

Proposal Writing:

Hints for writing a good proposal & getting beam time

<http://ftp.xor.aps.anl.gov/sector4/NXSchool-proposals.pdf>

Jonathan Lang – APS

Brian Chakoumakos, John Budai, Suzanne te Vetuis

Neutron X-ray Scattering School

June 24, 2011

DOE X-ray and Neutron Sources

Advanced Light Source



Advanced Photon Source



National Synchrotron Light Source



→ NSLS-II

CHES

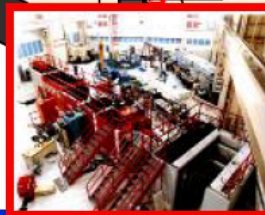
NIST

Stanford Synchrotron Radiation Laboratory

Linac Coherent Light Source



Manuel Lujan Jr. Neutron Scattering Center



High-Flux Isotope Reactor



Spallation Neutron Source

Also 5 DOE Nanoscience Centers (BNL, SNL/LANL, ORNL, ANL, LBNL)
3 DOE Electron Microscopy Centers (ANL, LBNL, ORNL)



Basics of the facility proposal systems

- All the DOE (NIST & NSF) neutron and x-ray sources offer access to beam time through an experimental proposal system. “General users (GU)”.
- Proposal submission is done through a web-based application. When and how often proposals are submitted varies by facility.
 - APS 3 times a year (March, July, October)
 - SNS/HFIR 2x a year?
- All proposals are peer-reviewed and rated, and beam time is allocated using the scores of these reviews. Once time has been allocated, the beamline staff schedule the proposals.



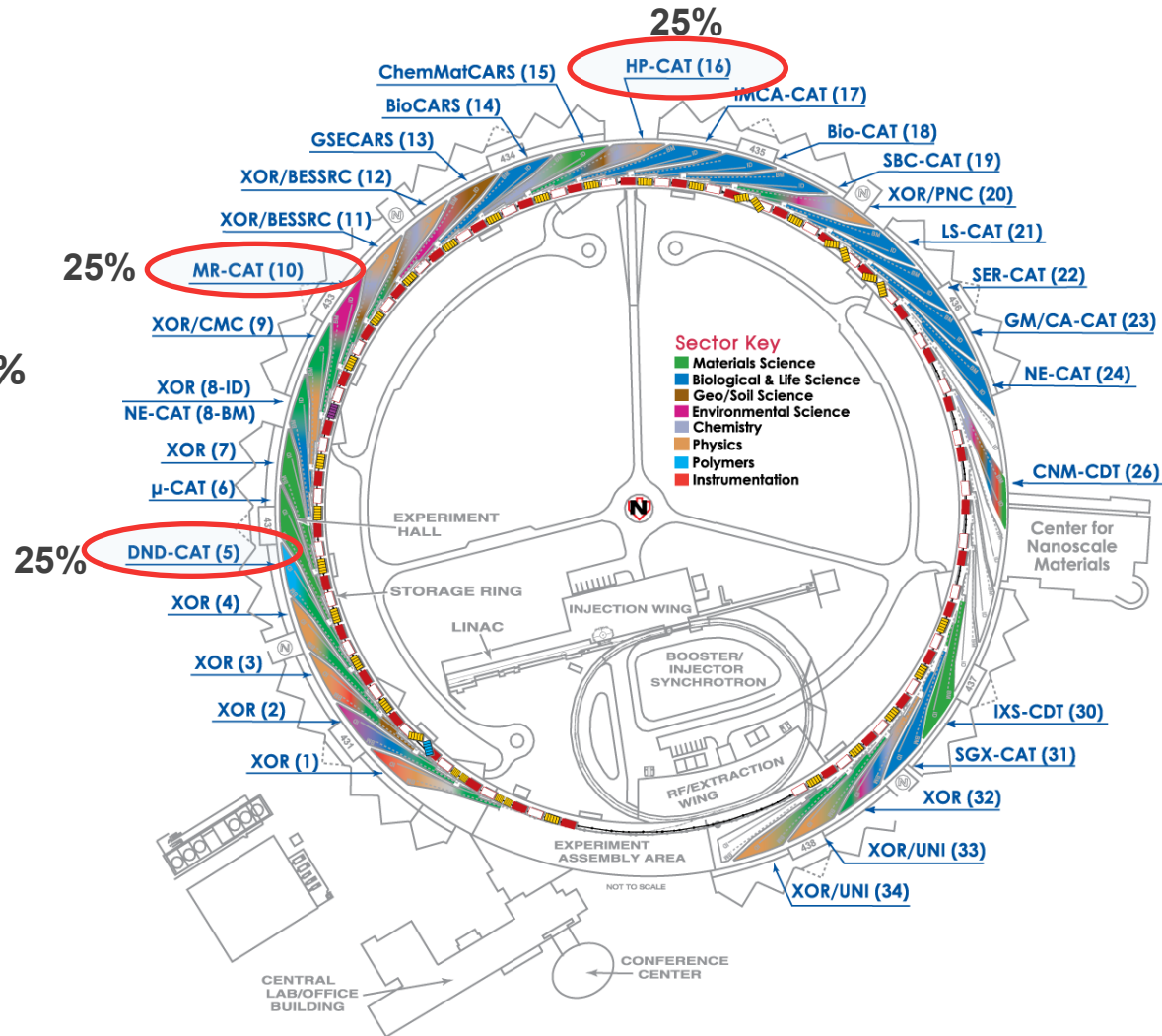
Amount of general user time available

APS/NSLS/SSRL/ALS

- ✓ All beamlines offer GU beam time.
- ✓ Most DOE/NSF funded beamlines provide 80-100% of their time to general users.

SNS/HFIR

- ✓ Amount varies by instrument.
- ✓ Once running, ~75% of time will be for general users.



Upcoming Proposal Deadlines:

X-ray sources

	Next Deadline
APS	July 8, 2011
NSLS	Sept. 30, 2011
SSRL	Sept. 1, 2011
ALS	July 15, 2011

<http://www.lightsources.org/cms/?pid=1000336>

Neutron sources

SNS/HFIR	Sept. 7, 2011
LANSCCE	Fall
NIST-NCNR	Sept. 11, 2011
CNBC, Chalk River	Continuous

Note at most facilities these are hard deadlines:

APS always at Friday mid-night (12:05 → next cycle)



Getting Started

- Study instrument web pages
- Contact an instrument scientist to discuss your research
 - What is the research problem?
 - Which instrument(s) are appropriate?
 - What are the experimental conditions (temperature, pressure, magnetic field, etc)?
 - What will be measured?
 - How much beamtime will it take?
 - Probability of success? Impact? Significance?
 - What is the timeline?



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Beamline/Instrument Information

https://beam.aps.anl.gov:443/pls/apsweb/beamline_display_pkg.technique_dir

APS Home Page Lecture Notes... LDRD Propos... https://beam... Review of Sci... ORNL Neuro... https://beam...

Argonne NATIONAL LABORATORY
Advanced Photon Source
A U.S. Department of Energy, Office of Science,
Office of Basic Energy Sciences national synchrotron x-ray research facility

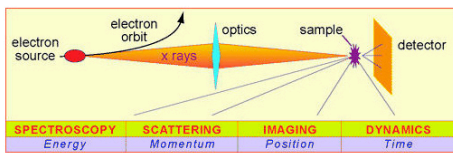
About User Information Science & Education Media Center Beamlines Search APS

APS Beamline Directory

APS Synchrotron Techniques

The unique properties of synchrotron radiation are its continuous spectrum, high flux and brightness, and high coherence, which make it an indispensable tool in the exploration of matter. The wavelengths of the emitted photons span a range of dimensions from the atomic level to biological cells, thereby providing incisive probes for advanced research in materials science, physical and chemical sciences, metrology, geosciences, environmental sciences, biosciences, medical sciences, and pharmaceutical sciences. The features of synchrotron radiation are especially well matched to the needs of nanoscience.

This breadth of problems requires an extensive suite of probes. The basic components of a beamline, however, share general similarities as shown in the schematic diagram below.



The fundamental parameters that we use to perceive the physical world (energy, momentum, position, and time) correspond to three broad categories of synchrotron experimental measurement techniques: spectroscopy, scattering, and imaging. By exploiting the short pulse lengths of synchrotron radiation, each technique can be performed in a timing fashion.

Spectroscopy is used to study the energies of particles that are emitted or absorbed by samples that are exposed to the light-source beam and is commonly used to determine the characteristics of chemical bonding and electron motion.

Scattering makes use of the patterns of light produced when x-rays are deflected by the closely spaced lattice of atoms in solids and is commonly used to determine the structures of crystals and large molecules such as proteins.

Imaging techniques use the light-source beam to obtain pictures with fine spatial resolution of the samples under study and are used in diverse research areas such as cell biology, lithography, infrared microscopy, radiology, and x-ray tomography.

SPECTROSCOPY	
Technique	Beamline
Hard X-Ray Spectroscopy	
Diffraction anomalous fine structure	20-BM-B
Fluorescence spectroscopy	1-ID-C, 12-BM-B
Intensity fluctuation spectroscopy	8-ID-J, 8-ID-E*
Magnetic circular dichroism (x-ray magnetic circular dichroism, hard x-ray)	4-ID-D
Small X-ray absorption fine structure	13-ID-C-D, 2-ID-D, 20-ID-B-C
Time-resolved x-ray absorption fine structure	7-ID-B-C-D, 10-ID-B, 11-ID-D, 20-ID-B-C
X-ray absorption fine structure	20-BM-B, 10-BM-A-B, 13-ID-C-D, 5-BM-D, 10-ID-B, 12-BM-B, 11-ID-D, 20-ID-B-C, 9-BM-B-C, 13-BM-D
X-ray absorption near-edge structure	16-BM-D
X-ray emission spectroscopy	16-ID-D, 20-ID-B-C
X-ray photon correlation spectroscopy	8-ID-J, 8-ID-E*
X-ray raman scattering	16-ID-D, 20-ID-B-C
micro X-ray absorption fine structure	20-BM-B, 10-ID-B, 18-ID-D
Metrology, Optics, Detector Calibration, Etc.	
X-ray optics development/techniques	9-ID-B-C-D
Soft X-Ray Spectroscopy	
Magnetic circular dichroism (x-ray magnetic circular dichroism, soft x-ray)	4-ID-C
X-ray magnetic linear dichroism	4-ID-C
X-ray photoemission spectroscopy	4-ID-C

https://beam.aps.anl.gov:443/pls/apsweb/beamline_display_pkg.display_beamline?p_beamline_num_c=31

APS Home Page APS-Sector4 Home - APS-U Project Inside Argonne APS-Beamtime Scheduling Google Yahoo! Apple Dictionary

Argonne NATIONAL LABORATORY
Advanced Photon Source
A U.S. Department of Energy, Office of Science,
Office of Basic Energy Sciences national synchrotron x-ray research facility

About User Information Science & Education Media Center Beamlines Search APS

Argonne Home > Advanced Photon Source

APS Technique Directory
APS Beamline Directory
Print Version of Beamline
Beamline Information Maintenance

Beamline 4-ID-D: Magnetic Studies-Hard X-ray

X-ray Science Division, APS
Physics, Materials Science



Description
Beamline 4-ID-D focuses on polarized materials. This beamline is equipped with the polarization of the incoming x-ray linear to vertical linear ($P_{in} = -0.80$).

Supported Techniques

- Anomalous and resonant scattering
- Magnetic x-ray scattering
- Magnetic circular dichroism (hard x-ray)

Beamline Controls and Data Acquisition
All data acquisition is done on Sun with the SPEC software program. Beamline based applications running VME-based graphical interface to display and control devices.

Detectors

- NaI scintillation (Oxford Cybe)
- Vortex Si drift diode detectors
- Pin diodes
- Ion chambers
- Avalanche Photodiodes

Additional Equipment

- 8-circle Huber diffractometer
- ARS He J-T stage Displex (1
- ARS He Displex (4.5-325 K)
- ARS He Displex (50-800 K)
- He flow cryostat (5-325 K)
- Diamond anvil cells (spectroscopy)
- 4-tesla spectroscopy magnet

Selected Publications

"Pressure-Induced Transition in Many Y. Ding, D. Haskel, Y. C. Tseng, E. K. 102, 237201 (2009).

"Pressure-tuned spin and charge ordering in an intermetallic organometallic Y. Feng, R. Jaramillo, G. Srajer, J. C. Lang, Z. Islam, M.S. Somayazulu, O.G. Shpyrko, J.J. Pluth, H.-K. Mao, E.D. Isaacs, and G. Aeppli, T.F. Rosenbaum, *Phys. Rev. Lett.* **99**, 137201 (2007).

"Magnetic Structure of $\text{RuSr}_2\text{GdCu}_2\text{O}_8$ Determined by Resonant X-Ray Diffraction", B. Bohnenbuck, I. Zegkinoglou, J. Strempfer, C. S. Nelson, H.-H. Wu, C. Schüßler-Langeheine, M. Reehuis, E. Schierle, Ph. Leininger, T. Herrmannsdörfer, J. C. L. Adam, G. Srajer, C. T. Lin, and R. Knimer, *Phys. Rev. Lett.* **102**, 037205 (2009).

Local Contacts

Name DANIEL HASKEL (XMCD, Magnetic Reflectivity, High Pressure)
Phone 630.252.7758
Email haskel@aps.anl.gov

Name YEJUN FENG (Magnetic Scattering, High-Pressure)
Phone 630.252.7780
Email yefun@aps.anl.gov

Name YONGSEONG CHOI (Magnetic Reflectivity, XMCD)
Phone 630.252.2271
Email ychoi@aps.anl.gov

Beamline Specs

Source	3.5 Undulator
Monochromator Type	Kohzu Si(111)
Energy Range	2.7-40 keV
Resolution ($\Delta E/E$)	1.4×10^{-4}
Flux (photons/sec)	3.5×10^{13} @8 keV
Beam Size (HxV)	
Focused	220 μm x 100 μm
Unfocused	2.6mm x 1.2mm

For additional information see:

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Submitting a proposal

NLSLS

National Synchrotron Light Source
http://www.nsls.bnl.gov

NSLS
NATIONAL SYNCHROTRON LIGHT SOURCE

Call for Proposals
Next general user proposal deadline:
January 31, 2009

Recent News
NSLS Hosts 2nd Annual Historically Black Colleges and Universities Scientific Workshop
NSLS Hosts 2nd Annual Historically Black Colleges and Universities Scientific Workshop
Scientific Planning Workshop White Papers Now Online

Facility Updates
Chi-Chang's Corner: DOE Grant Boosts NSLS Advanced Detector Development
Safety Update: Fiscal Year 2008 Injuries
Notes from the UEC: Past and Present

Science Highlights
Slippery Customer: A Greener Anticancer Additive for Engine Oils
Cracking the Structure of a Key Cancer-Related Protein
Creating an Electron Avalanche without Electronics

Upcoming Seminars
Naturally Clonased
Richard and Caele Rikford, Passamas Works
12:00 PM, NSLS, Seminar Room
Friday, October 10, 2008

Upcoming Meetings & Workshops
X-ray Methods in Structural Biology
October 17-19, 2008
Introduction to XAFS: Experiment, Theory, Data Analysis
October 30, November 1, 2008
NSLS Town Meeting
Thursday, November 13, 2008

APS

Advanced Photon Source | Argonne National Laboratory
http://www.aps.anl.gov

Argonne National Laboratory
U.S. Department of Energy

APPS Upgrade Project
The Advanced Photon Source (APS) provides the brightest x-ray beams in the Western Hemisphere to more than 5,000 scientists worldwide.

LEARN about x-ray research
START your APS user
WORK resources for users

APPS Upgrade Project
Project Home
User Input Invited
Upgrade News

APPS Upgrade Project
June 25 - Friday
User Science Seminar
APS Seminar 1 401-A1100 @ 12:00 PM
Deadline: June 28, 2010
Information for Industrial Users
Next QUP Deadline: July 9, 2010
XSD Visitor Program

NIST Center for Neutron Research
http://www.ncnr.nist.gov

NIST
National Institute of Standards and Technology

NEWS FOR NCNR USERS
NCNR Seminar Schedule
Pat Gallagher named NIST Deputy Director
Pat Gallagher, NCNR Director for the past four years, has been appointed NIST Deputy Director, assuming until further notice the responsibilities and duties of NIST Deputy Director. The appointment is subject to the approval of the Board of Directors of NIST.

CALL FOR PROPOSALS - NEW!
The next proposal deadline is November 3, 2008. Successful proposals will be allocated instrument time from January 2009 through August 2009. [details](#)

We have posted some [proposal statistics](#) summarizing the last five calls.

NCNR Expansion
A significant expansion of the NCNR is underway. The project comprises development of a new cold neutron moderator, and a new guide hall with five state-of-the-art instruments. A workshop was held on July 17-19, 2006.

Major Upgrade to SANS Analysis Software
With a new user interface and calculations up to 1.7x faster, this new release makes

NIST

ORNL Neutron Sciences
http://neutrons.ornl.gov

ORNL Neutron Sciences

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OAK RIDGE NATIONAL LABORATORY
NEUTRON SCIENCES
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Researching a cure for Huntington's Disease

Oak Ridge National Laboratory is home to two of the most advanced neutron science research facilities in the world, the **Spallation Neutron Source** and the **High Flux Isotope Reactor**.

OPERATING STATUS
SNS Beam on target at ~870kW. The plan for Tuesday is Neutron Production without any interruption.
HFIR is operating at 85MW for fuel cycle 429

UPCOMING EVENTS
13 JUL Goldschmidt Conference Knoxville, TN, USA
19 JUL National School on Neutron and X-Ray Scattering Oak Ridge, TN, USA

NEWS & UPDATES | USER INFO | EDUCATION | PUBLICATIONS
Neutron Scattering Science Call for Proposals
Thank you for submitting more than 570 proposals for the current call. The next Call for Proposals will be August 25, 2010.

Call for Proposals
Call for Proposals
Call for Proposals

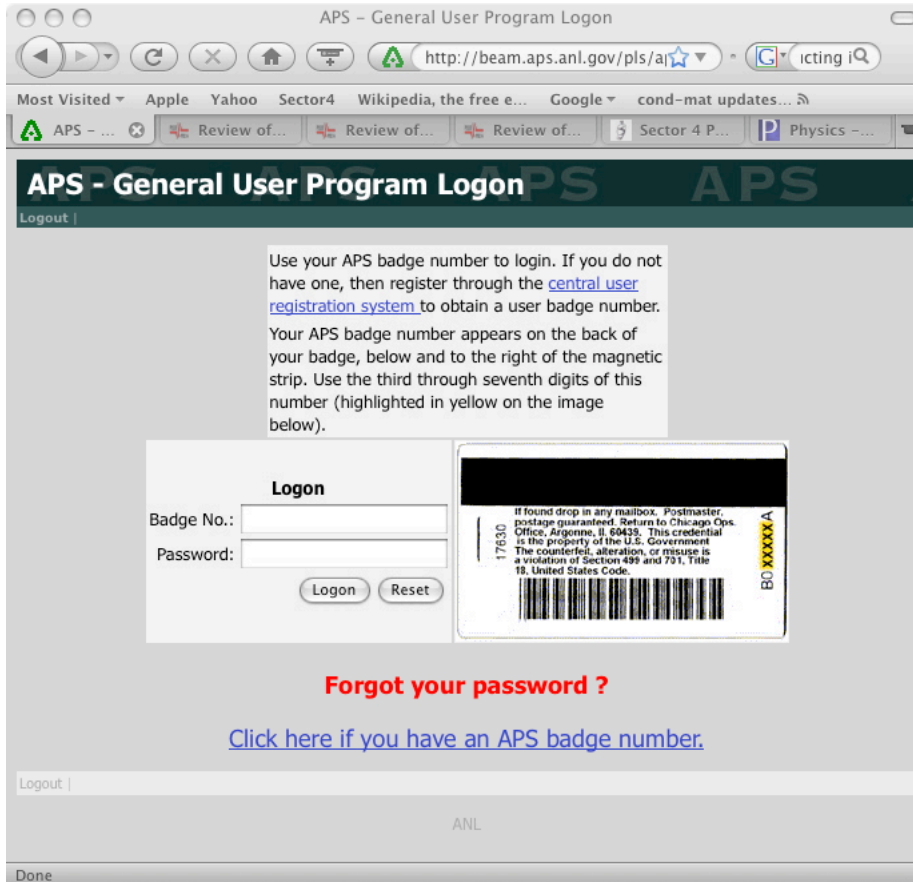
Let us know what capabilities you'd like to see at SNS and HFIR.
More User Information
News Feed

SNS
HFIR

Almost all facilities have link on home page

Login to the system

APS



The screenshot shows a web browser window titled "APS - General User Program Logon". The address bar shows the URL "http://beam.aps.anl.gov/pls/ai...". The page content includes a "Logout" link, a text box explaining the login process (using the APS badge number, specifically the third through seventh digits), a "Logon" form with fields for "Badge No.:" and "Password:", and "Logon" and "Reset" buttons. To the right of the form is an image of an APS badge with a barcode and the text "17630" and "BC XXXXXA". Below the form is a red link "Forgot your password?" and a blue link "Click here if you have an APS badge number.". The footer of the page shows "ANL" and "Done".

APS - General User Program Logon

Logout |

Use your APS badge number to login. If you do not have one, then register through the [central user registration system](#) to obtain a user badge number. Your APS badge number appears on the back of your badge, below and to the right of the magnetic strip. Use the third through seventh digits of this number (highlighted in yellow on the image below).

Logon

Badge No.:

Password:

Forgot your password ?

[Click here if you have an APS badge number.](#)

Logout |

ANL

Done

Will have to remember user number at each facility



Proposal forms at SNS and APS

SNS/HFIR

The screenshot shows the 'Create a New Proposal' form in the SNS/HFIR iPTS. The browser window title is 'Create Proposal - Mozilla Firefox'. The URL is 'https://insapp1.sns.ornl.gov/pls/prod/f?p=100:49:3910448804620322::NO'. The page title is 'Integrated Proposal Tracking System'. The form is titled 'Create a New Proposal' and includes a 'Help' button. The 'Base Proposal Information' section contains the following fields and options:

- Proposal Number: Pending
- Name: Suzanne Te Velthuis
- Date: 23-SEP-2008
- Email: Emailtevelthuis@sant.gov
- User Institution: Search
- Proposal Title: test
- Proposal Type: %
- Will the data collected be considered Proprietary?: Yes No
- Will the data collected be considered classified?: Yes No
- Is this research required for a student's thesis?: Yes No
- Does this experiment involve exposure to, or use of, biological materials? Such as recombinant DNA, virus or components of a virus, a biological toxin, exposure or handling of risk group 1 or 2 microorganisms (dead or alive), select agents or toxins (dead or alive) or any other sort of biologically hazardous material, to either plants or animals.: Yes No
- Will human subjects or laboratory animals be used in this experiment, or does this operation involve exposure to, or handling of, human tissue or body fluids, human cells in culture or animal matter?: Yes No
- Will Hazardous substances, equipment, or procedure be brought to ORNL as part of this proposed experiment? If yes, provide detailed safety procedures in proposal text.: Yes No
- Abstract: 0 of 4000

Buttons: Cancel, Save and Continue.

APS

The screenshot shows the 'General User Proposal' form in the APS system. The browser window title is 'APS - General User Proposal - Mozilla Firefox'. The URL is 'https://beam.aps.anl.gov/pls/apweb/gup0001.display_exp?_pid=792659010841428&_page_num=1&_gup_id=10'. The page title is 'APS - General User Proposal'. The form is titled 'General User Proposal' and includes a 'Main Menu | Search Criteria | Instructions | Logout' link. The form is titled 'Proposal : GUP-10325' and includes the following sections:

- General | Experimenters | Abstract | Beamtime Request | Questions | Review Panel
- Proposal Title: [Text Field]
- Shifts Recommended by PRP: not available
- Shifts Allocated by BAC or Scheduled by Beamline in current cycle: (0)
- Shifts Used to date: (0)
- Shifts Remaining: not available
- Do you want this proposal to be considered for project status? [description](#): Yes No
- Does this proposal require mail-in service?: Yes No
- Does this research involve macromolecular crystallography (single crystals)? : Yes No
- Will the data collected be considered proprietary? : Yes No
- Will the data collected be considered classified? : Yes No
- Does this research involve human subjects or materials? : Yes No
- Does this research involve live animals? : Yes No
- Are there known safety hazards associated with the proposed experimental procedures or your samples? : Yes No
- Is this research required for a student's thesis? : Yes No
- Is this proposal related to another general user proposal? If so, which one(s) and how? (500 characters or less): [Text Field]
- Subject of Research: Materials science Physics Chemistry Polymers Medical applications Biological and life sciences Earth sciences Environmental sciences Optics (excluding x-ray optics) Engineering Instrumentation related to user facilities Purchase of specialty service or materials Other (specify) Specify Other: [Text Field]

Buttons: Generate Report, Copy Proposal, Next Page, Save, Submit.

Proposal #: 10325

Each proposal system will ask very similar questions

Questions asked

- Proposal Title
- General Info (Title, Experimenters, Funding source, etc.)
- Abstract - What is the scientific importance of the proposed research?
- Why do you need the facility to do this research?
 - Neutron vs. X-rays
 - Why do you need an insertion device beamline instead of a bending magnet?
 - Spallation source vs. reactor source
 - Hard X-rays vs. Soft X-rays
- Why do you need the beam line (and/or instrument)?
 - Particular technique or sample environment
- What previous experience / results do you have.
- Describe the proposed experiment(s), including samples and procedures.
- Justification of the amount of time requested.



General Information

Edit Proposal - Mozilla Firefox

File Edit View History Bookmarks Tools Help

https://snsapp1.sns.ornl.gov/pls/xprod/f?p=100:11:3910446804620322::NO::P11_PRP5L_ID:1498&cs=379C651964E7D8D6B013400184A7F54

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PDF of IPTS-1498 Home Feedback FAQ Logout

Home Proposal Details Funding Research Areas Facilities Instruments Team Members Samples Scheduling Submit for Review

My Proposals > Edit Proposal IPTS-1498

Help

Edit Proposal Cancel Apply Changes

Proposal Number	IPTS-1498
Status	Saved for Further Editing by Applicant
Name	Suzanne Te Velthuis
Email	tevelthuis@anl.gov
* Proposal Date	23-SEP-2008 15:23
* User Institution	US - Argonne National Laboratory Search
* Proposal Title	test
* Proposal Type	General User
* Will the data collected be considered proprietary?	<input type="radio"/> Yes <input checked="" type="radio"/> No
* Will the data collected be considered classified?	<input type="radio"/> Yes <input checked="" type="radio"/> No
* Is this research required for a student's thesis?	<input checked="" type="radio"/> Yes <input type="radio"/> No
* Does this experiment involve exposure to, or use of, biological materials? Such as recombinant DNA, virus or components of a virus, a biological toxin, exposure or handling of risk group 1 or 2 microorganisms (dead or alive), select agents or toxins (dead or alive) or any other sort of biologically hazardous material, to either plants or animals.	<input type="radio"/> Yes <input checked="" type="radio"/> No
* Will human subjects or laboratory animals be used in this experiment, or does this operation involve exposure to, or handling of, human tissue or body fluids, human cells in culture or animal matter?	<input type="radio"/> Yes <input checked="" type="radio"/> No
* Will Hazardous substances, equipment, or procedure be brought to ORNL as part of this proposed experiment? If Yes, provide detailed safety procedures in proposal text.	<input type="radio"/> Yes <input checked="" type="radio"/> No
* Abstract	<div>This is the abstract</div> <div>20 of 4000</div> <div>Download Template Attach Statement of Research (.pdf)</div> <p>Please use the Template Provided to Prepare your Proposal.</p> <p>23-SEP-2008 15:23</p>
Last Modified Date	23-SEP-2008 15:23

Done snsapp1.sns.ornl.gov

Proposal: General information

- Pick a good title. Boring and to the point is better than spectacular and vague.
 - Good: “XAS study of Fe valence in CaFe_2As_2 under pressure ”
 - Bad: “Understanding superconductivity in iron pnictides”
- Is it thesis related? Is there a deadline?
 - Will push your proposal up if scores are close
- Fill in the abstract. Do not just upload a PDF document!
 - More work for reviewer.
- Do upload a publication from previous work (mention previous proposal).
 - Shows you made good use of beam time.
 - Do not upload a 20 pages of supplemental information (couple of plots with text OK)



Proposal: Experimenters page

General Experimenters Abstract Beamtime Request Questions Review Panel

Proposal : GUP-10325

Spoke person: [Find](#)

First Name : Last Name

Phone: Email Badge

Institution:

Mailing Address:

Experimenters Coming to APS:

Badge	First Name	Last Name	Affiliation	Phone	Email	Delete
Find						
Find						
Find						
Find						

Experimenters Not Coming to APS:

Badge	First Name	Last Name	Affiliation	Phone	Email	Delete
Find						
Find						
Find						
Find						

Previous Page Next Page

Pressing SAVE will allow you to save this proposal and continue to make changes. Notifications will not be sent.

Pressing SUBMIT will save this proposal AND notifications will be sent to the APS. No changes can be made thereafter.

Proposal # : 10325

- Use the “find” feature
- List everyone involved in experiment



Experiment Description

General Experimenters Abstract Beamtime Request **Questions** Review Panel

Proposal : GUP-10325

Please specify the funding source(s) for your proposed research:

<input type="checkbox"/> DOD (specify)	<input type="checkbox"/> DOE, Office of Basic Energy Sciences	<input type="checkbox"/> DOE, Office of Biological and Environmental Research
<input type="checkbox"/> DOE, Other (specify)	<input type="checkbox"/> Foreign (specify)	<input type="checkbox"/> HHIH
<input type="checkbox"/> Howard Hughes Medical Institute (HHMI)	<input type="checkbox"/> Industry	<input type="checkbox"/> NASA
<input type="checkbox"/> NIH	<input type="checkbox"/> NSF	<input type="checkbox"/> Other U.S. Government
<input type="checkbox"/> USDA	<input type="checkbox"/> Other (specify)	Specify Other: <input type="text"/>

What is the scientific or technical purpose and importance of the proposed research? (limit : 500 words)

Why do you need the APS for this research? (limit : 100 words)

Why do you need the beamline you have chosen? (limit : 100 words)



Experimental Details

- Give background information why it is important.
 - Science at facilities very diverse. Good chance reviewer not expert in polymers, catalysts, superconductors, etc.
 - @ APS each committee gets ~60 proposals each cycle (~700 total/cycle)
- Clearly state what you want to measure and how
 - Give details. Temperature range, X-ray Energy, Sample geometry
 - What sample characterization has been done already? (XRD, SEM, etc.)
 - Reviewer needs to judge if experiment is feasible
 - Does x-ray energy match laser penetration depth
 - % of dilute atoms OK for fluorescence measurements
- Why use x-rays or neutrons?
 - Neutron vs. X-rays
 - TEM, Mössbauer, Laser Raman, etc.
- Justify the amount of beam time requested (ask instrument scientist!)



Beamtime Request

General Experimenters Abstract **Beamtime Request** Questions Review Panel

Proposal : GUP-10325

Rapid Access Description Make New Request 3rd

Total 8-hour shifts requested for the LIFE OF THE PROPOSAL

Total 8-hour shifts recommended by the Proposal Review Panel for the LIFE OF THE PROPOSAL : not available

Total shifts used to date: 0

Number of the shifts remaining: not available

For which scheduling period are you applying? Status :

Techniques Required:

Choice Of Beamline:

Please select the instrument based on your beamline selection:

- For 1st beamline
- For 2nd beamline
- For 3rd beamline

Any appropriate beamline

Number of 8-hour shifts requested for THIS scheduling period

Minimum number of usable shifts per visit:

Do you have specific scheduling requirements ?

What equipment is required ?
What equipment will you bring ?

Please list any new publications resulting from your work at the APS.

Describe the progress made during your most recent beamtime. (2000 characters including spaces)

Unacceptable Dates (MM/DD/YYYY)

From	To
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

Previous Page Next Page

Pressing SAVE will allow you to save this proposal and continue to make changes. Notifications will not be sent.

Pressing SUBMIT will save this proposal AND notifications will be sent to the APS. No changes can be made thereafter.

Proposal #: 10325

- Proposals are valid for two years, but need to put in beam time request each cycle.
- Chose multiple beamlines.
 - SAXS (12-ID, 5-ID, 15-ID)
 - XAFS (20-BM, 10-ID, 12-BM)
 - General Diffraction
- Don't list only one week that you can come. Holidays?
- Special sample environment / detectors will place more constraints on schedule.
 - GE amorphous Si detector
 - Magnet
 -



Ratings for APS Proposals

Table 1. Definition of Ratings Used in Reviewing General User Proposals

1 - Extraordinary	The proposal involves highly innovative research of great scientific importance. Proposed research will significantly advance knowledge in a specific field or scientific discipline. Considerable societal relevance is demonstrated. The radiation characteristics of the APS are highly desirable for the success of the proposed work.
2 - Excellent	The proposed research is of high quality and has potential for making an important contribution to a specific field or scientific discipline. The work is cutting edge and is likely to be published in a leading scientific journal. The radiation characteristics of the APS are important to the success of the proposed work.
3 - Good	The proposed research is near cutting-edge and likely to produce publishable results. Impact on a specific field or scientific discipline is likely. Synchrotron radiation is essential to accomplish the intended goals of the research. The proposed work will greatly benefit from access to the APS.
4 - Fair	The proposed research is interesting but may not significantly impact a specific field or scientific discipline. Publication may or may not result from this research. Synchrotron radiation is required, but the proposed work could be performed at other facilities.
5 - Poor	The proposed research is not well planned or is not feasible. Results would not make important contributions to fundamental or applied understanding, and work is not likely to result in publication. The need for synchrotron radiation is not clear.

APS proposals are rated on a scale from 1 to 5

Average score is ~2.2

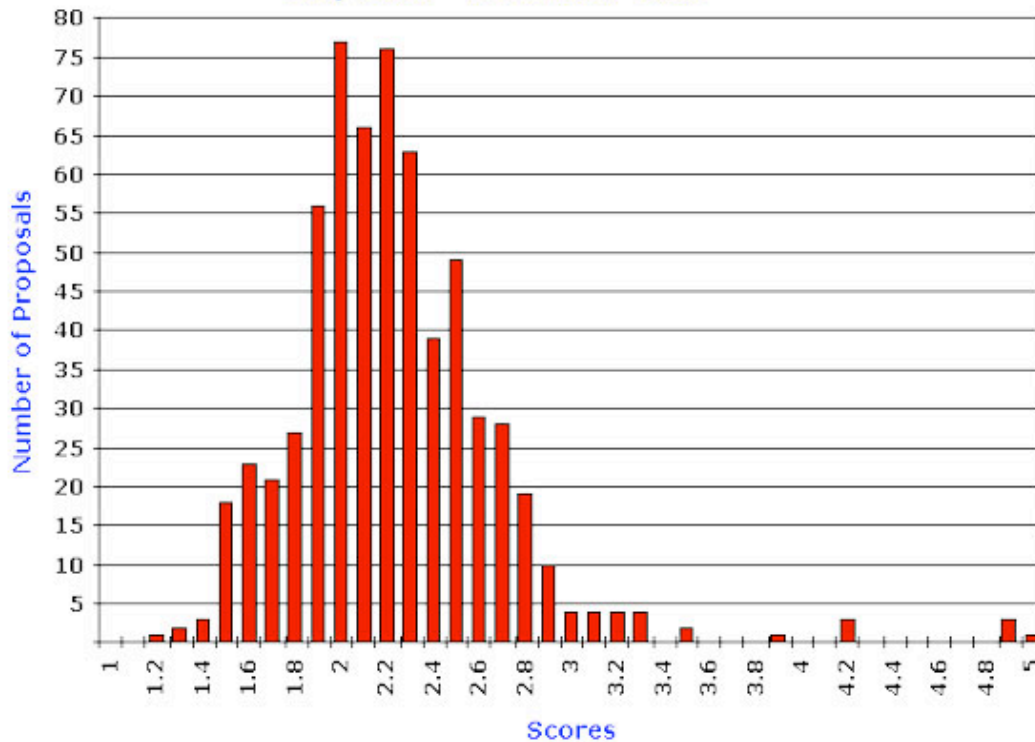
Cut off score for receiving beam time varies by beamline (1.5 - 2.2)

Proposal ageing (score reduced by 0.2 each time does not receive time)



Some facilities provide cutoff scores

Distribution of Proposal Scores for General Science Proposals
All Beamlines
July 2010 - December 2010



Helps you know what to expect.

Should I wait or submit another proposal?

Beamline	Cutoff Score
1.4 (IR)	2.70
4.0.2 (EPU)	1.90
5.3.2 (Polymers XAFS)	2.32
6.0.1 (Femtosecond)	--
6.0.2 (Femtosecond)	2.22
6.1.2 (Soft X-Ray Microscopy)	2.40
6.3.1 (Materials Sciences)	--
6.3.2 (Calibration and Standards)	3.90
7.0.1 (XPS, STXM, SXF, SPEM)	2.03
7.3.3 (SAXS)	2.14
8.0.1 (SXF)	2.14
8.3.2	2.50
9.0.2 (Chemical Dynamics, Coherent Imaging)	2.32
9.3.1 (XAMS)	--
9.3.2 (APSD/AMC, High-Pressure XPS)	2.04
10.0.1. (HERS/AMO)	2.23
10.3.2 (Micro XAFS)	2.20
11.0.1 (Magnetic Microscopy, Spectromicroscopy; PEEM3)	2.43
11.0.2 (Molecular Environmental Sciences)	1.78
11.3.1 (Small Molecule Crystallography)	2.58
12.0 (ARPES)	2.12
12.2.2 (High Pressure)	2.29
12.3.2	2.53
*Total allocation	

easier

easier

harder



Tips

- Give a concise explanation of this specific proposal
 - Provide background on importance (i.e. “bigger picture”)
 - State clearly exactly what you are going to measure and why.
 - Reviewer want so assess likelihood of success.
- Include relevant details to experiment but do not get too verbose
 - Reviewer needs to judge not only scientific importance, but also if the experiment is feasible and if you are asking for the right instrument.
- If you are a first time user, talk to the local contact/instrument scientist.
 - Find out about details of the instrument, typical measuring times...
 - Oversubscription rate; Can a less popular instrument do most of the measurements you need.
 - Send them the proposal ahead of time and ask for advice. Collaborate?
- If you have previous results from other experiments include them!
 - Home, other institution, previous experiment.
 - Sample characterization.
 - Do not attach large number of pages.
- Take advantage of proposal ageing. **Get a few proposals in the system.**



Several common pitfalls

- Proposer assumes committee is familiar with their specialty.
- Proposer writes large proposal asking for multiple weeks of time. Better to write a shorter proposal with a well defined objective. Be realistic with beam time request.
- Proposal deadline (for next cycle) is before schedule beamtime for this cycle.

Common Reviewer comments:

- “Proposers could improve their score by including more experimental details, attaching previous results and expanding on the purpose and importance of the research.”
- “Hasn't the proposed research been published previously?”
- We do not feel that granting 20 shifts/cycle for 2 years is consistent with the history of publication of this work.
- Proposer should perform initial characterization with lab source or SEM, TEM....



After submission

- Allow time for review and revisions
- Expect feedback several weeks from the call close
- Be ready to schedule experiment if approved
 - Identify participating team members
 - Respond to facility access approval information (foreign nationals)
 - Facilitate execution of user agreements
 - Complete required training
 - Confirm sample availability and description and laboratory needs
- Consider reviewer comments if not approved and plan to resubmit this proposal or a new proposal in the next call.
Opportunities (# of facilities and beamlines/facility) continue to grow.



Upcoming Proposal Deadlines:

X-ray sources

	Next Deadline
APS	July 8, 2011
NSLS	Sept. 30, 2011
SSRL	Sept. 1, 2011
ALS	July 15, 2011

<http://www.lightsources.org/cms/?pid=1000336>

Neutron sources

SNS/HFIR	Sept. 14, 2011
LANSCE	July 8, 2011
NIST-NCNR	Sept. 11, 2011
CNBC, Chalk River	Continuous

Note at most facilities these are hard deadlines:

APS always at Friday mid-night (12:05 → next cycle)



Topical Schools and Short courses

X-ray schools

XAFS summer school – APS
XAFS school – BNL
SAXS short course – APS
X-ray Imaging, High Pressure

Dates

July 18-22, 2011
Fall, 2011
Spring, 2012

Neutron schools

Lance summer school (Energy Mat.)
NIST summer school
(SANS or Neutron Spectroscopy)

July 12-22, 2011
June 19-23, 2011

