Newsletter No. 18 2014

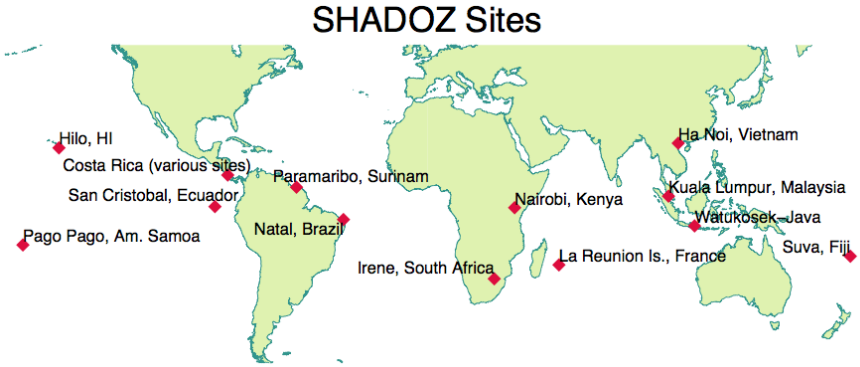
SHADOZ Notes

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 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:

• NDACC Steering Committee – 3-5 November, 2014, Brussels, Belgium.

Recent SHADOZ Publication: Thompson, A. M., Balashov, N. V., Witte, J. C., Coetzee, J. G. R., Thouret, V., and Posny, F.: Tropospheric ozone increases over the southern Africa region: bellwether for rapid growth in Southern Hemisphere pollution?, Atmos. Chem. Phys., 14, 9855-9869, doi:10.5194/ acp-14-9855-2014, 2014.

SHADOZ Team Members

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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 appropriates references to their work.

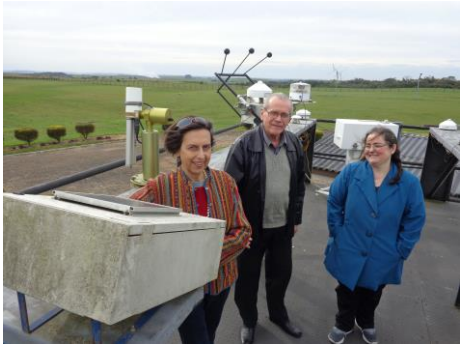
SHADOZ Site: Natal, Brazil

Fig 1. Group at Maxaranguape, Natal sonde launch site

Fig 2. Group visiting CTGas training academy in Natal

The Natal site is located on the very northeastern tip of Brazil. It is a clean air site with prevailing onshore winds. Latitude = -5.42, Longitude = -35.38, Elevation = 42 m.

Santa Maria in Rio Negro do Sul - atmospheric observatory operated jointly by INPE and the Federal University of Santa Maria (UFSM)



SHADOZ PI Anne Thompson with hosts Drs. Damaris Kirsch Pinheiro and Nelson Rodriguez of UFSM at Brewer and AERONET instruments at the INPE-UFSM observatory

The quadrennial CACGP/ IGAC (Commission for Atmospheric Chemistry and Global Pollution)/ (International Global Atmospheric Chemistry project) Symposium was held in Natal, Brazil, near the SHADOZ station operated by INPE (the Brazilian Space Agency) from 22-26 September 2014. Two presentations with the SHADOZ archive, one comparing sondes to OMPS satellite retrievals near the tropopause, were made by Jacquie Witte. The Natal station manager, Francisco Raimundo da Silva, presented a poster on the total ozone record at Natal on behalf of N. Paes Leme. Dr. Anne Thompson, SHADOZ PI, gave a talk about trends in tropospheric ozone over Irene and Réunion.

The first ozonesonde station in the tropics, at Natal, Brazil, started operations in 1978 and joined SHADOZ in 1998. Station Manager da Silva with Dobson operator Terceira Bezera Penha hosted Anne Thompson and Jacquie Witte along with the WMO/ GAW Head Dr. Oksana Tarasova at the present launch station of INPE, some 40 km north of Natal at a clean marine site, Maxaranguape (Fig. 1). On 24 September, a meeting was held with the station manager Mr da Silva, Dr. Marcos Aurelio Ferreira dos Santos, Head of INPE-Natal, and INPE scientists from the Sao Jose dos Campos Headquarters, including Dr. Plinio Alvala. On 26 September Drs. Alvala and Thompson toured a training facility in Natal, operated by the Natural Gas company of Brazil, where students learn how to operate gas distribution equipment and analytical instruments used for air quality monitoring (Fig. 2).

Prior to the Natal visit Anne Thompson visited an ozone site that operated in the 1990s and would like to affiliate with SHADOZ (bottom figures). In contrast to Natal, Santa Maria in the southern state of Rio Negro do Sul, is sub-tropical and inland so impacts of dynamics near the sub-tropical jet can be detected. Thompson also gave a lecture at INPE-UFSM to students of Prof. Pinheiro.