

Δt (light)	1 ns	4 ns	10 ns	35 ns	100 ns	290 ns	800 ns	2 μ s	5 μ s	10 μ s	24 μ s	50 μ s	110 μ s	250 μ s	650 μ s	1.3 ms	6 ms	35ms	210 ms	4 s*	
mode [†]																					
Program	P/E	P/E	P/E	P/E	P/E	P/E	LV	P/E	LV	LV	P/E	P/E	P/E	P/E	P/E	P/E	P/E	P/E	P/E	P/E	P/E

All data were collected at the BioCARS Laue 14-ID-B beamline, Advanced Photon Source.

*Control to check for irreversible pumping effects: negative time delay (x-ray flash 1 ms before the laser flash, 4 s waiting time between exposures \Rightarrow equivalent to a 4-s time point).

[†]IP, Mar345 imaging plate; CCD, MarCCD.

[‡]Result of merging of redundant measurements and symmetry equivalents: $R_{\text{merge}} = \frac{\sum_{hkl,i} |A_{hkl,i} - \langle A_{hkl} \rangle|}{\sum_{hkl,i} A_{hkl,i}}$, where A_{hkl} refers either to amplitudes, $|F_{hkl}|$, or intensities, $|F_{hkl}|^2$.

[§]Result of scaling the light to the dark data set. $R_{\text{scale}} = \frac{\sum_{hkl} |I_{hkl}^{\text{light}} - I_{hkl}^{\text{dark}}|}{\sum_{hkl} I_{hkl}^{\text{light}}}$.

[¶]S: Hybrid mode, single bunch. X-ray exposure per image: 74 \times 150 ps x-ray pulses for dark, 45 \times 150 ps for light (5 mA/pulse, chopper at 905 Hz); SU, hybrid mode, super-pulse, x-ray exposure per image: 20 \times 500 ns X-ray pulses for dark, 15 \times 500 ns for light (95 mA/pulse, chopper at 905 Hz); NF, normal operation mode (324 bunches): 24 \times 2 μ s X-ray pulses for dark, 16 \times 2 μ s for light (54 mA/pulse, chopper at 905 Hz); N, normal operation mode (324 bunches): 10 \times 5 μ s X-ray pulses for dark, 12 \times 5 μ s for light (136 mA/pulse, chopper at 330 Hz).

^{||}Data reduction programs. P/E, PRECOGNITION/EPINORM; LV, LAUEVIEW.