



*Supplement of*

## **Hemispheric differences in ozone across the stratosphere–troposphere exchange region**

**Rodrigo J. Seguel et al.**

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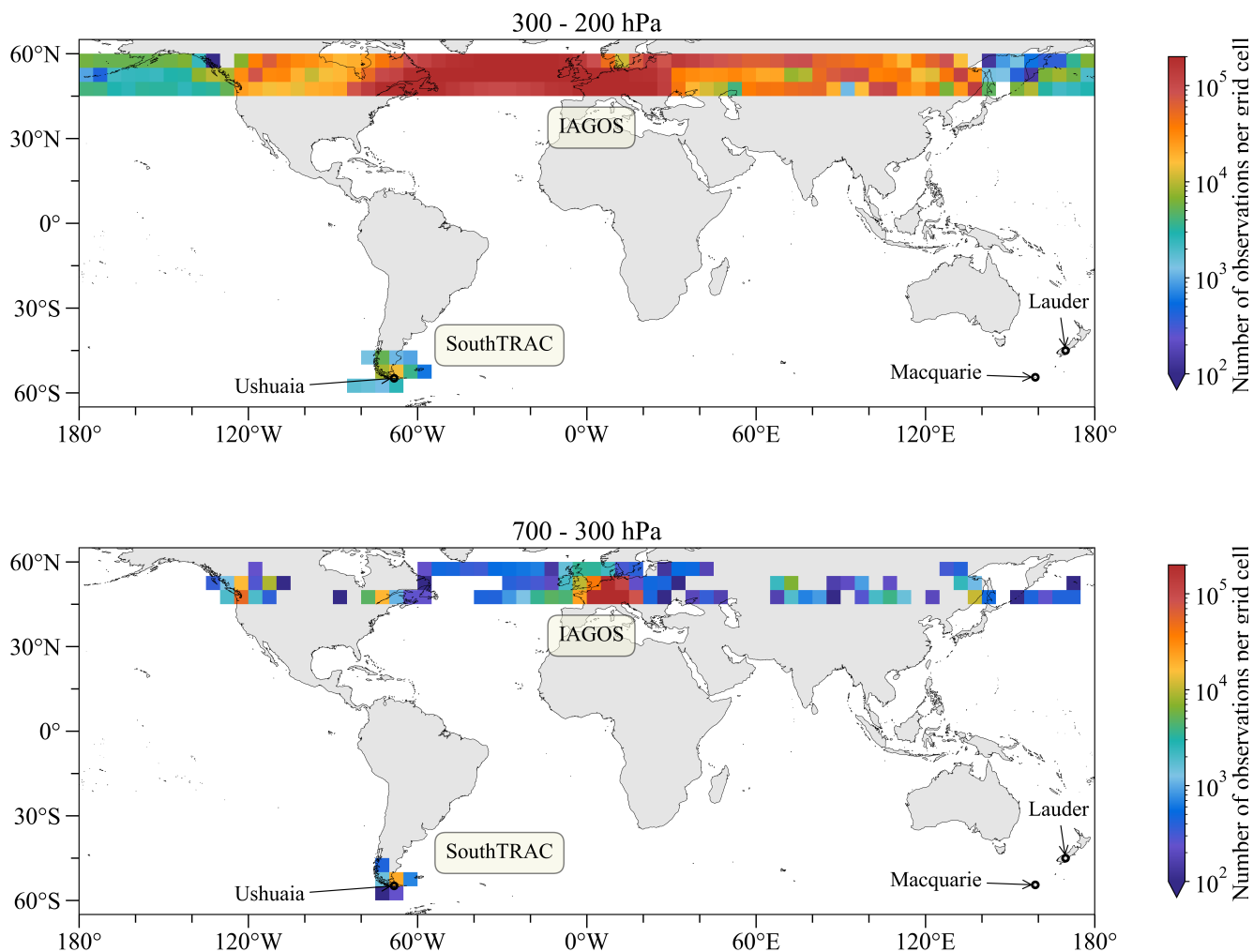
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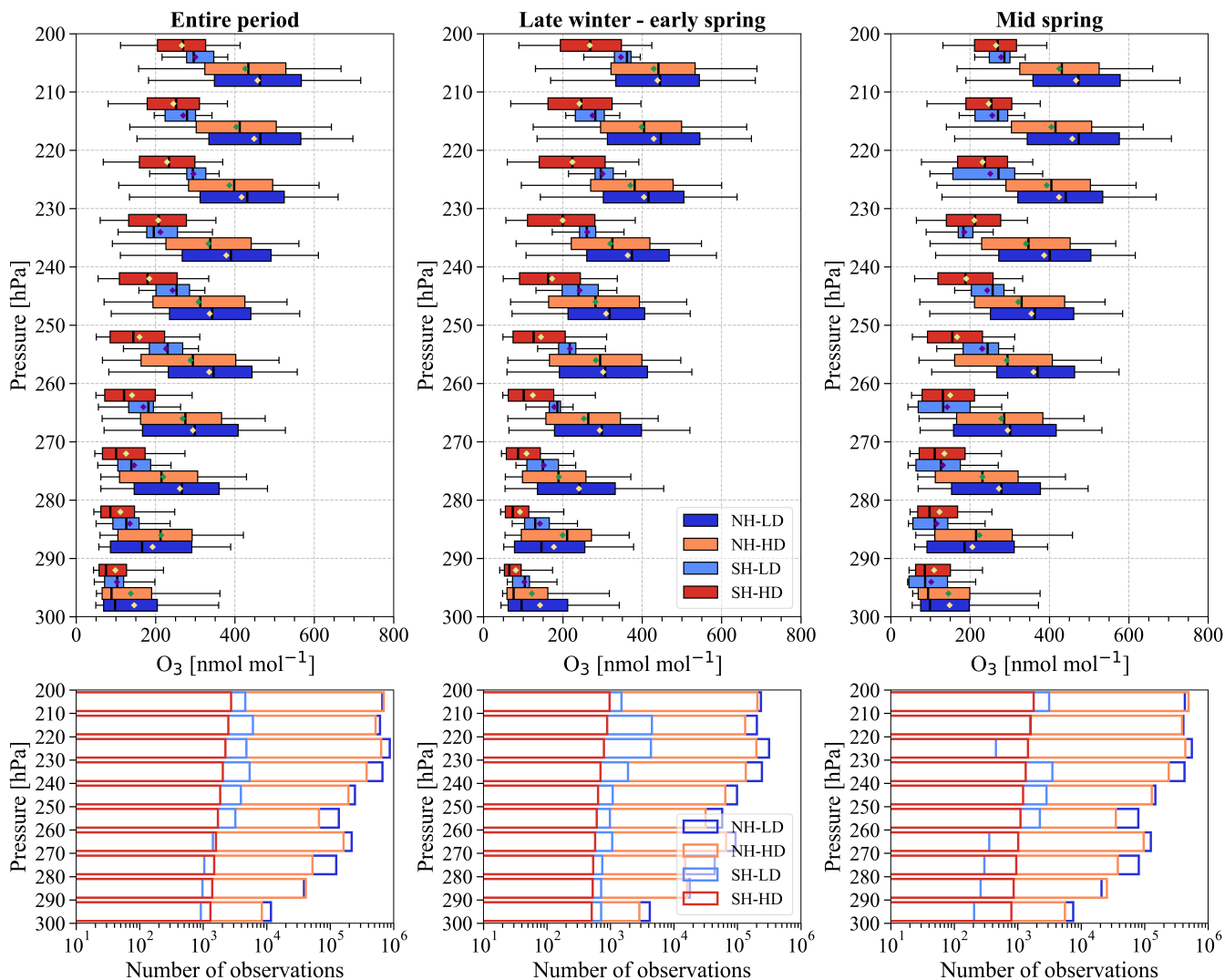
**Figure S1:** Routes position frequency obtained from aircraft GPSs. All panels show only SouthTRAC and IAGOS data within the same latitudinal band 45°-60° in the SH and NH. The upper panel shows the number of GPS observations by grid cell (5° x 5°) between 300 and 700 hPa. The lower panels show the same information between 700 and 300 hPa.

**Figure S2:** Ozone box plot ( $\text{nmol mol}^{-1}$ ) and associated sample sizes by pressure bins. The plots include ozone data with RH less than 30% obtained from IAGOS, SouthTRAC and WOUDC. In the upper panel, the left, middle and right plots show the entire period, late winter-early spring and mid-spring respectively, for the northern and southern hemispheres and high-depleted (HD) and low-depleted (LD) years. Box plots indicate the median, the 25<sup>th</sup> and 75<sup>th</sup> percentiles. The diamonds in the upper panels indicate the mean values. The whiskers extend to the 5<sup>th</sup> and 95<sup>th</sup> percentiles. In the lower panels, the X-axis shows the observation numbers. The rest of the plot information is the same as described in the upper panel. High and low-depletion years in SH included ozonesondes launched from Ushuaia, Lauder and Macquarie Island.

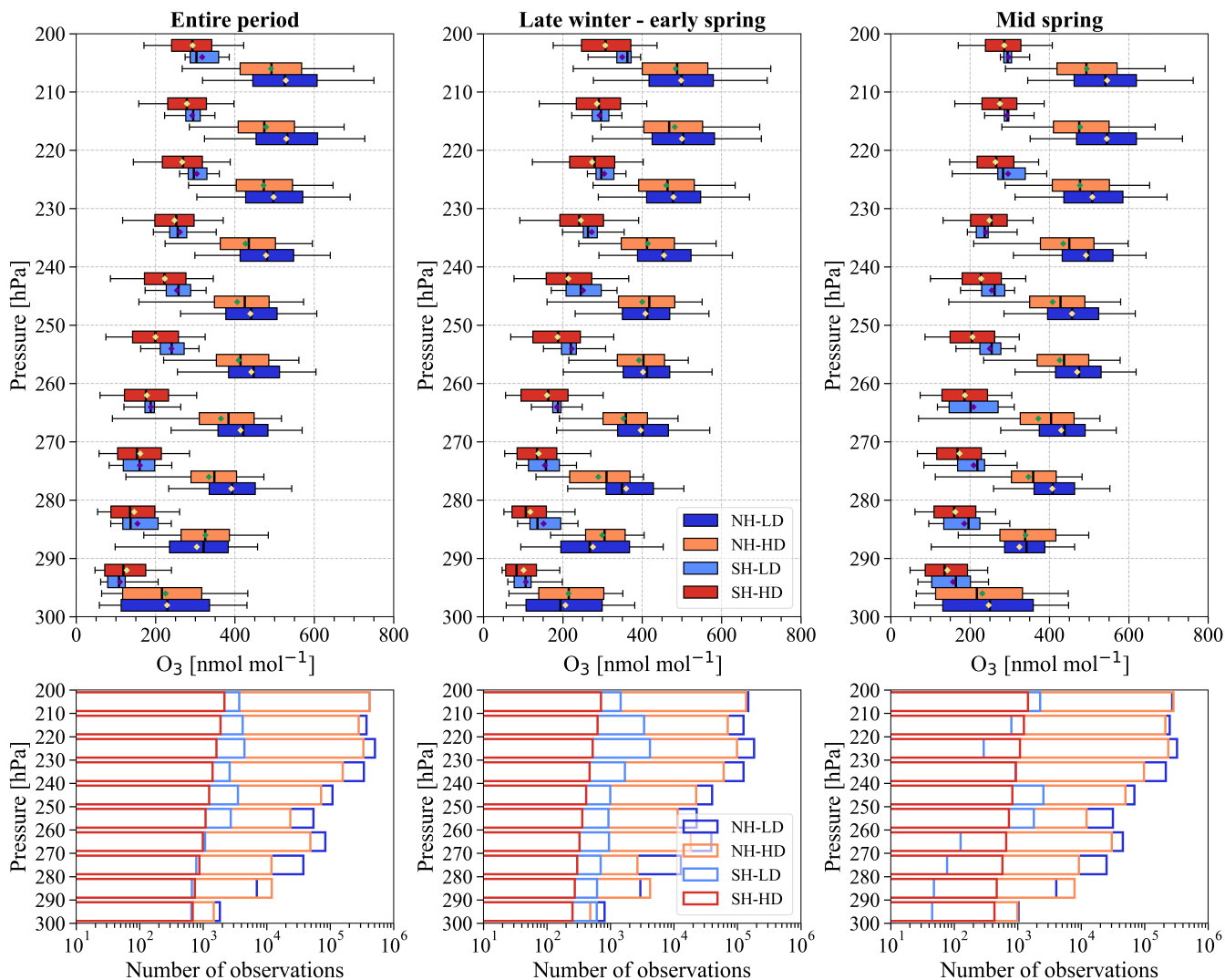
**Figure S3:** Ozone box plot ( $\text{nmol mol}^{-1}$ ) and associated sample sizes by pressure bins. The plots include ozone data with RH less than 10% obtained from IAGOS, SouthTRAC and WOUDC. In the upper panel, the left, middle and right plots show the entire period, late winter-early spring and mid-spring respectively, for the northern and southern hemispheres and high-depleted (HD) and low-depleted (LD) years. Box plots indicate the median, the 25<sup>th</sup> and 75<sup>th</sup> percentiles. The diamonds in the upper panels indicate the mean values. The whiskers extend to the 5<sup>th</sup> and 95<sup>th</sup> percentiles. In the lower panels, the X-axis shows the observation numbers. The rest of the plot information is the same as described in the upper panel. High and low-depletion years in SH included ozonesondes launched from Ushuaia, Lauder and Macquarie Island.



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