

Arctic response to the Madden-Julian Oscillation

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We will examine whether and how an Madden–Julian oscillation (MJO) event can cause changes in Arctic circulation and temperature, especially near the surface. Lagged composites and projections with the thermodynamic energy equation will be used to investigate the mechanisms that drive the Arctic surface air temperature changes associated with the MJO. Then this connection of the MJO will be demonstrated using initial value calculations, as well as climate model simulations. Possible connections to sea ice and Arctic climate trend will be discussed.