



## **Tropospheric ozone trends (1975-2000) in the UT/LS in northern hemisphere using measurements from ozone sondes and regular aircraft**

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Ozone is a particularly strong greenhouse gas in the tropopause region and therefore trends in this altitude are important for changes in radiative forcing. The knowledge of tropospheric ozone trends in the UT/LS is usually based on a small number of stations operating regular ozone measurements from balloons, the longest series started measurements in the late 1960s. In this study we used ozone measurements from regular aircraft of the project GASP (Global Atmospheric Sampling Program) providing measurements from B-747 aircrafts operated from USA from 1975 to 1979 in comparison with measurements of the ongoing project MOZAIC.

For this comparison the measurements are binned according to tropopause altitude, and coordinates in equivalent latitudes are used for analysis of stratospheric data. The measurements show that ozone increased in the lowest part of the stratosphere over northern midlatitudes since the late 1970s in summer, while it decreased in the other seasons. In addition, a comparison between the above-mentioned regular air crafts measurements and ozone sondes is presented.