

Abstract Submitted
for the DFD11 Meeting of
The American Physical Society

Uncertainty of Spatial and Temporal velocity for High-speed PIV

KOJI OKAMOTO, the University of Tokyo — High-speed PIV system can provide huge amount of images for PIV analysis. With frame straddling technique, the dynamic range of velocity could be improved with four image analysis technique. This technique sacrifices the temporal directional resolution to improve the dynamic ranges. Because total amount of the image information is constant, if we improve a spatial resolution, the temporal resolutions will decrease. There should be a sufficient conversion of spatial and temporal resolutions. The relation between sampling frequency and flow characteristic frequency in both spatial and temporal direction will be discussed.

Koji Okamoto
the University of Tokyo

Date submitted: 04 Aug 2011

Electronic form version 1.4