

Arctic warming and midlatitude atmospheric variability

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It has been hypothesized that Arctic amplification has increased the variability of the Northern Hemisphere jet-stream and has led to more frequent extreme weather events (e.g. blocking, snowfall). In this talk, we will briefly discuss this hypothesis as well as the additional modeling and observational studies that suggest that the large internal variability of the circulation likely masks any potential effects of Arctic amplification on midlatitude weather in the present-day. Looking to the future, the model simulations performed for CMIP5 (the Coupled Model Intercomparison Project, phase 5) offer mixed evidence of a link between Arctic amplification and the future response of the midlatitude circulation. Given that increasing greenhouse gas concentrations are projected to influence not just the Arctic climate, but the climate at other latitudes as well, a goal of future research should be to assess the relative importance of Arctic change compared to these other factors in determining future midlatitude weather and its extremes.