

HTPD 2018



Contribution ID : 298

Type : not specified

14.38 The Lawrence Livermore National Laboratory X-ray Optic Calibration Facility

Thursday, 19 April 2018 10:31 (120)

X-ray imaging optics are finding increased use in high energy density (HED) and inertial confinement fusion (ICF) experiments. Kirkpatrick-Baez microscopes and Wolter optics, for example, have complex point spread functions. Multilayer coated optics will have energy response functions that can vary with off-axis position. It is necessary to calibrate the optical systems in order to take full advantage of their resolution and energy response. LLNL has built a facility to calibrate x-ray optics. The calibration includes measurement of point-spread functions for a range of optics, covering an energy range of 5 – 30 keV currently, extendable to 60 keV. We will describe the capabilities of the calibration facility, concept of operations, and initial data from select x-ray optics. This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344. LLNL-ABS-743924

Primary author(s) : KOZIOZIEMSKI, Bernard J. (Lawrence Livermore National Laboratory)

Co-author(s) : AYERS, Jay (Lawrence Livermore National Laboratory); BELL, Perry (Lawrence Livermore National Laboratory); BRADLEY, David K. (Lawrence Livermore National Laboratory); DESCALLE, Marie-Anne (Lawrence Livermore National Laboratory); HAU-RIEGE, Stefan (Lawrence Livermore National Laboratory); MCCARVILLE, Thomas (Lawrence Livermore National Laboratory); PARDINI, Tom (Lawrence Livermore National Laboratory); PICKWORTH, Louisa A (Lawrence Livermore National Laboratory); VOGEL, Julia K. (Lawrence Livermore National Laboratory); AMPLEFORD, David J. (Sandia National Laboratories); BALL, Christopher R. (Sandia National Laboratories); BOURDON, Chris J. (Sandia National Laboratories); FEIN, Jeffery R. (Sandia National Laboratories); MU, Ming (Sandia National Laboratories)

Presenter(s) : KOZIOZIEMSKI, Bernard J. (Lawrence Livermore National Laboratory); AYERS, Jay (Lawrence Livermore National Laboratory); BELL, Perry (Lawrence Livermore National Laboratory); BRADLEY, David K. (Lawrence Livermore National Laboratory); DESCALLE, Marie-Anne (Lawrence Livermore National Laboratory); HAU-RIEGE, Stefan (Lawrence Livermore National Laboratory); MCCARVILLE, Thomas (Lawrence Livermore National Laboratory); PARDINI, Tom (Lawrence Livermore National Laboratory); PICKWORTH, Louisa A (Lawrence Livermore National Laboratory); VOGEL, Julia K. (Lawrence Livermore National Laboratory); AMPLEFORD, David J. (Sandia National Laboratories); BALL, Christopher R. (Sandia National Laboratories); BOURDON, Chris J. (Sandia National Laboratories); FEIN, Jeffery R. (Sandia National Laboratories); MU, Ming (Sandia National Laboratories)

Session Classification : Session #14. Thursday Morning Poster Session