

Abstract Submitted
for the DFD08 Meeting of
The American Physical Society

Three-dimensional measurement of temperature and velocity field in buoyancy driven flows NOBUYUKI FUJISAWA, GEN SATO, YOUHEI OHKAWA, Niigata University — Three-dimensional measurements of temperature and velocity field in buoyancy driven flows are carried out using a background oriented Schlieren combined with tomographic reconstruction technique. This method is based on the refractive index measurement in the three-dimensional flow field, and the corresponding velocity field is evaluated from the displacement of the measured temperature field. The accuracy of this measurement is examined using the artificial images derived from the numerical simulation.

Nobuyuki Fujisawa
Niigata University

Date submitted: 06 Aug 2008

Electronic form version 1.4