



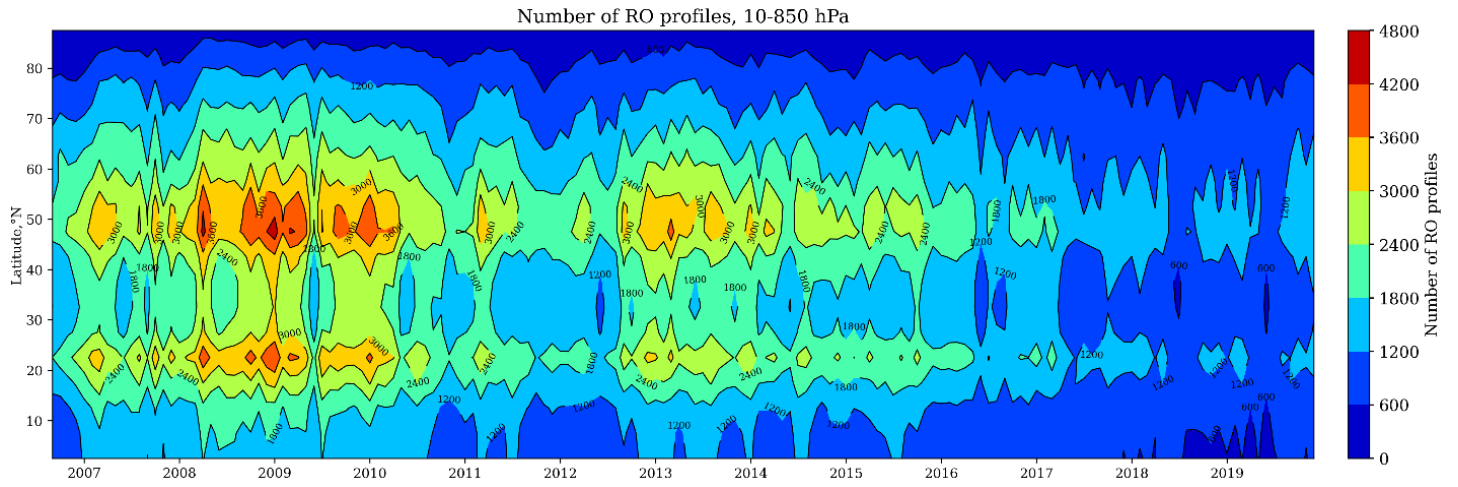
*Supplement of*

## **Observational perspective on sudden stratospheric warmings and blocking from Eliassen–Palm fluxes**

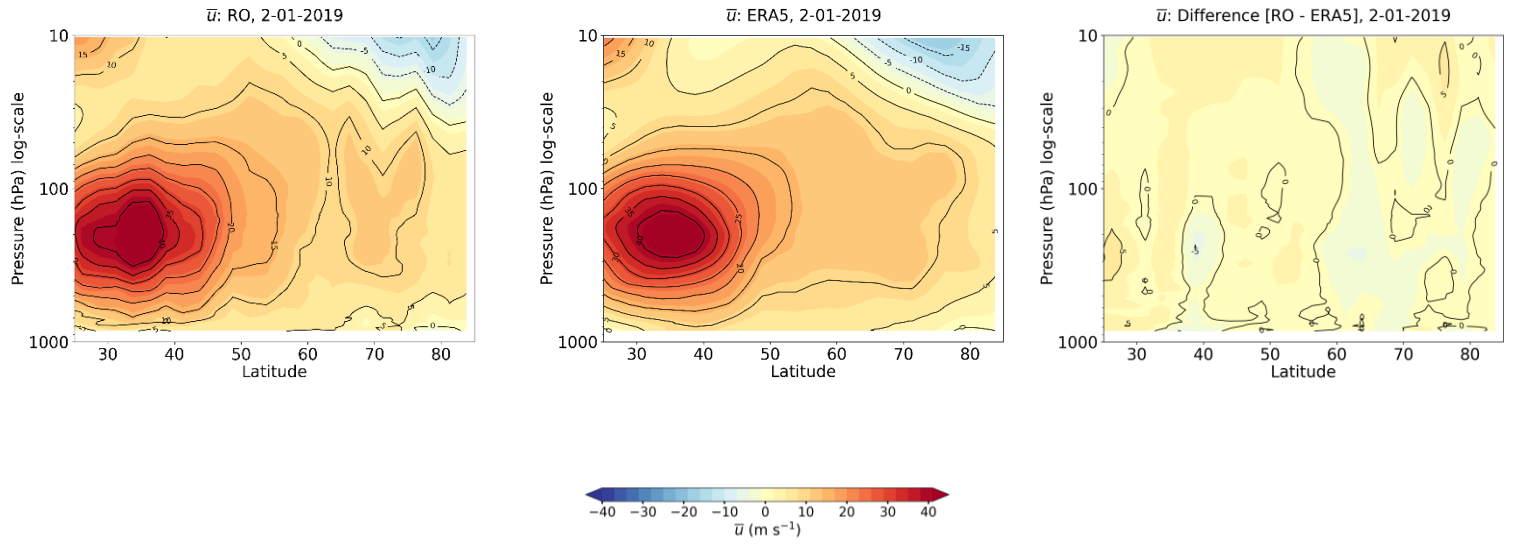
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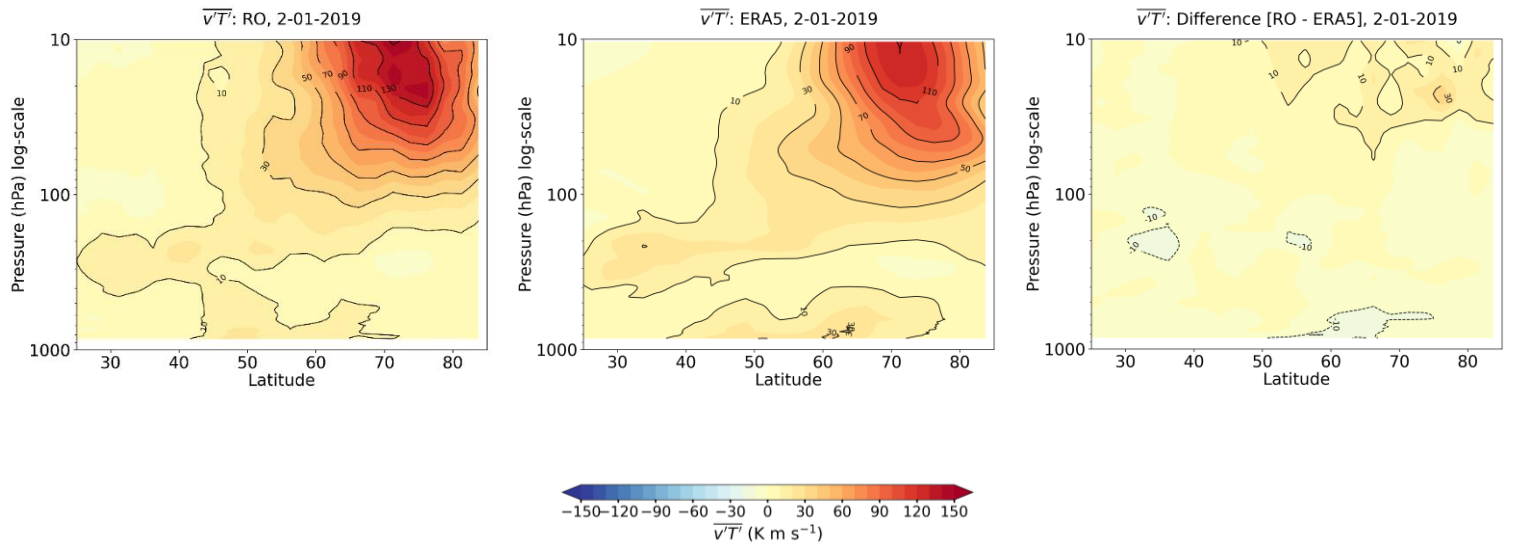
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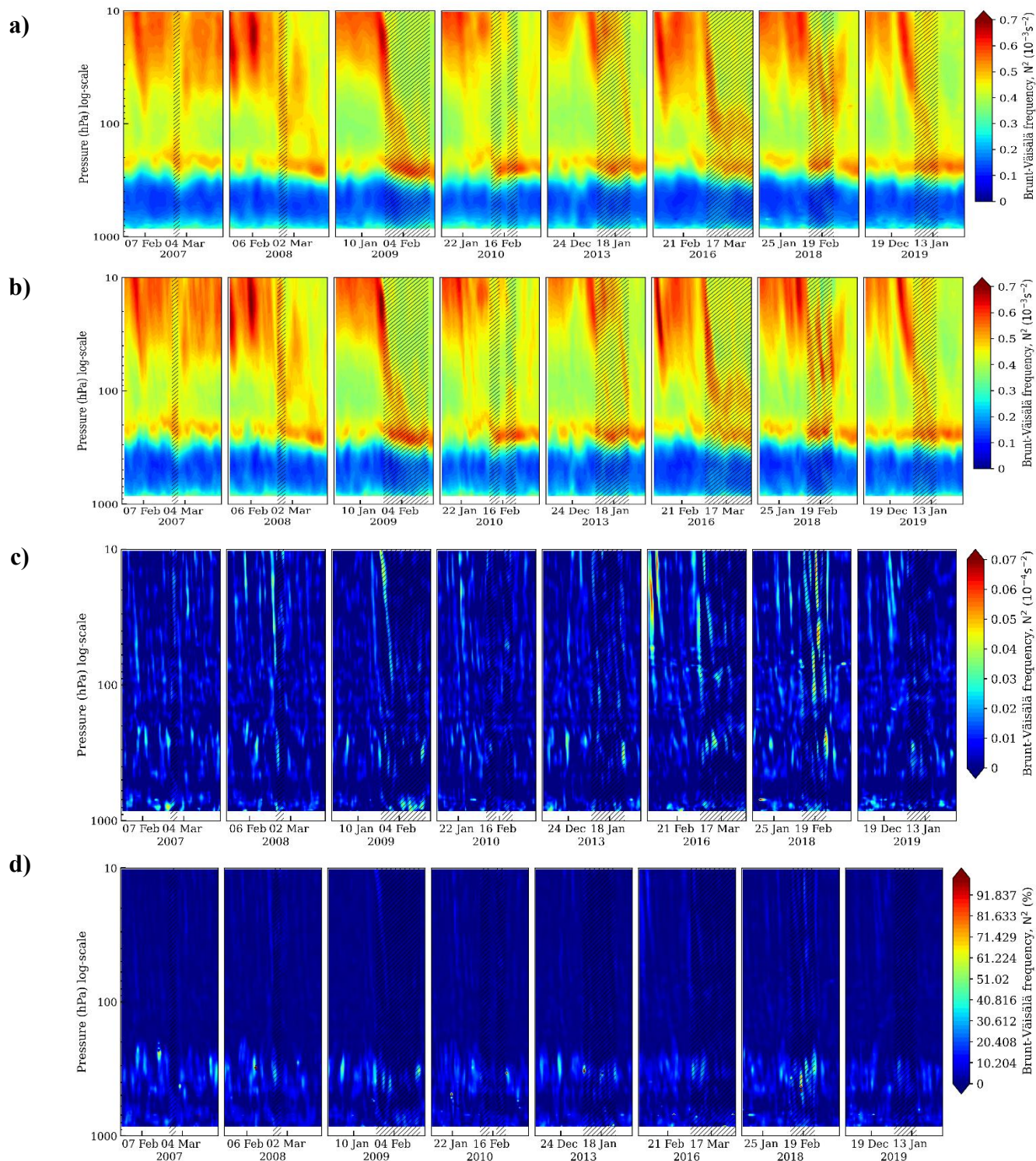
**Figure S1:** Zonal distribution of the monthly number of the RO profiles averaged over 10 to 850 hPa for the period from September 2006 to December 2019.



**Figure S2:** Zonal-mean zonal wind computed from RO (geostrophic wind; left) and ERA5 (real wind; right) and their difference for an exemplary day.



**Figure S3:** Eddy meridional heat flux computed from RO (using geostrophic meridional wind; left) and ERA5 (using real meridional wind; right) and their difference for an exemplary day.



**Figure S4:** Brunt Väisälä frequency computed from RO (a) and ERA5 (b) and their difference (c) and difference in percentage (d) averaged over 75-90° N within a +/- 30 day timeframe relative to each of the SSW events from 2007 to 2019. Hatched regions indicate dates when the zonal-mean zonal wind at 60° N and 10 hPa is negative.