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**Low Wind Speed Radar 1 Backscatter
Measurements at C- and Ku-Band
Obtained during the Surface Wave
Dynamics Experiment**

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ABSTRACT

Radar back scatter measurements collected at both C- and Ku-band during the recent Surface Waves Dynamics Experiment (S W A J DE) on 1 March 1991 show dramatic variabilities of the normalized radar cross section (σ^0) of the ocean surface at low wind speed. Additionally, measurements of the σ^0 in the cross wind direction fluctuated much more than the σ^0 in the upwind direction. Both C- and Ku-band data are quite similar, both exhibiting a more pronounced roll off of σ^0 with decreasing neutral stability wind than indicated by previously published empirical model functions. The data show extremely large azimuthal modulations, in some cases greater than 20 dB, and show good qualitative agreement with the azimuthal modulation predicted by Donelan and Pierson's model function.