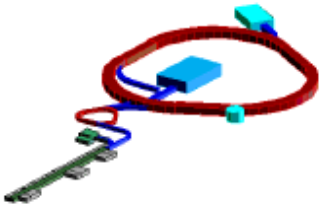

Project Office for High Intensity Proton Accelerators
at KEK and JAERI

KEK Office: 1-1 Oho, Tsukuba-shi, 305-0801, Japan
JAERI Office: Tokai-mura, 319-1195, Japan

E-mail: shoji.nagamiya@kek.jp
Tel: 81-298-64-5678, Fax: 81-298-64-5258

September 20, 2002

Dear Friends:

From April 1, 2001, a new accelerator project has been started in Japan at which high intensity proton beams of a MW class are available at both 3 GeV PS and 50 GeV PS. The first beams are expected in early 2007.

On behalf of the team of the JAERI-KEK Joint Project, I would like to enclose

Call for Letters of Intent (LoI's) on
Neutron Instruments at the Spallation Neutron Source

Because we must start to fix various parameters for the project, I would like to ask you to pay a special attention to this call for LOI's. For neutron beams, the final form of the experimental area allows up to 23 neutron beam lines, whereas only a few will be prepared within the approved Phase 1 budget. We will make efforts continuously to obtain additional budget to approach the final form.

Nevertheless, the first LOI's are very important to advance into the first decision of the instrumentation. The Project Team plans to call for LOI's every year. If you are not ready to prepare LOI this time, the next chance will be one year from now.

I warmly invite you to consider possible participation in the forthcoming facility in Japan.

Sincerely yours,

Shoji Nagamiya
Project Director

Call for Letters of Intent

on

Neutron Instruments at the Spallation Neutron Source

of

JAERI-KEK Joint Project on High Intensity Proton Accelerators

The JAERI-KEK Joint Project on High Intensity Proton Accelerators received its construction fund starting on April 1, 2001. It is expected that this project be completed in JFY2006, providing with the first beams in April 2007. One of major research facilities of the project is an intense pulsed spallation neutron source for neutron scattering research, fundamental physics with neutrons, and so on. To promote these sciences the instrumentation is the key issue. We would like to call for letters of intent at this time for the instrumentation from all over the world.

Scope of the Project

The approved portion of the accelerators in this facility consists of a 3 GeV proton synchrotron injected from a linac and a 50 GeV proton synchrotron with MW-class beam power at both 3 GeV and 50 GeV. The 3GeV beam will be extracted to the Materials and Life Science Experimental Facility for the use of a spallation neutron source and a muon source. The spallltion neutron source will produce pulsed neutrons with 25Hz, and these pulsed neutrons are the major focus in the present call for LOI's. The 50 GeV beam will be used for nuclear and particle physics experiments.

Selection Process

Each LOI will be reviewed first by a peer review group and, then, it will be discussed at the Neutron Instruments Planning Committee. Based on the results of discussions, recommendations for the selected LOI's will be made to the Project Director. Selection criteria include scientific merits, capability of the proposed group, etc. During the coming few years the call of LOI's will be made once a year.

General Policy for Instrumentation

We would like to call for LOI's with the following policy.

1) In principle, the proposed instrument must be constructed and maintained by the proposed group.

2) The proposed instrument will be used for the duration of α years.

3) The group that proposed its instrument has the right of using a fraction of β% beam time for their own scientific program, whereas the remaining (100-β)% beam time must be open for a general usage. For the portion of the latter usage, a separate PAC will select the proposals.

4) Values of α and β will be discussed and assigned by the Neutron Instruments Planning Committee.

5) The beamtime charge is in the process of negotiation with the government.

Needed Information in LOI

Each LOIs must contain, at a minimum, the items listed below. The length of LOI need not be long (an approximate guideline is that the entire length is 10 pages or less).

1) Name of the proposal
2) Spokesperson(s) and/or Contact Person(s) (name, title, affiliation, address, telephone number, fax number, and e-mail address).
3) Short explanation of the proposed instrument. In this description, identify the type of the moderator to be used (a cold moderator, a decoupled poisoned cold moderator or a decoupled cold moderator).
4) Description of anticipated research program elements using the proposed instrument, with emphasis on the unique uses of the spallation source.
5) Desired values of α and β.
6) Possibility of funding for instrument construction, together with an expected manpower.
7) Other useful information, such as commitments to other proposals, etc.

Other Information

1) Deadline: December 6, 2002.
2) LOI must be sent to:

   Professor S. Nagamiya
   Director, Project Office of High Intensity Proton Accelerators
   KEK, 1-1 Oho

Tsukuba-shi, 305-0801, Japan

3) Consultation on the information on LOI:

Dr. Y. Oyama (oyama@cens.tokai.jaeri.go.jp)

and Professor S. Ikeda (susumu.ikeda@kek.jp)

Neutron Science Group for the Joint Project

4) Process after receiving LOI's:

Based on the recommendations by the Neutron Instruments Planning Committee, the Director will inform the results to the individual groups. The selected groups are going to be invited to submit full proposals. Guidelines for the full proposal will be described separately.

Neutron Instruments Planning Committee

Chair:	Yasuhiko Fujii (Univ. Tokyo)
Co-Chair:	Kazuyoshi Yamada (Kyoto Univ.)
Secretary:	Susumu Ikeda (KEK)
Secretary:	Yukio Oyama (JAERI)
	Masatoshi Arai (KEK)
	Yujiro Ikeda (JAERI)
	Yasuo Endoh (Tohoku Univ.)
	Yuji Ohashi (Tokyo Inst. Tech.)
	Toshiharu Kanaya (Kyoto Univ.)
	Masayoshi Kawai (KEK)
	Kenji Suzuki (Emeritus Professor of Tohoku Univ.)
	Masaru Tanokura (Univ. Tokyo)
	Yasuki Nagai (Osaka Univ.)
	Nobuo Niimura (JAERI)
	Michihiro Furusaka (KEK)
	Yukio Morii (JAERI)

Proposal list applied in 2002

1. Neutron-Nucleus Reaction Measurement Facilities
Representative: Masayuki IGASHIRA (Tokyo Inst. Tech.)

2. Polarized Pulsed Neutron Beamline
Representative: Yasuhiro Masuda (KEK)

3. Light Nuclei Systems Diffractometer
Representative: Kenatro Suzuya (JAERI)

4. High Pressure and High Temperature Material Science Station
Representative: Hiroyuki Kagi (Univ. Tokyo)

5. Single Crystal Diffractometer for Material Science
Representative: Ken-ichi Ohshima (Univ. of Tsukuba)

6. Pulsed Neutron Radiography Facility
Representative: Masahito Matsubayashi (JAERI)

7. Neutron Spin Echo Spectrometer
Representative: Seiji TASAKI (Kyoto Univ.), Hideki SETO(Kyoto Univ.)

8. Very Cold Neutron Optics
Representative: Masahiro Hino (Kyoto Univ.)

9. Medium Resolution Powder Diffractometer
Representative: Tooru Ishigaki (Muroran Tech. Inst.)

10. High Resolution Powder Diffractometer
Representative: Yakashi Kamiyama (KEK)

11. Residual Stress Analysis Diffractometer
Representative: Atusho Moriai (JAERI)

12. Amorphous Structure Diffractometer

Representative: Toshiya Otomo (KEK)

13. Small Angle Diffractometer
Representative: Kazuya Aizawa (JAERI)

14. Horizontal Type Neutron Reflectometer
Representative: Naoya Torikai (KEK)

15. Bio-molecule Crystal Diffractometer
Representative: Ichiro Tanaka (JAERI)

16. Low Energy Chopper Spectrometer
Representative: Kenji Nakajima (JAERI)

17. High Resolution Chopper Spectrometer
Representative: Shin-ichi Ito (KEK)

18. Bio-molecule Inelastic Spectrometer
Representative: Kaoru Shibata (JAERI)

Review Working Group

Group		Title number
A:	Fundamental Physics	1, 2, 6, 8
B-1:	Structure and Material Science	4, 5, 9, 10
B-2:	Condensed Matter Physics (Inelastic)	7, 16, 17, 18
B-3:	Physics of Fluid and Amorphous Materials	3, 12, 13, 14
C:	Bio-material	13, 14, 15, 18