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Electron Energy Deposition in Fast-Shock Ignition SEYED ABOLFAZL GHASEMI, AMIR HOSSEIN FARAHBOD, Research School of Laser and Optics — Calculations of fast electrons penetration and energy stopping power in dense fuel show that about 25% of the initial electron energy effectively reaches to the central part of the fuel if the initial electron energy is of the order ∼6.5 MeV. To evaluate more realistically the performance of FSI approach, we have used a quasi-two temperature electron energy distribution function of Strozzi (2012) and fast ignitor energy formula of Bellei (2013) that are consistent with 3D PIC simulations. In terms of figure of merit and for fuel mass >1 mg, the general advantages of fast-shock ignition in comparison with shock ignition can be estimated to be better than 1.3.

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