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Phase diagram and Equation of State of Boron Carbide TADASHI OGITSU, SEBASTIEN HAMEL, Lawrence Livermore National Laboratory, ANDREW SHAMP, EVA ZUREK, SUNY Buffalo — Boron carbide is considered to be a good candidate material as ablator for inertial confinement fusion yet its phase diagram and equation of state are not well established. In the talk, we will first briefly summarize our current understanding of the phase diagram of boron carbide and the some of the important aspects such as uncertainty in the stoichiometry of real sample, which affects on the phase stabilities of boron carbide. We will then discuss about the progresses on the understanding of high-pressure phases of boron carbide predicted by the ab-initio crystal structure prediction method. [1] This work was performed under the auspices of the US Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344. [1] D. C. Lonie, E. Zurek, Computer Physics Communications 182, 372 (2011).

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