Southern Hemisphere Additional Ozonesondes (SHADOZ) 2024 Project Updates: Archive News and Tropospheric Ozone Data Trends

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Abstract

The Southern Hemisphere Additional Ozonesondes (SHADOZ) network, jointly operated by NASA-Goddard Space Flight Center (GSFC), NOAA, 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 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 addition of a new station located in the Tropical West Pacific, Palau, with over 5 years of ozonesonde launches (*Müller et al.*, 2023), (2) the success of hosting virtual regional SHADOZ station meet-ups in 2024 to foster improved communication with stations, and (3) present 25 years of tropospheric ozone column 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 Tropospheric Ozone Assessment Report (TOAR-II) Activity. Our results show SHADOZ median trends ranging from +/- 3 ppbv/decade with ozone over SE Asia stations exhibiting the greatest increases. 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 are openly available for ozone trend studies.

Early Career Scientist

NO, I am not an early career scientist.

IGAC Activities

TOAR: Tropospheric Ozone Assessment Report

IGAC Regional Working Groups

Southern Hemisphere Working Group