

Geophysical Research Abstracts,
Vol. 10, EGU2008-A-01028, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-01028
EGU General Assembly 2008
© Author(s) 2008



Characterizing ocean processes with finite-size Lyapunov exponents

E. Hernandez-Garcia and C. Lopez

IFISC, Instituto de Fisica Interdisciplinar y Sistemas Complejos (CSIC-Univ. de les Illes
Balears). E-07122 Palma de Mallorca

The spatial distribution of Lyapunov exponents reveals many important characteristics of the nonlinear motion of fluids, including stretching, mixing, or barriers to transport. We use the methodology of finite-size Lyapunov exponents to analyze ocean velocity fields (both observed and computed) to understand processes such as mixing strength or biological primary productivity.