Newsletter No. 17 2014

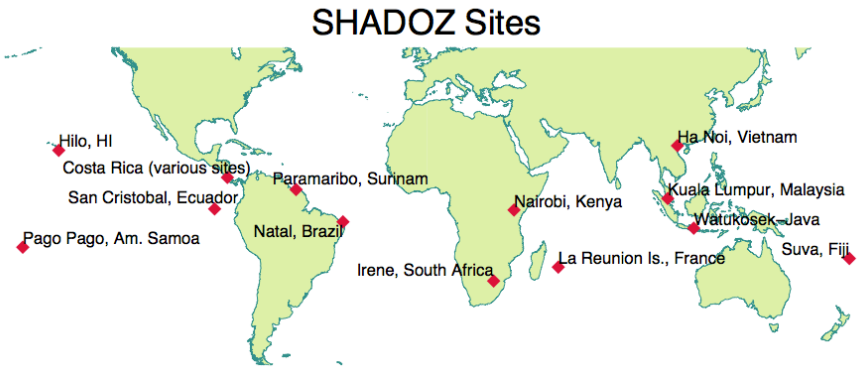
SHADOZ Notes

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:

- 20th Anniversary of MOZAIC/IAGOS, 12-15 May 2014, Toulouse France: http://meteo.fr/cic/meetings/2014/MOZAIC-IAGOS/
- Ozone Managers Meeting, 14-16 May 2014, Geneva Switzerland (To support Montreal Protocol) By invitation only
- IGAC/iCACGP, 21-26 September 2014 in Natal, Brazil, http://igac-icacgp2014.org/

SHADOZ Team Members

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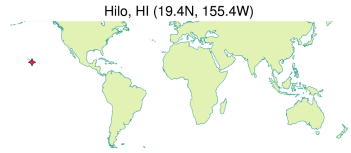
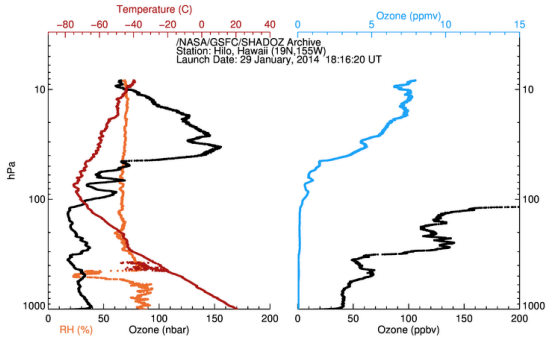
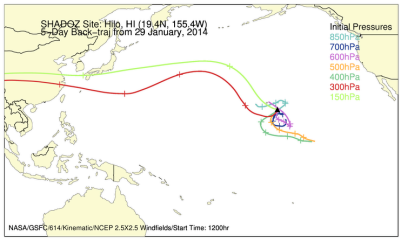
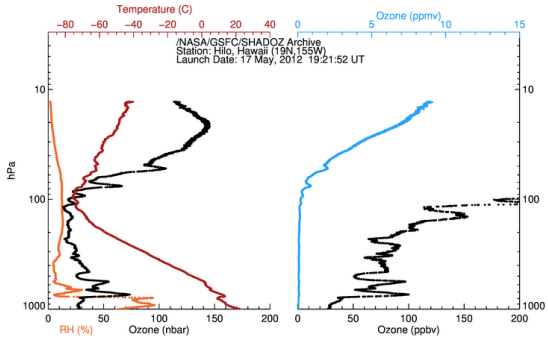
The SHADOZ homepage provides technical information for each station and contact information. The station managers are responsible for the original data processing and should be consulted for details of their methods and appropriates references to their work.

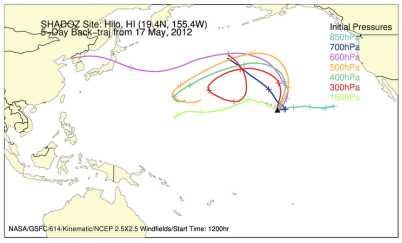
Highlight Station: Hilo, Hawaii











NWS facility at Hilo International airport.

The photo shows (from left to right) Steve Ryan, David Nardini and Emrys Hall of the NOAA ESRL Global Monitoring Division (GMD) launching a balloon from the NWS facility in Hilo, Hawaii. Steve (now retired) and David are part of the Mauna Loa Observatory Staff. The payload consists of a radiosonde, ozonesonde and NOAA Frost Point Hygrometer (FPH). At Hilo a radiosonde/ozonesonde payload is launched once per week and the FPH is added once per month to measure water vapor in the UTLS. GMD began routinely launching ozonesondes at Hilo in July 1991. Monthly FPH flights were added in December 2010 to initiate a long-term UTLS water vapor record similar to those at Boulder, Colorado (since 1980) and Lauder, New Zealand (since 2004). Photo taken by Allen Jordan (GMD).

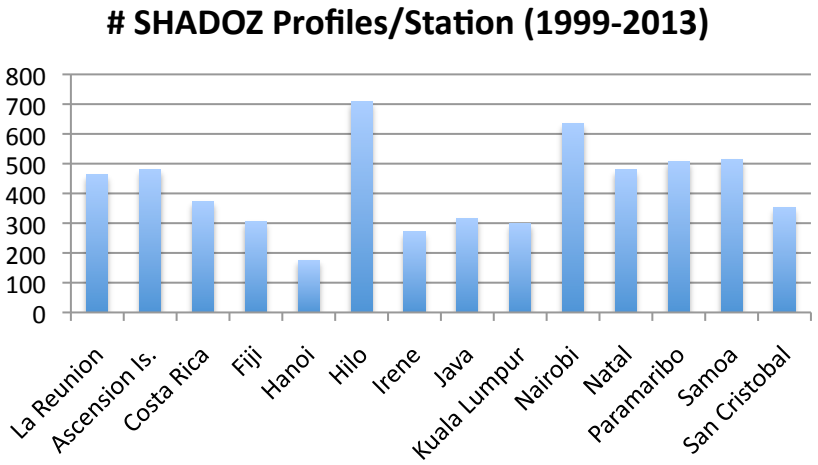
Update from the SHADOZ PI Anne Thompson

This newsletter features one of the SHADOZ stations that was operational some years prior to SHADOZ: Hilo, Hawaii (US) which is at the foot of the famous mountain station, the Mauna Loa Observatory. Thanks to Dale Hurst (University of Colorado, NOAA) for providing the information.

In March I attended the GRUAN Implementation and Coordination Meeting #6 (ICM-6) on behalf of SHADOZ. What is GRUAN (the GCOS Reference Upper Air Network); see www.gruan.org. Like SHADOZ, GRUAN is a central archive for sounding data, in particular, radiosonde data that meet certain reporting criteria. The objective is to provide temperature records of high quality that can be used for climate studies. The GRUAN Working Group Co-Chairs are Greg Bodeker (New Zealand) and Peter Thorne (UK) and the head of the Lead Center for GRUAN is Holger Vömel (Germany). There are currently 15 GRUAN stations. One of them is at the Howard University Beltsville Research Center, 15 km northwest of NASA/ Goddard Space Flight Center. I gave a SHADOZ status report and most of the 50-60 attendees of GRUAN ICM-6 toured the Beltsville, Maryland facility as well as the Sterling Test Research Facility of the National Weather Service at Sterling, Virginia, adjacent to Washington-Dulles Airport.

GRUAN stations are presently sparse in the southern hemisphere and in the tropics and subtropics generally. In the final sessions of the GRUAN ICM-6, we discussed the possibility of establishing GRUAN affiliations with radiosonde launches at selected SHADOZ stations. A positive benefit for both projects would be strengthening of local infrastructure for both GRUAN and SHADOZ. There would also be enhanced visibility for such stations within the larger WMO (World Meteorological Organization), GCOS (Global Climate Observing system) and NDACC (Network for the Detection of Atmospheric Composition Change) communities. Stay tuned for updates.

On 15-16 May I will be attending the Ozone Research Managers (ORM) Meeting at WMO Headquarters in Geneva to present SHADOZ updates to Research Managers in charge of programs and support for ozone monitoring from ground and space. I will be sharing some of the statistics on SHADOZ archiving, re-processing and station updates with that important group. Note that the quadrennial International Commission on Atmospheric Chemistry and Global Pollution (iCACGP)/ International Global Atmospheric Chemistry (IGAC), will be held 21-26 September 2014 in Natal, the longest-running station that is in SHADOZ. Operations began there in 1978.



Please send news updates to Archiver: Jacquie Witte at Jacquelyn.witte@nasa.gov.

Thank you for reading. As always, thank you for supporting SHADOZ in many ways!