

Abstract Submitted  
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**Bright Spots: UV Measurements Using a Vacuum Photodiode Array** RORY PERKINS, PAUL BELLAN, California Institute of Technology — Solar coronal loops typically erupt abruptly after long quiescent periods. Such eruptions might be initiated by interactions between adjacent loops; this possibility was explored in a laboratory experiment where two plasma-filled flux tubes merge in either a co-or counter-helicity arrangement (J.F. Hansen, S.K.P. Tripathi, and P.M. Bellan, *Phys. Plasma* 2, 3177(2004)). The latter arrangement produces a bright region with enhanced soft x-ray emission. We investigate such mergings with a new array of EUV photo-detectors (based on S.J. Zweben, R.J. Taylor, *Plasma Physics*, Vol. 23, No. 4(1981)) that provides spatially and temporally resolved measurements of radiation between 10 and 120 nm. The detector boasts a sub-microsecond rise-time and provides a large signal without amplification. The detector is shielded from the charged particle background by permanent magnets. A novel two-step scheme diverts RF ground loop currents and greatly improves the signal-to-noise ratio.

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