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Progress on Investigating the Peeler Regime at JETi200

Monday, 22 September 2025 19:00 (1h 30m)

In this poster we present our recent progress on experimentally realizing the peeler mechanism to accelerate protons from silicon-based CH coated targets. Known for producing monoenergetic protons, abundant electrons and bright x-rays, the peeler is of general interest in laser-plasma field. The target is oriented longitudinally along the laser propagation direction. The laser pulse interacts with the target's front edge, peeling electrons and driving them forward. These electrons then pull out and accelerate protons at the rear edge. In preparation, the targetry process has commenced, and preliminary 3D-PIC simulations have been conducted to assess the feasibility of using the available femtosecond TW laser for this scheme.

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