

(35-240329-B) Southern Hemisphere Additional Ozonesondes (SHADOZ) 2024 Project Updates: Archive News and Ozone Trends

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The Southern Hemisphere Additional Ozonesondes (SHADOZ) network, jointly operated by NASA-Goddard Space Flight Center (GSFC), NOAA's Global Monitoring Laboratory (GML) and international partners, collects and archives ozonesonde-radiosonde data records for 15 operating stations in the tropics and subtropics. There are now over 10,000 ozone and pressure-temperature-humidity (P-T-U) profiles with 100m vertical resolution at the SHADOZ archive (<https://tropo.gsfc.nasa.gov/shadoz/Archive.html>) with data from 1998-2024. The focus of this presentation is a 2024 update on the SHADOZ Project and Data Archive activities including: (1) the upcoming addition of a new station located in the Tropical West Pacific, Palau (Müller *et al.*, 2023), (2) the success of hosting virtual regional SHADOZ station meet-ups in 2024, organized by the NASA-GSFC team, to foster improved communication with stations, and (3) present 25 years of ozone trends from the SHADOZ network (Thompson *et al.*, 2021; Stauffer *et al.*, 2023), used for evaluation of model and satellite products as a part of the TOAR-II/HEGIFTOM project. This presentation summarizes our overarching goal of maintaining the continuity of long-term global ozonesonde records in the tropics and subtropics and ensuring that the best quality data reach end users.

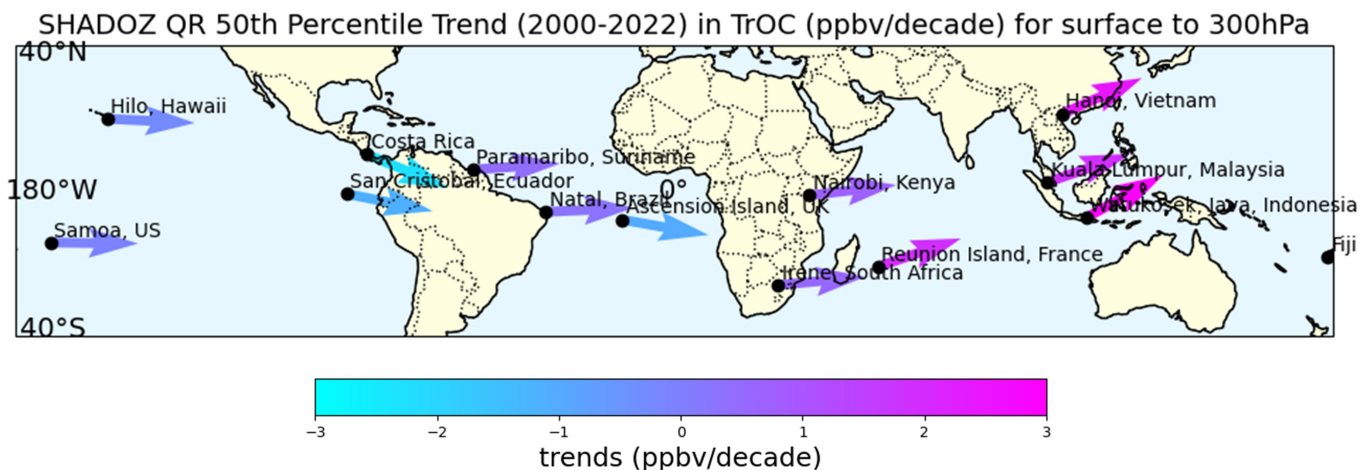


Figure 1. SHADOZ Quantile Regression (QR) 50th percentile trends (ppbv/decade) for 2000-2022 column-averaged tropospheric ozone for surface to 300 hPa. Color map ranges +/- 3 ppbv/decade and arrow direction shows increasing (up), decreasing (down) or no trend (rightward).