

Abstract Submitted  
for the DFD10 Meeting of  
The American Physical Society

**Experimental study of atmospheric wind and ocean surface wave interaction**<sup>1</sup> ARINDAM SINGHA, REZA SADR, Texas A&M at Qatar — The exchange of momentum between the wind and the ocean surface is the primary source of various oceanic phenomena, both in large and small-scales. Upon reviewing the existing literature, there seems to be a missing link between the standard atmospheric and oceanic-circulation models. This is due to the difficulty of the theoretical formulation for a proper model, given that the ocean-air interface varies in space and time simultaneously; and the difficulty of obtaining reliable experimental data on ocean surface and atmospheric turbulence characteristics. An experimental site is being developed at the under-construction New Doha International Airport (NDIA) in Qatar to obtain simultaneous atmospheric and ocean surface data. The site is located at the end of an aircraft approach light line which is about 500 m into the sea. Water at this location is about 6-m deep and ocean floor is almost flat terrain in all directions. The necessary measurement will be accomplished by synchronized operation of three sonic anemometers and two CCD cameras. An overview of the experimental site, along with preliminary data showing the weather trend and the feasibility of the study is reported.

<sup>1</sup>Supported by QNRF.

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Date submitted: 05 Aug 2010

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