

Universal multifractal indices for the ocean surface at far red wavelengths

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Abstract

For some time, ocean wave breaking has been conceptualized as a cascade process in which the large scale wind energy flux driving the system is dissipated by wave breaking at small scales, the two separated by the “equilibrium” scaling range. Cascades are now known to generically lead to multifractals; with special “universal” multifractals theoretically predicted. In this paper we use far red (0.95_μm) radiances at 1 m resolution obtained from aircraft to test the multifractal behavior of the ocean surface and estimate the corresponding universal multifractal parameters of the radiance field. © American Geophysical Union 1993

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