**CLF Targetry Technical Request for Principal Investigators.**

Release 1.00

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This form is intended for Principal investigators requesting CLF targetry support for experiment access at other laser facilities during the Vulcan 20-20 project.

**Form T1. Preliminary request for Targets.**

This form should be used to detail your target requests for the campaign. Requirements have been grouped into target types, characterisation needed and also pinhole and filter requirements.

Targets have been grouped into a number of standard types, please use these descriptions wherever possible. It is expected that for most requests there will be further target details added in the ‘other details’ section.

In most cases the host facility will be responsible for providing the target mount and delivery system. Please ensure that the TF group is fully involved in the planning process to ensure that the interfaces between the targets and the experiment are fully understood and defined.

When filling in the number of shots required, please only add the **number of shots expected**. The target fabrication group will assess the yield of targets and will make appropriate spares in consultation with you in the planning process. Including spares in the request will delay the fabrication of other targets and will affect the experimental campaign. Over requests will result in target types being cut from other parts of the experimental list.

The provision of the CLF tape drive is not automatically provided as the system is licenced for supply externally through Scitech Precision Limited. It is expected that this is arranged through the host institution. Tape targets and materials can be requested through the V20-20 access provision however complex targets can have a long lead-time and can be expensive, so it is critical that you discuss with both TF, ESG and the host institution, before submission of your proposal to the panel.

Specialised or non-standard target requests requiring R&D or on long lead time **must** have been discussed with relevant Target Fabrication staff prior to proposal submission. In addition, if detailed characterisation of a target is needed (e.g. for publication) please state this. If you would like to discuss the characterisation that is available, please contact a member of the target fabrication team.

Please detail all diagnostic pinhole and filter requirements. Not all pinholes or filter materials are kept in stock and unless requested they cannot be guaranteed for the experiment.

Contacts for detailed discussions:

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**Form T1. Preliminary request for Targets.**

**Part 1. Experimental Targets:**

|  |  |  |
| --- | --- | --- |
| **Target Type 1** (please tick as required) | **Mounting**(please tick as required) |  |
| [ ]  Proton Foil[ ]  Simple Backlighter[ ]  Foil 1-100um[ ] Thin foil 100-1000nm[ ]  Ultra-thin foil <100nm[ ]  Low density target[ ]  Dot target[ ]  Layered Target (please specify)[ ]  Mass limited target[ ]  Cone/Hohlraum[ ] Complex 3D (Cone/shell)[ ]  Other (please specify) | [ ]  Single shot[ ]  Part of a Cluster[ ]  High-rep Rate Array[ ]  Complex Array (e.g double foil)[ ]  Nano-positioning Wheel[ ]  C-mount[ ]  Tape target[ ]  Other (please specify) | **Expected number of targets (shots) required** |
| **Other details:** |
| **Source** | [ ]  CLF Target Fabrication[ ]  Other |
|  |  |
| **Contact details** |  |
| **Material** |  |

|  |  |  |
| --- | --- | --- |
| **Target Type 2** (please tick as required) | **Mounting**(please tick as required) |  |
| [ ]  Proton Foil[ ]  Simple Backlighter[ ]  Foil 1-100um[ ] Thin foil 100-1000nm[ ]  Ultra-thin foil <100nm[ ]  Low density target[ ]  Dot target[ ]  Layered Target (please specify)[ ]  Mass limited target[ ]  Cone/Hohlraum[ ] Complex 3D (Cone/shell)[ ]  Other (please specify) | [ ]  Single shot[ ]  Part of a Cluster[ ]  High-rep Rate Array[ ]  Complex Array (e.g double foil)[ ]  Nano-positioning Wheel[ ]  C-mount[ ]  Tape target[ ]  Other (please specify) | **Expected number of targets (shots) required** |
| **Other details:** |
| **Source** | [ ]  CLF Target Fabrication[ ]  Other |
|  |  |
| **Contact details** |  |
| **Material** |  |

|  |  |  |
| --- | --- | --- |
| **Target Type 3** (please tick as required) | **Mounting**(please tick as required) |  |
| [ ]  Proton Foil[ ]  Simple Backlighter[ ]  Foil 1-100um[ ] Thin foil 100-1000nm[ ]  Ultra-thin foil <100nm[ ]  Low density target[ ]  Dot target[ ]  Layered Target (please specify)[ ]  Mass limited target[ ]  Cone/Hohlraum[ ] Complex 3D (Cone/shell)[ ]  Other (please specify) | [ ]  Single shot[ ]  Part of a Cluster[ ]  High-rep Rate Array[ ]  Complex Array (e.g double foil)[ ]  Nano-positioning Wheel[ ]  C-mount[ ]  Tape target[ ]  Other (please specify) | **Expected number of targets (shots) required** |
| **Other details:** |
| **Source** | [ ]  CLF Target Fabrication[ ]  Other |
|  |  |
| **Contact details** |  |
| **Material** |  |

|  |  |  |
| --- | --- | --- |
| **Target Type 4** (please tick as required) | **Mounting**(please tick as required) |  |
| [ ]  Proton Foil[ ]  Simple Backlighter[ ]  Foil 1-100um[ ] Thin foil 100-1000nm[ ]  Ultra-thin foil <100nm[ ]  Low density target[ ]  Dot target[ ]  Layered Target (please specify)[ ]  Mass limited target[ ]  Cone/Hohlraum[ ] Complex 3D (Cone/shell)[ ]  Other (please specify) | [ ]  Single shot[ ]  Part of a Cluster[ ]  High-rep Rate Array[ ]  Complex Array (e.g double foil)[ ]  Nano-positioning Wheel[ ]  C-mount[ ]  Tape target[ ]  Other (please specify) | **Expected number of targets (shots) required** |
| **Other details:** |
| **Source** | [ ]  CLF Target Fabrication[ ]  Other |
|  |  |
| **Contact details** |  |
| **Material** |  |

**Multi-target Geometry**

Please supply a simple sketch (indicating critical dimensions) for any complicated or new requirements. Attach additional information on an extra sheet if necessary. If some components of target assemblies are to be provided by an external source please provide a contact so that the CLF target fabrication group can contact the fabricator to ensure that the target is compatible with the experimental design.

**Part 2. Characterisation:**

|  |  |
| --- | --- |
| Target type 1 | Details:  |
| Target type 2 | Details:  |
| Target type 3 | Details:  |
| Target type 4 | Details:  |

**Part 3. Pinhole Requirements:**

|  |  |  |
| --- | --- | --- |
| 1 | [ ]  Thomson pinhole[ ]  Multi-pinhole (4 pinholes)[ ]  Multi-pinhole (lead mount)[ ]  Other (please specify) | Details (diameter, filtering of individual pinholes):  |
| 2 | [ ]  Thomson pinhole[ ]  Multi-pinhole (4 pinholes)[ ]  Multi-pinhole (lead mount)[ ]  Other (please specify) | Details (diameter, filtering of individual pinholes):  |
| 3 | [ ]  Thomson pinhole[ ]  Multi-pinhole (4 pinholes)[ ]  Multi-pinhole (lead mount)[ ]  Other (please specify) | Details (diameter, filtering of individual pinholes):  |

**Part 4. Filters and Photocathodes:**

|  |  |  |
| --- | --- | --- |
| 1 | [ ]  Flat field filters[ ]  Photocathodes[ ]  Multi-element filter[ ]  Other (please specify) | Details (material, thickness, support):  |
| 2 | [ ]  Flat field filters[ ]  Photocathodes[ ]  Multi-element filter[ ]  Other (please specify) | Details (material, thickness, support):  |
| 3 | [ ]  Flat field filters[ ]  Photocathodes[ ]  Multi-element filter[ ]  Other (please specify) | Details (material, thickness, support):  |