Abstract View

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Observations of Directional Relaxation of Wind Sea Spectra

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ABSTRACT

Two-dimensional wave spectra were acquired through a NOAA Experimental Research Buoy in 34 m of water off the North Carolina coast (Atlantic Ocean). These are analyzed in ideal wave-growth situations and under rapidly turning winds. The relationship between variance and peak frequency for growing seas, determined from the buoy data, agrees well with relationships based on data from other methods. The response of mean wave direction as a function of frequency is documented graphically and by simple regression analyses for several cases of rapidly turning wind fields. The relaxation rates for wave direction are similar to limited previous estimates. The present results can be used in evaluating wave prediction models.