@article{Labe2018b,

abstract = {A large ensemble of simulations from a high-top atmospheric general circulation model (AGCM) are conducted to compare the atmospheric responses from loss of Arctic sea ice thickness and sea ice concentration. The response to projected sea ice thickness loss indicates substantial surface warming over the Arctic Ocean and up to 1° C of cooling in Eurasia. While the dynamic circulation response from sea ice thickness loss is smaller in magnitude, it has a similar spatial anomaly pattern as that due to sea ice concentration loss. This pattern resembles the negative phase of the Northern Annular Mode. The simulations reveal that sea ice thickness loss enhances the thermodynamic and large-scale circulation response from sea ice anomalies. These results stress the importance of considering a realistic sea ice thickness distribution in future AGCM sea ice perturbation experiments.},

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