## 3rd workshop on Studies of Dynamically Compressed Matter with X-rays

### Programme

**Thursday, 14th January 2021**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session I: Status of HPLF and other dynamic compression opportunities at ESRF (Chair: O. Mathon)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00</td>
<td>Welcome: R. Torchio and H. Reichert</td>
</tr>
<tr>
<td>11:15 – 11:40</td>
<td>Status of the High Power Laser Facility on ID24</td>
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<tr>
<td>11:40 – 12:05</td>
<td>Single pulse experiments on ID09/ESRF for dynamic compression and structural dynamics</td>
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</tbody>
</table>

**Lunch Break**

### Session II: Dynamic compression at the ESRF (Chair: M. Mezouar)

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<tbody>
<tr>
<td>14:00 – 14:30</td>
<td>Single-shot XAS on laser shock compressed Fe-rich alloys: FeNi, FeSi and Fe oxides</td>
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<tr>
<td>14:30 – 15:55</td>
<td>X-rays as a probe for dynamic compression experiments</td>
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<tr>
<td>14:55 – 15:20</td>
<td>Application of XPCI to the incipient stages of material failure on ID19</td>
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**Break**

### Session III: Highlights from other facilities (Chair: D. Kraus)

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<thead>
<tr>
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<tbody>
<tr>
<td>15:30 – 15:55</td>
<td>Dynamic compression response of SiO2 at different strain rates</td>
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<tr>
<td>15:55 – 16:20</td>
<td>Constraints on the crystallization kinetics in shock compressed MgSiO3</td>
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<tr>
<td>16:20 – 16:45</td>
<td>X ray absorption spectroscopy with X-rays from a laser wakefield accelerator</td>
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**Break, Speakers’ photo**
### Session IV: Highlights from other facilities
**Chair: P. Loubeyre**

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>17:00 – 17:25</td>
<td>Understanding complex dynamic response through new diagnostic and analysis methods</td>
<td>Minta Akin</td>
<td>LLNL, USA</td>
</tr>
<tr>
<td>17:25 – 17:50</td>
<td>Shock induced phase transitions of the Noble metals at the Dynamic Compression Sector</td>
<td>Richard Briggs</td>
<td>LLNL, USA</td>
</tr>
<tr>
<td>17:50 – 18:15</td>
<td>New capabilities for EXAFS measurements on the National Ignition Facility</td>
<td>Federica Coppari</td>
<td>LLNL, USA</td>
</tr>
<tr>
<td>18:15 – 18:40</td>
<td>The Matter in Extreme Conditions instrument at LCLS</td>
<td>Gilliss Dyer</td>
<td>LCLS, USA</td>
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</tbody>
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#### Friday, 15th January 2021

### Session V: Future science cases, proposal preparation
**Chair: G. Fiquet**

<table>
<thead>
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<th>Time</th>
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<tbody>
<tr>
<td>10:30 – 10:55</td>
<td>GeO2 under dynamic compression: from macroscopic to microscopic characterisation</td>
<td>Tommaso Vinci</td>
<td>LULI, France</td>
</tr>
<tr>
<td>10:55 – 11:20</td>
<td>High pressure investigation of liquid and amorphous systems using X-ray absorption spectroscopy</td>
<td>Paola d’Angelo</td>
<td>Università La Sapienza Rome, Italy</td>
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</tbody>
</table>

### Session VI: Future science cases, proposal preparation
**Chair: D. Eakins**

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<th>Time</th>
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<tbody>
<tr>
<td>11:30 – 11:55</td>
<td>Dynamic fragmentation process involved in brittle solids: towards a better understanding of the relationship between microstructural parameters and strain-rate sensitivity</td>
<td>Pascal Forquin</td>
<td>Université Grenoble Alpes, France</td>
</tr>
<tr>
<td>10:55 – 12:20</td>
<td>Behavior of Bulk metallic glasses under laser shock</td>
<td>Didier Loison</td>
<td>Université de Rennes, France</td>
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</tbody>
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### Lunch Break

### Session VII: Future science cases, proposal preparation
**Chair: F. Dorchies**

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<th>Time</th>
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<th>Speaker</th>
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<tr>
<td>14:30 – 14:55</td>
<td>Energy transport dynamics observed in warm dense copper using femtosecond time-resolved XANES spectroscopy</td>
<td>Ludovic Lecherbourg</td>
<td>CEA-DAM-DIF Arpajon, France</td>
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<tr>
<td>14:55 – 15:20</td>
<td>HED science with intense heavy-ion pulses at GSI/FAIR</td>
<td>Paul Neumayer</td>
<td>GSI Darmstadt, Germany</td>
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<tr>
<td>15:20 – 15:45</td>
<td>An introduction to First Light Fusion and our studies of matter compressed by projectile impact</td>
<td>Hugo Doyle</td>
<td>First Light Fusion Ltd Oxford, UK</td>
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<tr>
<td>15:45 – 16:20</td>
<td>Application of dynamic compression combined with X-ray diagnostics to geophysics and planetary science</td>
<td>Guillaume Morard</td>
<td>ISTerre Grenoble, France</td>
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<tr>
<td>Time</td>
<td>Agenda Item</td>
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<tr>
<td>16:30</td>
<td>Round Table (16:30 – 18:15)</td>
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<td>Chair: R. Torchio</td>
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<tr>
<td>16:30</td>
<td>HPLF-I: day-1 parameters and target requirements - R. Torchio/M. Harmand</td>
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<td>16:50</td>
<td>Shock diagnostics for HPLF-I - A. Sollier (16:50 – 17:10)</td>
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<td>17:10</td>
<td>Scientific proposals for HPLF-I, topics proposed by the speakers, others -</td>
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<td>A. Ravasio (17:10 – 17:30)</td>
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<td>17:30</td>
<td>Plans on ID09 and HPLF-II - M. Levantino (17:30 – 17:50)</td>
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<td>17:50</td>
<td>Shock-BAG partners for ID19 - A. Rack and D. Eakins (17:50 – 18:10)</td>
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<td>18:15</td>
<td>Concluding Remarks: R. Torchio</td>
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