

# **Interhemispheric Coupling During Sudden Stratospheric Warmings and at Different Phases of Quasi-Biennial Oscillation**

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Although sudden stratospheric warmings (SSW) are northern high-latitude middle atmospheric phenomenon, there are ample reports of concomitant global dynamical variabilities. In particular, there are many results on correlated variations between high-latitude stratosphere and low-latitude mesosphere-ionosphere-thermosphere system. In the reverse direction, the low-latitude stratospheric quasi-biennial oscillation (QBO) also has influence on the high-latitude dynamics. In this study we present results from observations at multiple latitudes during SSW and at different phases of QBO. For this we have used specular meteor radar based mesosphere-lower-thermosphere winds from both hemispheres, global observations from satellite (Microwave Limb Sounder, MLS), model (Canadian Middle Atmosphere Model, CMAM), and reanalysis (Modern Era-Retrospective Analysis for Research and Applications, MERRA) data sets. Interesting results, such as QBO modulation of northern mid- and high-latitude semidiurnal tide and interhemispheric (latitudinal) variability of semidiurnal tides during recent SSW events (particularly the major events of 2009 and 2013) would be presented. We discuss the possible role of interhemispheric coupling in explaining these results.

**Key words:** Interhemispheric Coupling, Semidiurnal-tide, Sudden Stratospheric Warmings, Quasi-Biennial Oscillation

## **References:**

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