

Call for proposals for the SACLA Basic Development Program

December 19, 2019

XFEL Research and Development Division

RIKEN SPring-8 Center

1. Introduction

After inaugurating a soft X-ray FEL beamline (BL1) in July 2016 and commencing simultaneous operation of two hard X-ray FEL beamlines (BL2 and BL3) in October 2017, SACLA has been able to substantially increase beamtime for users in excess of 6,000 hours per year. As use of the existing instruments and techniques has increased, users are increasingly demanding new XFEL capabilities to explore scientific frontiers.

The SACLA Basic Development Program invites proposals from a wide variety of users for the development of new instruments to promote innovative science leveraging SACLA's unique capabilities.

2. Outline

With this Program, the XFEL Research and Development Division (XFEL Division) of RIKEN SPring-8 Center (RSC) encourages users to submit proposals for the development of new instruments. Proposals are classified into two categories:

- [Category A] New proposals
- [Category B] Continued proposals

The XFEL Division expects to approve several proposals. For proposals that are fully approved (see "Accept I" in Section 3-2), the XFEL Division will develop detailed plans considering budget and feasibility, and then proceed with development while maintaining close collaboration with the proposal group. Furthermore, the proposal group and the XFEL Division will work jointly on the commissioning of the instruments with XFEL at SACLA. Finally, the instruments will be widely available for general user experiments. JASRI may provide support for the development.

For partially approved proposals ("Accept II"), the proposal group and the XFEL Division will conduct a feasibility study and compile a report. JASRI may also provide support for the investigation.

Anyone can apply to the program. Please refer to Section 4 for additional details about the program.

3. Evaluation

3-1. Method

The Evaluation Committee for the SACLA Basic Development Program, which consists of RSC members and external experts, will evaluate proposals based on reviews of the documentation provided.

3-2. Results

There are two categories for acceptance:

- [Accept I] Full approval to proceed with development of the instruments
- [Accept II] Partial approval – feasibility studies are required

If we receive similar proposals from different groups, we may merge them into a single theme.

3-3. Evaluation criteria

[Category A]

- Uniqueness of capabilities to be achieved with the proposal
- Originality and superiority over existing schemes
- Potential to contribute significantly to scientific research
- Convincing explanation of feasibility
- Applicability to general users (instruments that would be permanently dedicated to only the proposal group will not be approved)

[Category B]

- Validity and necessity to continue with the proposal

4. Program details

4-1. Budget

RIKEN will bear all costs of development – there is no allocation of budget to the institutions to which the proposal groups belong. Instruments developed in this program will be managed by RIKEN as RIKEN's assets.

The estimated budget for each proposal should not exceed US\$200,000. Please provide a cost estimation in the application document for reference. In the event your estimation exceeds that limit, please submit an inquiry to saclainst@spring8.or.jp.

4-2. Term

April 2020 (plan) to March 31, 2021(i.e., the end of FY2020)

*We plan to continue this program into FY2021 (i.e., April 2020 to March 2021), contingent on budget availability.

4-3. Form

After proposals have been approved, all members of the proposal group shall become visiting scientists of the Beamline Research and Development Group, XFEL Division, RSC, and conduct this program as RIKEN visiting scientists. Prior to conducting the proposal, the PI and participants of the proposal group shall secure consensus from their affiliated institution regarding working as RIKEN visiting scientists.

4-4. Disclosure

For approved proposals, information including titles and proposal groups will be announced on the SACLA website. Progress to-date may be reported by each PI during the SACLA Users' Meeting 2020 (planned for September). Results achieved in this program will also be posted.

5. Application

5-1. Format

- (1) Please submit questions to saclainst@spring8.or.jp regarding the format of the application.
- (2) There is no limit on the number of pages in the proposal, though concise and clear explanations are highly recommended.

5-2. Submission

- (1) Please submit the proposal to saclainst@spring8.or.jp in PDF format.
- (2) The application document must be submitted by the PI.
- (3) Prior to submission, the PI must secure approvals regarding the application with the institutions of all proposal members.
- (4) We will treat proposal documents as confidential material.

5-3. Deadline

Friday, February 14, 2020

6. Schedule (tentative)

- December 25 (Wed), 2019: Open the application process
- February 14 (Fri) , 2020: Close the application process
After evaluation, we will submit results to the PIs. For accepted proposals, we will provide details regarding RIKEN's visiting scientists and the start of the program.
- April 2020: Start of the program
- September 2020: SACLA Users' Meeting at SACLA
(Each PI may report progress for their proposal)

7. Contact

Submission of proposals and inquiries about the program should be addressed to:

E-mail: saclainst@spring8.or.jp

Beamline Research and Development Group, XFEL Research and Development Division, RIKEN SPring-8 Center