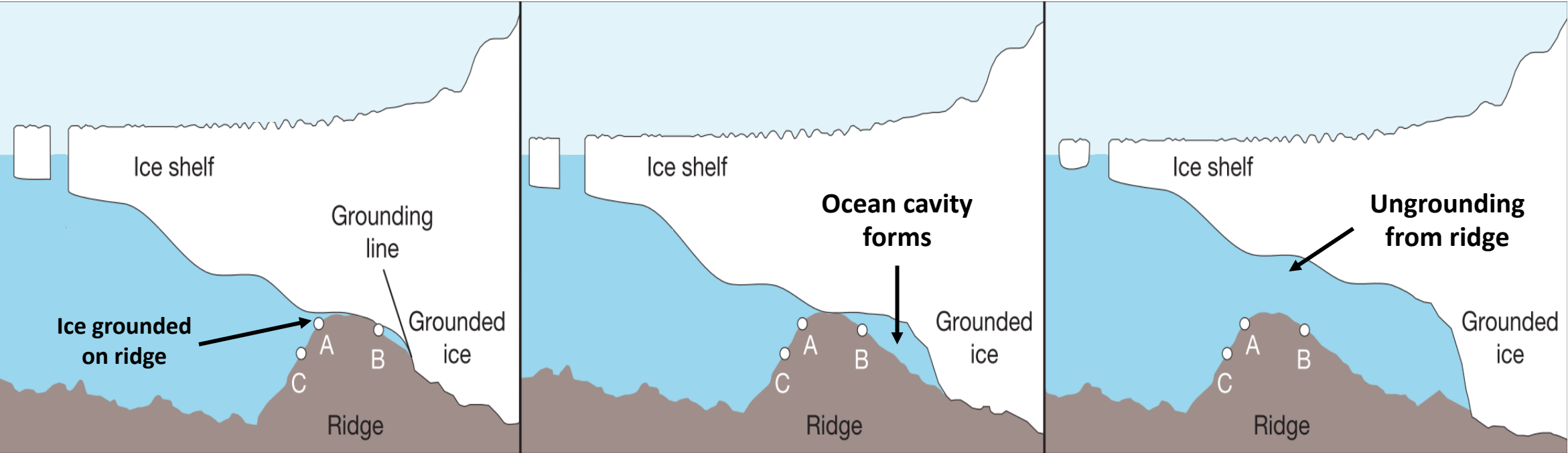


Jenkins et al., 2010 (Nature Geoscience)

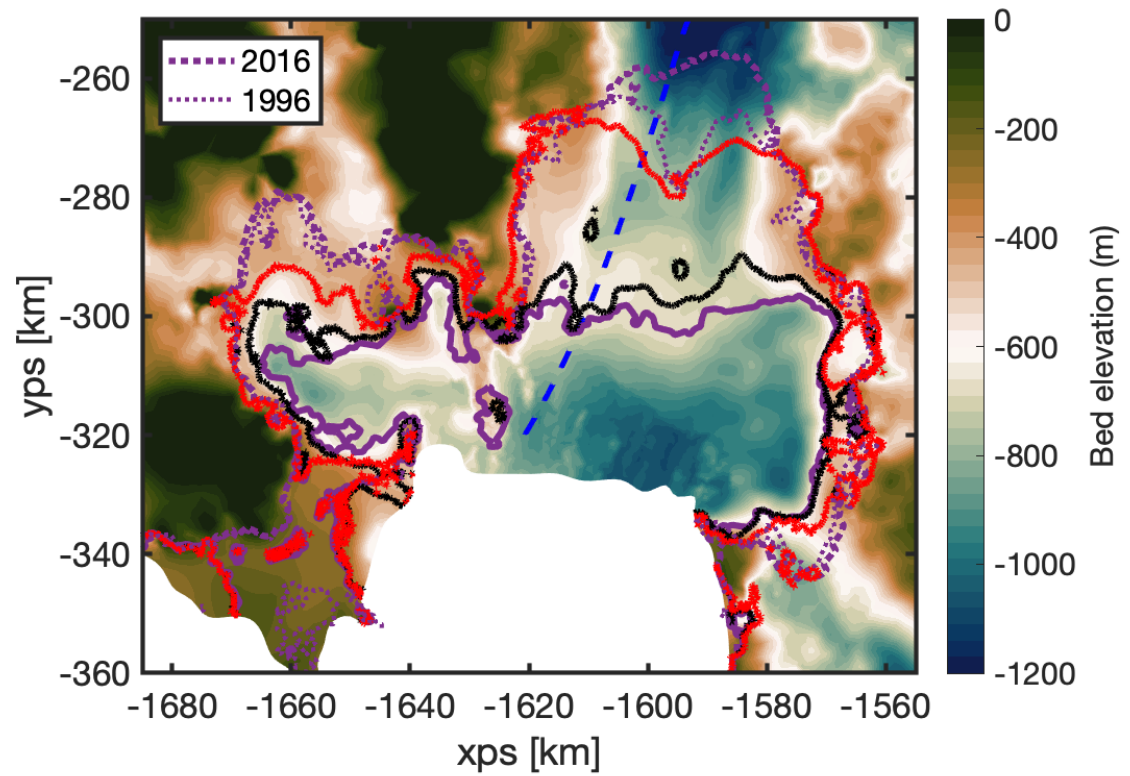
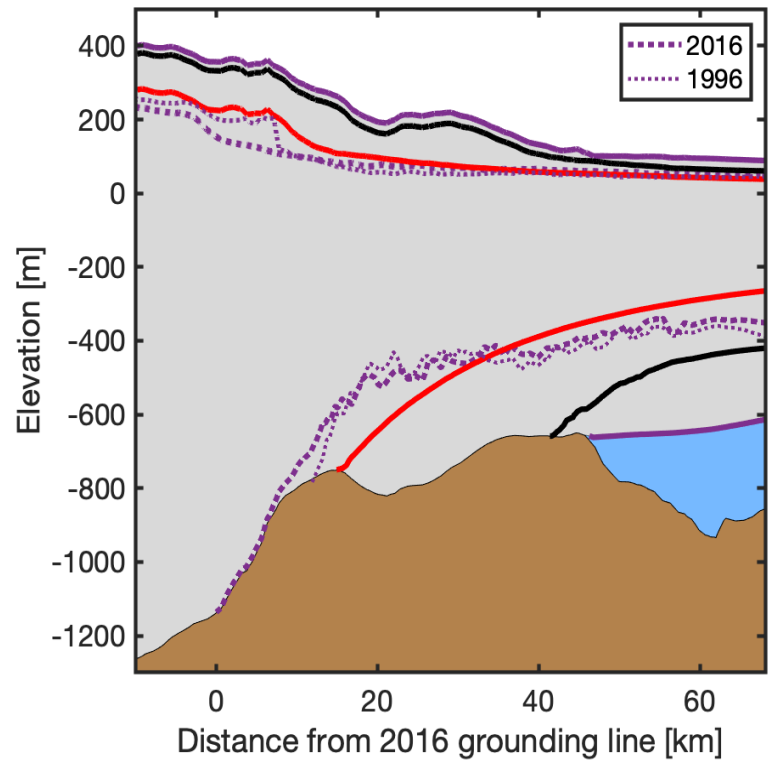
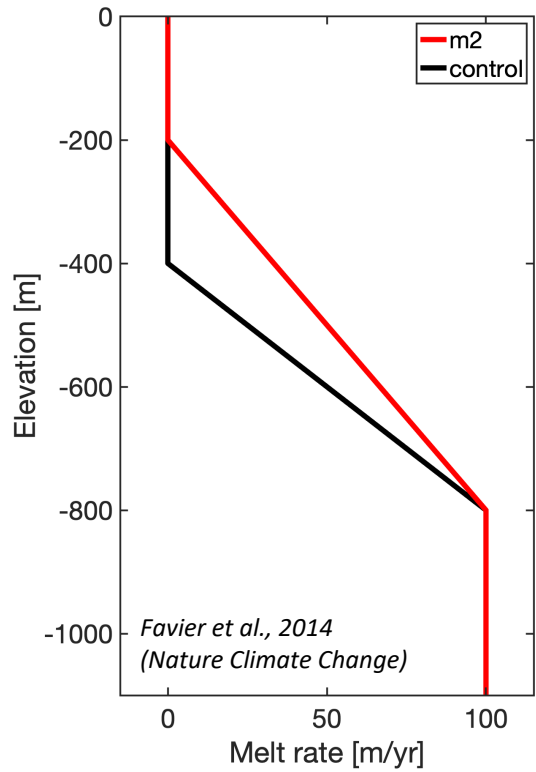




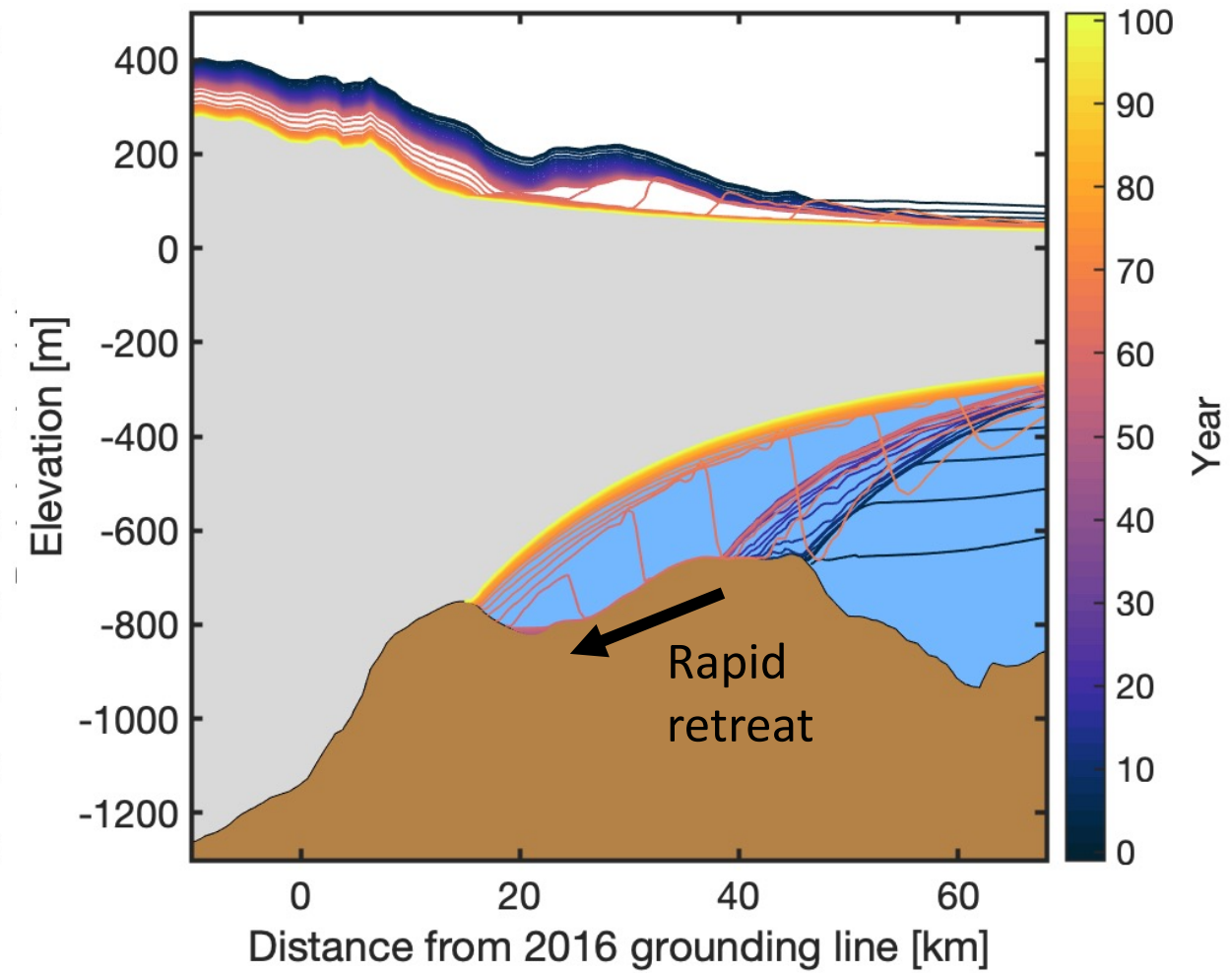
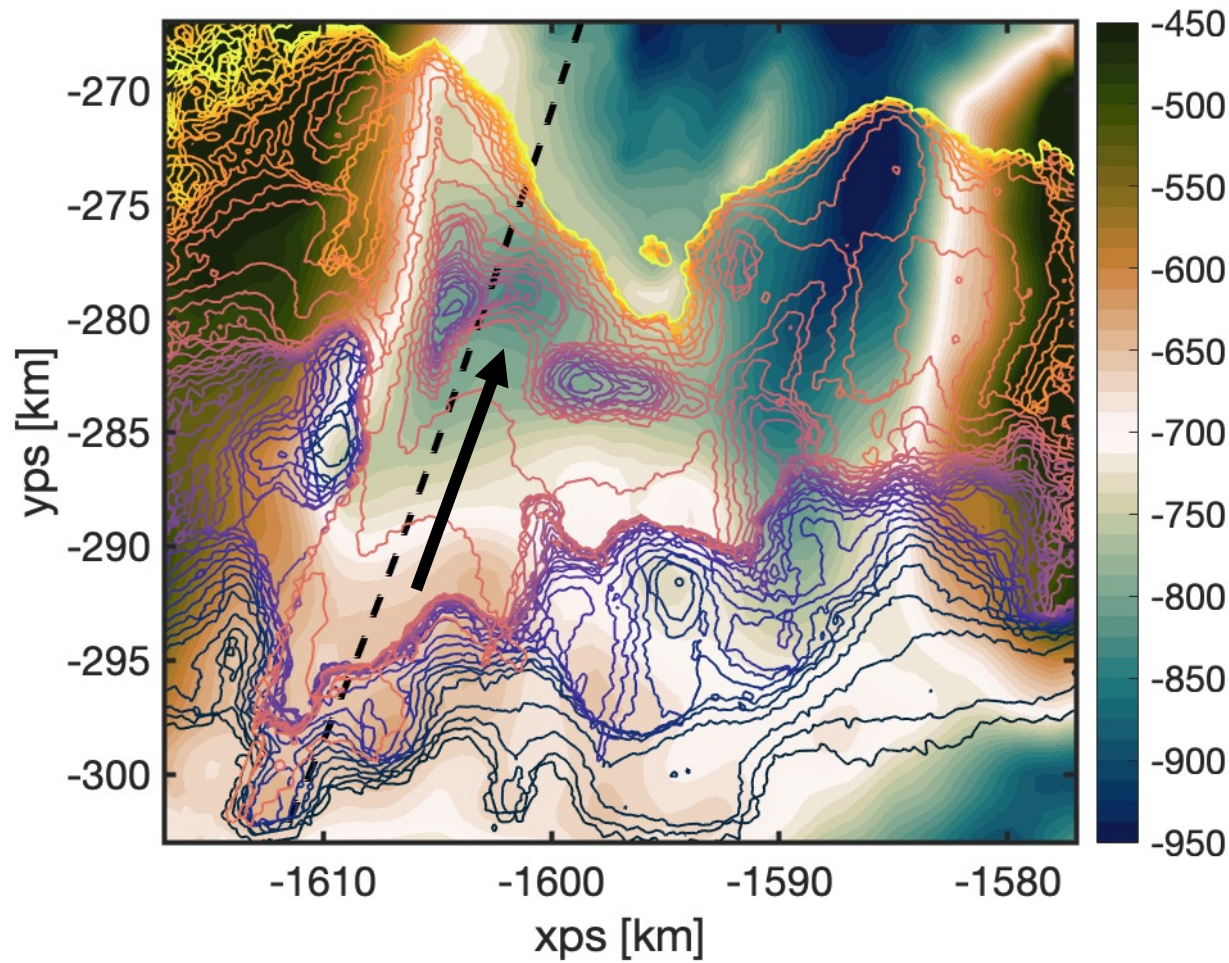
Pre-1945 → 1945-1970 → 1970 to present



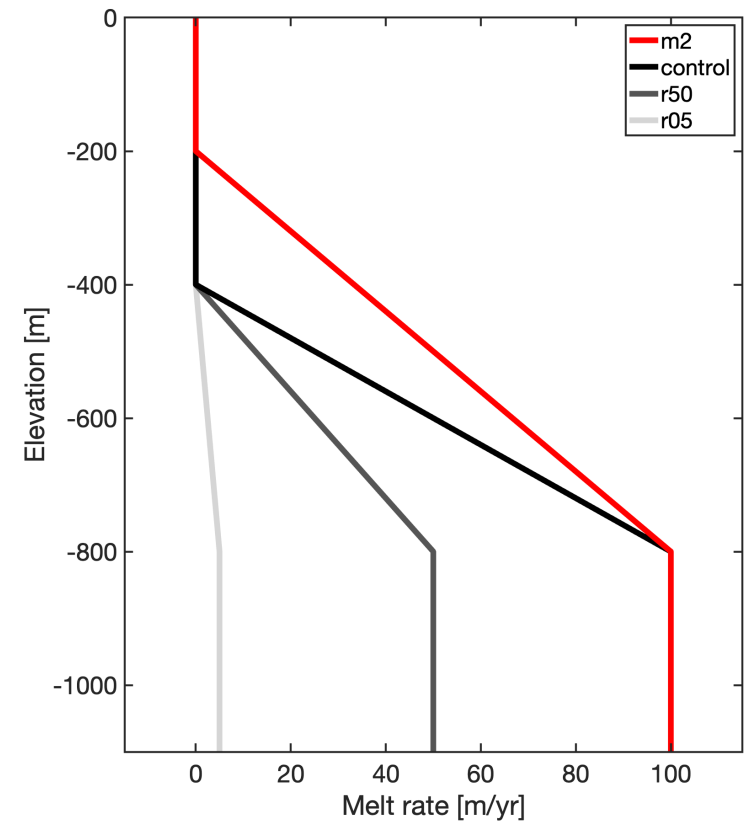
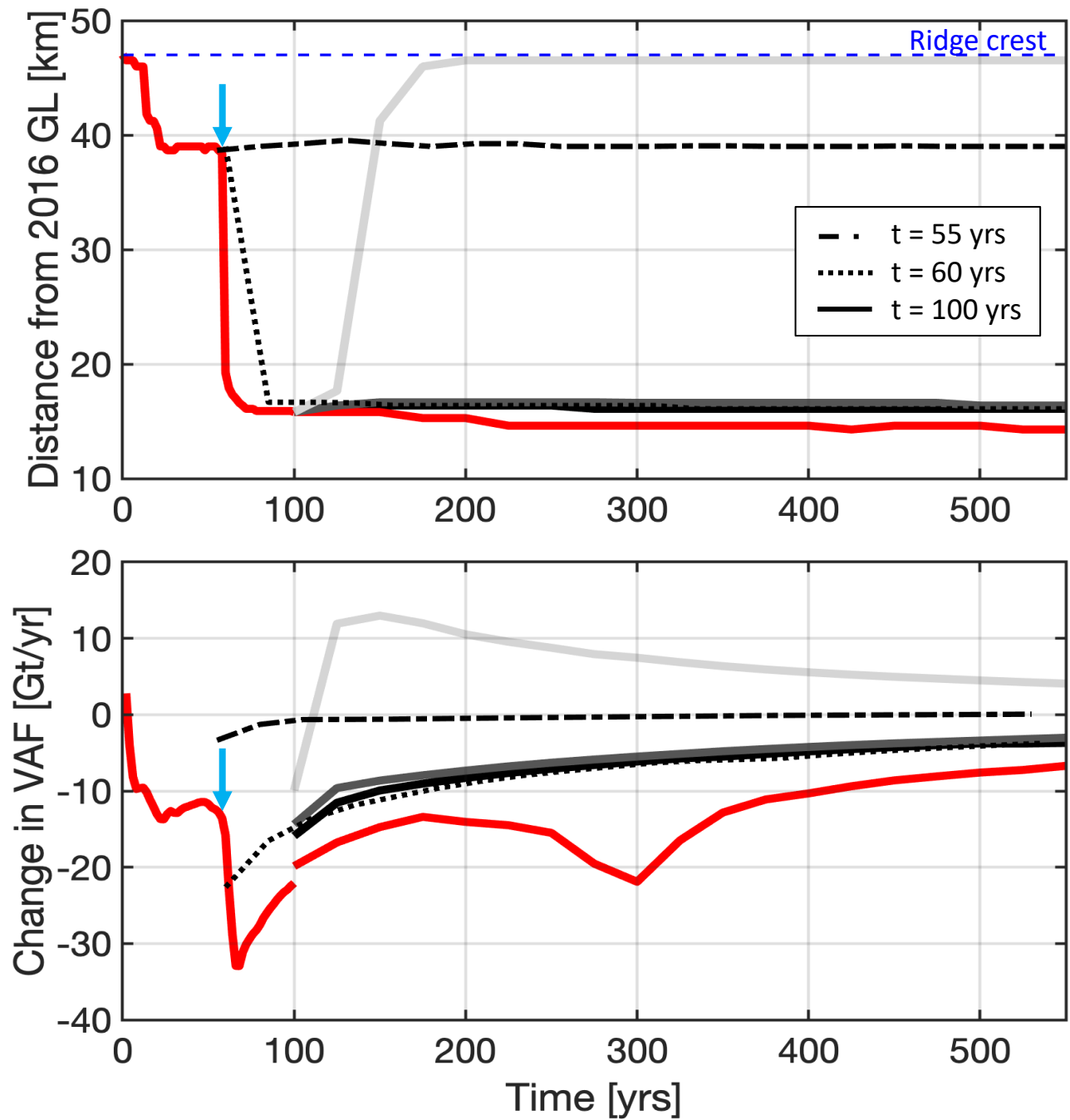
# Ridge retreat



# Rapid retreat

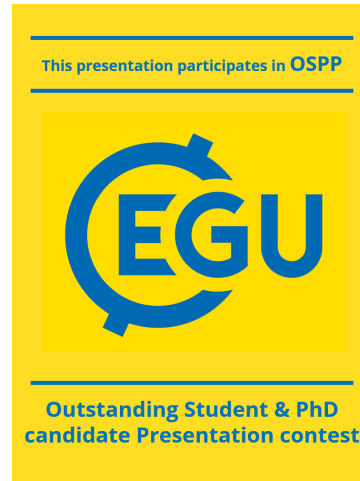


# Reversibility



# Thank You!

## Any questions?



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bradley.reed@bangor.ac.uk



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