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Soft x-ray interferometry

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The development of soft x-ray mirrors and large aperture soft x-ray beamsplitters now allows the near routine operation of soft x-ray interferometers with high brightness x-ray sources. Mach-Zehnder and Fourier transform interferometers utilizing a soft x-ray laser light source operating at 80 eV will be described. Results from high density, long scale-length plasma probing measurements, x-ray laser coherence measurements, and materials properties measurements will be presented.