



# Antarctic sea ice decline delayed well into the 21<sup>st</sup> century in a high-resolution climate projection

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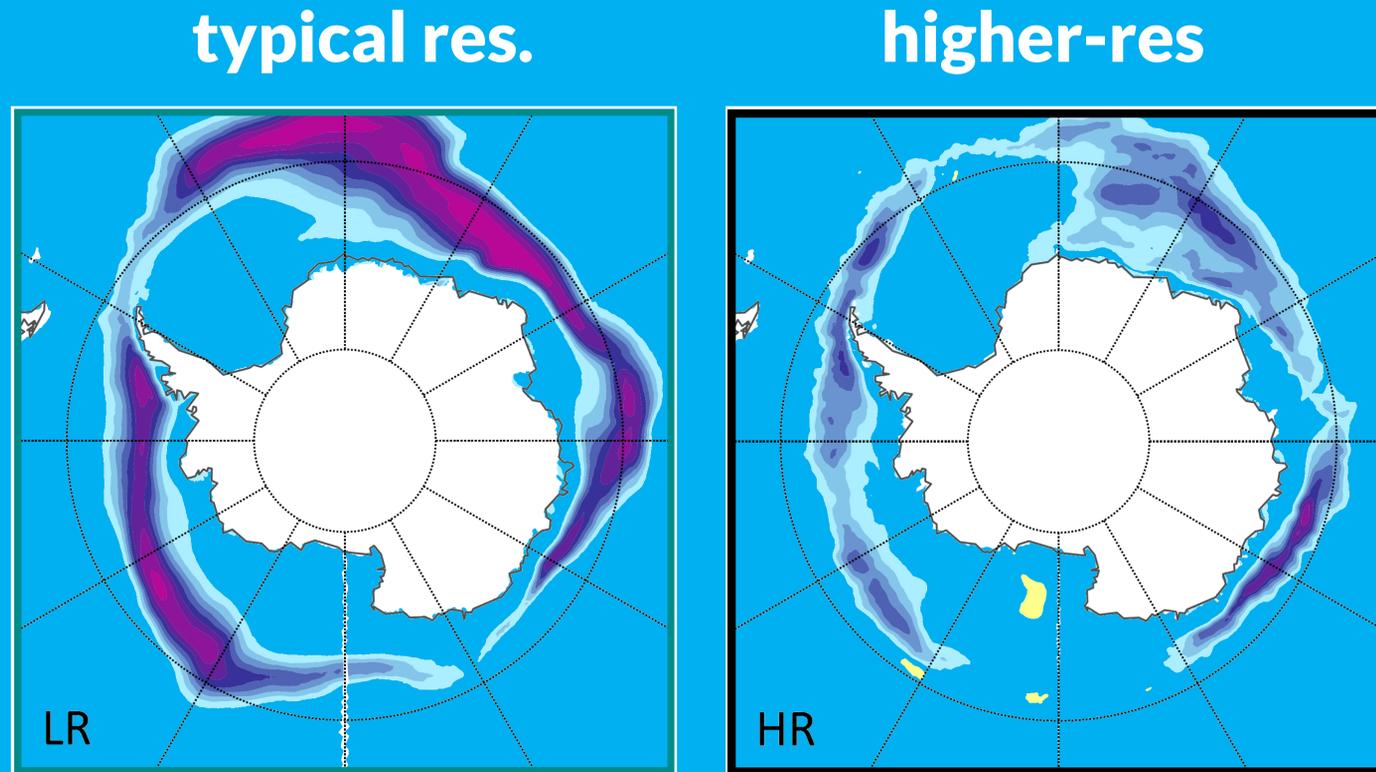
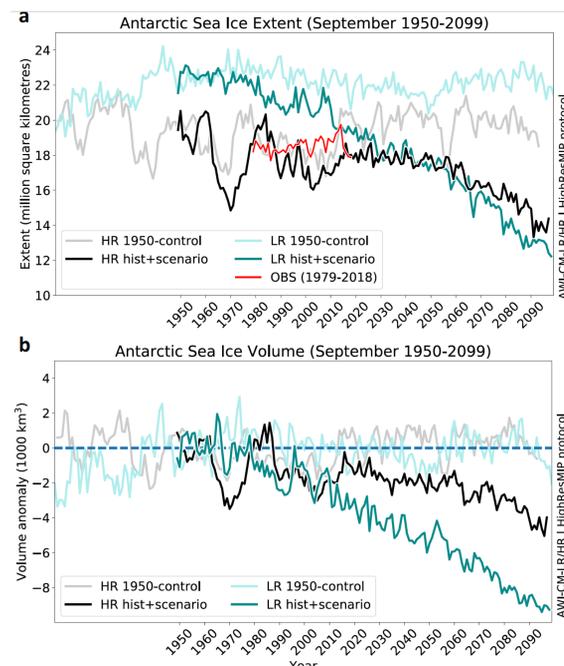
# Antarctic sea ice projections are sensitive to ocean model resolution.

**BACKGROUND:** Sea ice extent around the Antarctic continent has not declined since 1979. This is in stark contrast to existing climate models that tend to show a strong negative sea ice trend for the same period. The IPCC SROCC concluded that confidence in Antarctic sea ice projections is low.

## METHODS

1. Studying sea ice trends in observations (1979-2019), CMIP5, and in a HighResMIP projection with the AWI-CM climate model
2. AWI-CM-HR features an ocean with eddy-permitting and locally eddy-resolving resolution (up to 8km in Southern Ocean)
3. Compare HR simulation to a more standard-resolution LR configuration ("CMIP5-type", with eddy param.)

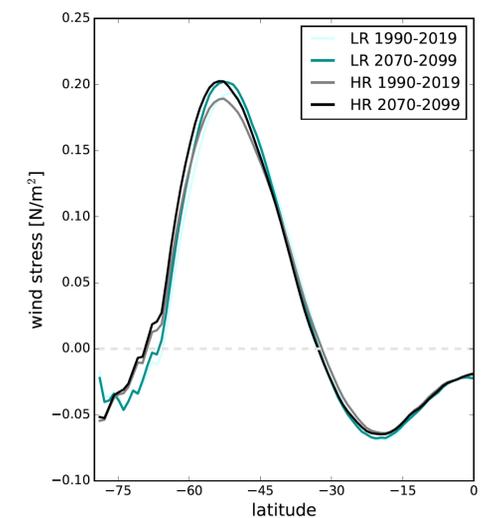
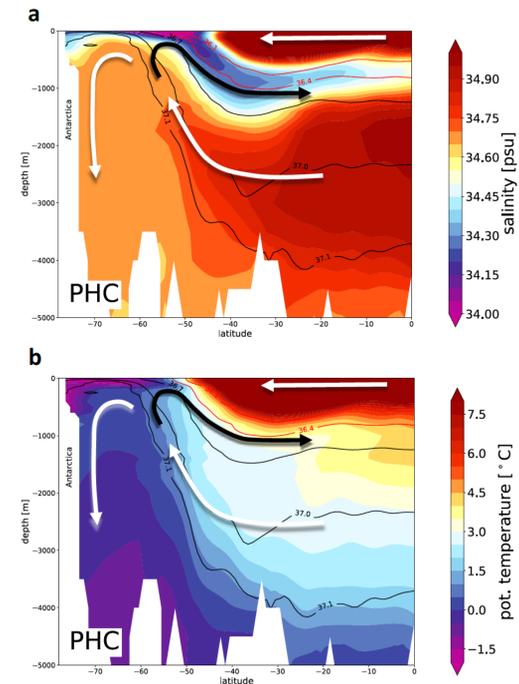
## DOES THE RESOLUTION PLAY A ROLE? YES!



## sea ice concentration change between 2070-2099 and 1990-2019 (RCP8.5)

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## Additional information



👤 Paper is currently in revision.

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