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Title: The influence of the MJO on the NAO: Mechanisms and Predictability

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Abstract:

The influence of the MJO on the development of the NAO is assessed in modeling experiments with the CESM1 coupled model. A time-evolving idealized MJO three-dimensional diabatic heating field, based on TRMM data, has been added to the full coupled model is an ensemble of 50 of seasonal simulations. The same evolution of additional heating (spanning 3 MJO cycles) occurs in each member of the ensemble, allowing for a robust assessment of the response mechanisms that affect the intra-seasonal evolution of the NAO. The role of Rossby wave propagation and breaking, storm track modification, and Atlantic regime transition will be assessed, as well as the role of internal variability.

Future work on the re-forecasting and predictability of observed NAO events will be outlined.

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