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Stability study of planar targets using standard and adiabat shaping pulses MARINA OLAZABAL-LOUME, CELIA Universite Bordeaux I Talence, LUDOVIC HALLO, CELIA Universite Bordeaux I — It has been recently proposed to reduce the ablative Rayleigh-Taylor instability growth by using the adiabat shaping technics. In this work, the relaxation adiabat shaping scheme [B. Betti et al., Phys. Plasmas 12, 042703 2005] is considered. A prepulse is followed by a relaxation period, when the laser is turned off. We report here a parametric study of picket's parameters carried out with a code dedicated to the linear stability analysis, on the basis of spherical realistic simulations including full physics. It is shown that the set picket/relaxation time mainly determines the target stability and that the adiabat shaping scheme modifies the perturbed state before and at the beginning of the main acceleration. Consequences of small laser pulse shape variations on the target hydrodynamics and on perturbations behaviour are studied.

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