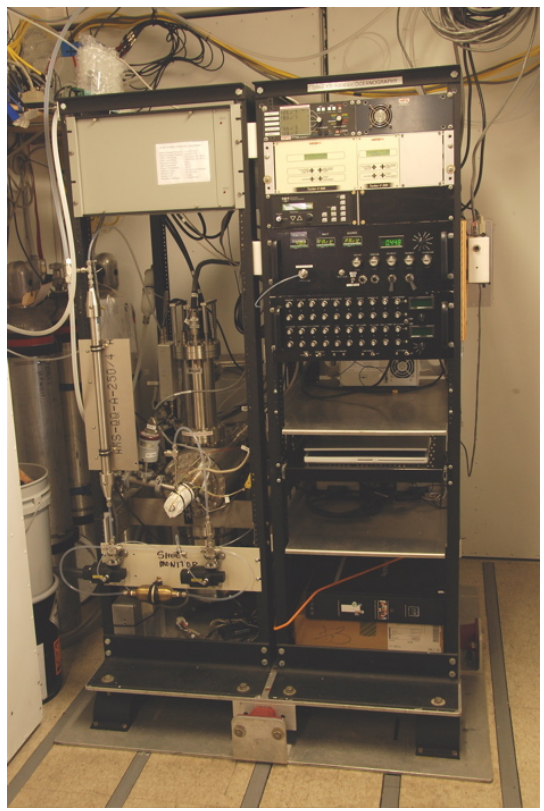
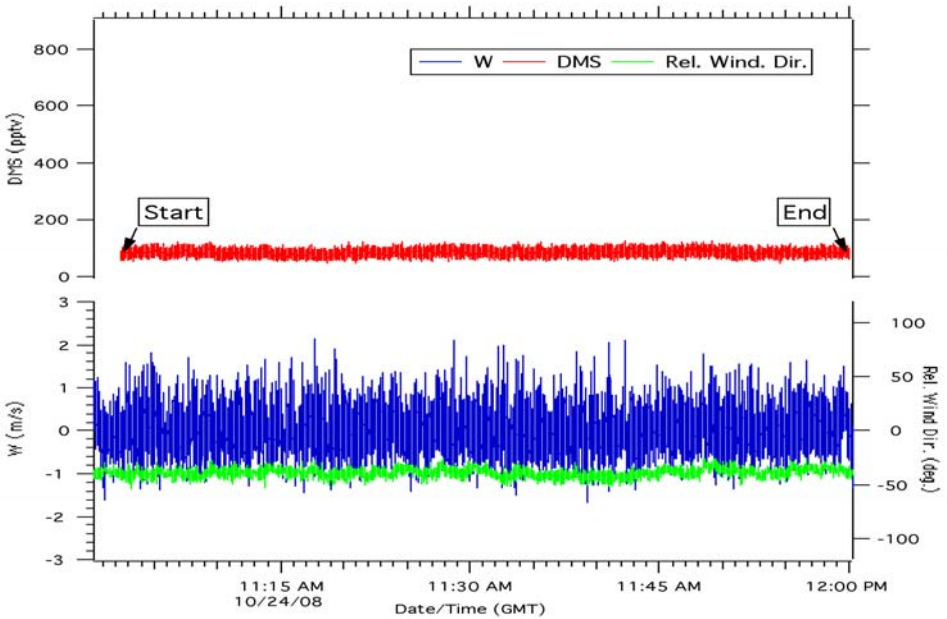
# VOCALS 2008 Leg 1 (*Ron Brown*)

## Air-Sea Flux of
## Dimethyl Sulfide (DMS) from Eddy Correlation

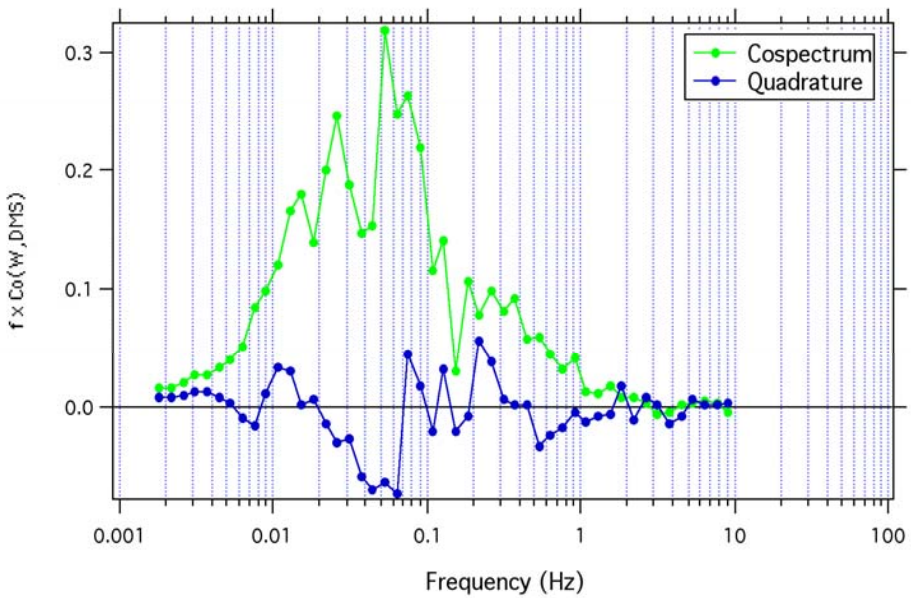
Mingxi Yang
University of Hawaii

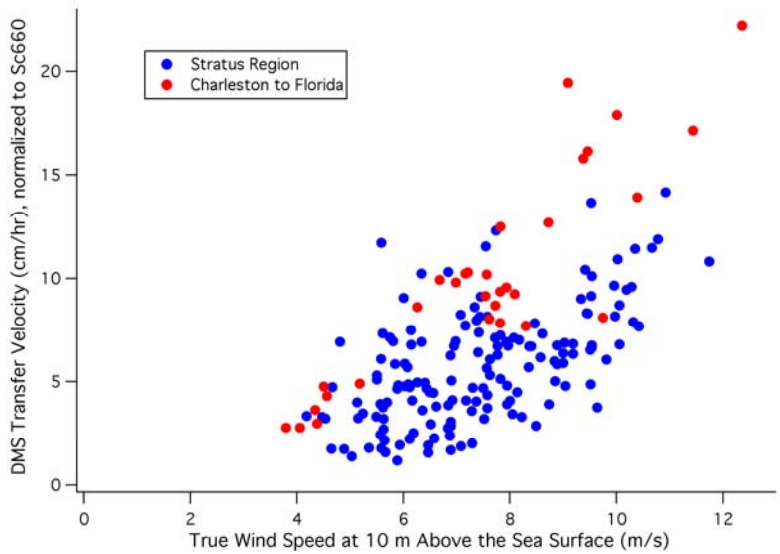




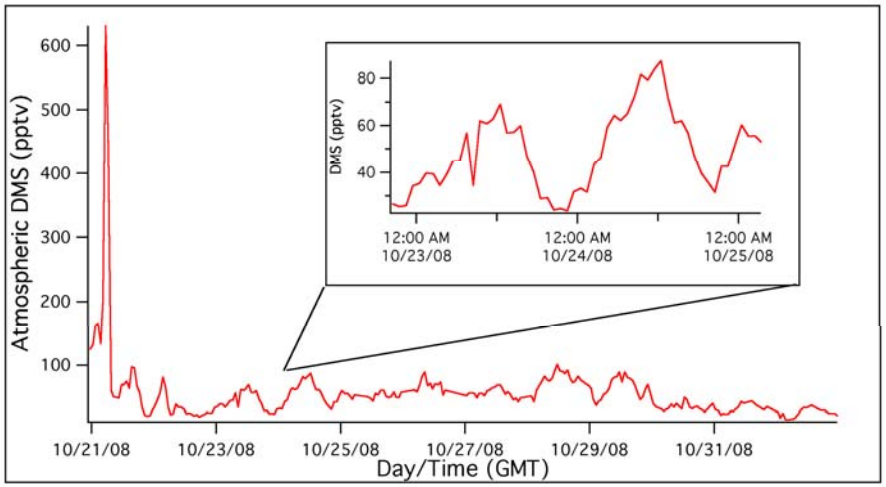

$$Flux = k\Delta C = \overline{C'W'}$$

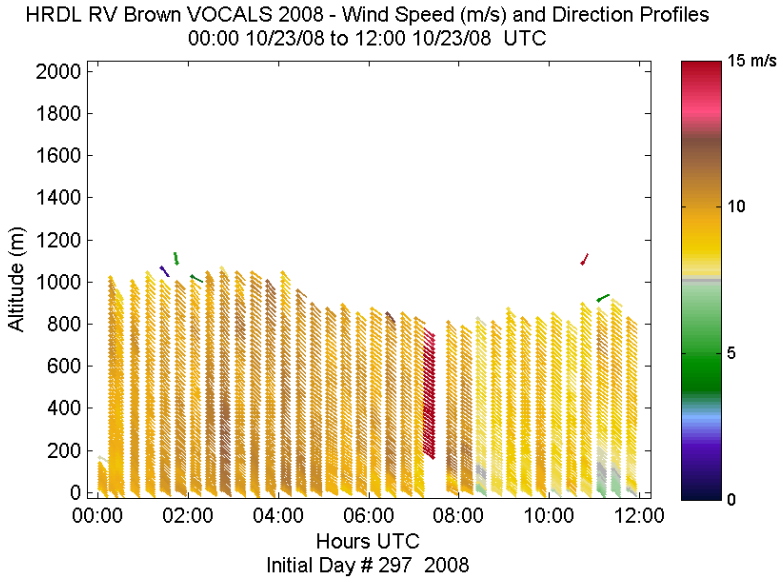
*k*: transfer velocity (or $V_t$)

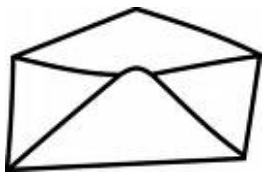


# DMS Diurnal Cycle and Surface Flux



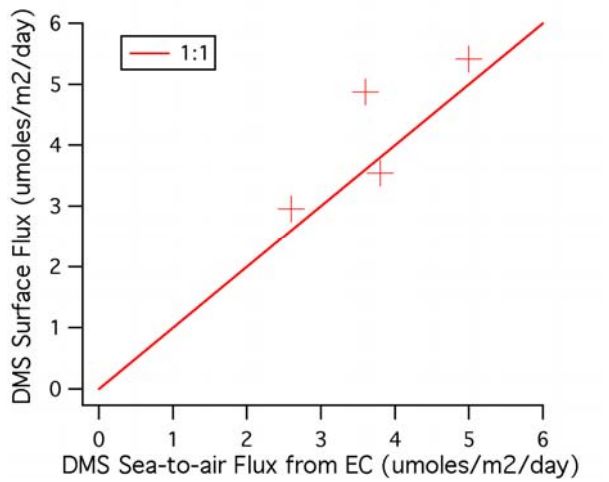



Surface flux for the morning of 10/23…

$$\frac{40\,pptv}{10hr} \rightarrow \frac{4\,pmol}{mol \cdot hr} * 900m \frac{mol}{24.4L} \frac{1000L}{m^3} \frac{24hr}{day} \frac{umol}{10^6\,pmol} = 3.5 umoles \cdot m^{-2} day^{-1}$$

Sea-to-air flux from eddy correlation - 3.8 umoles $m^{-2}$ $day^{-1}$



Where warm and fresh meet cold and salty - life flourishes, or flourished…

(~2.6 deg. S, W of Ecuador)