



## **Measuring tropical widening from potential vorticity and age of air**

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Over the last years several metrics have been discussed to measure tropical widening and different values have been reported using data from models and reanalysis. Such phenomenon is usually linked to dynamical changes in the southern hemisphere of the Earth because of the ozone hole and global climate change for both hemispheres. Changes observed in the atmosphere at the levels of the upper troposphere and lowermost stratosphere have shown potential as fingerprints of such widening.

In this work we revisited past work on this topic and examine and compare results of potential vorticity, potential temperature and age of air as markers of such tropical widening. Results show some dependence on vertical resolution and different values across all the datasets used.