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**Dynamic Characterization of Eglin Steel by Symmetric Impact Experimentation** PHILIP FLATER, RACHEL ABRAHAMS, CHRISTOPHER NEEL, LALIT CHHABILDAS, Air Force Research Laboratory, WILLIAM REINHART, Sandia National Laboratories — Well-controlled impact studies have been conducted on heat treated ES-1, Eglin steel to determine their dynamic material properties. In particular gas-gun and time-resolved laser interferometry has been used to measure the fine structure in the particle velocity profile resulting from symmetric impact. Nominal impact pressures range from 8 – 20 GPa. These experiments have allowed us to estimate the dynamic yield and spall strength and the phase transition kinetics of the material. Results of these experiments will be discussed in detail and compared to the results of other steels in the literature.

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