



SHADOZ Notes

Southern Hemisphere Additional Ozonesondes

A NASA public archive of tropical ozonesonde profile data for remote sensing research, model studies and education

Data are public <<http://croc.gsfc.nasa.gov/shadoz>>

SHADOZ is a NASA project to augment and archive balloon-borne ozonesonde launches and to archive data from tropical and sub-tropical operational sites. The project was initiated in 1998 by NASA/Goddard Space Flight Center with other US and international co-investigators. There are currently thirteen stations launching ozonesondes in the SHADOZ network. The collective

SHADOZ Sites



data set provides the first climatology of tropical ozone in the equatorial region, enhances validation studies aimed at improving satellite remote sensing techniques for tropical ozone estimations, and serves as an educational tool to students, especially in participating countries.

Upcoming Ozone-Themed Meetings and Workshops:

- GRUAN (GCOS Reference Upper Air Network) www.gruan.org: 10-15 March 2014, Greenbelt, Maryland USA.
- 20th Anniversary of MOZAIC/IAGOS, <http://meteo.fr/cic/meetings/2014/MOZAIC-IAGOS/> 12-15 May 2014, Toulouse France
- Ozone Managers Meeting, 14-16 May 2014, Geneva Switzerland (To support Montreal Protocol) By invitation only

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The SHADOZ homepage provides technical information for each station and contact information. The station managers are responsible for the original data processing and should be consulted for details of their methods and appropriate references to their work.

Suva, Fiji Ozonesonde Station

*Contributed by Bryan Johnson
(NOAA/GFDL)*

The Fiji SHADOZ site located on the University of the South Pacific (USP) campus in Suva, Fiji has been launching ozonesondes since 1997. The site is now approaching the 400th ozonesonde flight. Figure 1 shows averages of all the Fiji data binned into 3 month intervals. The Fiji data in the SHADOZ archive has been an important contributor to a broad range of studies related to tropospheric and stratospheric ozone structure, seasonal cycles, biomass burning, and satellite verification studies.

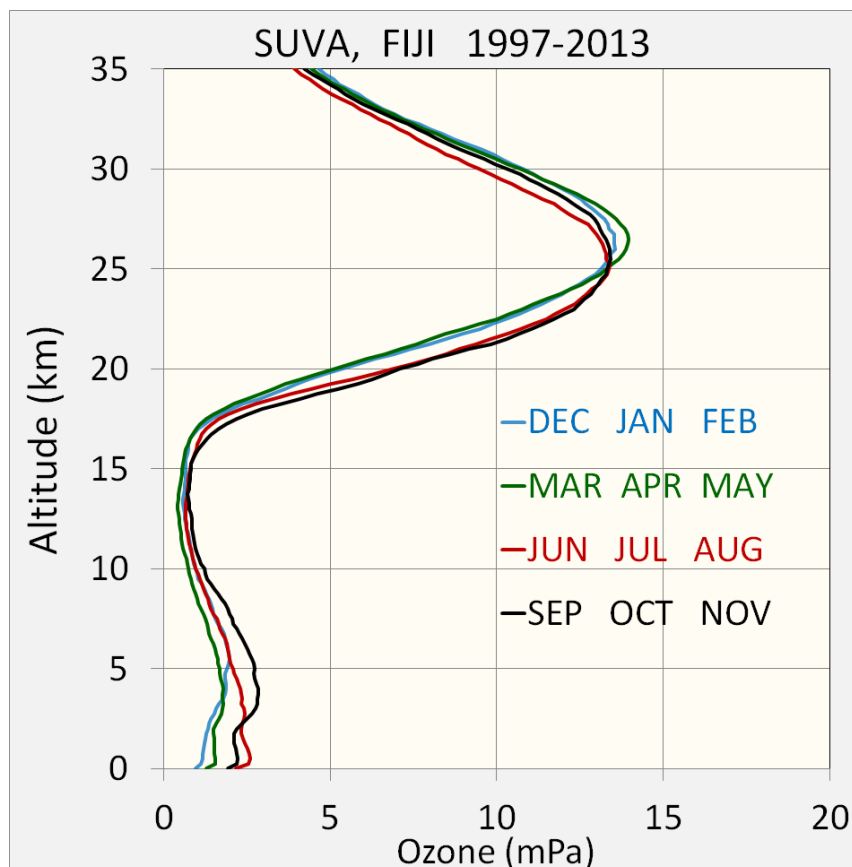


Figure 1: Season average profiles for all Suva, Fiji ozonesondes

Continuing this important data stream coming in from USP on a long term basis relies on good collaboration (USP, NASA SHADOZ, and NOAA), communications, and logistics. Regular email communication about ozonesonde launches with follow up plots of the data is done along with site visits. The recent February, 2014 visit by Bryan Johnson (Boulder NOAA/ESRL) accomplished two goals:

- 1) Training on using new telemetry software developed at NOAA for the new InterMet radiosonde interfaced with the ozonesonde. All previous ozonesondes at Fiji used Vaisala RS80 radiosondes, which have been out of production for several years. The new InterMet radiosonde and software is very user friendly and provides a wide range of profile viewing options. Another benefit is the addition of GPS wind data.
- 2) The second goal was to establish a contract with a new helium supplier through the Suva branch of the international gas supply company - BOC. Photo 1(pg. 3) shows the first delivery of 3 cylinders of helium, enough for 5 balloon launches, delivered by BOC-Suva.

Much of the success in ozonesonde flights from field sites depends on the dedicated staff at the site and their experience with atmospheric measurements. We are fortunate to have Dr. Matakite Maata involved in the ozonesondes since the beginning of the SHADOZ program and Dr. Francis Mani who recently joined the USP School of Biological and Chemical Sciences staff. Photo 2 shows Dr. Maata and Dr. Mani ready to release an ozonesonde from the site on the USP campus. Finally, the University of Suva places a high priority on collaboration with other science groups and publication of studies. This type of support by the University has been another reason for the success at the Fiji site. Logistics is often a difficulty at field sites, but establishing the new source of helium from a local supplier and new software for data collection/viewing we are pleased to report that the USP Fiji site is doing very well in the SHADOZ network.



Photo 1. Delivery of helium cylinders to USP by BOC-Suva.



Photo 2. Dr. Francis Mani (left) and Dr. Matakite Maata (right) preparing to release ozonesonde flight # 496 during the site visit by Dr. Bryan Johnson (NOAA) on February 12, 2014.