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Computer Simulations of Radiatively-Driven Shocks Using Mei-Gruneisen Equations of State[1] ROBERT PETERSON, SHANE WALTON, DON LEMONS, Los Alamos National Laboratory — Mei-Gruneisen Equations of State (EoS) have been developed for Flibe (BeF_2 and LiF) and Beryllium for Inertial Confinement Fusion (ICF) target applications. Layers or jets of Flibe has been suggested as a means of protecting ICF target chamber walls from the target-generated x-rays. Beryllium (doped with Copper) has been suggested as the ablator material for radiatively-driven capsules for NIF. We will show calculations, performed with the BUCKY computer code, of the response of slabs of Beryllium and Flibe to x-ray irradiation. The calculations are performed with different equations of state, including Mei-Gruneisen. Both situations (ablators and chamber protection) the manner of vaporization is important. The Mei-Gruneisen EoS has a particular treatment of the vapor dome, whose details are important to the details of vaporization.

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