

Abstract Submitted
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1 D analysis of Radiative Shock damping by lateral radiative losses. MICHEL BUSQUET, LERMA-Observatoire de Paris & ARTEP, Inc, JEAN-PHILIPPE COLOMBIER, CHANTAL STEHLE, LERMA-Observatoire de Paris — It has been shown theoretically and experimentally [1] that the radiative precursor in front of a strong shock in hi-Z material is slowed down by lateral radiative losses. The 2D simulation showed that the shock front and the precursor front remain planar, with an increase of density and a decrease of temperature close to the walls. The damping of the precursor is obviously sensitive to the fraction of self-emitted radiation reflected by the walls (the albedo). In order to perform parametric studies we include the albedo controlled lateral radiative losses in the 1D hydro-code MULTI (created by Ramis et al [2]) both in terms of energy balance and of spectral diagnostic.

[1] Gonzales et al, Laser Part. Beams 24, 1-6 (2006) ; Busquet et al, High Energy Density Physics (2007), doi: 10.1016/j.hedp.2007.01.002

[2] Ramis et al, Comp. Phys. Comm., **49** (1988), 475

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