



U.S. DEPARTMENT OF
ENERGY

Office of
Science

The US-Japan High Energy Physics Program

1st US-Japan Hawaii Mini-Symposium
on High Energy Physics
April 21, 2021

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*Office of High Energy Physics
Office of Science, U.S. Department of Energy*

The US-Japan HEP Program

- **The US-Japan HEP Program was started in 1979 under the S&T Agreement between the Government of Japan and the Government of the United States of America, aiming to promote joint research and development in High Energy Physics.**
- **Since its inception in 1979, Japan has provided support on the order of several \$M annually for collaborations between Japanese and US investigators in HEP.**
- **At the 38th (2016) US-Japan JCM, DOE proposed to contribute financially to the support of US-Japan cooperative activities.**
 - Such funding would make the US and Japan more balanced partners within the Program
 - Additional support for US HEP investigators would strengthen continuing and new cooperative activities between US and Japan.
- **Starting in FY17, \$2M was allocated by DOE/HEP annually to support the Program.**



The Joint Proposal Process

- **“Joint” proposal call started in FY 2017 with both a Funding Opportunity Announcement (FOA) and a DOE National Laboratory Announcement (NLA), but since FY 2018, the program call has only been via an NLA**
- **Program Title: US-JAPAN SCIENCE AND TECHNOLOGY COOPERATION PROGRAM IN HIGH ENERGY PHYSICS**
- **Announcement Issue Date: 10/15/2020**
- **Proposal Submission Deadline: 12/15/2020 5 PM (ET)**
- **University investigators: can participate via a subaward in a lab proposal**



Terms of Solicitation

➤ **Program Objective:**

- ▶ To support U.S. and Japanese investigators in bilateral cooperative research activities as part of the US-Japan Science and Technology Cooperation Program in High Energy Physics.

➤ **Research activities supported:**

- ▶ High energy physics experiments
- ▶ Development of accelerator technology
- ▶ Development of detectors for high energy physics experiments
- ▶ Workshops, conferences and/or travel support to incubate and develop new accelerator, detector and experiment concepts.

➤ **Limitations of support:**

- ▶ ILC cost-reduction R&D is excluded (activities supported with separate funds.)
- ▶ Must involve significant collaboration between U.S. and Japanese investigators.
- ▶ Support will be provided for cooperative R&D activities only.
- ▶ No scientific staff support (except travel).
- ▶ Theoretical research is not supported.

➤ **New for FY 2021:**

- ▶ Multi-year (up to 3 years) proposals



Proposal Statistics

► US-Japan Proposal Data:

FY	Proposal	Reviewed	Funded	US Request (M\$)	US Award (M\$)	Japan Award (M¥) ²
2017 ¹	42	41	17	7.8	1.8	309.3
2018	33	32	19	6.2	2.2	296.0
2019	24	24	20	5.2	1.6	290.1
2020	30	30	23	5.5	1.9	293.7
2021	23	23	-	10.6	-	-

Notes:

1. Several proposals were multi-institution collaborative proposals → total number of individual proposals was 63.
2. Includes M&S and travel; also includes several Japanese-only proposals

Ozaki Exchange Program

➤ **Launched in December 2018**

- ▶ To commemorate Dr. Satoshi Ozaki (1929-2017) for his many decades of contribution to the US-Japan Program
- ▶ To encourage and support the exchange of graduate students between Japan and the United States.
- ▶ To strengthen US-Japan scientific collaboration and in particular to facilitate greater cooperation in the areas of accelerator and particle physics in projects of mutual benefit to Japan and the United States

➤ **Eligibility:**

- ▶ Graduate students enrolled in accredited Japanese or U.S. physics Ph.D. programs are eligible to submit a proposal.

➤ **More information:**

- ▶ U.S. website: <https://www.bnl.gov/ozaki/>
- ▶ Japanese website: https://www2.kek.jp/kokusai/us_japan/ozaki_exchange_program/



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BROOKHAVEN
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U.S. DEPARTMENT OF
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Ozaki Exchange Program

Encouraging and funding the exchange of graduate students between Japan and the United States to strengthen U.S.-Japan scientific collaboration and facilitate cooperation in accelerator and particle physics.

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Mission

The goals of this program are to strengthen U.S.-Japan scientific collaboration and in particular facilitate greater cooperation in the areas of accelerator and particle physics in projects of mutual benefit to Japan and the United States. The program will encourage and fund the exchange of graduate students between Japan and the United States. This program has been established in honor of the late Dr. Satoshi Ozaki.

Eligibility and Terms

All graduate students enrolled—or undergraduate students already accepted for enrollment—in accredited Japanese or U.S. physics Ph.D. programs are eligible to submit a proposal. It is expected that most U.S. students applying will be in their second or third year of studies, but there is no hard requirement beyond being enrolled. The award start date will be within six months of the award date and is expected to start during the month of June. The duration of the award is for a three- to twelve-month period. One-time renewal proposals will be considered for a maximum fellowship of 24 months. A report on achievement shall be submitted to the program's point of contact (see below) within one month after the date of return.

Award and Funding

Each year, up to five proposals will be selected and recommended for funding in Japan and up to five will be selected and recommended for funding in the United States. The award will provide for travel, housing, and cost-of-living expenses for the stay overseas. Any needed tuition will be the responsibility of the student and their home institution. The host laboratory will arrange for accommodations for the duration of the funded proposal.

About Satoshi Ozaki

Satoshi Ozaki was a world-renowned physicist who helped design and build accelerators for scientific research across two continents.

After earning a master's degree in physics from Osaka University, Japan, and a Ph.D. in physics from the Massachusetts Institute of Technology, Ozaki came to Brookhaven in 1959 and spent the next two decades designing state-of-the-art electronic particle detectors and data acquisition systems for experiments at the Alternating Gradient Synchrotron (AGS). In 1981, he was invited to join KEK, Japan's National Laboratory for High Energy Physics, to direct the construction of TRISTAN, the first major high-energy particle collider in that country.

In 1989, Ozaki returned to Brookhaven Lab to head the Relativistic Heavy Ion Collider (RHIC) project, serving as project director throughout the facility's design and construction and leading the crucial industrial magnet procurement and technology transfer program. Ozaki was also instrumental to the success of Brookhaven's National Synchrotron Light Source II (NSLS-II) project, which he joined in 2005. As head of the NSLS-II Accelerator Division, he built up the group, attracting staff and leading development for the accelerator portion of the facility's conceptual design.

Summary

- **The US-Japan Program has been a very successful bilateral cooperative research program for over 40 years.**
- **Proposal calls are issued simultaneously in Japan and U.S. every October, with proposals due in December.**
- **Multi-year proposals are now allowed, starting in FY 2021.**
- **A Joint Review Panel (consisting of U.S. and Japanese members) makes award recommendations to the US-Japan Joint Committee on High Energy Physics, which reviewed and approved them at its annual meeting.**
- **The Ozaki Exchange Program was initiated in 2018, and is supporting graduate students doing research in U.S. and Japanese institutions.**

