

Stratosphere-troposphere coupling: How does stratospheric variability affect the troposphere?

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The primary mechanism involves modulation of the residual circulation. Anomalous downwelling creates deep polar temperature anomalies, which extend through the polar tropopause. This directly affects the height of the tropopause, and therefore the thickness of the troposphere. Tropospheric vortex spinup/spindown corresponds to changes in the annular modes.