**DCS Experimental Information Collection Form**

**Plate Impact Experiment**

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| **Experimental Overview** | |
| Experiment Title |  |
| Experiment Dates |  |
| Lead Experimenter  (Name, Institution, Phone, E-mail) |  |
| Other Experimenters: | Email Address: |
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| Scientific Objective |  |
| Number of experiments required to achieve scientific objective |  |
| List of Material(s) |  |
| **Experiment Parameters** | |
| Configuration:  Undulator and Multilayer Monochromator (MLM) | U27, 36 keV with MLM (standard for XRD)  U17.2, 24 KeV, 1st harmonic with MLM  U17.2, 26 KeV, 15 mm gap, 1st harmonic (standard for PCI)  U27, 23 keV without MLM  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Experiment Type | Imaging  Detector Magnification (FOV):  5x (2.5mm)  7x (1.7mm) 10x (1.3mm) |
| Diffraction  Scintillator Size: 75mm 120mm 150mm  Beam Position on Detector:  Center Edge Other: |
| Diffraction Geometry | Reflection  Gun Angle: Detector Angle: |
| Transmission  Gun Angle: -28˚ Detector Angle: 0˚ |
| Is target rotation about the barrel axis needed?  (±10° range of motion) | Yes No |
| X-ray spectral scan required? | Yes No |
| Beam size at target  *[Usual size for expt. at D and E hutches – 300 horiz./800 vert. (µm)]* | Horizontal (µm):  Vertical (µm): |
| Timing Trigger: | PZT TOBB |
| Target/probe configuration  *(POC provide DCS standard target design)* | Standard DCS User-provided design |
| Velocimetry:  User supplied probes  Describe probes: | VISAR (1 probe)  Available VPFs (m/s/fringe) (select two)  72 95 181 ☐308 458 945 |
| PDV  Number of Channels: |
| Detail of issues from last DCS visit: |  |

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| **Required Target and Configuration Detail** |
| 1. Drawing of experimental configuration. The drawing must include the sample assembly, incident and outgoing x-rays, gun angle, detector plane, detector distance and the desired field of view. 2. Detailed drawing of the target assembly. It should identify the various target components and materials used. Please include any non-standard details or unusual requests in the diagram. Include any relevant distances/indicators to locate the sample position while aligning the sample using x-rays, for example sample edges/thickness and their distances from target plate/spacers) 3. For XRD experiments:   If the sample has been previously studied at DCS, please provide ambient x-ray diffraction images (and dates of previous campaign). If not, have ambient diffraction pattern ready from other sources or from simulation. |
| **Shipping Requirements** |
| 1. Review [shipping requirements](https://dcs-aps.wsu.edu/shipping-instructions/). If shipping materials in advance of your arrival date, provide shipment tracking numbers to [dcs.admin@wsu.edu](mailto:dcs.admin@wsu.edu) 2. Is your shipment greater than 50lbs or contains hazardous materials? Yes No 3. If yes, please provide your APS User Cost Code: PRJ # \_\_\_\_\_\_\_\_\_\_\_. 4. An APS User Account is required to pay for miscellaneous materials and services associated with your beamline experiments at the APS (i.e. APS Stockroom supplies, APS Riggers for transporting your shipments to/from the dock, or anytime an ANL service request is submitted, even if there is no accompanying cost).  * Unsure of your APS User Cost Code or need to setup/maintain an APS User Account? Contact Lauren Ambrose at APS (630-252-1244, [useracct@aps.anl.gov](mailto:useracct@aps.anl.gov)) Your APS User Cost Code must be established prior to your experimental campaign. |

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| **Publication Requirements** |
| The [Acknowledgment Statement](https://dcs-aps.wsu.edu/publication-acknowledgements/) must be included in manuscripts for the work conducted at the Dynamic Compression Sector and published in journals, books, conference proceedings, or other printed scientific and technical media.  Notification of accepted manuscripts require notification to DCS and APS. *Send the copyright-free version of accepted manuscripts* to [dcs.admin@wsu.edu](mailto:dcs.admin@wsu.edu) and enter your accepted manuscript into the [APS Publications Database](https://www.aps.anl.gov/Science/Publications).   1. Provide detail of in-press or published manuscripts that include any previous work performed at DCS. 2. DCS Users are expected to publish results in peer-reviewed journals within a reasonable period (~1 year) after scheduled user time. Please indicate the anticipated timeline for publishing the results from your upcoming DCS experiments. |
| **User Requests/Information** |
| Please communicate any additional experimental details, requests and/or concerns relevant to your experimental time. |