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Enhancements to the Edge CXRS System on JET[1] T.M. BIEWER, D.L. HILLIS, Oak Ridge Nat. Lab., USA, Y. ANDREW, N.C. HAWKES, K.-D. ZASTROW, EURATOM/UKAEA Fusion Assoc., UK, K. CROMBE, Assoc. EURATOM, Belgium, JET EFDA COLLABORATION — Enhancements have been made to 2 of the 4 instruments comprising the edge (r/a ∼0.5 to ∼1.0) charge-exchange recombination spectroscopy (CXRS) suite of diagnostics on the Joint European Torus (JET). Both enhanced instruments now consist of short focal length spectrometers coupled to fast-framing CCD cameras at "high dispersion." Between these two instruments the number of plasma viewing channels increases from 24 to 34. The time resolution is improved to 10 ms. The neutral-beam induced emission of C VI at 529.1 nm, of Ne X at 524.8 nm, and of Ar XVIII at 522.4 nm is observed simultaneously, complementing the existing edge CXRS instruments, which can be tuned to observe any visible wavelength of interest. These enhancements enable the simultaneous observation of the temperature, rotation, and concentration of multiple plasma impurity ions at improved temporal and spatial resolution. Preliminary data will be shown from the recent JET campaign.

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