Air pollution due to ozone continues to increase in the tropics.

Methods

- Profiles of ozone from the commercial aircraft program IAGOS and the ozonesondes network SHADOZ averaged on a common vertical resolution of 50 hPa.
- For IAGOS, 6 key regions available. All profiles from all flights averaged within a same defined region.
- For SHADOZ, 5 sites where ozonesondes are launched located within IAGOS regions. These profiles are merged with IAGOS ozone profiles.
- Annual trends using quantile regression and account for ENSO (El Niño-Southern Oscillation) and QBO (quasi-biennial oscillation).

Trend Model:
\[ \text{anomaly} = b_0 + b_1 \text{Trend} + b_2 \text{ENSO} + b_3 \text{QBO(30mb)} + b_4 \text{QBO(50mb)} + \text{Noise} \]
where \(b_0\) is the intercept, \(b_1\) is the linear trend, \(b_2\) is the regression coefficient for ENSO, \(b_3\) and \(b_4\) are coefficients for QBO at 30 and 50 mb, respectively.

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