

# **The GAW-PFR Aerosol Optical Depth Network: 2008 – 2013 Time-Series at Cape Point Station, South Africa**

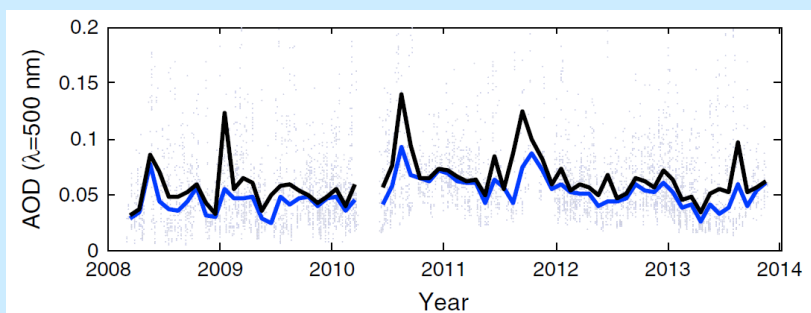
**S. Nyeki, C. Wehrli, J. Groebner,  
N. Kouremeti, S. Wacker**

**C. Labuschagne, N. Mbatha, E. Brunke**

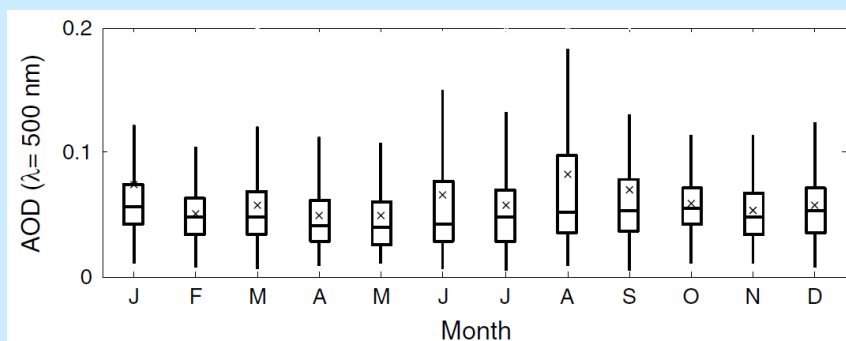
**PMOD/WRC, Davos, Switzerland**

**South African Weather Service, Stellenbosch, SA**

# The GAW-PFR AOD network: The 2008–2013 time series at Cape Point Station, South Africa

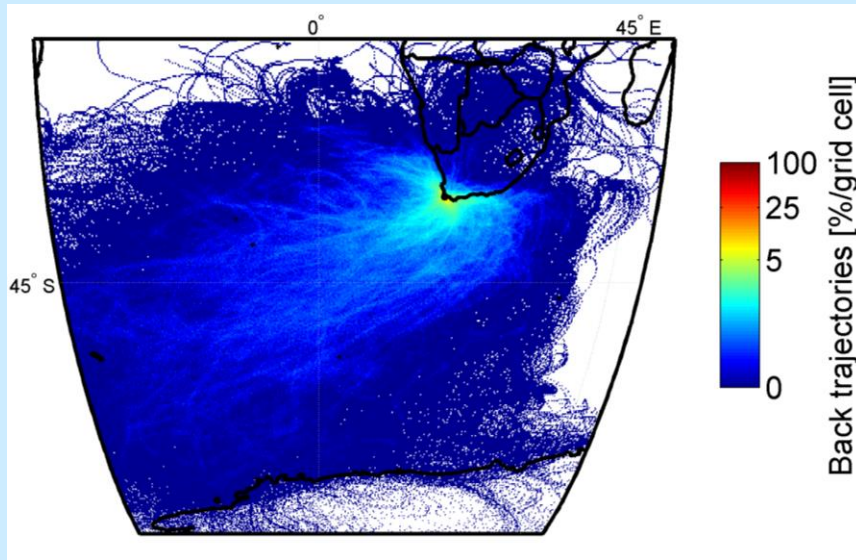


**Figure 5.** The 2008–2013 time series of 1 h AOD average values (gray points), monthly average (black line), and monthly median (blue line) at CPT.

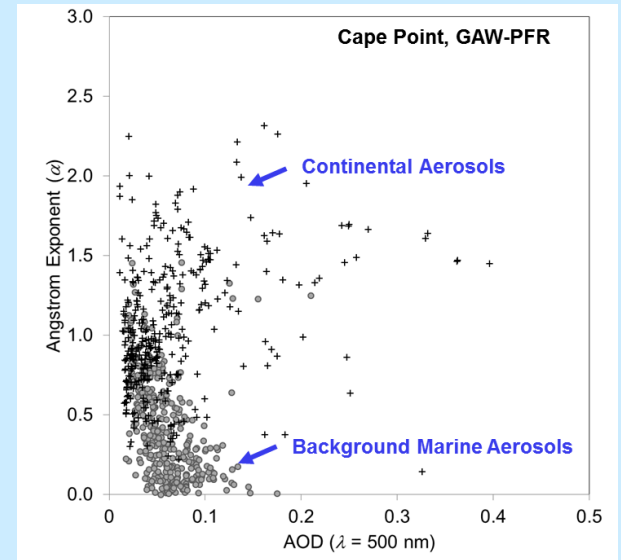


**Figure 6.** Annual cycle of AOD at CPT for the 2008–2013 period shown as a box-and-whisker plot.

# Back-Trajectories and Angstrom vs AOD at Cape Point



January – December 2008



*Nyeki et al., JGR, 2015.*

# Conclusions

- AOD ( $\lambda = 500 \text{ nm}$ ) and Ångström exponent ( $\alpha_{368-862 \text{ nm}}$ ) averages for the entire 2008–2013 period were 0.059 and 0.68, displaying only a weak seasonality.
- Based on radon ( $^{222}\text{Rn}$ ) conc. and back-trajectory analysis, AOD was classified: a) background marine, b) marine, c) mixed, and d) continental.
- AOD at CPT is consistent with ship-based (MAN network) and island (AERONET network) measurements and hence representative of background conditions in the South Atlantic and Southern Oceans.