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## Revisiting the factors that drive interannual variability in stratospheric entry water vapour

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Understanding the sinks, sources and transport processes of stratospheric trace gases can improve our prediction of mid to long term climate change. In this study we consider the processes that lead to variability in stratospheric water vapor. We perform a Multiple Linear Regression (MLR) on the SWOOSH combined anomaly filled water vapor product with ENSO, QBO, BDC, mid-tropospheric temperature, and CH<sub>4</sub> as predictors, in an attempt to find the factors that most succinctly explain observed water vapor variability. We also consider the fraction of entry water vapor variability that can be accounted for by variations of the cold point temperature as an upper bound on how much water vapor variability is predictable from large scale processes. Several periods in which the MLR fails to account for interannual variability are treated as case studies in order to better understand variability in entry water not governed by these large scale processes.