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Dynamic PIV measurement on the wake of thin plate KOJI OKAMOTO, The University of Tokyo, MASAAMI ISHIKAWA, University of The Ryukyus, HAJIME AKIMOTO, Japan Atomic Energy Research Institute — Dynamic PIV (Particle Image Velocimetry) with high-speed camera and high repetition laser is focused as quantitative measurement of the transient phenomenon. This system is possible to expand to time resolution of high frequency at 1kHz or 10kHz and it can be widely applied as time serial measurement of PIV which has remained the two-dimensional velocity. The configuration of high-speed camera is 512x256 pixels and 10kHz in frame rate. The repetition rate of double pulse laser is 5kHz for each rod. Double pulse interval is $20\mu\text{s}$ using frame straddling technique. The wake of the thin plate has been clearly visualized using the Dynamic PIV system. The vortex dynamics of the turbulent boundary layer has been investigated using the velocity data.

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