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**Simulations of High Intensity Short Pulse Lasers Incident on Reduced Mass Targets Using LSP<sup>1</sup>** FRANK W. KING, CHRIS ORBAN, KRAMER U. AKLI, DOUGLASS SCHUMACHER, The Ohio State University — We present the results of a series of fully kinetic 2D simulations using the PIC code LSP for the study of the heating and deformation of reduced mass targets. These simulations model a full scale laser pulse incident on full scale targets as a function of intensity, spot size, pre-plasma, and target lateral extent and thickness. We observe that the target deformation and heating has a strong dependence on intensity of the laser pulse and creation of a shock in the target. We also include a comparison of 2D and 3D kinetic runs that allows us to compare temperatures.

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