

Abstract Submitted
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Fast Radiometric and Infrared Measurements During Disruptions in DIII-D¹ D.S. GRAY, S.C. LUCKHARDT, D.G. WHYTE, J. ZHANG, University of California, San Diego, T.E. EVANS, D.A. HUMPHREYS, A.W. HYATT, A.G. KELLMAN, R.L. LEE, J.A. LEUER, M.J. SCHAFFER, R.T. SNIDER, P.L. TAYLOR, General Atomics, T.C. JERNIGAN, Oak Ridge National Laboratory — The need for high time resolution in measurements of optical emissions from disrupting plasmas has motivated the implementation of two new diagnostics on DIII-D. A 1 MHz-bandwidth disruption radiometer (DISRAD) uses an absolute X-UV (AXUV) four-element photodiode to measure radiated power along a single viewing chord. Different elements use different window materials (or no window), providing spectral information needed for interpretation. Results will aid in the design of a future multi-chord diagnostic for measurement of profiles. A tangentially oriented two-color IR instrument is employed for the detection of synchrotron radiation from disruption-generated runaway electrons. As a complement to the information from an IR scanner, this diagnostic provides fast measurements (100 kSamples/s) over a broad field (no spatial resolution).

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Prefer Oral Session
 Prefer Poster Session

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Special instructions: DIII-D Poster Session II (divertor physics, disruptions, RF, & diagnostics), immediately following Jernigan

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