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Streaked Backlighting with Double-Slit Imager for Laser-Accelerated Target Hydrodynamics HIROYUKI SHIRAGA, NORIMITSU MAHIGASHI, TATSUHIRO SAKAIYA, KEISUKE SHIGEMORI, MITSUO NAKAI, HIROSHI AZECHI, Institute of Laser Engineering, Osaka University — Trajectory and density profile of a laser-irradiated planer targets are usually observed with side-on x-ray backlighting. In such observation, three profiles are necessary to derive transmittance of the probing x-ray through the target: backlit target, backlighting x-ray source, and x-ray emission from the target. We have developed a double-slit imager to observe those three images simultaneously. A CH planer target was irradiated with 0.53-micron GEKKO-XII/HIPER laser beams, and such three separate images were obtained. Trajectory and the target density profile were clearly observed.

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