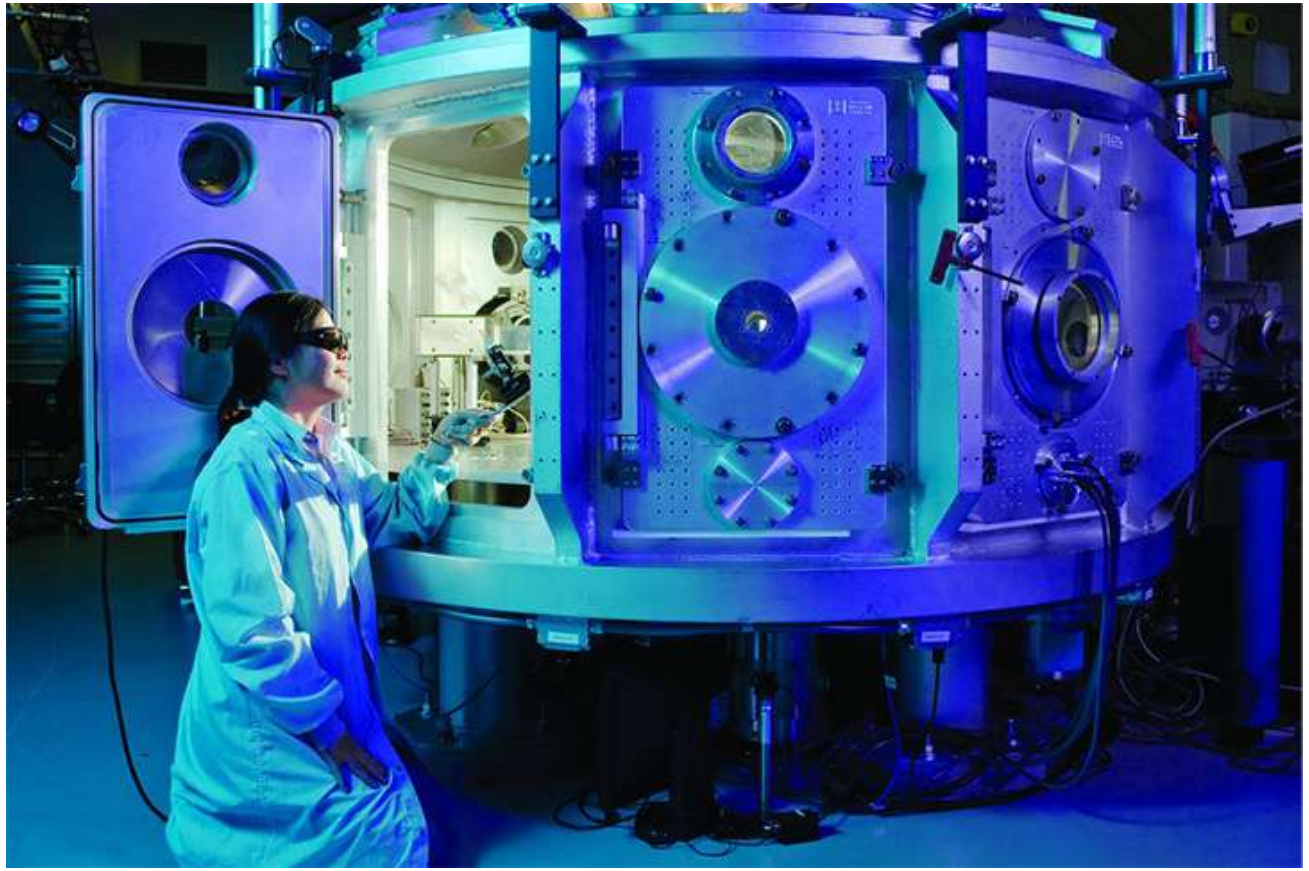
LaserNetUS

WELCOME

THE WEBINAR WILL BEGIN SHORTLY

U.S. DEPARTMENT OF ENERGY | Office of Science

AGENDA



Welcome (10:00-10:05)

Introduction to LaserNetUS (10:05-10:10)

Proposal Presentation (10:10-10:30)

Q&A with Panel (10:30-10:55)

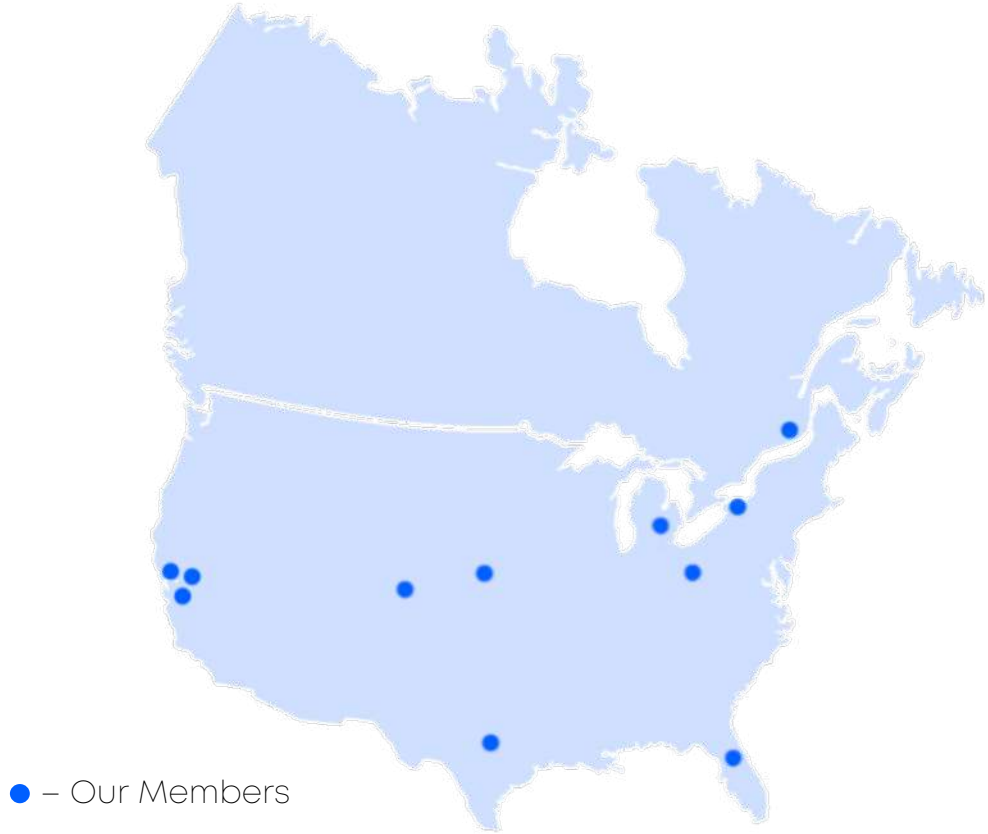
Closing remarks (10:55-11:00)

THE LASERNETUS NETWORK

The mission of LaserNetUS is to advance and promote intense ultrafast laser science and applications by:

- Advancing the frontiers of laser-science research;
- Providing students and scientists with broad access to unique facilities and enabling technologies;
- Fostering collaboration among researchers and networks from around the world.

Experimental time at participating laser facilities is awarded through a competitive proposal application process.



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PROPOSAL SUBMISSION GUIDELINES FOR CYCLE 4

LaserNetUS Proposal Submissions

Submission Schedule

Cycle	Type	Proposal deadline	Cycle begins	Cycle ends
1	LaserNetUS standard proposal call	Mar. 18, 2019 **4pm PST**	July 2019	Dec. 2019
2	LaserNetUS standard proposal call	Sept. 6, 2019 **4pm PST**	Jan. 2020	Dec. 2020
3	LaserNetUS standard proposal call	Dec. 11, 2020 **4pm PST**	June 2021	June 2022
4	LaserNetUS standard proposal call	Dec. 10, 2021 **4pm PST**	July 2022*	July 2023

*Earliest start date will depend on facility readiness and proposal feasibility.

Proposal Preparation Guidelines

LaserNetUS encourages scientists from all institutions and any field of research to propose experiments utilizing the consortium's wide-ranging laser capabilities. International Principal Investigators (PIs) and collaborations are welcome. We recommend that scientists describe well-posed experiments. Proposals must include brief discussions of the expected scientific or technological impact, the anticipated feasibility, and the probability of success. Proposals that include a clear description of the expected schedule, indicating the scope, have a better chance of being selected.

The Intense-light USers Engagement (I-USE) committee is hosting a one-hour Webinar on "How to Write a Successful LaserNetUS Proposal" on Oct. 25, 2021 from 10-11am PDT. Registration is required in advance. Dr. Arianna Gleason (Chair of the Proposal Review Panel) will present proposal best practices and evaluation criteria followed by a moderated Q&A session with a panel of previously successful applicants.

A Virtual Town Hall for Cycle 4 will be held on Nov. 17, 2021 from 8-10am PST to better inform the users about the capabilities offered by each of the laser facilities. Representative staff will inform the community about the latest capabilities through brief presentations followed by a moderated Q&A. A recording and slides from the previous meeting can be found on the Virtual Town Hall for Cycle 3 event page.

More information about each facility can be found on the LaserNetUS website.

Last revised: Oct. 20, 2021 pg. 1 of 5 LaserNetUS

LaserNetUS will have a call for proposals on approximately an annual basis.

The deadline to submit a proposal for Cycle 4 is Dec. 10, 2021 at 4pm PST.

For full details of the current call visit:
https://lasernetus.org/proposal

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FACILITIES PARTICIPATING IN CYCLE 4 CALL FOR PROPOSALS

Advanced Beam Laboratory (ABL)

Berkeley Lab Laser Accelerator (BELLA) Center)

Center for High Energy Density Science

Advanced Laser Light Source (ALLS)

Laboratory for Laser Energetics: OMEGA EP

Matter in Extreme Conditions (MEC) Instrument

Extreme Light Laboratory

Jupiter Laser Facility

Scarlet Laser Facility

Find information about the nine (9) laser laboratories participating in Cycle 4:

1) https://lasernetus.org/facilities

2) Virtual Town Hall for Cycle 4
   Nov. 17, 2021 from 8-10am PST
   See event page on our website for Zoom webinar details.

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INTENSE-LIGHT USERS ENGAGEMENT (i-USE) COMMITTEE

Ronnie Shepherd
Chair
LLNL

Amina Hussein
Co-Chair
UAlberta

i-USE is the User Group of LaserNetUS. The mission of i-USE is to grow the high-intensity laser community by:

- Supporting users on the LaserNetUS facilities;
- Advocating for member facilities and the user community;
- Providing an official channel of communication between users and LaserNetUS management;
- Fostering collaborations with the research community and industry; and
- Promoting training and education of students, post-docs and early-career scientist in laser-matter interactions;

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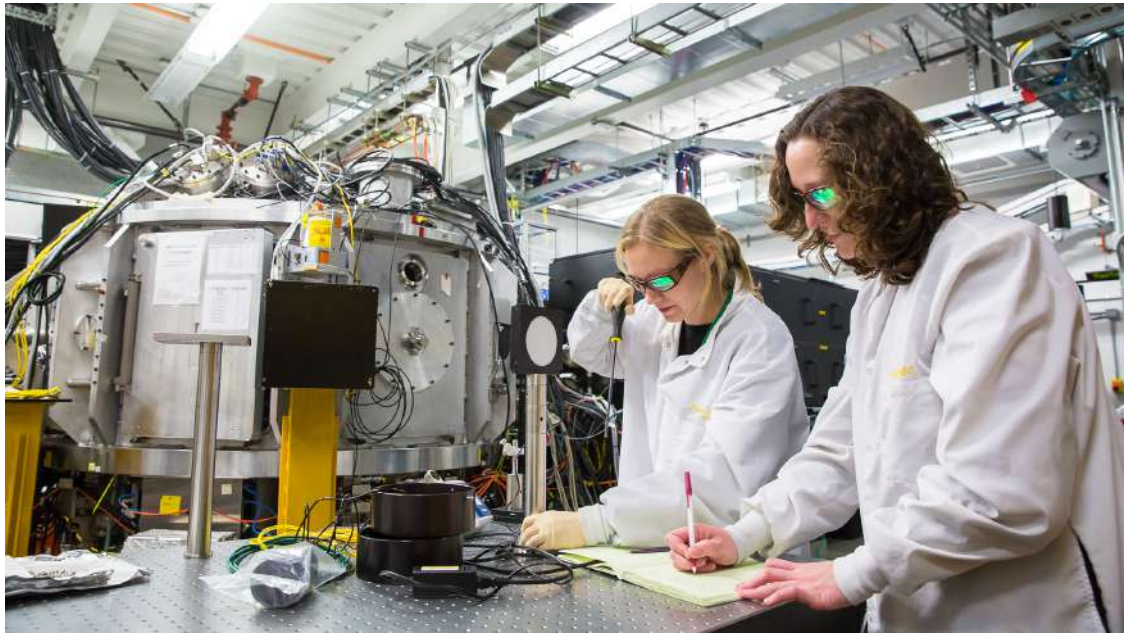
INTRODUCING DR. ARIANNA GLEASON



Her research applies ultrafast x-ray probes to study dynamic materials processes related to geoscience, planetary science, and fusion-energy research.

Arianna Gleason is..

- **a Staff Scientist** the Fundamental Physics Directorate at SLAC
- **an Adjunct Faculty** in the Geological Science Department at Stanford
- **the Chair** of the LaserNetUS Proposal Review Panel

‘How to Write a Successful LaserNetUS Proposal’

Best Practices & Evaluation Criteria

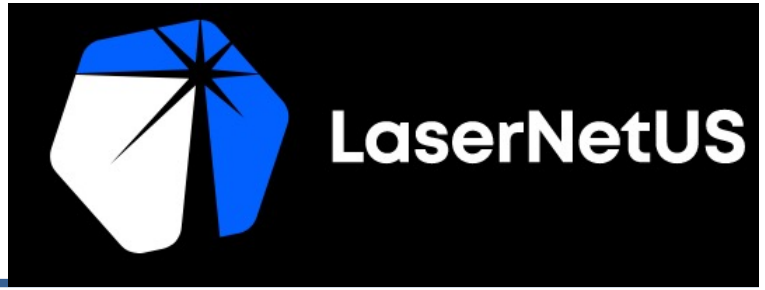
i-USE Webinar

Oct. 25, 2021

Dr. Arianna E. Gleason, SLAC/Stanford

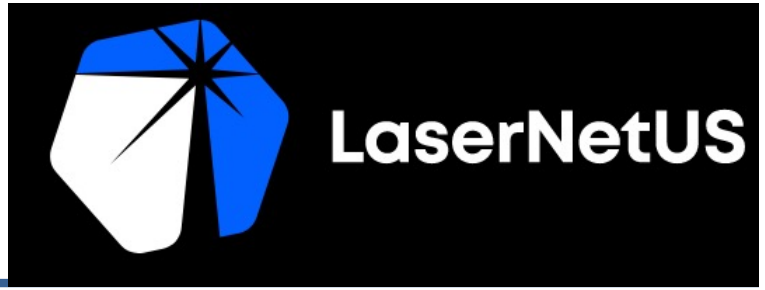
PRP Chair

Outline for Today



- Proposal review process
- Evaluation criteria
- Intro to proposal writing & best practices

The PRP is responsible for the evaluation of LaserNet proposals for scientific & technical merit

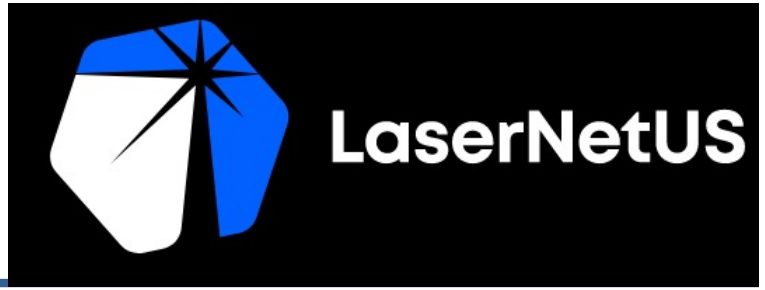


- The PRP was established as an independent and confidential committee to evaluate LaserNetUS proposals for recommendation for facility laser time across the 10 institutions
- Best practices were drawn from DOE, NSF, APS, NIF, LDRD and other PRP review processes
- Proposal submission and review has been done with assistance from SLAC

Chair: Arianna Gleason, SLAC/Stanford (Cycles 4, 5); Tammy Ma, LLNL (Cycles 1-3)
Proposal Administrator: Paul Jones, SLAC & LCLS Users' Office
Program Coordinator: Chandra Curry, SLAC
Additional administration: Gilliss Dyer, SLAC

* Slides courtesy T. Ma, LLNL *ex officio* PRP Chair & A. Gleason, SLAC/Stanford current Chair

The Review Process has 5 stages



1. **Pre-Review/COI stage**
   -PRP members will review a list of proposal titles, PI's, and institutions. COI's will be identified.

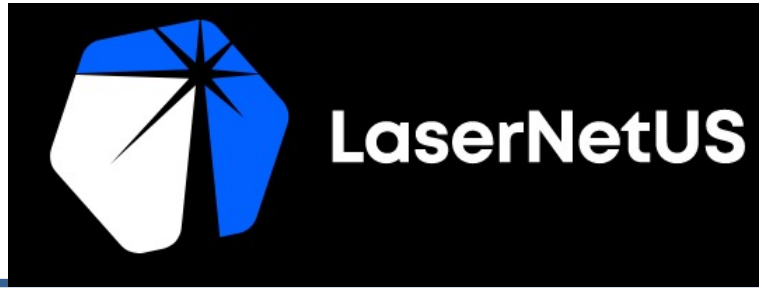
2. **Initial PRP Review Stage**
   -Each proposal is assigned 3 reviewers; primary and secondary assignments

3. **Final PRP Review Stage**
   -Full group discussion and numerical score to rank each proposal
   -Recategorized by facility
   -Consensus will be reached by the entire PRP and comments collated for PI feedback

4. **Facility Feasibility**
   -The top ranked proposals for each facility will be sent to the Facility Directors for evaluation of technical feasibility.

5. **Final Decisions**
   -PRP review and Facility Feasibility are integrated to develop a Final list of awards

Review Criteria: Intellectual Merit & Broader Impact



Merit is most important!

Originality, Uniqueness, and Scientific Merit

To what extent does the proposal articulate a fundamental intellectual advance or a fundamentally new approach to expanding knowledge, understanding, or a new capability?

Qualifications of the PI and Team

How well-qualified are the PI and team?

Organization and Conception

In the proposal, how well-organized and presented is the idea? Is the technical approach feasible?

Resource Scope

Is a LaserNetUS laser system required for this experiment? To what extent does the proposed work fit within the limits of an experimental slot?

Impact is important too!

Infrastructure Enhancement

To what extent will the project enhance the scientific, technical or engineering infrastructure of LaserNet ?

Impact on the HED Scientific Community & Society

How broadly will the project impact the scientific and technical HED and high-intensity laser community in the US, and translate to a broad impact on society? Bring new users?

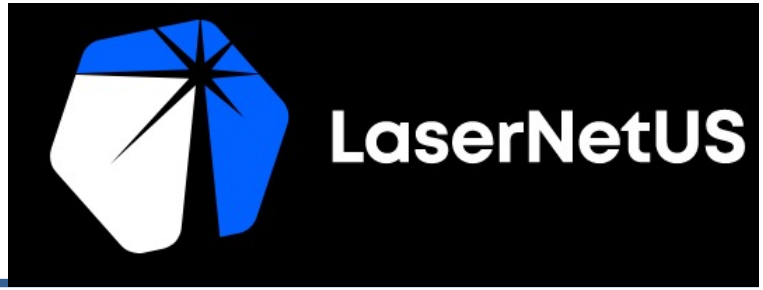
Dissemination of Results

How broad of an audience will the project results be shared with and will the results be interesting enough to garner significant attention?

Impact on Workforce

To what extent will the project attract new talent, develop existing staff, provide mentorship?

Review Criteria: Intellectual Merit & Broader Impact



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- Clearly shows and justifies the need to investigate a research
- presents a set of workable strategies for conducting the proposed research

!! Hypothesis-driven proposal narrative

!! Key-questions

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!! Hypothesis-driven proposal narrative

!! Key-questions

- To address the research scope, which laser system(S) and why?

-explicit
-deliberate

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Is a LaserNetUS laser system required for this experiment? To what extent does the proposed work fit within the limits of an experimental slot?

- Who is on the team and what unique skill set(s) to they bring?
- Portfolio of experimentalists and theorist is encouraged
- Previous experience?
- Engagement of Students and Early Career folks encouraged (connection to Broader Impact assessment)

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- Narrative arc
- Setup up the research need/knowledge gap by providing a 1-2 sentence synopsis research-to-date → background and significance
- Methodology

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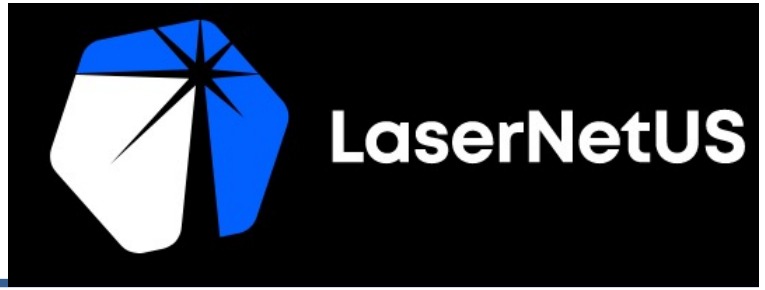
Resource Scope

Is a LaserNetUS laser system required for this experiment? To what extent does the proposed work fit within the limits of an experimental slot?

- New to laser platforms/methods/diagnostics?
  - Let us help you!
  - Reach out to I-USE Committee to ask for resources and guidance

Review Criteria: Intellectual Merit & Broader Impact



- Shared knowledge, shared capabilities?
  - Foundational knowledge
  - Fill a knowledge gap
  - Diagnostic development
  - Technique advancement – incremental and needed to frontier

Impact is important too!

Infrastructure Enhancement

To what extent will the project enhance the scientific, technical or engineering infrastructure of LaserNet ?

Impact on the HED Scientific Community & Society

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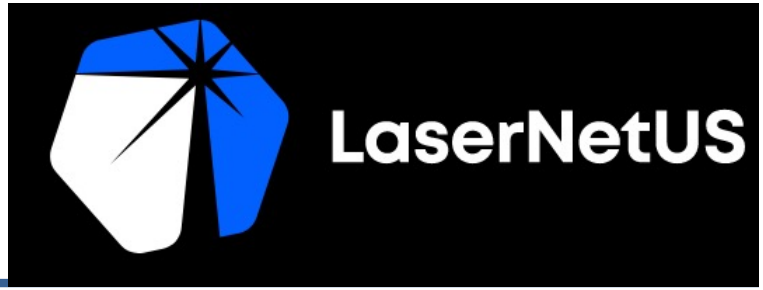

- Who benefits? What is the benefit?
- Are you a new user to laser platforms/experiments?
- Novelty of application

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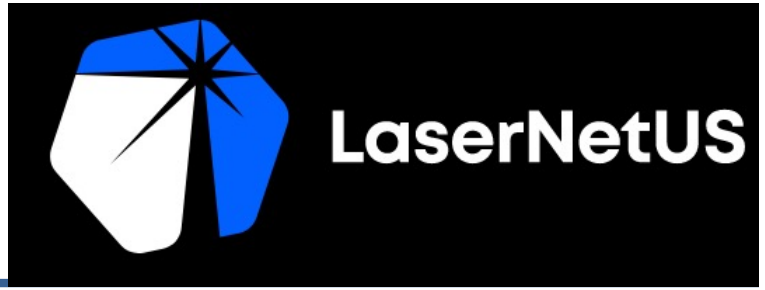

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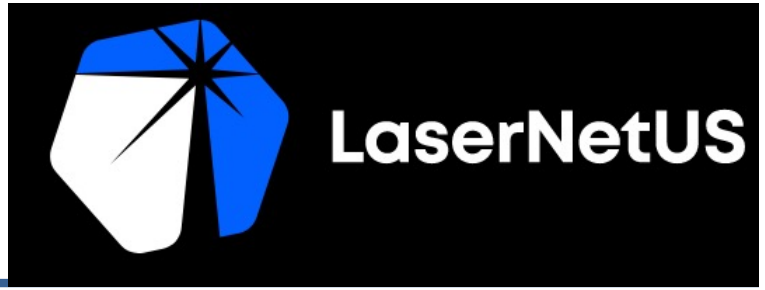
To what extent will the project attract new talent, develop existing staff, provide mentorship?

- Outreach of results?
  - Paper for publication?
  - More beamtime?
  - Conferences?
  - Student Thesis?
  - Patent?
  - Shared Diagnostic?

Review Criteria: Intellectual Merit & Broader Impact



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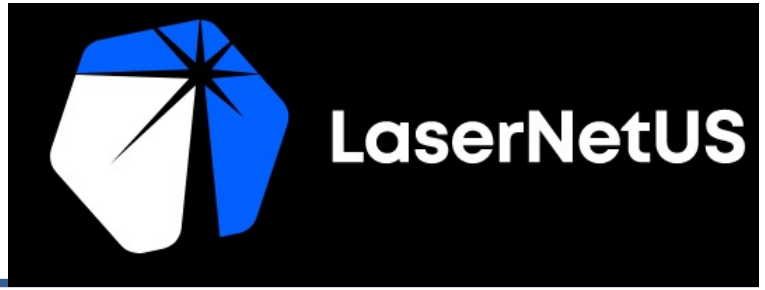
- Growth of the community and field
- Cross-collaboration with new fields?
- Student/early career engagement is so important

Other tips



- Stick to the page limit!
- Try not to be too repetitive, be concise!
- multiple similar proposals from the same team members may not be reviewed favorably

What to expect after proposal submission?

Response letters with feedback are composed for every submitted proposal to LaserNetUS -awarded or declined

LaserNetUS

Call for Proposals

LaserNetUS
Due December 10th, 2021

The mission of LaserNetUS is to advance and promote intense ultrafast laser science and applications by:

- Advancing the frontiers of laser-science research
- Providing students and scientists with broad access to unique facilities and enabling technologies
- Fostering collaboration among researchers and networks from around the world.

Proposals for access to the LaserNetUS facilities will be accepted via a web-based proposal system until **4:00 p.m. PST Friday, December 10th, 2021.**

This call is for LaserNetUS Cycle 4 experiments to be fielded between July 2022 and July 2023. Scheduling of the approved experiments will be subject to experiment feasibility, availability of each facility, and the evolution of the COVID-19 pandemic.

For full details of the call, please look at the attached PDF document and visit:
https://www.lasernetus.org/proposal-submissions

Reach out: ariannag@Stanford.edu

LaserNetUS

Q&A with Previously Successful Applicants

U.S. DEPARTMENT OF ENERGY | Office of Science

OUR PANEL

Prof. Peter Norreys
University of Oxford
PI Cycle 2

Dr. Brian Kraus
PPPL
PI Cycle 3

Dr. Nicholas Hartley
SLAC
PI Cycle 2

Dr. Sophia Malko
PPPL
PI Cycle 3

Prof. Louise Willingale
University of Michigan
PI Cycle 2

Moderated by:

- **Prof. Thomas White**
  University of Nevada-Reno
- **Prof. Scott Feister**
  California State University
  Channel Islands

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THANK-YOU FOR ATTENDING

- To learn about the proposal guidelines visit: https://lasernetus.org/proposal

- The deadline to submit is Dec. 10, 2021 at 4pm PST.

- If you still have questions, visit our website and complete the "Contact Us" form.

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