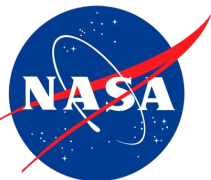


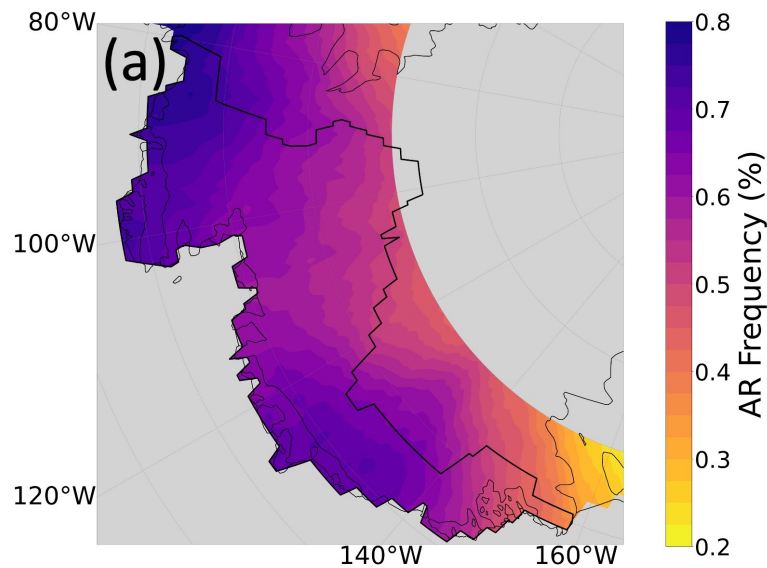
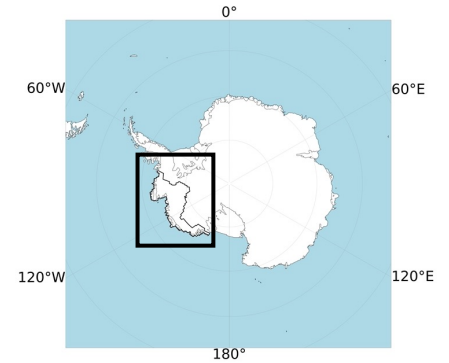
# Climatology and Surface Impacts of Atmospheric Rivers on West Antarctica

Preprint now available in  
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<https://doi.org/10.5194/tc-2022-101>

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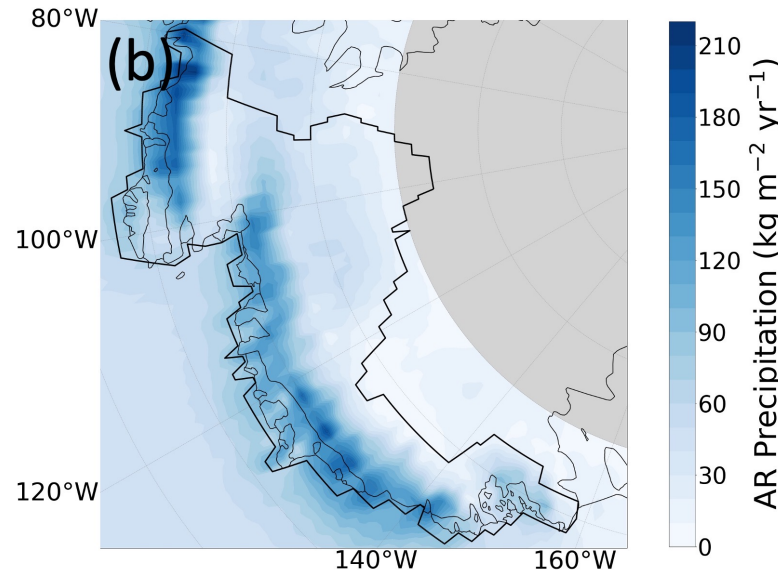


# Atmospheric rivers (ARs): long, narrow bands of warm and moist air that propagate poleward from the extratropics

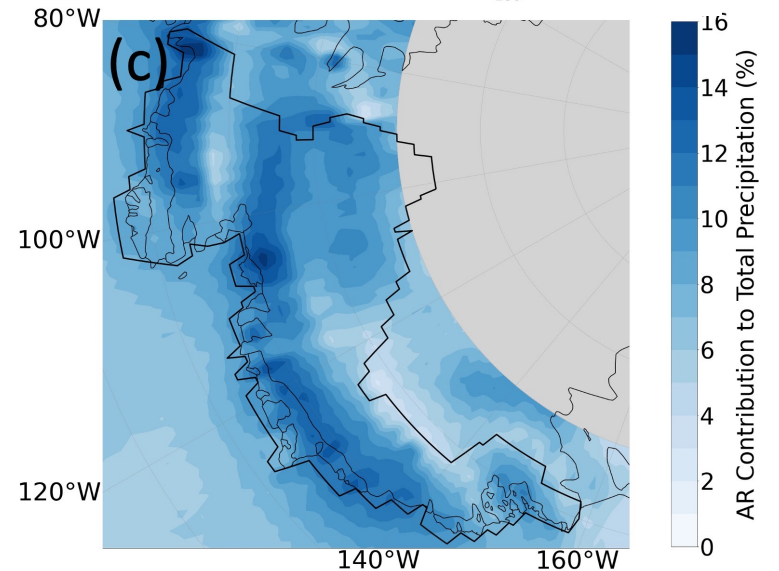


Frequency of AR landfall over West Antarctica (1-3 days per year)

*Wille et al., 2021*



Total annual precipitation attributed to ARs (MERRA-2)



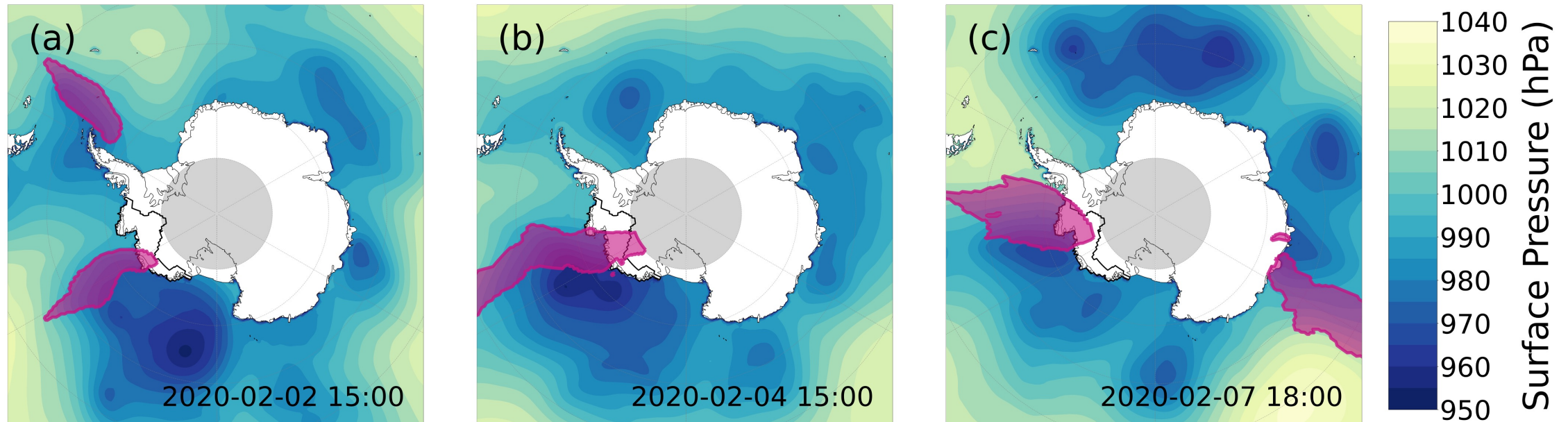
AR precipitation as the percentage of the total annual precipitation (MERRA-2)

*Maclennan et al., in review* 2



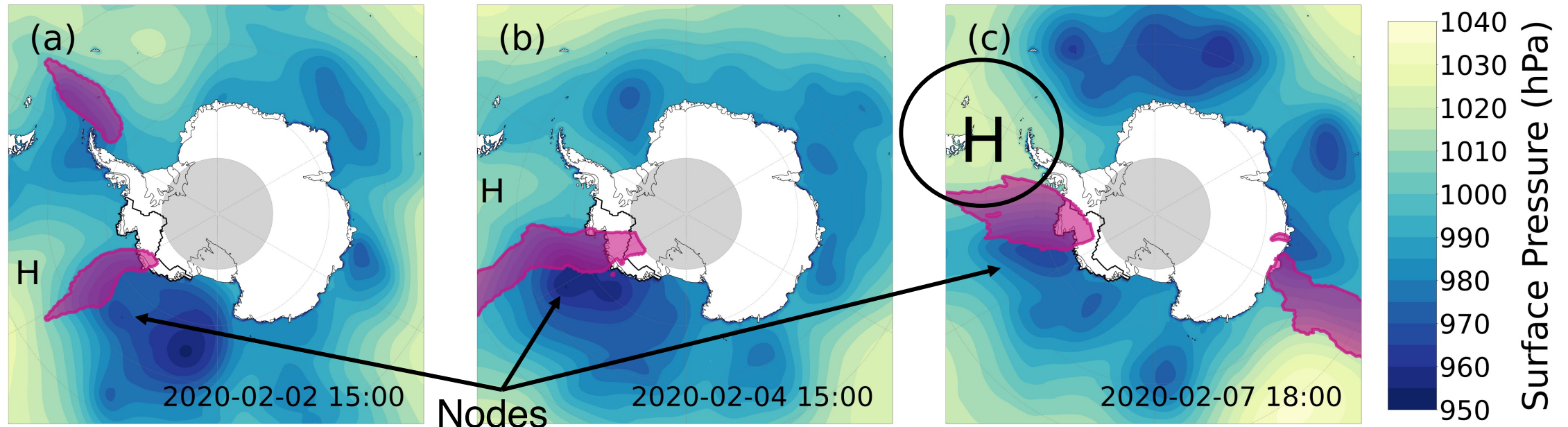
# AR Family: 3 ARs make landfall in rapid succession from February 1-8, 2020

*Maclennan et al., in review*



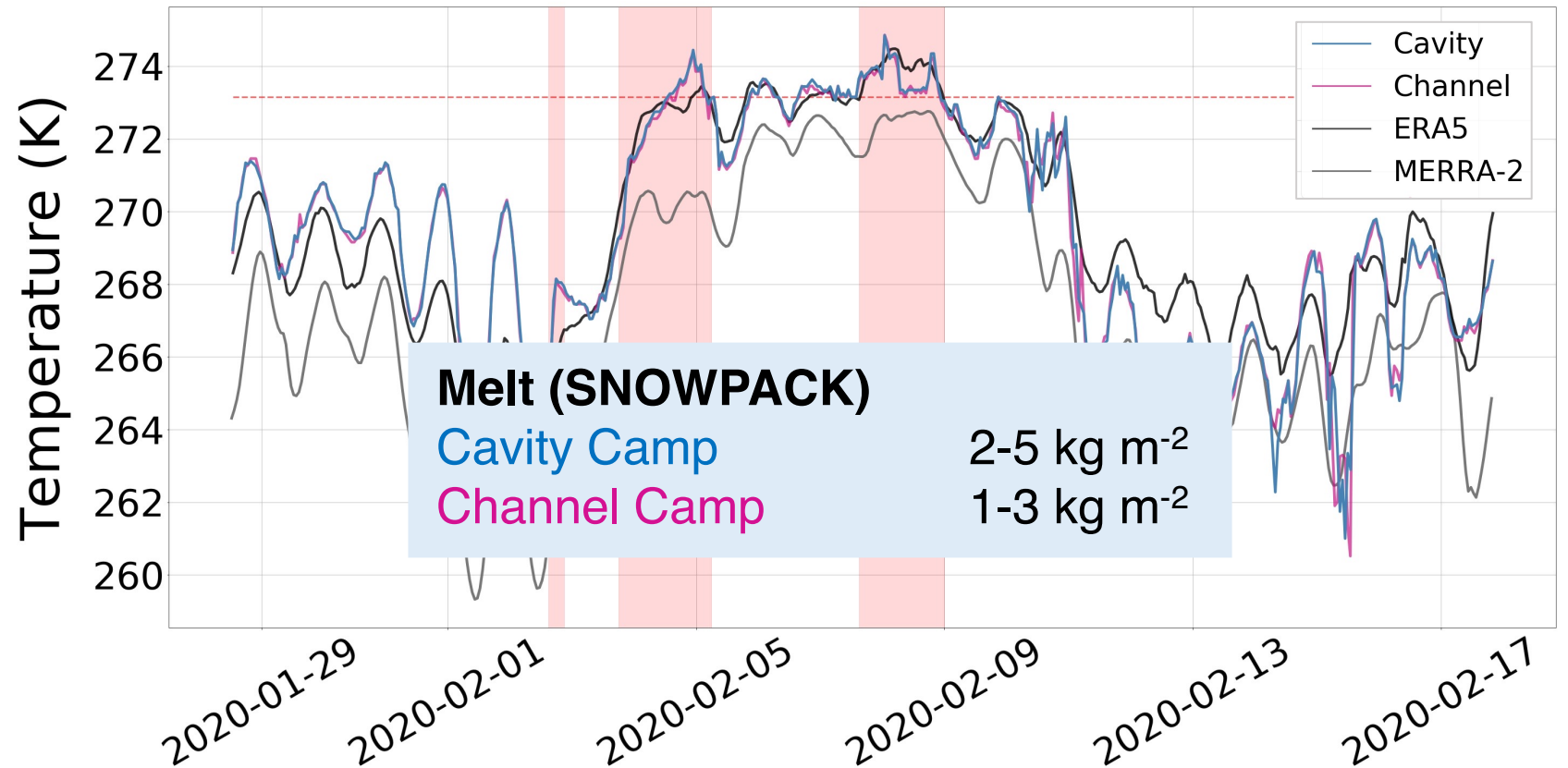
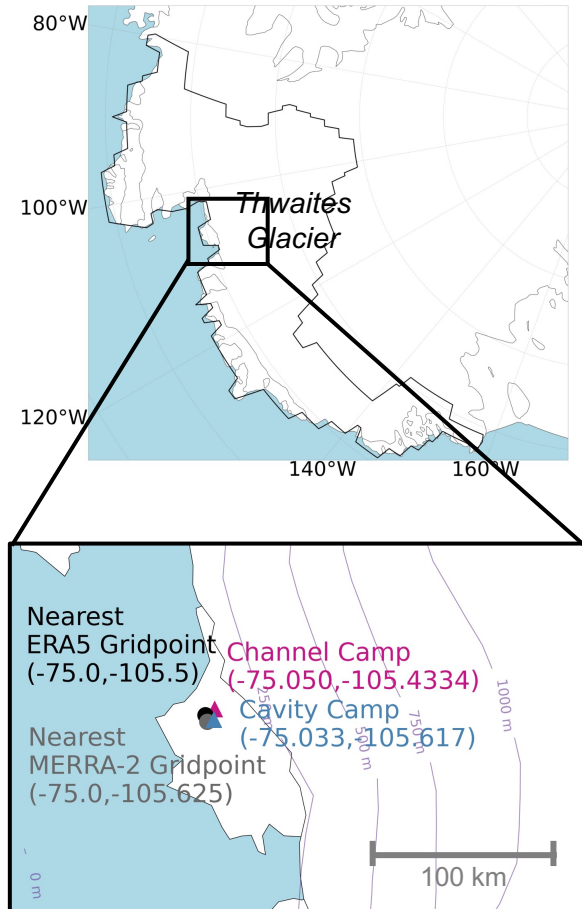
# Nodes in the low-pressure system and high-pressure ridge propel the ARs onto West Antarctica

*Maclennan et al., in review*



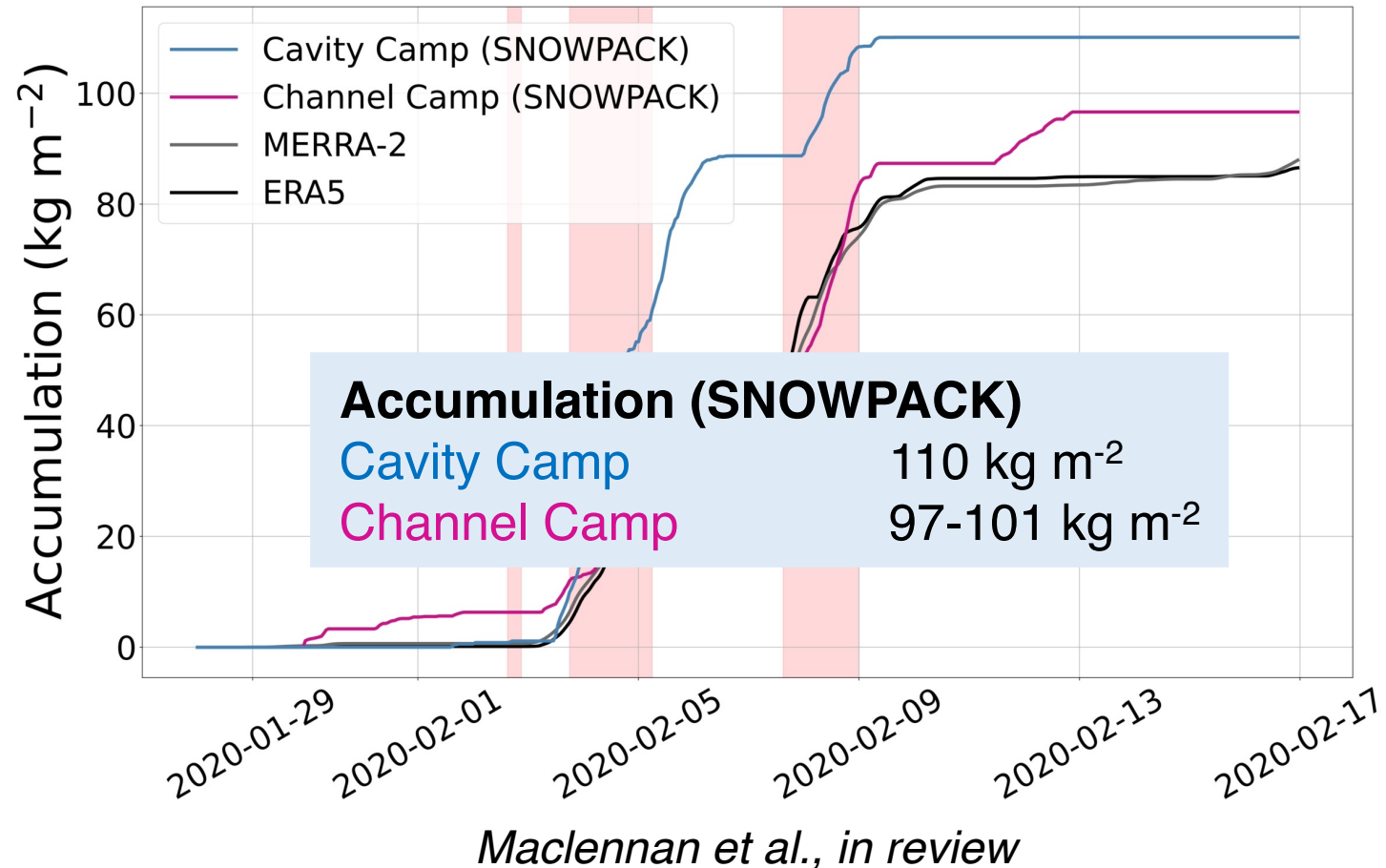
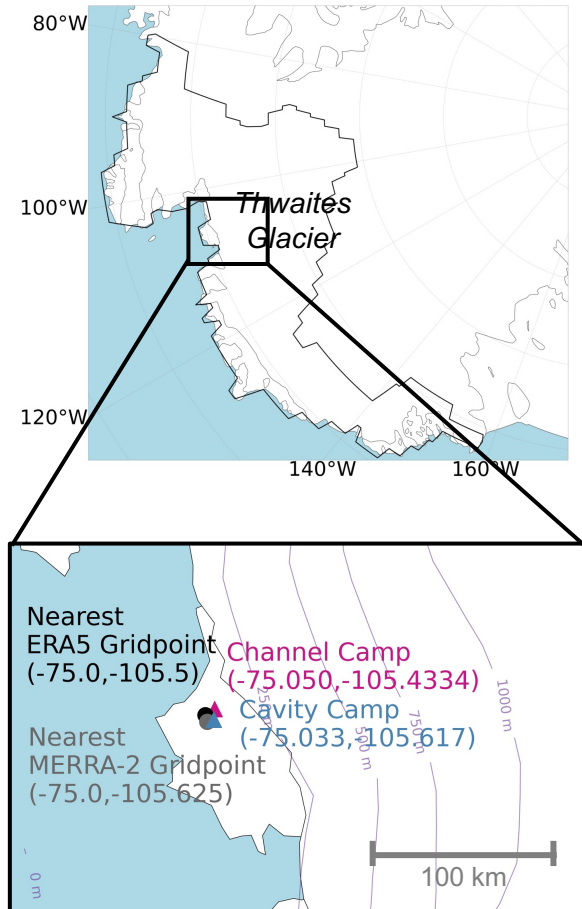
Nodes + high-pressure ridge → AR family event

# Observations of AR family event show high accumulation, some surface melt

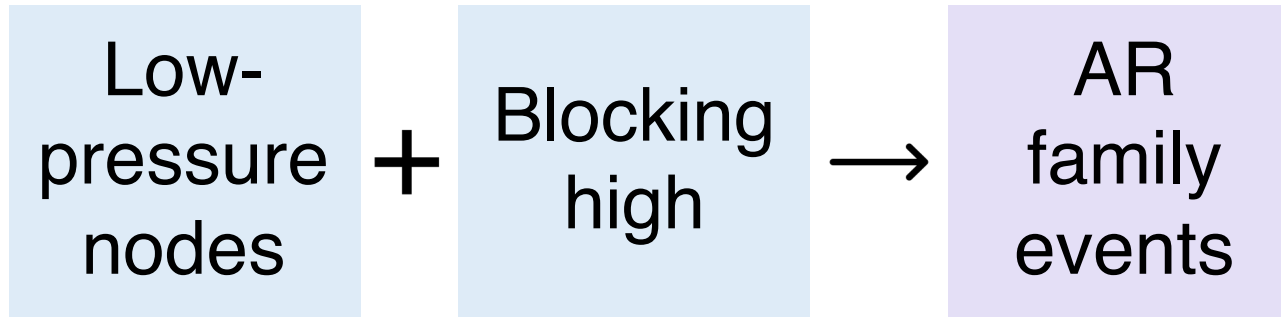


Maclennan et al., in review

# Observations of AR family event show high accumulation, some surface melt



# Major Takeaways



- Compounding impacts on surface temperatures and melt
- AR snowfall still dominates melt

## Thank you for listening!

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