

Abstract Submitted
for the DFD11 Meeting of
The American Physical Society

Lagrangian particle tracking in strained and buoyant flows ARMANN GYLFASON, DIMITRY IVANOV, LAHCEN BOUHLALI, Reykjavik University, CHUNG-MIN LEE, California State University Long Beach — We present experimental particle tracking results in two turbulent flow configurations, straining flow and buoyant flow. Our focus is on the influence of large scale structure of such flows on the motions of passive and inertial particles, in particular acceleration statistics, Lagrangian structure functions, and two point statistics. The results are contrasted with previous work, and our results from approximately isotropic flows. The Eulerian structure of the underlying flow field is measured by applying the PIV method.

Armann Gylfason
Reykjavik University

Date submitted: 11 Aug 2011

Electronic form version 1.4