

Abstract Submitted
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Measurements of electron and proton heating temperatures from XUV images at 68 eV in PW laser experiments PEIMIN GU, RICHARD FREEMAN, Ohio State University, BINGBING ZHANG, UC Davis — Short pulse isochoric heating by electrons and protons has been studied in experiments using the Rutherford Appleton Laboratory (RAL) PW laser. An XUV imager at 68 eV recorded the spatial patterns of heating. Temperatures were deduced from absolute intensities and comparison with modeling using a hydrodynamic radiation and physics code (Lasnex). The experimental method including calibration of the XUV mirrors and CCD cameras will be discussed. Data analysis of both electron and proton temperature patterns from the XUV images will be presented. This work was part of fast ignition research in collaboration with colleagues from GA and LLNL and supported by the US Office of Fusion Energy Sciences.

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