

Abstract Submitted
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The LAMP instrument at the LCLS¹ TIMUR OSIPOV, JEAN-CHARLES CASTAGNA, CHRISTOPH BOSTEDT, LCLS, SLAC Linac Coherent Light Source, HUI XIONG, Univ of Connecticut - Storrs, KEN FERGUSON, MAXIMILIAN BUCHER, LCLS, SLAC Linac Coherent Light Source, NORA BERRAH, Univ of Connecticut - Storrs — We have commissioned and used a new instrument at the Linac Coherent Light (LCLS) Source at SLAC National Laboratory called LAMP. It consists of several detectors housed in a double chambered vacuum system. One detection scheme offered relies on the use of a double velocity map imaging (VMI) spectrometer which enables research in the gas phase such as molecular dynamics experiments. The latter are monitored via the detection of electron and ionic fragments resulting from x-ray photo-absorption of x-ray photons. With this new tool, we can record the different fragmentation pathways by measuring multi-particles ion-ion coincidences/multi-particle correlations. We can also simultaneously image the electrons momenta to capture the most detailed x-ray induced reaction in molecules and nano-systems. The other detection scheme offered consists of two imaging detectors of the pnCCD type for diffraction experiments of clusters and bio-specimens. This instrument, available to any users, has the possibility to uncover new mechanisms in physics, chemistry and biology.

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