

Abstract Submitted  
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**The effect of surface conditions on the statistics of the surface temperature field during mixed convection**<sup>1</sup> J. KOU, J.R. SAYLOR, Clemson University — The statistics of the surface temperature field of an air/water interface are presented for the case of a clean water surface and a water surface covered with the surfactant monolayer oleyl alcohol. Experiments were conducted in a wind/water tunnel where the wind speed ranged from 1 - 4 m/s and the water was warmer than the air. The surface temperature field was acquired using an infrared camera. The root-mean-square and the skewness of the surface temperature field were computed and related to the heat flux and the wind speed for both the clean and surfactant-covered cases. Probability density functions of surface temperature were also computed and are presented to further reveal the effect of surfactant on the relationship between heat flux and wind speed and the surface temperature field. Some discussion of the mean temperature field is also presented.

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