

## Monday 26<sup>th</sup> September

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| 8:30        | Registration<br><i>Tea and coffee with biscuits</i>                          |                                  |
| 9:00        | Welcome and Admin for the Day  | <i>S. Astbury (CLF)</i>          |
| 9:05        | Welcome Announcement   | <i>J. Collier (Director CLF)</i> |
| 9:15        | An Introduction to the Workshop Series                                       | <i>M. Tolley (CLF)</i>           |
| 9:30-10:30  | Session 1<br>Introduction to Target Fabrication Facilities                   |                                  |
| 9:30        | Target Fabrication Capabilities at LLE                                       | <i>M. Bonino (LLE)</i>           |
| 9:50        | An Overview of Target Fabrication Capabilities at STFC                       | <i>C. Spindloe (CLF)</i>         |
| 10:10       | Overview of General Atomics and Capabilities for High Rep-Rate Facilities    | <i>P. Fitzsimmons (GA)</i>       |
| 10:30-11:00 | Tea and Coffee with Biscuits   |                                  |
| 11:00-12:30 | Session 1 (Continued)<br>Introduction to Target Fabrication Facilities       |                                  |
| 11:00       | Target Fabrication Activities at the P3 Platform at ELI-Beamlines            | <i>T. Lastovicka (ELI-BL)</i>    |
| 11:20       | AWE Target Fabrication Overview  | <i>Liam Jenvey (AWE)</i>         |
| 11:40       | AWE Target Fabrication Trials Manager Process                                | <i>B. Foote (AWE)</i>            |
| 12:10-13:15 | Lunch – Finger Buffet  |                                  |
| 13:15-15:00 | Session 2<br>Low Density Materials Science                                   |                                  |
| 13:15       | Three-dimensional Printing of Foam Targets for Laser-Direct-Drive Implosions | <i>D. R. Harding (LLE)</i>       |
| 13:35       | Material Science at Orion for Target Fabrication                             | <i>N. Stubbs (AWE)</i>           |

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| 13:55       | A New Way to Synthesize Ultra-low Metallic Foams  | <i>F. Durut (CEA)</i>               |
| 14:15       | Fabrication of Nanowires and Nanohole Targets for High Power Laser Experiments  | <i>S. Ionescu (ELI-NP)</i>          |
| 14:35       | Improved Dispersion of Nanoparticles via Surface Functionalisation  | <i>S. Irving (CLF)</i>              |
| 15:00-15:30 | Tea and Coffee with Biscuits  |                                     |
| 15:30-16:30 | Session 3<br>Microfabrication and Characterisation  |                                     |
| 15:30       | Microtarget Fabrication Using Sputtering for High Power Laser Applications: Simulations and Deposition through a Mask | <i>D. Chemate (TIFR, Hyderabad)</i> |
| 15:50       | X-Ray Fluorescence for Copper Nanofilm Analysis and Sputter Process Quality Monitoring                                | <i>M. Arya (IIT Bombay)</i>         |
| 16:10       | Characterisation of Thin Topography Using Optical Transmission  | <i>N. Jadhav (TIFR, Hyderabad)</i>  |
| 16:30       | Day 1 - Closing Remarks   |                                     |

## Tuesday 27<sup>th</sup> September

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| 8:30  | Tea and Coffee with Biscuits   |                             |
| 8:55  | Welcome and Admin for the Day  | <i>S. Astbury</i>           |
| 9:00  | Session 4<br>Liquid Targetry   |                             |
| 9:00  | Automation and optimisation of high-repetition rate laser-driven proton acceleration | <i>C. Palmer (QUB)</i>      |
| 9:25  | Liquid Leaf Target for High Repetition Rate Laser-ion Acceleration Experiments       | <i>D. Hofmann (TUD)</i>     |
| 9:50  | KHz-rate Dynamical Target Shaping for High Intensity LPI                             | <i>A. K. Patnaik (AFIT)</i> |
| 10:15 | In-air Microstructure Assembly   | <i>A. Ward (CLF)</i>        |

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| 10:40-11:10 | Tea and Coffee with Biscuits  |                                  |
| 11:10-12:30 | Session 5<br>Automation in Target Assembly and Fabrication  |                                  |
| 11:10       | Targetry Automation   | <i>C. Bläser (TUD)</i>           |
| 11:30       | Automated Target Alignment Station for Medium Repetition Rate Targetry  | <i>P. Lutz (Focussed Energy)</i> |
| 11:50       | Automation of Target Fabrication Processes at the CLF   | <i>C. Gardner (CLF)</i>          |
| 12:10       | IPFL – Bespoke Plastic Parts  | <i>A. Bloomfield (IPFL)</i>      |
| 12:30-13:30 | Lunch – Finger Buffet   |                                  |
|             | Session 6<br>High Rep Rate 1  |                                  |
| 13:30       | Development of Targetry for High Rep-Rate Experiments on EPAC   | <i>S. Astbury (CLF)</i>          |
| 13:50       | Development of High Repetition Rate Targets Systems for Ion Acceleration with Lasers                                      | <i>M. Füle (U. of Szeged)</i>    |
| 14:10       | Investigation of the Micromachining of Micro through-hole on Thin Stainless Steel by an Optical and Conventional Approach | <i>A. Ibrahim (TIFR, Mumbai)</i> |
| 14:30       | Time-resolved Imaging of Material Ablated by Ultrashort Laser Pulses  | <i>N. Schott (TUD)</i>           |
| 14:50       | Day 2 – Closing Remarks   |                                  |
| 15:00-15:30 | Tea and Coffee with Biscuits  |                                  |
| 15:30-17:00 | Session 7<br>Poster Session   |                                  |
| 18:00-21:00 | Conference Dinner – Museum of Natural History   |                                  |

## Wednesday 28<sup>th</sup> September

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| 9:00        | Tea and Coffee with Biscuits   |                              |
| 9:15        | Welcome and Admin for the Day  | <i>S. Astbury</i>            |
| 9:20-10:30  | Session 8<br>IFE Targetry  |                              |
| 9:20        | Overview of LLNL Target Fabrication Technology<br>Development Projects for HED and ICF Targets                           | <i>S. Bhandarkar (LLNL)</i>  |
| 9:50        | Technologies for Mass Producing Inertial Fusion Energy<br>Targets and Determining their Survival in an IFE Chamber       | <i>D. R. Harding (LLE)</i>   |
| 10:10       | Recent Developments in Plasma-Assisted Deposition for<br>Laser Targets and LLNL  | <i>S. O. Kucheyev (LLNL)</i> |
| 10:30-11:00 | Tea and Coffee with Biscuits   |                              |
| 11:00-12:30 | Session 9<br>High Rep Rate 2   |                              |
| 11:00       | Cryogenic Hydrogen Ribbon for Laser Driven Proton<br>Acceleration at Hz-Level Repetition Rate                            | <i>T. Chagovets (ELI-BL)</i> |
| 11:20       | Automated Characterisation of Debris Impacts in Laser-<br>Matter Experiments Using Image Processing and Sensor<br>Fusion | <i>S. Pietzsch (TUD)</i>     |
| 11:40       | TBC  | <i>Tim Böttcher (FE)</i>     |
| 12:00       | Discussion and Future Workshops  | <i>All</i>                   |
| 12:15-13:15 | Lunch  |                              |