

# How to use the neutron beamlines

CROSS  
TOKAI



Research Center for Neutron Science and Technology



## STEP 1 - Consult with staff

Make contact with a member of staff before you submit a proposal to get information about the beamlines or assistance with planning your experiment.  
The contact points are:

### USERS

**For JAEA / KEK beamlines**  
J-PARC Center Users' Office

E : j\_proposal@ml.j-parc.jp  
T : +81-29-284-3398  
F : +81-29-284-3286

**For public beamlines**  
**CROSS-Tokai Science Coordinators**

E : user\_question@cross.or.jp  
T : +81-29-219-5300  
F : +81-29-219-5311

**For Ibaraki Prefecture beamlines**  
Ibaraki Quantum Beam Research Center

E : info-neutron@pref.ibaraki.lg.jp  
T : +81-29-352-3301



## STEP 2 - Submit your proposal

All the neutron beamlines are available via an open and transparent proposal submission and evaluation process. A variety of access modes are available according to the needs of the applicant.

Access mode	Proposal Type	Submission rounds per year	Proprietary or Non-proprietary	Valid period	Notes
General	Regular	Two	Both	1 cycle	
	Program			3 years	
	Urgent	at anytime TBD		1 cycle	
	Rapid			1 cycle	
Trial use *1	Regular	Two *2	Non-Proprietary	1 cycle	Open to all users
Project	Regular	One	Non-Proprietary	1 year	For staff of J-PARC Center (JAEA or KEK)
Instrument group	Regular	One	Non-Proprietary	1 year	For instrument scientists use

\*1 This access mode will be available from 2012B

\*2 Submission dates for "Trial use" proposals will be separate from those for the other access modes.

**OPEN NOW**

### Call for proposal 2012A

- Deadline for Proposal Submission : **17:00(JST) 7th.Dec.2011**

- Online Proposal System:

<https://gamusha1.j-parc.jp/j-pas/auth/menu.jsp>

<http://www.j-parc.jp>

## STEP 3- Complete admin procedures

Once your proposal has been approved and beamtime allocated, you can complete the administrative requirements online. Start at the J-PARC Center Users Office homepage.

J-PARC center Users Office : [http://is.j-parc.jp/uo/index\\_e.html](http://is.j-parc.jp/uo/index_e.html)



## STEP 4- Carry out your experiment

The MLF offers a suite of unique, high-performance instruments and a range of ancillary equipment to meet the challenging demands of leading-edge experiments. Dedicated specialized software is similarly on hand to analyze and interpret experiment results.

Moreover, you will be supported by expert beamline staff throughout your experiment.

### User Support at the Beamline

- + Instrument setup
- + Preparation of ancillary equipment and accessories
- + Sample handling (mounting, alignment, exchange and storage)
- + Operation of the instrument and user training
- + Monitoring of experimental conditions and data collection
- + Data reduction and analysis

# About CROSS-Tokai



Research Center for Neutron Science and Technology

## Legislation for the “Promotion of Public Utilization of Specific Advanced Large-Scale Research Facilities”

- ☞ Designates “Specific Advanced Large-Scale Research Facilities” – Currently three major facilities
- ☞ Designates a “Registered Institution for Facilities Use Promotion” independent of the owner
- ☞ Secures their reliable and stable operation irrespective of the financial status of the facility owners



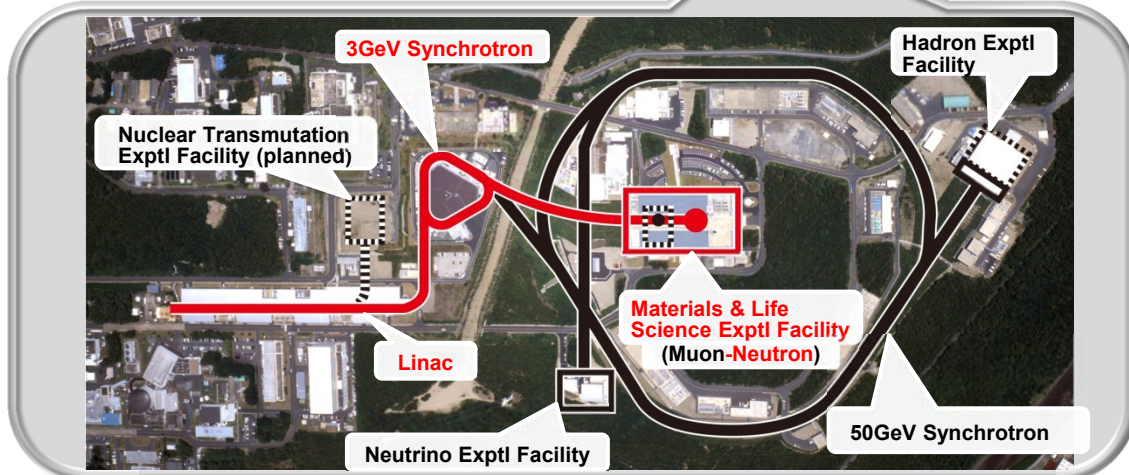
Spring-8 / SACLA



J-PARC / MLF



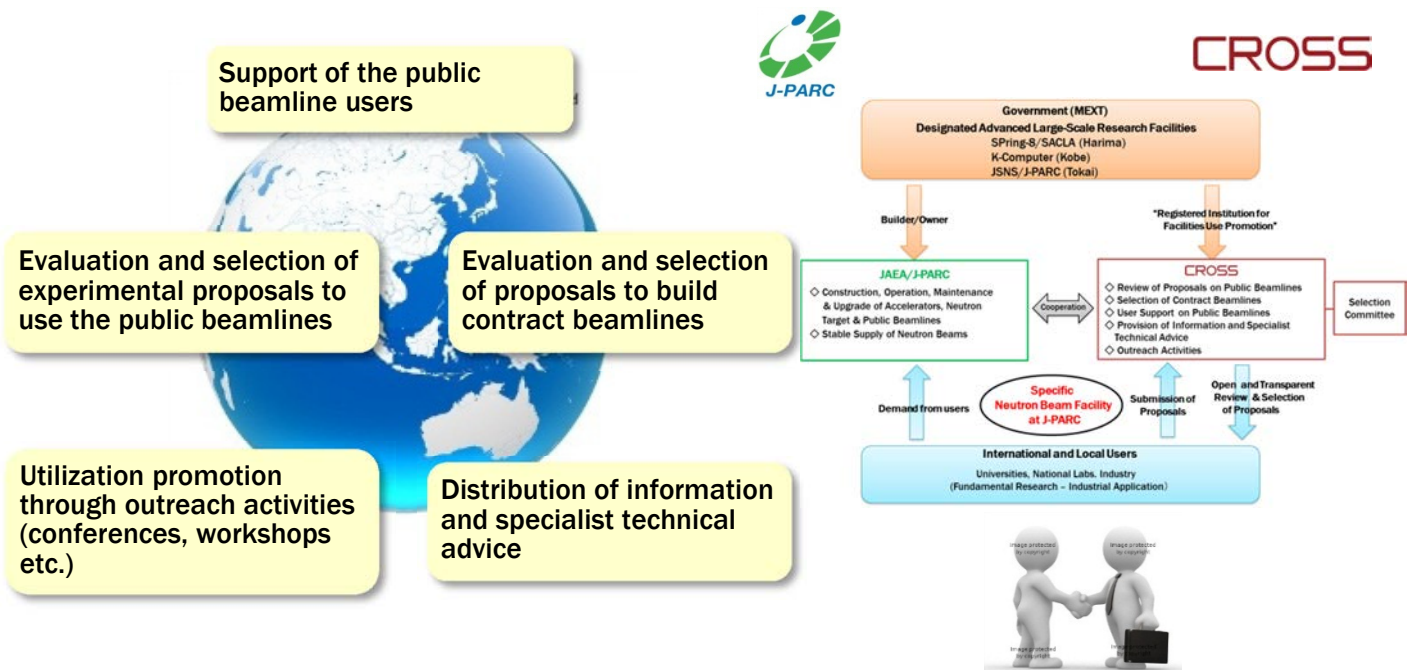
K-Computer(京)



## Specific Neutron Beam Facility at J-PARC

Owner : **JAEA**

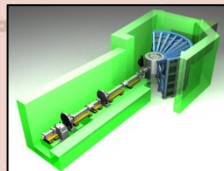
Registered Institution : **CROSS-Tokai** with the mission of “Usage Promotion Services”





## BL01 4SEASONS 四季

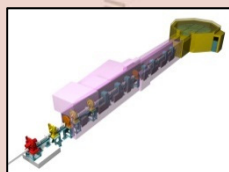
4D Space Access Neutron Spectrometer  
4次元空間中性子探査装置



Measurement of spin and lattice dynamics in condensed matter over a wide range of 4D momentum-energy space

## BL02 DNA

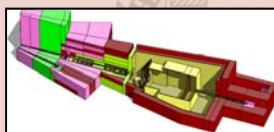
Biomolecular Dynamics Spectrometer  
ダイナミクス解析装置



Measurement of atomic and spin dynamics (magnetic materials) in biological macromolecules, soft matter and functional biomaterials

## BL15 TAIKAN 大観

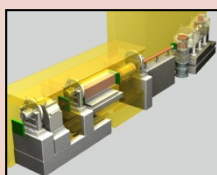
Smaller-Angle Neutron Scattering Instrument  
大強度型中性子小中角散乱装置



Structure analysis on the nano and micro scale of metals, magnetic materials, soft matter, proteins and their complexes

## BL17 SHARAKU 写楽

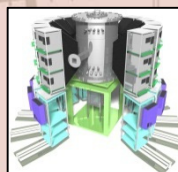
Polarized Neutron Reflectometer with Vertical Sample  
試料垂直型偏極中性子反射率計



Structural analysis of functional thin film materials, biological thin films and buried interfaces

## BL18 SENJU 千手

Single Crystal Neutron Diffractometer under Extreme Condition  
特殊環境微小単結晶中性子構造解析装置



Microcrystal and magnetic structure analysis of functional materials under extreme conditions

## Q.1 What is the role of CROSS-Tokai?

- Establish and facilitate the functions of the Proposal Selection Committee
- Manage the "Call for Proposals" and proposal selection process for the public beamlines
- Collect and manage the assessment of applications to build contract beamlines
- Provide user support on the public beamlines
- Provide information and specialist advice to facility users
- Guarantee a safe working environment for facility users and staff



## Q.2 How many staff work for CROSS-Tokai?

CROSS-Tokai has 48 members of staff; 28 of these work on the beamlines including 13 engineers and technicians

CROSS-Tokai Total: 48	BL staff: 28 Technicians: 13
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## Q.3 What level of user support can I expect on the public beamlines?

CROSS-Tokai is committed to providing complete user support services with personnel and facilities including:

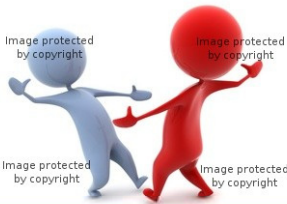
- Science Coordinators to assist with any aspect of experiment planning or design
- A team of research scientists with wide-ranging experience and expertise to support the beamlines
- Data analysis and software development specialists
- Electrical and mechanical technical staff
- Sample preparation laboratories and equipment

## Q.4 What types of experiments can be carried out on the public beamlines?

See Panel 2 for a description of beamline capabilities and applications.

## Q.5 What ancillary equipment is available on the public beamlines?

In addition to cryostats and magnets, a wide variety of Extreme-environment equipment is available on the beamlines.



## Q.6 Is there any plan to build more public beamlines?

It is possible that as many as 10 beamlines will be supported by CROSS-Tokai in the future. Expansion plans are currently under consideration.

## Q.7 How much user time is available on the public beamlines?

In principle, about 120 days per year (~60% of the total beamtime) is available for users on the public beamlines.

## Q.8 What is the oversubscription rate at the MLF?

Demand for beamtime varies across the instruments but, as a guide, the MLF is typically oversubscribed by about a factor of 2.

## Q.10 How do I apply for beamtime on the public beamlines?

We recommend to get in touch with Science Coordinators as a first step. They will be able to provide technical advice and administrative support to get you started. Send email to [user\\_question@cross.or.jp](mailto:user_question@cross.or.jp)

## Q.9 What does it cost to use the public beamlines?

There is **NO CHARGE** for non-proprietary use of the public beamlines. Charges for proprietary use of the facilities are available on application.



Masatoshi SATO  
佐藤 正俊



Yoshiaki FUKUSHIMA  
福嶋 喜章

## Q.11 How can I get more information about using the public beamlines?

Contact the Science Coordinators by sending an email to [user\\_question@cross.or.jp](mailto:user_question@cross.or.jp) or call on +81-29-219-5300

