Impact of DW on Flux Climatology



Clayson and Bogdanoff (2013)





SPURS Study

- Upper-ocean stable boundary layers have rarely been measured with high spatial- and temporalresolution
- New/improved instrument platforms allow for the exploration of the SBL in the SPURS Region



WHOI SPURS Mooring

- Direct Covariance Flux System (DCFS)
- WHOI's IMET System





Physics of DW Layers

• Observations of turbulence in DW Layers



Diurnal Warming from SLOCUM Glider



September 29, 2012 – Temperature



Primary TKE Dissipation Estimates

resolution (W/m²) 500 250 10 20 30 Depth (m) 40 50 60 70 09/24 09/26 09/28 09/30 10/02 10/04

TKE Dissipation September 22, 2012 - October 05, 2012

-10 -9 -8 -7 -6 -5 -4 e - Dissipation (W/kg)

-11

Vind Speed (m/s)

-3

Updated DW Parameterization



Creating a DVSST for Flux Calculations

06/07/00 04Z

06/10/00 07Z

06/13/00 09Z

Sea Surface Temperature Comparison:, Reynold's Daily–Blue, Clayson Diurnal–Red June 01, 2000 – July 02, 2000, (0^o , 200^o)

06/16/00 12Z

06/19/00 14Z

06/22/00 16Z

06/25/00