Subtropical clouds key to Southern Ocean teleconnections to the tropical Pacific

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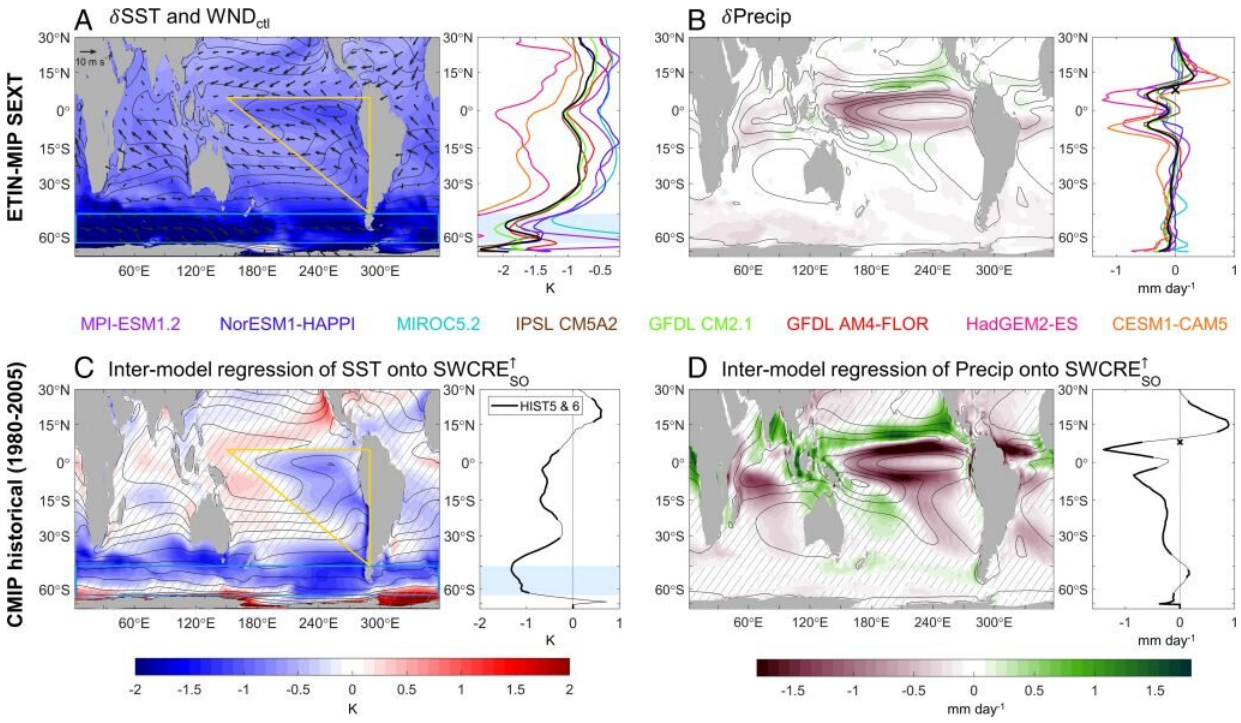

The impact of Southern Ocean cooling on the tropical Pacific. Credit: UNIST

The effect of the Antarctic climate change on the changes in the sea surface temperature in the Pacific Ocean has been identified.

Since an increase in the average global sea surface temperature (SST) could have profound impacts on climate and weather systems, their

findings are expected to be of great help in improving climate forecasts in the mid-latitude, as well as future climate predictability.

A research team, led by Professor Sarah Kang in the Department of Urban and Environmental Engineering at UNIST, has recently demonstrated the Southern Ocean–driven teleconnection mechanism mediated by subtropical low cloud feedback, which is erroneously weak in climate models.

This suggests that the impact of the Southern Ocean bias on the tropical precipitation bias is likely to be stronger than recent studies suggest, noted the research team.

Their findings have been published in *PNAS*.

More information: Hanjun Kim et al, Subtropical clouds key to Southern Ocean teleconnections to the tropical Pacific, *Proceedings of the National Academy of Sciences* (2022). DOI: 10.1073/pnas.2200514119

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