



| Prop No | Spokesperson           | Title   | Inst |
|---------|------------------------|---|------|
| LU68    | Schmidt, Marius        | Pushing the Time-Resolution of Mix-and-Inject Serial Crystallography to the Limit   | MFX  |
| LU78    | Sension, Roseanne      | Polarized fs-XANES of Electronic and Structural Excited State Evolution in Cobalamins   | XCS  |
| LU83    | Sokolowski-Tint, Klaus | Fluid polymorphism – structural dynamics in supercooled liquids   | XPP  |
| LU89    | Ginsberg, Naomi        | Coherent imaging of annealing events in strongly coupled nanoparticle superassemblies   | XCS  |
| LU92    | Bucksbaum, Philip      | Multidimensional Multimodal Molecular Motion Viewed with Hard X-Rays  | CXI  |
| LU98    | Teitelbaum, Samuel     | Observing Critical Fluctuations and Anisotropic Electron-Phonon Coupling in Charge Density Waves  | XPP  |
| LV03    | Tracy, Sally           | Shock-Induced Phase Transitions in Carbonate Minerals   | MEC  |
| LV04    | Minitti, Michael       | Ultrafast Ghost Imaging of Molecular Dynamics in Ionic Systems  | CXI  |
| LV08    | Gleason, Arianna       | Void collapse physics in ICF ablator materials  | MEC  |
| LV09    | Savoini, Matteo        | Multidimensional pathways for coherent control of ferroic order via soft phonon modes   | XPP  |
| LV11    | Wolf, Thomas           | Ultrafast coupled nuclear and electronic motion investigated by x-ray diffraction   | CXI  |
| LV12    | Aquila, Andrew         | Understanding inception in soot formation   | MFX  |
| LV13    | Clarke, Samantha       | Examining the dynamics of the $\alpha$ to $\beta$ phase transition in Fe–Ni alloys under shock compression  | MEC  |
| LV14    | Ros, Alexandra         | Microfluidic Mixers and Droplets Facilitating Time-Resolved Macromolecular Crystallography with Minimal Sample Consumption  | MFX  |
| LV16    | Koralek, Jake          | Magnetic competition on the verge of a quantum spin liquid  | XPP  |
| LV18    | Heimann, Philip        | X-ray Pump-Probe Study of Warm Dense Copper   | XPP  |
| LV20    | Bergmann, Uwe          | An X-ray Laser Oscillator at the Copper K-alpha1 line   | CXI  |
| LV25    | Nagler, Bob            | Measuring the Electron-Ion Equilibration in Dense Plasmas   | MEC  |
| LV28    | Coslovich, Giacomo     | Observing the Birth of Three-dimensional Charge Density Waves in YBCO   | XPP  |
| LV29    | Wolf, Thomas           | Investigating excited state population dynamics and hydrogen transfer structural dynamics of acetylacetone using a novel approach for transient x-ray absorption spectroscopy | TMO  |
| LV30    | Kern, Jan              | Chemical bond activation by high-valent reactive metal intermediates in dinuclear Fe systems: combined XES and XRD at room temperature  | MFX  |
| LV31    | Bowlan, Pamela         | X-ray–optical transient grating to measure the complete electric field of attosecond hard X-ray pulses  | XCS  |
| LV37    | Ihme, Matthias         | Understanding Equilibrium Cluster Dynamics at Supercritical Conditions  | XCS  |
| LV38    | Boie, Larissa          | Mapping decoherence pathways following an ultrafast CDW phase transition  | XPP  |
| LV41    | Doumy, Gilles          | Towards observing site selective chemistry in real time   | TMO  |
| LV43    | Orville, Allen         | Deciphering degradation of last resort antibiotics by beta-lactamases with non-equilibrium, time-resolved SFX studies   | MFX  |
| LV44    | Cherezov, Vadim        | Serial Femtosecond Crystallography of G protein-Coupled Receptors in Lipidic Cubic Phase  | CXI  |
| LV46    | Yeh, Syun-Ru           | Establishing coMESH as a General Tool for Protein Structural Determination at LCLS  | MFX  |

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| LV47    | Fromme, Petra          | Time-resolved XES studies at short pulse duration on Photosystem II and Manganese model complexes.   | CXI  |
| LV48    | Barnes, Christopher    | Imaging the HIV-1 envelope glycan shield across clades and cell types  | MFX  |
| LV56    | Scheerer, Patrick      | Structure and Mechanism of Oxygen-Tolerant and -Sensitive Hydrogenases: X-ray Spectroscopy and Crystallography under Physiological Conditions                            | MFX  |
| LV60    | Reinhard, Marco        | Studying the ferrocyanide photo-aquation reaction using Fe K $\alpha$ 1,3 and valence-to-core X-ray emission spectroscopy and X-ray scattering                           | XCS  |
| LV68    | Yano, Junko            | Time-Resolved X-ray Absorption Spectroscopy of Photosystem II at Room Temperature  | XPP  |
| LV70    | Yachandra, Vittal      | Structures of the Intermediates of Photosystem II and the Mechanism of Photosynthetic Water-Splitting Using Simultaneous X-ray Emission Spectroscopy and Crystallography | MFX  |
| LV73    | Briggs, Richard        | Probing the electride behavior of potassium:liquid-liquid and complex crystal structures under dynamic compression   | MEC  |
| LV77    | Singer, Andrej         | Speckle interferometry for transition pathway mapping in a photoexcitation   | XCS  |
| LV79    | Singer, Andrej         | Deterministic structural switching through giant nonlinear phononics   | XPP  |
| LV80    | Ofori-Okai, Benjamin   | Measuring the electrical conductivity of shock-compressed warm dense matter using single-shot-time-domain terahertz spectroscopy   | MEC  |
| LV82    | Driver, Taran          | Angular Streaking of Photoemission from Aligned Molecules  | TMO  |
| LV88    | Liang, Mengning        | Polymer crystallization in electrospun fibers  | MFX  |
| LV94    | JAMES CRYAN (SP)       | Real-time Observation of Ultrafast Electron Motion using Attosecond XFEL Pulses  | TMO  |
| LV95    | Schriber, Elyse        | Observation of Ultrafast Structural Dynamics in Materials using Small-unit Cell Serial Femtosecond Crystallography   | CXI  |
| LV96    | Natan, Adi             | Disentangling Ultrafast Solute and Solvation Dynamics with high-energy X-ray Scattering  | XCS  |
| LV97    | Chen, Lin              | Deciphering Directional Excited-State Charge Transfer Mechanisms Using Ultrafast XFEL Science  | XCS  |
| LV98    | Trigo, Mariano         | Nonlinear couplings among collective modes in quantum materials  | XPP  |
| LW00    | Gopalan, Venkatraman   | Fluctuations, Emergence and Dynamics of Complex Topological Superstructures by Design  | XPP  |
| LW02    | CYNTHIA BOLME (SP)     | Effects of Heterogeneities on Materials Strength under Dynamic Loading Conditions  | MEC  |
| LW03    | Dominik Kraus (SP)     | Chemistry of light element mixtures at planetary interior conditions   | MEC  |
| LW05    | Walter, Peter          | HFP Early Science TMO  | TMO  |
| LW06    | Walter, Peter          | Chemical Dynamics in Ultrafast Molecular Dissociation of Nitrous Oxide   | TMO  |
| LW07    | Walter, Peter          | Xe Early Science cVMI TMO  | TMO  |
| LW08    | Walter, Peter          | Early Science at TMO Photochemistry  | TMO  |
| LW09    | Gleason, Arianna       | Ptychography development and application   | XPP  |
| LW11    | Minitti, Michael       | Molecular Nuclear and Electron Dynamics on Complex Energy Landscapes   | CXI  |
| LW37    | Schofield, Christopher | Time-resolved SFX and XES studies of the Fe(II) dependant enzymes IPNS and AlkB  | MFX  |
| LX44    | Hadt, Ryan G           | Structural and Dynamic Basis for Quantum Effects in Enzyme Catalysis   | MFX  |

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| P171    | Schmidt, Marius          | Room Temperature Structure and Inhibition of the Coronavirus SARS CoV-2 Main Protease  | MFX  |
| P172    | Fromme, Petra            | Time-resolved serial femtosecond crystallography studies on the endonuclease NendoU protein of SARS-CoV-2                                | MFX  |
| P173    | DeMirici, Hasan          | Structural dynamics of SARS-CoV-2 3-Chymothrypsin-like Protease and its Inhibitor Complexes  | MFX  |
| P175    | Orville, Allen           | Time-resolved SFX of Covid-19 proteins including M-pro   | MFX  |
| P178    | Hogue, Brenda            | Coronavirus Viroporin Structural Studies   | CXI  |
| P179    | Cohen, Aina              | Understanding the RNA maturation machinery of SARS-CoV-2: visualizing the acutely radiation sensitive Nsp10 and Nsp16 complex in action. | MFX  |
| P180    | Takacs, Christopher      | Connecting transport, heterogeneity, and functionality in N95 material   | CXI  |
| X383    | Mengning Liang (Sp)      | CXI at higher photon energies  | CXI  |
| X385    | Alexander Britz (Sp)     | Development of a Polycapillary Optic X-ray Emission Spectrometer for Partial Fluorescence Yield XAS of Extremely Dilute Solutions        | XCS  |
| X386    | Takahiro Sato (Sp)       | XPP commissioning and beam characterization with higher photon energy  | XPP  |
| X387    | Takahiro Sato (Sp)       | Reestablishment of XPP pump and probe capability   | XPP  |
| X388    | Takahiro Sato (Sp)       | Development of Hard X-ray polarization switching technique using phase retarder  | XPP  |
| X392    | Matthieu Chollet (Sp)    | XCS commissioning for high photon energy   | XCS  |
| X393    | Matthieu Chollet (Sp)    | XCS CCM commissioning  | XCS  |
| X396    | Tim Van Driel (Sp)       | Commissioning the new Liquid chamber setup for vertical x-ray polarization   | XCS  |
| X397    | Tim Van Driel (Sp)       | Commissioning the Liquid Standard Configuration for higher X-ray energies  | XCS  |
| X400    | Taran Driver (Sp)        | Core Hole Coherent Spectroscopy in N2O   | TMO  |
| X402    | James Glowonia (Sp)      | Characterizing the instrument response function for deep ultraviolet pumped gas phase diffraction in CXI                                 | CXI  |
| X403    | Haoyuan Li (Sp)          | Amplitude-splitting pulse-front-preserving split-delay system with sub-nanoradian relative pointing stability                            | XPP  |
| X407    | Yanwen Sun (Sp)          | Detector characterization/optimization for speckle visibility extraction   | XPP  |
| X410    | Yanwen Sun (Sp)          | Demonstration of split-pulse XPCS methodology with wavefront splitting optics  | XCS  |
| X411    | Bob Nagler (Sp)          | MXI commissioning for photon energies 12keV to 24keV   | MEC  |
| X420    | Raymond Sierra (Sp)      | TtO for the new Pegasus Deux Chip Injecotr Mount   | CXI  |
| X421    | Diling Zhu (Sp)          | X-ray cavity R&D: test of a 20-meter-roundtrip 'cold' cavity and its in/out coupling mechanisms  | XPP  |
| X428    | Alyssa Prinz             | Safety Collimator and Stopper Material Damage Studies  | XCS  |
| X429    | Roberto Alonso-Mori (Sp) | Commisioning of the standard configuration vertical polarization chamber for XAS at XPP  | XCS  |