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Title: Simulating the Extratropical Response to the Madden-Julian Oscillation

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Abstract:

Recent studies have shown that the diabatic heating of the Madden-Julian Oscillation (MJO) has a global impact that may serve as an important signal for subseasonal predictions. To understand the dynamical process of the extratropical response, a primitive equation global atmospheric circulation model is forced with an anomalous tropical heating associated with the MJO. Different aspects of the dynamical process involved in the extratropical response are analyzed. In particular, the nonlinearity of the response and the sensitivity to forcing location as well as to the atmospheric initial state are discussed.

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