1067-60-624   **Meng Xu*** (`mxu@uwyo.edu`), 2601 Coe Street, Apt 392, Laramie, WY 82072, and **Sritharan** (`sssritha@nps.edu`). *A Stochastic Lagrangian Particle Model and Nonlinear Filtering for Three Dimensional Euler Flow with Jumps.*

In this paper we will introduce a stochastic Lagrangian particle model with jumps for the three dimensional Euler ow and study the associated nonlinear filtering problem.We apply results from backward integro-differential equation problem to prove uniqueness of solution to the Zakai equations. (Received September 12, 2010)