

LaserNetUS Town Hall - Questions & Answers

Includes questions posted by email in the following days

Updated 2019/02/21

General questions

Q: Is there any DOE-FES funding that we may apply for?

A: Once proposals are selected for time, there will be modest funding available for travel, and possibly targets, for PIs and their team to execute the experiment. The request needs to be submitted to FES program manager for consideration: kramer.akli@science.doe.gov.

Q: Can you please give some info on the review panel for experimental evaluation?

A: FES has paid for time on each of the facilities and is directly recruiting the peer review panel (PRP) for this first call. The PRP will be independent of the member facilities and will judge proposals based on scientific merit, recommending which proposals will be allocated time. The PRP review will be followed by a facility feasibility and sorting review of the recommended experiments. Facilities have input only on feasibility.

Q: Am I specifically asking for a facility or is a suitable facility assigned to me? For example, I want a high rep rate laser and there are several in the net.

A: The proposal form asks users to select a first and (optionally) a second choice for laser facility. This selection will not affect PRP decisions. By default the first choice would be assigned unless there are scheduling or feasibility issues, in which case the experiment may be given to the second-choice facility, or a third facility deemed to be suitable based on the experimental requirements. This sorting will be done during the feasibility stage. Proposals should clearly state the laser parameters needed and especially why a given facility is most preferable.

Q: It's common for the facility laser parameters (energy, contrast, etc.) to fluctuate over time due to upgrades or (more commonly) maintenance woes, such that values reported in presentations and online are often "best case" scenarios that perhaps aren't representative of conditions when an experimenter might arrive. That's par for the course with these sorts of experiments, but as a consortium it seems like LaserNetUS would be in a good spot to have some central location where laser parameters could be reported and updated, perhaps with relevant data plots (I'm thinking in particular about contrast measurements here)--are you guys considering something along these lines?

A: We will continue to discuss the best ways to consistently and clearly represent the up-to-date laser performance at each facility. We are not yet at a point where we can enforce regular updates from each of the facilities, but will look for ways to move towards this ideal. In posting

their nominal performance numbers on the website, facilities were encouraged to represent numbers that they were comfortable achieving.

Q: If I have been planning an experiment at specific facilities does LaserNetUS negate them?

A: No. LaserNetUS sets aside designated time at each facility and has no control over what facilities do with the remainder of their time.

Q: On the application form there was something about international PIs - what is the current and future policy?

A: From the website, "*LaserNet US intends to be open to international users. However, during the first year of operation, LaserNet US applications will be restricted to PIs from US institutions. International collaborators are welcomed. Start date for acceptance of applications from international PIs will be announced in the future.*" There are no such restrictions on international collaborators not listed as PIs.

Q: Can one of the senior members from a laser facility participate as a collaborator on a LaserNetUS experiment?

A: Yes. Scientists from LaserNetUS home institutions are not excluded.

Q: What is the time frame of the review process ?

A: The decision process will be one month long with the announcements coming by May 2019. Scheduling will be coordinated between the awarded experimental team and the assigned facility.

Q: How can I learn more about the funding or structure of LaserNetUS?

A: Contact the FES program manager, kramer.akli@science.doe.gov.

Facility-Specific questions

Extreme Light Laboratory

From Donald Umstadter

No questions were asked specifically about the Extreme Light Laboratory.

Center For High Energy Density Science: Texas Petawatt Laser

From Todd Ditmire

Q: Any limitations on targets when using f/1 optic?

A: There will be; please discuss with facility contacts, as debris could be an issue. Send email to (mdonovan@physics.utexas.edu) to discuss this.

Q: Do you have a list of facility diagnostics for users?

A: Yes, it is posted at <http://texaspetawatt.ph.utexas.edu/diagnostics.php>

Berkeley Lab Laser Accelerator (BELLA) Center

From Cameron Geddes (on behalf of Thomas Schenkel)

Q: Will the multi-beam line for BELLA PW be ready in 2020 or 2021?

A: These will not be available for the current cycle: Multi-TW available in 2021, short focal length will be 2020

Q: Remind us of the pulse length and characteristics:

A: For BELLA PW it is 30 fs, the 100 TW beam is 40 fs long, contrast at 10^{-9} level at > 30 ps. See the tables at the bottom of:

<https://www.lasernetus.org/facility/berkeley-lab-laser-accelerator-bella-center>

Q: Please comment on how many proposals BELLA is offering?

A: This will depend on the complexity of experiments, likely ~2

Q: What are the constraints in the BELLA target chamber?

A: Difficult to answer, will need to work with users for exotic targets, target back reflection problems. Please contact t_schenkel@lbl.gov for more information.

Laboratory for Laser Energetics: OMEGA EP

From Mingsheng Wei

Q: Are these beam lines all to separate chambers or can they be combined in one experiment?

□

A: Yes, all four EP beams can be directed to the same 3.3m diameter OMEGA EP chamber for combined experiments.

Q: How will proposals be evaluated?

A: LaserNetUS PRP will evaluate proposals for scientific merit and impact. After the PRP review, the facility will review the PRP recommended proposals for system safety and feasibility. This is true for all nine facilities participating in this call.

Matter in Extreme Conditions (MEC) Laser Facility

From Gilliss Dyer

Q: Can both beams (long and short pulse) be used simultaneously? Has this previously been done on a beamtime at MEC?

A: This has never been done before, but it is possible. Please contact the team before submitting your proposal to discuss feasibility concerns.

Q: How many beamtimes are offered at MEC for this call?

A: This will depend on experiment complexity. We will be running about 6 weeks worth of beamtime for LaserNetUS, including setup.

Q: Will you prioritise beamtimes that link to possible (or previous) XFEL beamtimes i.e. preparing for LCLS-II coming online?

A: The PRP is independent of the LaserNetUS facilities and is charged to choose those experiments that make the best scientific case. Arguably, a strong scientific case could include a larger experimental campaign extending beyond LaserNetUS activities, including the use of LCLS or other XFEL HED facilities, if the proposed experiment fits well into this context.

Jupiter Laser Facility

From Felicie Albert (on behalf of Bob Cauble)

No specific questions were asked about JLF

Scarlet Laser Facility

From Douglas Schumacher

Q: What's the Scarlet beam diameter?

A: Before focus, it is close to 6"

Advanced Beam Laboratory

From Jorge Rocca

Q: What is the scintillation material of the neutron detectors?

A: Using EJ228.

Q: Cr 39 detectors can be processed in situ?

A: Yes. We have a Nikon Optical microscope with camera plus a semi-automated software to perform detection.

Center for Ultrafast Optical Sciences: HERCULES

From Karl Krushelnick

No specific questions posed to CUOS