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## Modulation of PDO in the Arctic tropospheric warming

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The Arctic amplified warming under global warming is one of the prominent climate change events during the past several decades. Arctic sea ice retreat contributed the majority of the near-surface warming, and little to the mid-troposphere warming. The remote factors might contribute to or modulate the aloft Arctic warming.

Here we performed a multi-model joint-analysis to study the role of the Pacific decadal oscillation, which is one of the most important recurring ocean-atmosphere variability in the climate system, in the tropospheric Arctic warming. In the multi-model simulation, PDO reduced the Arctic warming trend during 1979-2013 significantly in spring, Autumn and early winter season from the near-surface to the upper troposphere. The reduction of warming reaches 0.3 / 0.2 °C per decade in the upper / lower troposphere.

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