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Present Operation Status of Target Injection System

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The progress of the target injection system is reported, where deuterated polystyrene (CD) beads are injected and engaged by implosion and heating laser beams at the repetition rate of 1 Hz. Since the high repetition rate experiments require to accurately position the injected pellets, for two years we have continuously tested and made the positions of the injected pellets better. Measuring the positions of the injected pellets is a required technology for target tracking and engagement. Newly developed shadowgraph system with two orthogonal probe beams has measured three-dimensional position of the flying targets for the first time. Using this shadowgraph system, we have evaluated the accuracy of the target injection, which will be useful for the future reactor system.

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