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# Statistics of Surface Layer Turbulence over the Tropical Ocean

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### ABSTRACT

Atmospheric surface layer turbulent statistics measured during the Barbados Oceanographic and Meteorological Experiment 8 and 30 m above mean sea level are presented. The budget equations of turbulent kinetic energy, humidity variance and temperature variance are examined. Within discussed limitations it is concluded that production equals dissipation in the case of turbulent kinetic energy and humidity variance. The analysis of the temperature variance budget revealed large differences between productions and dissipations computed assuming standard similarity functions derived from other data sets. Initial computation of fluxes revealed large systematic decreases with height in the shear stress and heat flux. Comparison with other results suggested corrections which would eliminate these differences. Comparison between profile fluxes and direct measurements suggests strong similarity of momentum and water vapor transfer.

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