

Abstract Submitted  
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**A towed airborne platform for turbulence measurements over the ocean**<sup>1</sup> CARL FRIEHE, DJAMAL KHELIF, University of California, Irvine — Measurements of wind stress and associated heat and mass fluxes (water vapor and CO<sub>2</sub>) down to ~10 meters height over the ocean are required to establish parameterizations for wave, weather, hurricane and climate models. At high winds and accompanying sea states, such measurements are difficult or impossible. A new airborne instrumented towed platform has been developed that allows measurements down to 10 meters under radar-altitude control while the tow aircraft is safely above. Measurements include the three components of the wind, temperature, humidity, infrared surface temperature, CO<sub>2</sub>, and motion and navigational parameters. The bandwidth of the sensors allows calculation of the Reynolds averaged covariance's of stress and sensible heat and evaporation fluxes. Results are compared to equivalent measurements made with an instrumented aircraft. We would like to thank Robert Bluth of the Naval Postgraduate School and Jesse Barge and Dan Bierly of Zivko Aeronautics.

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