

# **Sensitivity of WACCM and Implications for Predictability**

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## **Conclusions**

\*Perturbations in the lower thermosphere can switch the state of the whole atmosphere system which has multiple flow equilibria, and major stratospheric sudden warmings are sensitive to perturbations in both lower and upper atmosphere. Climatologically favorable conditions (Holton and Tan, 1980) should thus be interpreted in a statistical sense.

\*Chaotic divergence is most significant in atmospheric regions where planetary wave is strong. Development of the divergence has an apparent downward progression from the mesosphere/lower thermosphere down to the troposphere.