

Abstract Submitted
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X-ray Split and Delay System for Soft x-ray Pump/Probe Experiments at the LCLS Free Electron Laser¹ BRENDAN MURPHY, WMU, JOHN BOZEK, JEAN-CHARLES CASTAGNA, SLAC, NORA BERRAH, WMU — We will report on the development of a mirror based x-ray split and delay system (XRSD) for soft x-rays at the Linac Coherent Light Source free electron laser. This device will be used for x-ray pump, x-ray probe experiments in gas-phase as well as solid state using the LCLS femtosecond photon beam. The XRSD system will be positioned after the Kirkpatrick-Baez focusing mirrors, delivering two pulses with a variable delay to the interaction chamber. Delay of 0-100 femtoseconds can be produced with resolution under 100 attoseconds. The energy in each pulse will be measured shot to shot. The XRSD is expected to be ready for user experiments in early 2012.

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Brendan Murphy
WMU

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