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X-ray Instrumentation and Beam Characteristics at the Dynamic Compression Sector[1] D. CAPATINA, K. D'AMICO, T. GOG, Argonne National Laboratory, P. ENG, University of Chicago, T. GRABER, J. KLUG, D. PASKVAN, N. SINCLAIR, Y. LI, P. A. RIGG, Y. M. GUPTA, Washington State University
— The Dynamic Compression Sector (DCS) at the Advanced Photon Source at Argonne National Laboratory is a first-of-its-kind facility coupling a variety of high-precision, dynamic compression drivers with highly-tunable, high energy X-rays from a third generation synchrotron source. To meet the scientific needs of the DCS user community, precise control of the X-ray energy distribution, exposure, and spot size is of critical importance. This presentation will provide an overview of the X-ray beam conditioning optics and experimental shutters used at DCS to tailor the properties of the beam for the needs of each experiment. The full range of X-ray beam modes available at DCS will be described and the in-line X-ray diagnostic tools used to ensure a well-characterized source will be discussed.

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Paulo Rigg
Washington State University

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