

Abstract Submitted
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2-D Profiles of 155 nm CIV Radiation in a Radiative Divertor Plasma in DIII-D¹ N.W. JALUFKA, M. DONALIES, A. PUNJABI, Hampton University, M.E. FENSTERMACHER, W. MEYER, D.G. NILSON, R.D. WOOD, Lawrence Livermore National Lab — First measurements of the spatial profiles of VUV emission from CIV (155 nm) in the entire divertor region of DIII-D are presented. Carbon is the dominant radiating impurity in the DIII-D divertor; up to 50% of the total radiated power is from the CIV doublet at 154.8 and 155.1 nm. The recently installed VUV tangential TV allows measurement of radiation from the entire divertor region at these wavelengths. The optical system consists of reflective and refractive elements and a wavelength filter which form an image of the CIV emission; this image is converted to visible light by a phosphor and imaged onto a CID camera. General 3-D tomographic inversion software is used to reconstruct 2-D profiles of CIV radiation in the poloidal plane assuming toroidal symmetry. These VUV profiles will be compared with visible CIII profiles for both ELMing H-mode and radiative divertor plasmas. Consistency of the location of the carbon radiation with the local divertor electron temperature measured by Thomson scattering and with the total radiation measured by bolometers will be examined.

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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 Lasnier

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