



## **Influence of winter Arctic Oscillation on Arctic sea ice concentration**

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The changes of Arctic sea ice concentration for Nov-Mar is investigated from the HadISST dataset and these changes have been linked to the changes in the Arctic Oscillation. The result clearly shows a significant negative correlation between Arctic Oscillation and sea ice concentration over Greenland, Barents and Okhotsk, but a positive correlation over Davis Strait. In our study the Sea of Okhotsk is focused because local SSTs and sea ice have impacts on the weather and climate in China. From upper level to low level over north Pacific, when sea ice is decreased, there is a dipole pattern with a zonal anomalous anticyclonic circulation and an anomalous cyclonic circulation symmetrically located at the north and the south of 35°N. And the pattern resembles the circulation structure of the positive phase of Arctic Oscillation.