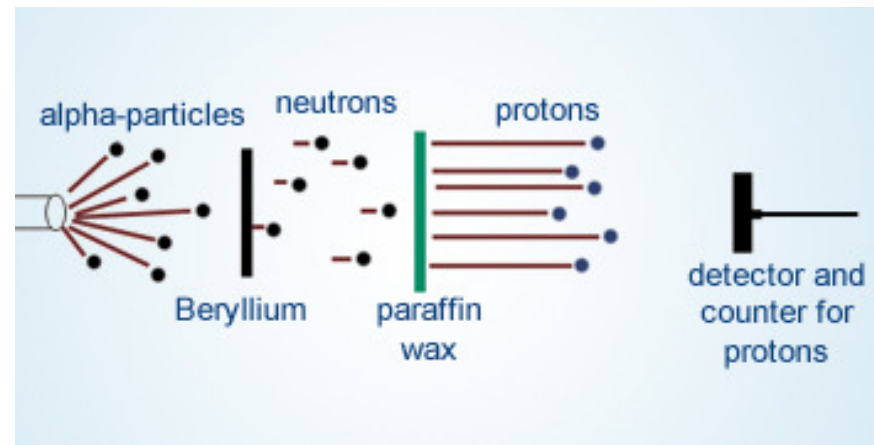


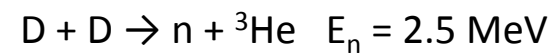
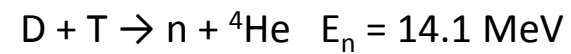
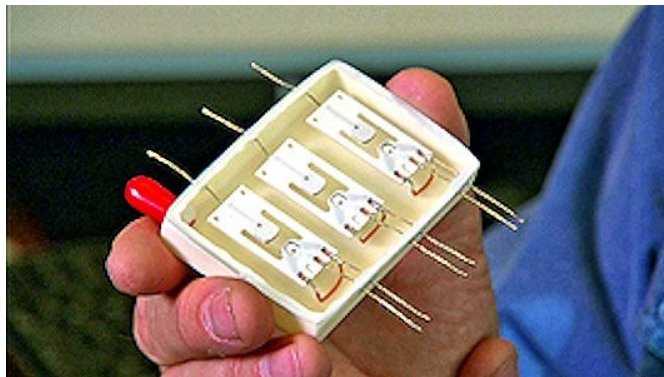
How to find neutrons

Robert McGreevy

Neutron source No. 1

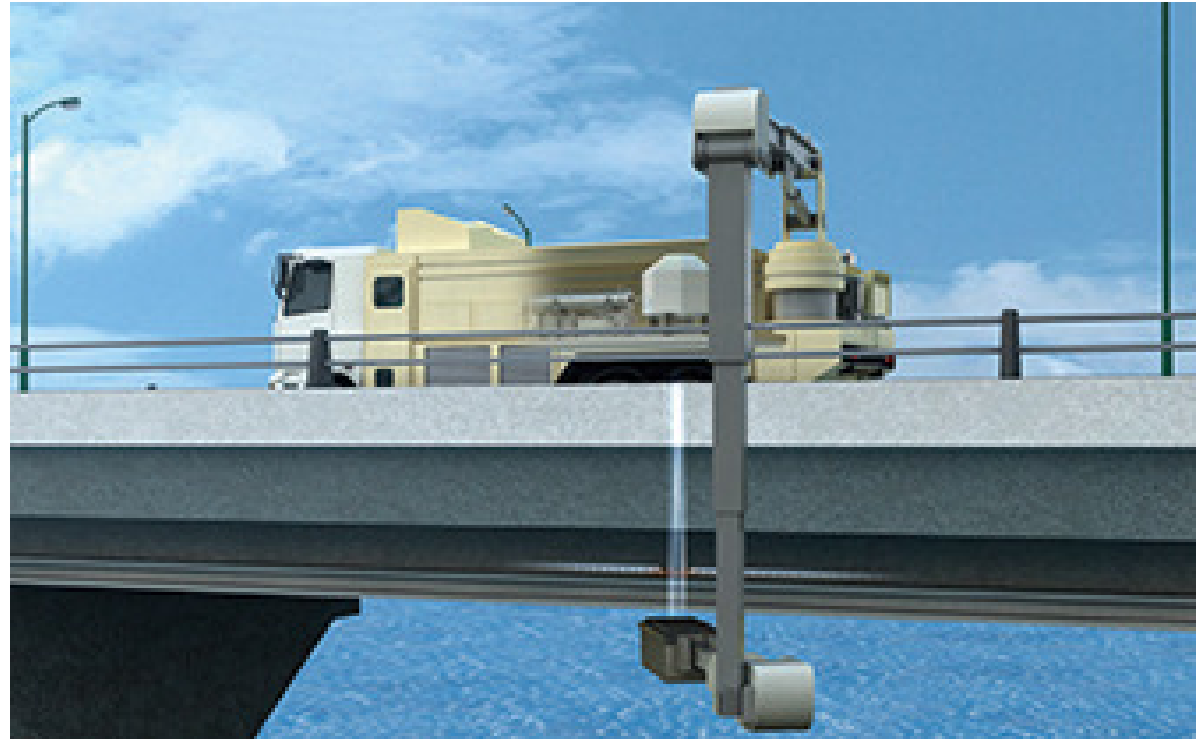


Portable neutron sources

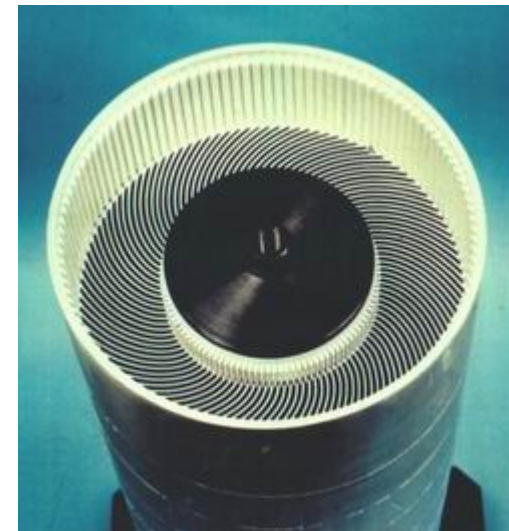
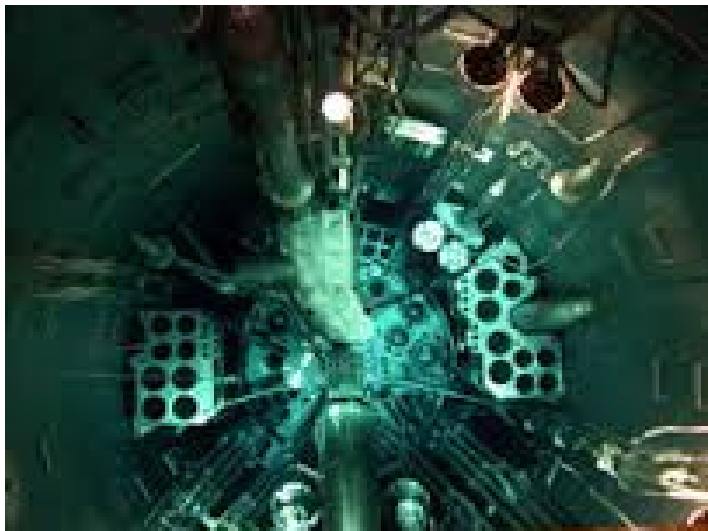
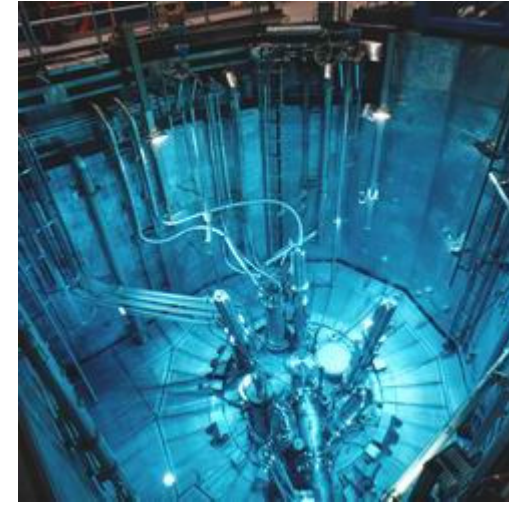
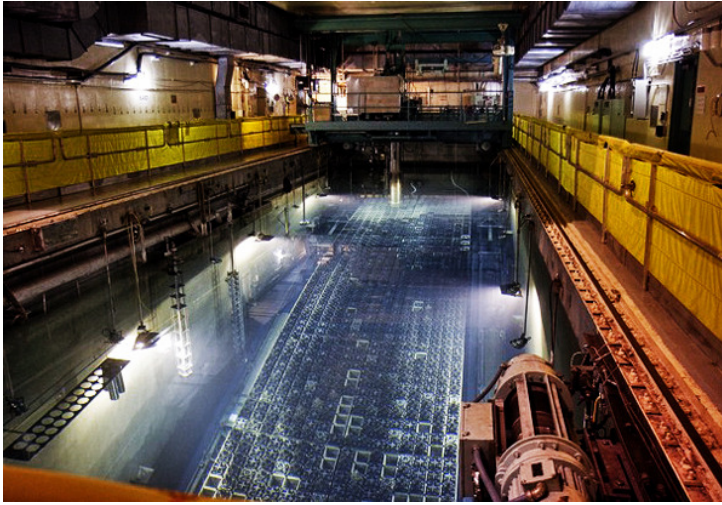


- Oil industry
- Security
- Structure evaluation

Portable neutron sources



Non-portable neutron sources



User programmes

- Early programmes 'parasitic' at materials testing reactors
- Mainly used by local scientists (staff)
- UK Neutron Beam Research Committee 1966 expanded access to the broader university research community
- Institut Laue Langevin (1971) first (high flux) research reactor purpose built for an external user community
- User programmes now common at synchrotrons etc.



Where should I go to get neutrons?

- Where can I do the best science?
 - Instrument specifications
 - Flux
 - Sample environment
 - Technical/user support
 - Laboratory space/facilities
 - PhD programmes
 - Software
- Proximity/ease of access
- Timing (cycles, shutdowns ...)
- Funding
- Personal connections/collaborations
- Accommodation/Food/Scenery

Where should I go to get my neutrons?

<http://neutronsources.org/>



Home - Neutronsources - Internet Explorer

http://neutronsources.org/

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Neutronsources.org

Your entry into the neutron world

Home About News Neutron centres Resources Calendar

Welcome to Neutronsources.org

This website aims to provide information about neutron facilities and neutron research worldwide.

Get in touch

If you are from a neutron facility and would like to send your latest highlights please email us at news@neutronsources.org.

Mailing list

To be informed of neutron-related activities and developments please subscribe to the neutron sources [mailing list](#).

Neutronsources.org is supported by [nmi3](#) and hosted at [ERM II](#)

29.07.2015
NMI3

ILL has signed the Grant Agreement for SINE2020

A new project will start in October 2015 and last for four years. It has recently been accepted for funding under the European Commission HORIZON 2020 framework.

[» read more](#)

16.07.2015 From:ANSTO, Australia

Deadline for Neutron Scattering and Deuteration Proposals at the OPAL Reactor

Proposals at the OPAL Neutron Beam Facility (both cold- and thermal-neutron instruments) and National Deuteration Facility are now open.

[» read more](#)

16.07.2015 From:ENSA

Start

11:02 19/08/2015

Neutronsources.org

Your entry into the neutron world

Neutron centres

Research centres worldwide use neutrons as probes to investigate diverse properties of a wide range of materials.

Neutron associations support scientists who perform neutron research. These associations can be organised by country or be a joint collaboration between different countries.

Here you can find a dedicated webpage with information about each research centre and neutron association worldwide. Please browse them by continent through the tabs above or by clicking on the map below.



Sources with significant user programmes

Europe

Reactors

- [Institut Laue Langevin – ILL \(France – *member countries or collaborations only*\)](#)
- [Heinz Maier-Leibnitz Zentrum – MLZ \(Germany\)](#)
 - Julich Centre for Neutron Science – JCNS
 - Forschungs-Neutronenquelle Heinz Maier-Leibnitz - FRM-II
- [Laboratoire Leon Brillouin – LLB \(France\)](#)
- [Helmholtz-Zentrum Berlin – HZB \(Germany\)](#)
- [Budapest Neutron Centre – BNC \(Hungary\)](#)
- [Nuclear Physics Institute – NPI \(Czech Republic\)](#)

Spallation sources

- [ISIS \(UK\)](#)
- [Swiss Spallation Neutron Source – SINQ \(Switzerland\)](#)
- [European Spallation Source – ESS \(Sweden – *under construction*\)](#)

NMI3

ILL (France)

ILL :: Neutrons for science : The world's flagship centre for neutron science - Internet Explorer

https://www.ill.eu/

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ABOUT ILL PRESS AND NEWS SCIENCE & TECHNOLOGY USERS INSTRUMENTS & SUPPORT REACTOR, ENVIRONMENT & SAFETY INDUSTRY CAREERS

More than simply neutrons

NEUTRONS FOR SCIENCE
Welcome to the Institut Laue-Langevin
The world leader in neutron science and technology

The Institut Laue-Langevin is an international research centre based in Grenoble, France.
At the leading edge of neutron science and technology, it operates one of the most intense neutron sources in the world. [\[more\]](#)

To know more about ILL, see the FAQ

Site entrance
The site entrance is now located at 71 avenue des Martyrs. See interactive map of the site below, and [more information here.](#)

New brochure on 'Neutrons and energy'
The main challenge for the COP21 conference in Paris next December is the transition to a lower-carbon economy. To combat global warming we need more efficient means of harnessing natural energy. The solutions often involve advanced materials with complex structures - and to understand these we need neutrons and neutron technology.
You can find examples of the ILL's work in this domain in its recently published "Neutrons and energy" brochure.

Colloquia at ILL
The ILL runs a colloquium series at which prestigious speakers are asked to give exciting and accessible talks of general interest to scientists having a wide range of backgrounds. In the past, ILL colloquia have included the Astronomer Royal, the editor of Nature or Hélène Langevin-Joliot.
More information on past and future colloquia [here.](#)

News
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Scientific news
03.08.15 Solving a long-standing atomic mass difference puzzle paves way to the neutrino mass [\[more\]](#)
05.08.15 Superiorion conductor for fuel cells
An alternative material for use in fuel cells has been probed by the ILL. A publication in Physical... [\[more\]](#)
08.07.15 Sizing up for spintronics
Neutrons have been used to directly observe the behaviour of tiny magnetic 'chains' that could find... [\[more\]](#)

General information
18.06.15 Revised 2015 reactor schedule [\[more\]](#)
25.05.15 EU supports the neutron science community: SINE2020 granted [\[more\]](#)

ILL general presentation film

Start

10:26 29/08/2015

ILL (France)

The Yellow Book 2008 - Internet Explorer

https://www.ill.eu/fileadmin/users_files/Other_Sites/YellowBook2008CDRom/index.htm

ILL :: Neutrons for science : Th... The Yellow Book 2008

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The Yellow Book 2008

Guide to Neutron Research Facilities



C O N T E N T S

- Foreword
- The high flux reactor
- The ILL instruments:**
 - Elastic Scattering Instruments**
 - Powder diffractometers
 - Single crystal diffractometers
 - Large-scale structure diffractometers
 - Reflectometers
 - Inelastic Scattering Instruments**
 - Time-of-flight spectrometers
 - High resolution spectrometers
 - Three-axis spectrometers
 - Nuclear and Particle Physics Instruments**
 - Nuclear and Particle Physics instruments
- User Programme
 - Computers and Computing
 - Chemistry and Biology Laboratories
 - Sample Environment
 - Advanced neutron tools
 - Safety Regulation
 - Partnerships

Start

10:30 29/08/2015

ILL (France)

https://www.ill.eu/fileadmin/users_files/Other_Sites/YellowBook2008CDRom/page/pg.htm?rub=1_3 - Internet Explorer


https://www.ill.eu/fileadmin/users_files/Other_Sites/YellowBook2008CDRom/page/pg.htm?ru

ILL :: Neutrons for science : Th... ill.eu

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The Yellow Book 2008  Contents > The ILL Instruments * If pdf file doesn't open, click here

Experimental facilities at the ILL

Neutron guide hall ILL 22

Reactor hall Inclined guide H4

Reactor hall ILL 5 Experimental level (C)

Reactor operational level (D)

Turbine wheel

Reactor

HCHN

BERT

ECM







UCEN

MAMBO

Neutron guide hall - ILL 7 Vercors side (WEST)

Neutron guide hall - ILL 7 Chartreuse side (EAST)

Layout

Start      

10:29 29/08/2015

MLZ (Germany)

Home - MLZ - Heinz Maier-Leibnitz Zentrum - Internet Explorer

MLZ http://www.mlz-garching.de/englisch

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MLZ Heinz Maier-Leibnitz Zentrum
Neutrons for Research, Industry and Medicine

Collaborating Institutes
Neutron source FRM II
Getting to MLZ
Phone Book
Imprint

Home Search Deutsch

MLZ is a cooperation between:

About MLZ News & Media Neutron Research Instruments Science & Projects Industry & Medicine User Office

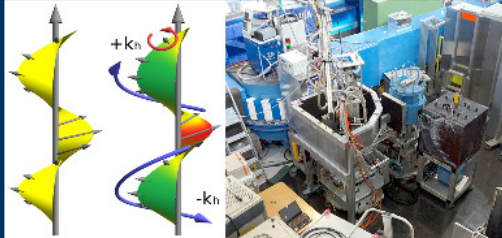
TUM
Technische Universität München

Helmholtz-Zentrum Geesthacht
Zentrum für Material- und Energieforschung

JÜLICH
FORSCHUNGSZENTRUM

29.08.2015 Source: Forschungs-Neutronenquelle Heinz Maier-Leibnitz

Neutrons decrypt the dynamics of magnetic helices



Manganese silicon is the preferred crystal of scientists going in for magnetic research: it can be manufactured for some time as relatively large single crystal, and is particularly suited to investigate the magnetic properties. Now theoretical and experimental physicists from the TU Munich, the MLZ and the University of Cologne managed to pull off a special coup with this material.

[read more](#)

Events

Conference
35th Symposium on Dynamical Properties of Solids (DyProSo2015)
13.09.2015 - 17.09.2015

School
MATRAC Schools - Application of Neutrons and Synchrotron Radiation in Engineering Materials Science
21.09.2015


Workshop
JCNS Workshop 2015
05.10.2015 - 08.10.2015

Workshop
Soft Matter & Neutrons GO Energy
08.10.2015 - 09.10.2015

[Show all](#)

28.08.2015 Source: ESS, European Spallation Source, Lund, Sweden

Brilliant Future for Neutron Research



As of today, the European Union rises the neutron source European Spallation Source (ESS) in Lund, Sweden, which is under construction, to a European Research Infrastructure Consortium (ERIC).

Third edition of "Experimental facilities" available

The essential guide for all users and those aspiring to be!

MLZ

Start

10:32
29/08/2015

MLZ (Germany)

Instruments - MLZ - Heinz Maier-Leibnitz Zentrum - Internet Explorer

MLZ http://www.mlz-garching.de/instruments

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MLZ Heinz Maier-Leibnitz Zentrum Collaborating Institutes

MLZ Instrument Suite

- FZJ
- TUM
- HZG
- HZG/TUM
- MPG
- FZJ/TUM

FRM

RESEDA SPHERES MARIA DNS MIRA PANDA ANTARES STRESS-SPEC TRISP

SANS-1 PGAA KWS-1 KWS-2 REFSANS TOFTOF J-NSE KWS-3 KOMPASS BIODIFF NEPOMUC UCN MEDAPP PUMA NECTAR POLI HEIDI RESI SPODI

MEPHISTO SAPHIR POWTEX TOPAS TRISP EDM

Neutron Guide Hall West Experimental Hall Neutron Guide Hall East

MLZ Instruments according to partners (FZJ - Forschungszentrum Jülich, TUM - Technische Universität München, HZG - Helmholtz-Zentrum Geesthacht, MPG - Max Planck Society)

Start

10:38 29/08/2015

LLB (France)

Laboratoire Léon Brillouin - Internet Explorer

http://www-llb.cea.fr/en/

Laboratoire Léon Brillouin

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IRAMIS | CIMAP | LSI | LIDYL | NIMBE | SPEC | webmail : intra - extra

Laboratoire Léon Brillouin
UMR12 CEA-CNRS
Bât. 563 CEA Saclay
91191 Gif sur Yvette Cedex
France
llb-sec@cea.fr

cea cnrs

Welcome Beam time Research Instrumentation Education Neutron links

IRAMIS / llb /

Discover the LLB ...

News ...

- Structural stability of anhydrous proton conducting $SrZr_{0.9}Er_{0.1}O_{3-x}$ perovskite ceramic vs. protonation/deprotonation cycling: Neutron diffraction and Raman studies
- ENSA new "Neutrons for Science and Technology" brochure
- Future of the French neutron source LLB-Orphée.

Important Meetings Schools and Conferences

Aug. 30th 2015 to Sep. 04th 2015 [Conférence CEA](#) [Zaragoza, Espagne](#)
European Conference on Neutron Scattering 2015 (Saragosse -Espagne) »
[PDF](#)

Oct. 05th 2015 to Oct. 06th 2015 [Conférence CEA](#) [Evian les Bains, Haute Savoie, France](#)
Neutron Imaging and tomography: New applications and developments »
Laboratoire Léon Brillouin
<http://www.sth.asso.fr/jdn/site-jdn-23/imaging-wor...>
[JDNImagingWorkshop.pdf \(2.3 Mo\)](#)

The LLB Phone book by the CNRS
RSS links

Headlines

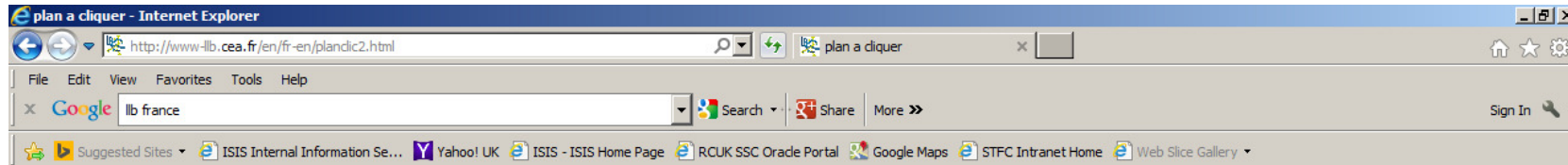
Agenda

- European Conference on Neutron Scattering 2015 (Saragosse -Espagne)
Conférence CEA
Sunday, Aug 30, 2015, 14h00
Plus ...

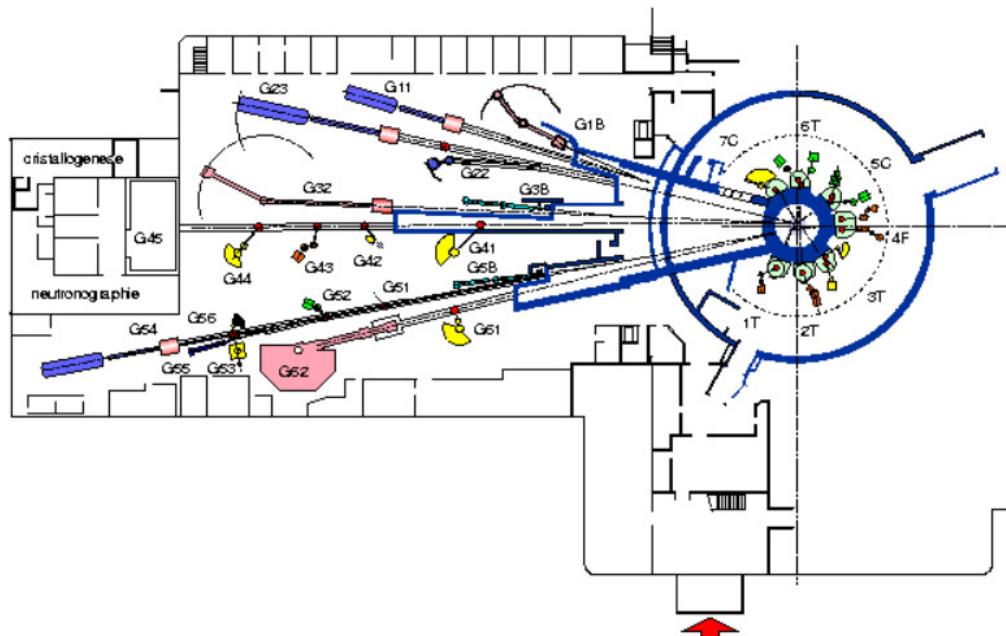
Start

10:39
29/08/2015

LLB (France)



IMPLANTATION GENERALE DES SPECTROMETRES



HZB (Germany)

The screenshot shows the HZB website in an Internet Explorer browser window. The address bar displays the URL https://www.helmholtz-berlin.de/index_en.html. The search bar contains the text "hzb germany". The website header features the HZB logo (Helmholtz Zentrum Berlin) and navigation links for Sitemap, Contact, Imprint, and My Intranet. A search bar is present with the placeholder text "enter search item, press return" and a dropdown menu for "all sources". Below the header is a horizontal menu with tabs for Overview, Neutron and photon source, Research, User Access, Offers, News, and Media Centre. The main content area includes a large photograph of the Adlershof building, a text block titled "BESSY II" describing the Berlin-based electron storage ring, and a "Quick Access for Visitors" sidebar with dropdown menus for Users Information, Industry and Public Institutions, Press Information, Vacancies, Proton Therapy, Visitors, Students and PhD, Perspective, and Research for Society. On the left, there is a "Social Media" section with links to HZBde Facebook, HZBde Twitter, HZB Youtube, RSS, HZB Instagram, and HZBzlog. Below this is a "Aktuelle Tweets @HZBde" section. The central text area contains a "Welcome to the Helmholtz-Zentrum Berlin" section with a paragraph about the center's mission and a paragraph about its research facilities (BER II and BESSY II). To the right, there is a "Media Centre" section with a grid of video thumbnails and a link to browse and download materials. The browser's taskbar at the bottom shows the Start button, several application icons, and the system tray with the date 29/08/2015 and time 10:43.

HZB (Germany)

Instruments BER II - Internet Explorer

https://www.helmholtz-berlin.de/quellen/ber/instruments-neutrons/index_en.html

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Google hzb germany

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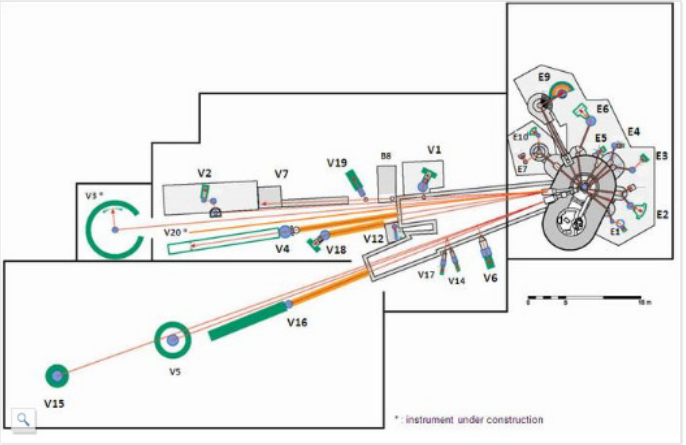
SiteMap Contact Imprint My Intranet

Complex neutron experiments under extreme conditions at BER II

HZB offers access to a great variety of **neutron instruments** for complex experiments under extreme conditions. Both thermal and cold neutrons are available. Instruments provided with thermal neutrons are located in the **Experimental Hall**, instruments provided with cold neutrons are located in the **Neutron Guide Hall**. An exception is the diffractometer EXED in the Neutron Guide Hall, which can be operated both with thermal and cold neutrons.

Users who are unsure which is the most appropriate **instrument** for their experiment should contact the User Office for help.

In order to achieve those extreme conditions, HZB is placing a special emphasis on **sample environment** for e.g. high magnetic fields, high pressures, high to ultra low temperatures – and combinations thereof.



Floorplan BER II

* instrument under construction


Downloads

- [Floorplan 2011](#) (PDF, 637 KB)
- [the complete BENSIC instrumentation brochure \(April 2007\)](#) (PDF, 6 MB)

Beamtime Coordination

Dr. Astrid Brandt

- [\(030\) 8062-42169](tel:(030)8062-42169)
- [\(030\) 8062-14732](tel:(030)8062-14732)
- [Email](#)



Links

- [User Access](#)
- [Sample Environment](#)
- [Badge](#)

Start

10:44 29/08/2015

BNC (Hungary)

Budapest Neutron Centre ...for research, science and innovation! | Association of the KFKI Rese - Internet Explorer

http://www.bnc.hu/

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BNC
Budapest Neutron Centre

Budapest Neutron Centre ...for research, science and innovation!
Association of the KFKI Research Institutes Centre for Energy Research – Wigner Research Centre for Physics

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- Gallery
- Accommodation
- How to reach KFKI Campus/BNC
- Restaurants

CONTACT

Start

10:49
29/08/2015

BNC (Hungary)

Instruments | Budapest Neutron Centre ...for research, science and innovation! - Internet Explorer

http://www.bnc.hu/?q=node/7

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PGAA; Prompt Gamma Activation Analysis

REF; Polarised Beam Neutron Reflectometer

GINA; Polarized Reflectometer

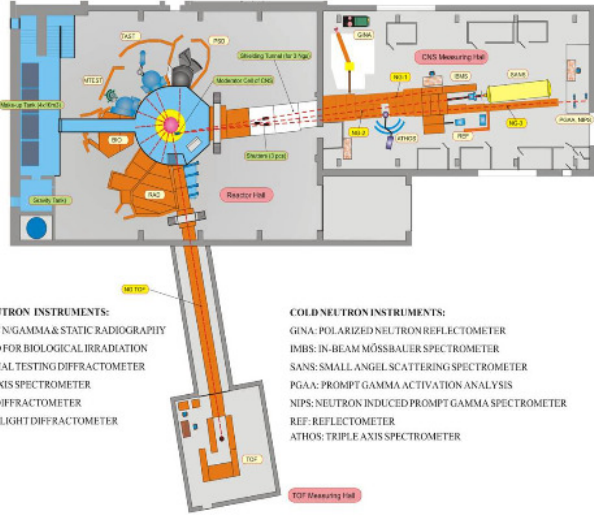
NRAD; Dynamic n/y Radiography, Static Radiography



ADMINISTRATOR

Request new password

in



THERMAL NEUTRON INSTRUMENTS:
RAD: DYNAMIC N/GAMMA & STATIC RADIOGRAPHY
BIO: PORT USED FOR BIOLOGICAL IRRADIATION
MTST: MATERIAL TESTING DIFFRACTOMETER
TAS: TRIPLE AXIS SPECTROMETER
PSD: POWDER DIFFRACTOMETER
TOF: TIME-OF-FLIGHT DIFFRACTOMETER

COLD NEUTRON INSTRUMENTS:
GINA: POLARIZED NEUTRON REFLECTOMETER
IMBS: IN-BEAM MÖSSBAUER SPECTROMETER
SANS: SMALL ANGLE SCATTERING SPECTROMETER
PGAA: PROMPT GAMMA ACTIVATION ANALYSIS
NIPS: NEUTRON INDUCED PROMPT GAMMA SPECTROMETER
REF: REFLECTOMETER
ATHOS: TRIPLE AXIS SPECTROMETER

Start | 10:50 29/08/2015

NPI (Czech Republic)

The screenshot shows the website of the Nuclear Physics Institute, ASCR, Department of Neutron Physics. The browser window is titled "About ONF - Internet Explorer" and the address bar shows "http://neutron.ujf.cas.cz/". The search bar contains "npi czech republic". The website header includes the NPI logo, the text "Nuclear Physics Institute, ASCR Department of Neutron Physics", and a search bar. A navigation menu is located below the header, with options: HOME, NEUTRON PHYSICS, NUCLEAR ANALYTICAL METHODS, EXPERIMENTAL FACILITIES, CONTACTS, PROJECTS, EVENTS, and LINKS. The main content area is titled "Department of Neutron Physics" and contains a "NEWS" section with a link to "ESS Science Symposium 2012". Below the news section are sections for "ACCELERATORS" (listing Tandatron) and "NEUTRON INSTRUMENTS" (listing Research reactor LVR-15, HK3 - Neutron Analytical Methods, HK4 - Strain Scanner, MEREDIT - Powder Diffraction, MAUD - High Resolution SANS, HK3b - Neutron Optics, and HK9 - Strain Diffractometer). The "Department of Neutron Physics" section also contains text about the department's activities and research directions, including "Fundamental and Applied Research with Thermal Neutrons" and "Nuclear Analytical Methods with Charged Particles". The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the date and time "17:13 29/08/2015".

Internet Explorer window: About ONF - Internet Explorer
Address bar: http://neutron.ujf.cas.cz/
Search bar: npi czech republic

Website Header:
Nuclear Physics Institute, ASCR
Department of Neutron Physics
THE ACADEMY OF SCIENCES OF THE CZECH REPUBLIC
HOME | INTRANET | WEBMAIL | SITE MAP

Navigation Menu:
HOME | NEUTRON PHYSICS | NUCLEAR ANALYTICAL METHODS | EXPERIMENTAL FACILITIES | CONTACTS | PROJECTS | EVENTS | LINKS

Department of Neutron Physics

NEWS

ESS Science Symposium 2012
Physical simulations of processes in engineering materials with in-situ neutron diffraction/imaging.
November 15-16, 2012, Prague, Czech Republic
Read more....

ACCELERATORS

Tandatron

NEUTRON INSTRUMENTS

Research reactor LVR-15
HK3 - Neutron Analytical Methods
HK4 - Strain Scanner
MEREDIT - Powder Diffraction
MAUD - High Resolution SANS
HK3b - Neutron Optics
HK9 - Strain Diffractometer

Department of Neutron Physics

The activity of the Neutron Physics Department has been focusing basically in two directions:

- Fundamental and Applied Research with Thermal Neutrons at the Reactor LWR-15
- Nuclear Analytical Methods with Charged Particles at the Van de Graaff and Tandatron accelerators

Fundamental and Applied Research with Thermal Neutrons

The neutron research has been carried out at five horizontal beam channels of the reactor LVR-15 which are hired at the Research Centre Řež, Ltd. **Scattering of neutrons** is used to study structure of materials in various size scales, from ordering of atoms in crystal lattice to microscopic heterogeneities on nano- and microscopic scales. High penetration of neutrons in most materials permits to carry out these tests non-destructively in the bulk and/or inside special sample environment (low and high temperatures, mechanical load). **Nuclear reactions** of neutrons with matter are employed to analyze concentration profiles of light elements in solids. Our experimental facilities are opened to external users. Neutron Physics Laboratory participates in the *Transnational Access to Large Facilities* programme in the frame of FP7 NMI3 project where we have offered to European neutron community 5 experimental facilities: Neutron strain scanning, Small-angle neutron scattering, Neutron depth profiling and Neutron activation analysis and Radiative thermal neutron capture.

Nuclear Analytical Methods with Charged Particles

Two electrostatic accelerators, old Van de Graaff and new Tandatron 4130 MC are used for modification and characterization of micro- a nano structured materials. Installation of new analytical devices in the Tandatron laboratory is in progress. The RBS-channelling device for analyses of crystalline materials and ERDA-TOF device for depth profiling of light elements were put into routine operation. Ion microprobe, unique in CR, was installed in 2009. The Tandatron based device for high energy ion implantation has been in routine use. The research activities of the group has mainly been concentrated on preparation, modification and characterization of polymer-metal composites (collaboration with Institute of Chemical technology-Prague, the University of J.E Purkyně-Usti nad Labem and Kazan Physical-Technical Institute-Russia), chalcogenide glasses (University of Pardubice), optical coatings (Institute of Physics AS), B-C-N-Si based hard coatings (University of West Bohemia), bioactive materials (Institute of Physiology AS), diamond-like and siloxan based coatings (Masaryk University, TU Brno). Other activities include the study of diffusion of water solutions in minerals (Nuclear research Institute), development of ion beam based analytical techniques (collaboration with FZR Rossendorf-Germany) and testing of position sensitive detectors (Institute of Technical and Experimental Physics-Prague).

Windows taskbar: Start, application icons, system tray (17:13 29/08/2015)

ISIS (UK)

ISIS - ISIS Home Page - Internet Explorer

http://www.isis.stfc.ac.uk/

ISIS - ISIS Home Page

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Go to low graphics version | SHARE Science & Technology Facilities Council

Science & Technology Facilities Council
ISIS

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Backstage Science : Muons

ISIS is a world-leading centre for research in the physical and life sciences at the STFC Rutherford Appleton Laboratory near Oxford in the United Kingdom. Our suite of neutron and muon instruments gives unique insights into the properties of materials on the atomic scale.

We support a national and international community of more than 3000 scientists for research into subjects ranging from clean energy and the environment, pharmaceuticals and health care, through to nanotechnology and materials engineering, catalysis and polymers, and on to fundamental studies of materials.

News and Events

ISIS Call for Studentships
Monday 10 August 2015
The ISIS Call for Studentships is now open!

ISIS opens its doors!
Monday 13 July 2015
The Harwell Open Day on Saturday 11 July saw around 15,000 people visiting the site, 4,300 of whom visited ISIS! They were treated to a liquid nitrogen show, the chance to make slime, grow cental gardens and build their favourite cental

Science at ISIS

Staying safe in the skies
Monday 10 August 2015
It may surprise you to learn just how much ISIS has contributed to airline safety over the last few years, so here are some examples of how science is helping to keep us safe.

ISIS features on the cover of the journal of Materials Chemistry A
Thursday 06 August 2015
The cover picture on the most recent issue of Journal of Materials Chemistry A features a paper presenting results from an experiment carried out at ISIS using the POLARIS instrument.

Start

10:54
29/08/2015

ISIS (UK)

ISIS - Instruments - Internet Explorer

http://www.isis.stfc.ac.uk/instruments/instruments2105.html

ISIS - Instruments

File Edit View Favorites Tools Help

Google npi czech republic Search Share More >> Sign In

Suggested Sites ISIS Internal Information Se... Yahoo! UK ISIS - ISIS Home Page RCUK SSC Orade Portal Google Maps STFC Intranet Home Web Slice Gallery

Go to low graphics version SHARE Science & Technology Facilities Council

Science & Technology Facilities Council
ISIS

About Science **Instruments** Industry Groups People User office Apply for Beamtime Beam Status Vacancies

Home Instruments

Target Station 1 Target Station 2

Instruments by technique

Muon spectroscopy
Muons provide a complementary probe to neutrons, particularly in the areas of magnetism, superconductivity and charge transport.
Argus, Emu, Hifi, MuSR

Neutron diffraction
Neutron diffraction experiments determine the atomic and/or magnetic structure of a material. This technique can be applied to study crystalline solids, gasses, liquids or amorphous materials.
Gem, Engin-X, Hrpd, Nimrod, Osiris, Pearl, Polaris

Instruments by target

Muons
Argus, Deva, Emu, Hifi, MuSR

TS1
Alf, Crisp, Engin-X, Fires, Gem, Het, Hrpd, Ines, Iris, Loq, MAPS, MARI, Merlin, Osiris, Pearl, Polaris, Prisma, Rotax, Sandals, Surf, S/D, Tosca, Vesuvio

TS2
ChipIR, Exceed, IMAT, Inter, Larmor, Let, Lmx, Nimrod, Offspec, Polref, Sans2d, Wish, Zoom

Start

10:55
29/08/2015

ISIS (UK)

The screenshot shows a web browser window displaying the ISIS website. The browser's address bar shows the URL: <http://www.isis.stfc.ac.uk/apply-for-beamtime/newton-funding-for-indian-chinese-and-south-afric>. The search bar contains the text "isis newton fund". The website header includes the Science & Technology Facilities Council logo and the acronym "ISIS". A navigation menu contains links for "About", "Science", "Instruments", "Industry", "Groups", "People", "User office", "Apply for Beamtime", "Beam Status", and "Vacancies". The main content area features a section titled "Newton Funding for Indian, Chinese and South African researchers". The text in this section states: "ISIS has been awarded funds as part of the UK Government's Newton Fund to support researchers from China, India and South Africa to use ISIS. ISIS is able to support a limited number of experiments each round from users from these three countries. For supported experiments we can fund up to two researchers to come to ISIS for the experiment, and will pay for economy flights, accommodation and food costs for those researchers. Accommodation arrangements should be made through the ISIS user office, who will also provide a per diem amount for food; claims for flights should also be made through the user office and require supporting receipts. To apply for Newton Funding for an ISIS experiment, please tick the box on page 4 of the ISIS online proposal system saying that you would like funding when you are creating your beamtime application (this mechanism will be available from ISIS round 16/2 onwards – for experiments approved before then, please contact [Philip King](#) to ask about the possibility of funding). Details of the UK Government's Newton Fund can be found [online](#)." Below the text is a "SHARE" button with social media icons. A "Skip to Top" link is also present. The footer contains a "Browse Site" section with links to "Other STFC" (ASTeC, Central Laser Facility), "News" (ISIS Call for Studentships, ISIS opens its doors!), "Site Sections" (Home, About), and "Important Links" (Directions to ISIS, People). The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the date and time: 17:26, 29/08/2015.

SINQ (Switzerland)

Paul Scherrer Institut (PSI) :: Swiss Spallation Neutron Source - SINQ - Internet Explorer

http://www.psi.ch/sinq/

File Edit View Favorites Tools Help

Google sinq psi Search Share More >> Sign In

Suggested Sites ISIS Internal Information Se... Yahoo! UK ISIS - ISIS Home Page RCUK SSC Orade Portal Google Maps STFC Intranet Home Web Slice Gallery

HOME PAUL SCHERRER INSTITUT PSI

ABOUT PSI CONTACT MEDIA CORNER SITEMAP QUICKLINKS Search...


PUBLIC & MEDIA Explore the world of PSI SCIENTISTS & USERS For the scientific community INDUSTRY & THE ECONOMY Transfer and collaboration opportunities

SINQ

PSI Home » Research with Neutrons and Muons (NUM) » SINQ

EDUCATION & JOBS EVENTS INFORMATION MATERIAL EN

Instrumentation
Access to SINQ
SINQ Live
Safety Regulations
Publications
The Neutron Source
Contact



SINQ: The Swiss Spallation Neutron Source

Neutron scattering is one of the most effective ways to obtain information on both, the structure and the dynamics of condensed matter. A wide scope of problems, ranging from fundamental to solid state physics and chemistry, and from materials science to biology, medicine and environmental science, can be investigated with neutrons. Aside from the scattering techniques, non-diffractive methods like imaging techniques can also be applied with increasing relevance for industrial applications.

The spallation neutron source SINQ is a continuous source - the first of its kind in the world - with a flux of about 10^{14} n/cm²/s. Beside thermal neutrons, a cold moderator of liquid deuterium (cold source) slows neutrons down and shifts their spectrum to lower energies. These neutrons have proved to be particularly valuable in materials research and in the investigation of biological substances. SINQ is a user facility. Interested groups can apply for beamtime on the various instruments by using the SINQ proposal system.

Latest scientific SINQ highlights:

A new class of chiral materials hosting magnetic skyrmions beyond room temperature
Y. Tokunaga et al

Call for Proposals
Next submission deadline:
November 15, 2015, 23:59 (CET)
More Information

SINQ OPERATION STATUS

- Accelerator Status
- Experiment Schedule

NUM
LNS
LDM
SINQ operation

PSI User Facilities Newsletter
Current News from PSI photon, neutron and muon user facilities

Start [Icons] 10:56 29/08/2015

SINQ (Switzerland)

Paul Scherrer Institut (PSI) :: Instrumentation - Internet Explorer

http://www.psi.ch/sinq/instrumentation

File Edit View Favorites Tools Help

Google sinq psi Search Share More >> Sign In

Suggested Sites: ISIS Internal Information Se..., Yahoo! UK, ISIS - ISIS Home Page, RCUK SSC Orade Portal, Google Maps, STFC Intranet Home, Web Slice Gallery

HOME PAUL SCHERRER INSTITUT PSI

ABOUT PSI CONTACT MEDIA CORNER SITEMAP QUICKLINKS Search...

PUBLIC & MEDIA Explore the world of PSI | SCIENTISTS & USERS For the scientific community | INDUSTRY & THE ECONOMY Transfer and collaboration opportunities

SINQ

PSI Home » Research with Neutrons and Muons (NUM) » SINQ » Instrumentation

EDUCATION & JOBS EVENTS INFORMATION MATERIAL

EN

Instrumentation

Instrumentation

- Instrumentation
- Access to SINQ
- SINQ Live
- Safety Regulations
- Publications
- The Neutron Source
- Contact

Neutron Scattering and Imaging Instruments at SINQ

THICS HRPT NEUTRA POLDI MORPHEUS AMOR MuPAD BOA SANS-I SANS-II MARS ICON EIGER RITA-II DMC NARZISS ORION TASP FOCUS

Floor plan of the instruments located in the two SINQ halls.

Diffractionmeters

HRPT High resolution powder diffractometer (thermal neutrons)

FURTHER INFORMATION

- Information about SINQ sample environment equipment
- Information about SINQ computing, software, manuals and instrument control systems
- All methods offered at the PSI User Facilities, please make use of the filter options.

SINQ OPERATION STATUS

- Accelerator Status
- Experiment Schedule

User Contacts

- User Office
- DUO Login

PSI User Facilities Newsletter

Current News from PSI photon, neutron and muon user facilities

Open Positions

Start

10:56 29/08/2015

ESS (Sweden – under construction)

The screenshot shows the ESS website in an Internet Explorer browser window. The address bar displays <https://europeanspallationsource.se/>. The browser's search bar contains the text "ess". The website's header features the ESS logo (European Spallation Source) and a navigation menu with the following items: ABOUT ESS, SCIENCE & INSTRUMENTS, TECHNOLOGY, BUILDING ESS, CAREERS, and PARTNERS & INDUSTRY. Below the navigation menu are three icons: a gear for "Project", a flask for "Science", and three people for "Society". A large blue map of Europe is visible in the background of the header.

Quick Jump: [News](#) | [Partners](#) | [Science](#) | [Events](#) | [Procurement](#)

European Commission Establishes ESS as a European Research Infrastructure Consortium

AUG 20, 2015

European Spallation Source ERIC. Yesterday the EC in Brussels formally adopted its decision to establish the European Spallation Source as a European Research Infrastructure Consortium, or ERIC.

[Read more](#)

Take Note

- [View Current and Forthcoming Tenders](#)
- [Reports from the ESS Construction Site](#)

Latest News At ESS

- [operating facility for Delårsrapport](#)
- [neutron image, 100 \(1.5-07\), 008 \(LUCIFER\)](#)
- [Portrait of two men](#)
- [3D architectural rendering of the ESS building](#)

The Windows taskbar at the bottom shows the Start button, several application icons (including Internet Explorer and PowerPoint), and the system tray with the date and time: 10:58, 29/08/2015.

ESS (Sweden – under construction)

SAC Recommends Four New Instruments to be built at the European Spallation Source | ESS - Internet Explorer

https://europenspallationsource.se/article/sac-recommends-four-new-instruments-be-built-

File Edit View Favorites Tools Help

Google ess Search Share More >> Sign In

Suggested Sites ISIS Internal Information Se... Yahoo! UK ISIS - ISIS Home Page RCUK SSC Orade Portal Google Maps STFC Intranet Home Web Slice Gallery

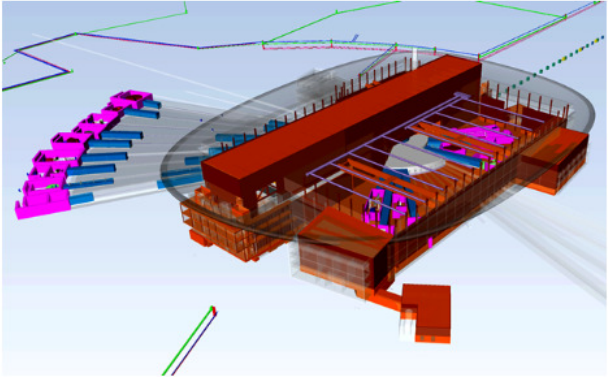
ESS EUROPEAN SPALLATION SOURCE

SEARCH Phone Book

ABOUT ESS SCIENCE & INSTRUMENTS TECHNOLOGY BUILDING ESS CAREERS PARTNERS & INDUSTRY

SAC Recommends Four New Instruments to be built at the European Spallation Source

JUN 16, 2015



The ESS Instrument Suite. The ESS peer-review instrument selection process nears conclusion as four new instrument proposals are recommended for inclusion within the facility's construction budget of 16 instruments.

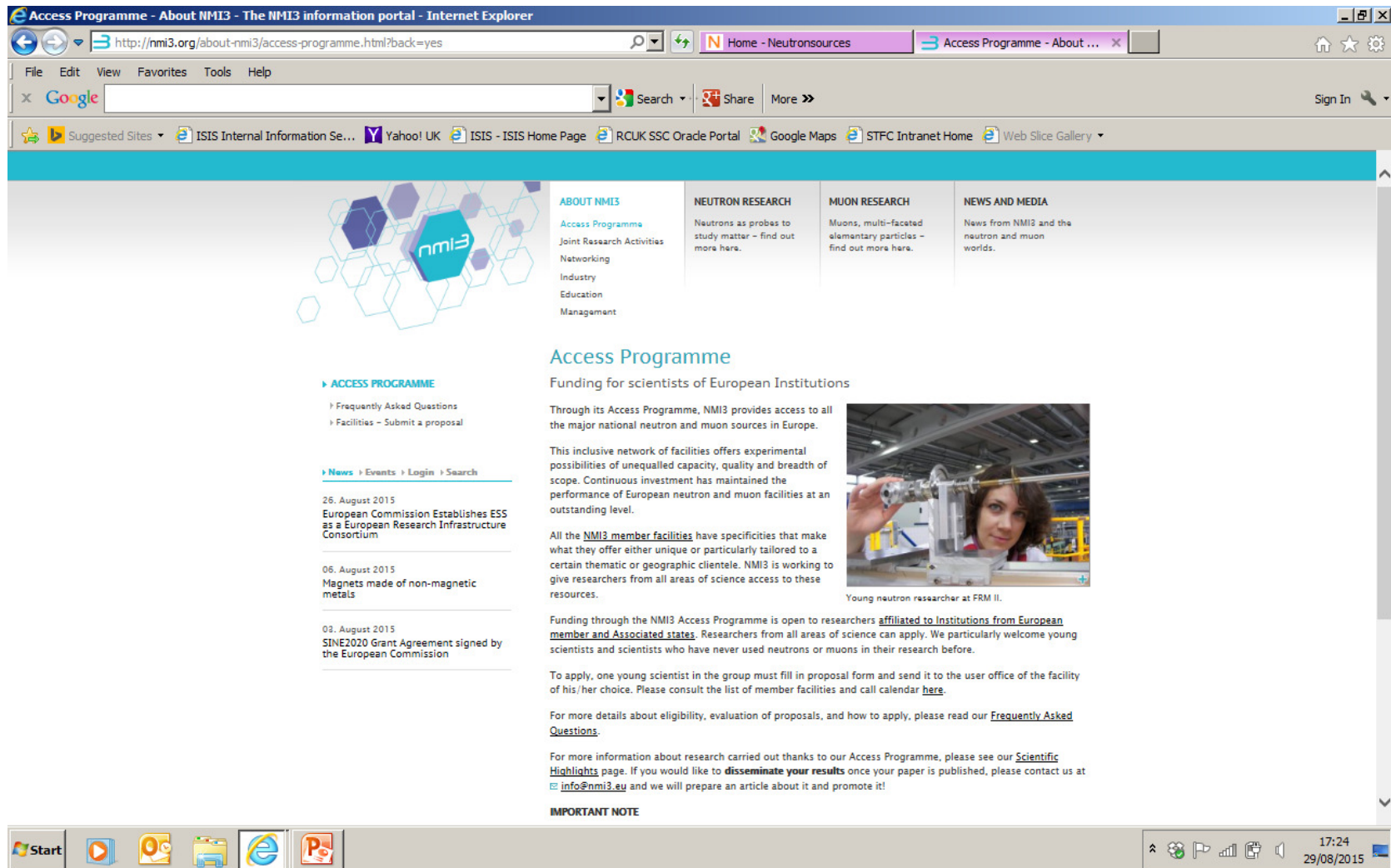
NEWS

- New Drug Carrier Aims to Treat Secondary Tumours of Breast Cancer
AUG 14, 2015
- BIFROST: A Prismatic Approach to Neutron Spectroscopy
AUG 12, 2015
- Dispersionless Spin Waves Provide Clues to Enigmatic Magnetic Ordering in Garnet Crystals
JUL 2, 2015
- Physics Underlying ESS 2015 Moderator Design Tested at J-PARC
JUL 1, 2015
- ESS and Chalmers University of Technology Sign Research MoU
JUN 29, 2015
- SAC Recommends Four New Instruments to be built at the European Spallation Source
JUN 16, 2015

Start

10:58 29/08/2015

NMI3 (European Access)



The screenshot shows the NMI3 website in an Internet Explorer browser window. The address bar displays the URL: <http://nmi3.org/about-nmi3/access-programme.html?back=yes>. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The search bar contains the Google logo and a search button. The browser's toolbar shows several suggested sites, including ISIS Internal Information, Yahoo! UK, ISIS - ISIS Home Page, RCUK SSC Orade Portal, Google Maps, STFC Intranet Home, and Web Slice Gallery. The website content is organized into a grid. On the left, there is a navigation menu with sections for 'ACCESS PROGRAMME' (including 'Frequently Asked Questions' and 'Facilities - Submit a proposal') and 'News' (with links to 'Events', 'Login', and 'Search'). The main content area features a large graphic of interconnected hexagons with 'nmi3' in the center. Below this, the 'Access Programme' section is titled 'Funding for scientists of European Institutions'. It describes the programme's goal to provide access to major national neutron and muon sources in Europe. A photograph of a young woman, identified as a 'Young neutron researcher at FRM II', is shown working with laboratory equipment. The text explains that the programme offers experimental possibilities of unequalled capacity, quality, and breadth of scope. It also mentions that all NMI3 member facilities have specificities that make them unique or particularly tailored to a certain thematic or geographic clientele. A section titled 'IMPORTANT NOTE' is visible at the bottom of the page. The browser's taskbar at the bottom shows the Start button and several application icons, including Internet Explorer, a media player, a folder, and a presentation software icon. The system tray in the bottom right corner shows the time as 17:24 on 29/08/2015.

Access Programme - About NMI3 - The NMI3 information portal - Internet Explorer

http://nmi3.org/about-nmi3/access-programme.html?back=yes

File Edit View Favorites Tools Help

Google Search Share More >> Sign In

Suggested Sites ISIS Internal Information Se... Yahoo! UK ISIS - ISIS Home Page RCUK SSC Orade Portal Google Maps STFC Intranet Home Web Slice Gallery

ABOUT NMI3

- Access Programme
- Joint Research Activities
- Networking
- Industry
- Education
- Management

NEUTRON RESEARCH

Neutrons as probes to study matter - find out more here.

MUON RESEARCH

Muons, multi-faceted elementary particles - find out more here.

NEWS AND MEDIA

News from NMI3 and the neutron and muon worlds.

ACCESS PROGRAMME

- Frequently Asked Questions
- Facilities - Submit a proposal

News Events Login Search

26. August 2015
European Commission Establishes ESS as a European Research Infrastructure Consortium

06. August 2015
Magnets made of non-magnetic metals

02. August 2015
SINE2020 Grant Agreement signed by the European Commission

Access Programme

Funding for scientists of European Institutions

Through its Access Programme, NMI3 provides access to all the major national neutron and muon sources in Europe.

This inclusive network of facilities offers experimental possibilities of unequalled capacity, quality and breadth of scope. Continuous investment has maintained the performance of European neutron and muon facilities at an outstanding level.

All the [NMI3 member facilities](#) have specificities that make what they offer either unique or particularly tailored to a certain thematic or geographic clientele. NMI3 is working to give researchers from all areas of science access to these resources.

Funding through the NMI3 Access Programme is open to researchers [affiliated to Institutions from European member and Associated states](#). Researchers from all areas of science can apply. We particularly welcome young scientists and scientists who have never used neutrons or muons in their research before.

To apply, one young scientist in the group must fill in proposal form and send it to the user office of the facility of his/her choice. Please consult the list of member facilities and call calendar [here](#).

For more details about eligibility, evaluation of proposals, and how to apply, please read our [Frequently Asked Questions](#).

For more information about research carried out thanks to our Access Programme, please see our [Scientific Highlights](#) page. If you would like to **disseminate your results** once your paper is published, please contact us at info@nmi3.eu and we will prepare an article about it and promote it!

Young neutron researcher at FRM II.

IMPORTANT NOTE

Start

17:24 29/08/2015

Americas

Reactors

- [NIST Centre for Neutron Research - NCNR \(USA\)](#)
- [High Flux Isotope Reactor – HFIR \(USA\)](#)
- [Canadian Neutron Beam Centre - CNBC \(Canada\)](#)

Spallation sources

- [Spallation Neutron Source – SNS \(USA\)](#)
- [Los Alamos Neutron Science Centre - LANSCE \(USA – *reduced user programme*\)](#)

NCNR (USA)

NIST Center for Neutron Research - Internet Explorer
Address bar: <https://www.ncnr.nist.gov/>
Search: ncnr nist

NIST Center for Neutron Research
-- a national resource for industry, universities, and government agencies

Coming to the NCNR?
[Click Here.](#)
[Visa question?](#)
[Logon to your NCNR-IMS account](#)

NCNR SiteMap

About the NCNR
[What We Do](#)
[Informal History](#)
[Staff](#)
[Annual Report](#)
[2015 Summer Schools](#)
• [Neutron Spectroscopy](#)
[Working at the NCNR](#)

Facility Information
[Live Data](#)
[Instrumentation](#)
[Instrument Contacts](#)
[Schedules](#)
[Center for High Resolution Neutron Scattering \(CHRNS\)](#)
 > [Education and Outreach](#)
[Sample Environment](#)
[NCNR Staff Forms](#)
[Sample Prep Labs](#)

User Information
[Planning Your Experiment](#)
[Obtaining BeamTime](#)
[Data Reduction/Analysis](#)
[Shipping Samples](#)
[Publishing Your Results](#)
[Financial Assistance](#)
[Travel & Lodging](#)
[NCNR User Group](#)

RECENT RESEARCH HIGHLIGHTS

CHRNS nSoft

Neutron beams reveal how two pieces of Parkinson's puzzle fit
[details](#)

From separation to transformation: metal-organic framework shows new talent
[details](#)

NIST helps cancer treatment drugs get past their sticking point
[details](#)
[C&E News item](#)

NEWS FOR NCNR USERS

NCNR Seminar Schedule

CALL FOR PROPOSALS
The new deadline for proposals for NCNR instrument time is June 16, 2015. Successful proposals will be allocated instrument time from September 2015 through March 2016.
[details](#)

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

IMPORTANT CHANGE!!
NEW ACCESS CONTROL POLICY
Starting July 21, 2014, driver's licenses from 7 states/territories will not be accepted as valid ID for NCNR access. Only US citizen users are affected.
[details](#)

INSTRUMENT DEVELOPMENT MEETING
A workshop on future directions for neutron instrument development for the benefit of the scientific community was held in Potomac, MD on Aug. 21-22, 2014.
[details](#)
[Executive Summary of outcome](#)

TRAINING FROM OTHER LABS
NIST now accepts basic radiation safety training from other U.S. neutron facilities in place of the NIST offered on-line training.
[details](#)

Windows taskbar: 11:00, 29/08/2015

NCNR (USA)

NIST Center for Neutron Research (NCNR) Instruments - Internet Explorer

https://www.ncnr.nist.gov/instruments/NCNRInstruments.html

File Edit View Favorites Tools Help

Google ncnr nist

Suggested Sites: ISIS Internal Information Se..., Yahoo! UK, ISIS - ISIS Home Page, RCUK SSC Orade Portal, Google Maps, STFC Intranet Home, Web Slice Gallery

NIST Center for Neutron Research

Home Instruments Science Experiments SiteMap

NIST Center for Neutron Research (NCNR) Instruments

Plan view of the NCNR Instruments

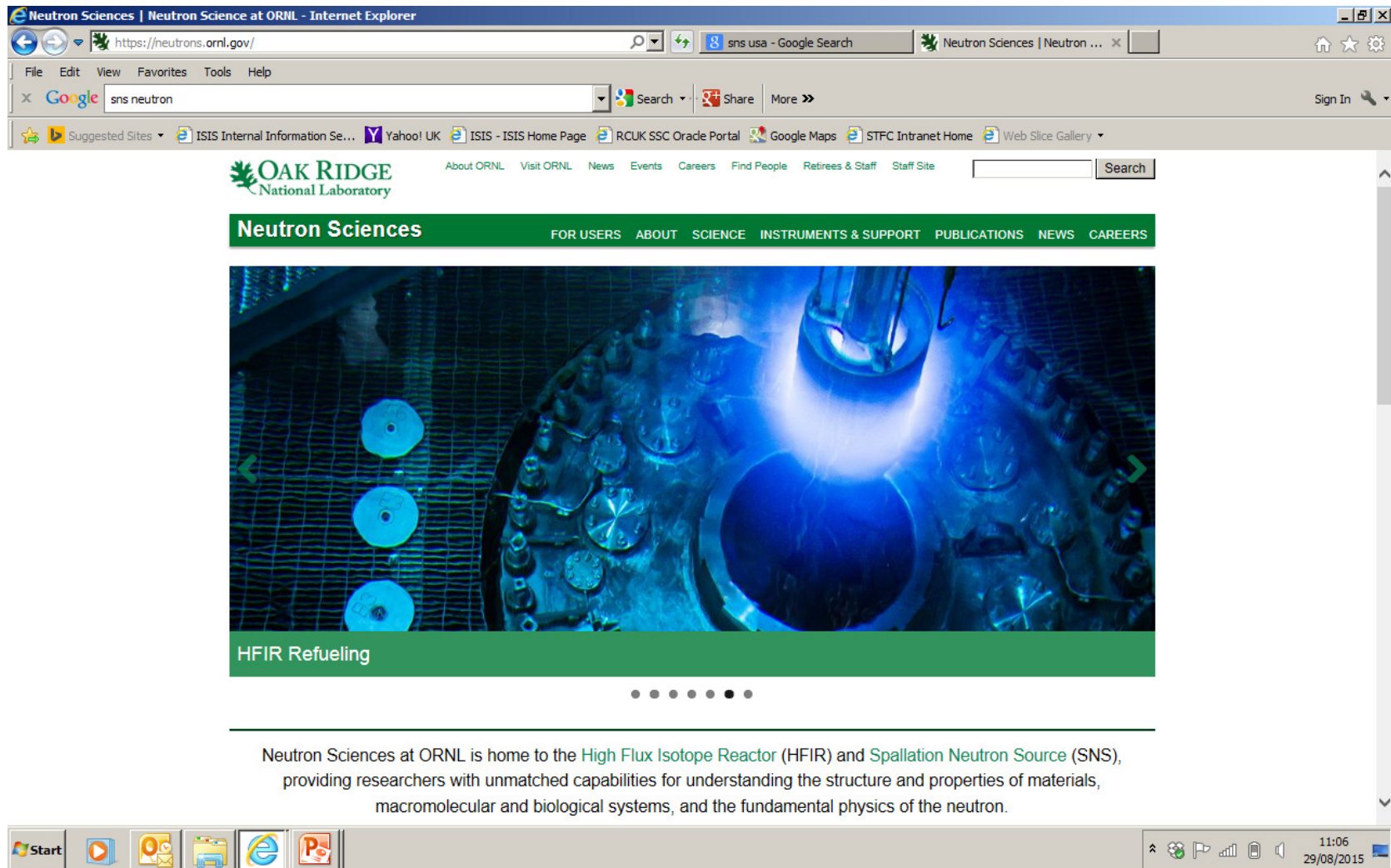
The diagram illustrates the layout of the NCNR instruments. A central neutron source is connected to various beamlines and instruments. The instruments are labeled as follows:

- BT9 MACS II
- BT8 DARTS
- BT7 3-AXIS
- BT1 HRPD
- BT5 USANS
- BT4 FANS
- BT2 NIF
- NGA
- NGBa
- NGC
- NGD
- NG1
- NG2
- NG3
- NG4
- NG5
- NG6
- NG7
- HOR REFL
- NIOFa
- NIOF
- DET
- CNDP
- PBR
- MAGIK
- PGAA
- HFBS
- DCS
- SPINS
- MDM
- PHYS
- NSE
- nSOFT
- aCORN
- NGB 30m SANS
- NG7 30m SANS

Start

11:01 29/08/2015

HFIR (USA)



The image is a screenshot of a web browser displaying the Neutron Sciences website at ORNL. The browser window shows the URL <https://neutrons.ornl.gov/> and a search bar with the text "sns neutron". The website header includes the Oak Ridge National Laboratory logo and a navigation menu with links for "FOR USERS", "ABOUT", "SCIENCE", "INSTRUMENTS & SUPPORT", "PUBLICATIONS", "NEWS", and "CAREERS". The main content area features a large image of the High Flux Isotope Reactor (HFIR) core during refueling, with a blue glow. Below the image is a green banner with the text "HFIR Refueling". A horizontal line separates this section from a paragraph of text: "Neutron Sciences at ORNL is home to the [High Flux Isotope Reactor \(HFIR\)](#) and [Spallation Neutron Source \(SNS\)](#), providing researchers with unmatched capabilities for understanding the structure and properties of materials, macromolecular and biological systems, and the fundamental physics of the neutron." The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the time 11:06 and date 29/08/2015.

HFIR (USA)

Neutron Science Instruments | Neutron Science at ORNL - Internet Explorer

https://neutrons.ornl.gov/instruments

sns usa - Google Search

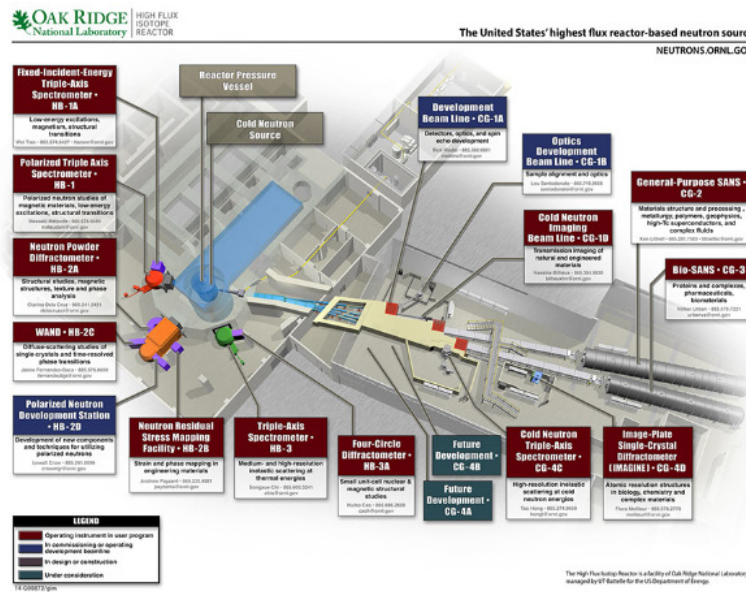
File Edit View Favorites Tools Help

Google sns neutron

Suggested Sites: ISIS Internal Information Se..., Yahoo! UK, ISIS - ISIS Home Page, RCUK SSC Orade Portal, Google Maps, STFC Intranet Home, Web Slice Gallery

Before submitting a proposal for a specific instrument, please contact the appropriate instrument scientist to make sure your research is feasible for that instrument.

Instrument Beam Line Layouts by Facility



Scattering Diffractometer
CG-3 BIO-SANS Biological Small-Angle Neutron Scattering Instrument
CG-4C CTAX Cold Neutron Triple-Axis Spectrometer
CG-4D IMAGINE Laue Diffractometer
HB-1 PTAX Polarized Triple-Axis Spectrometer
HB-1A FIE-TAX Fixed-Incident-Energy Triple-Axis Spectrometer
HB-2A POWDER Neutron Powder Diffractometer
HB-2B NRSF2 Neutron Residual Stress Mapping Facility
HB-2C WAND Wide-Angle Neutron Diffractometer
HB-3 TAX Triple-Axis Spectrometer
HB-3A FOUR-CIRCLE Four-Circle Diffractometer

SNS Instruments

CNBC (Canada)

The screenshot shows the Canadian Neutron Beam Centre website in Internet Explorer. The browser's address bar displays the URL <http://www.cnl.ca/en/home/facilities-and-expertise/cnbc.aspx>. The search bar contains the text "CNBC neutron". The website header includes the CNL logo and the text "Canadian Nuclear Laboratories | Laboratoires Nucléaires Canadiens". A navigation menu contains links for "About CNL", "Facilities & Expertise", "Centres of Excellence", "Commercial", "Work With Us", "Environmental Stewardship", and "News & Publications". The main content area features a large photograph of researchers in maroon lab coats. Below the photo is the heading "Canadian Neutron Beam Centre" and a paragraph describing the center's role in materials research. A sidebar on the right lists "Facilities & Expertise" with sub-links for "All Facilities", "Canadian Neutron Beam Centre", "National Research Universal", and "ZED-2 Research Reactor". The footer shows the Windows taskbar with the Start button and system tray icons, including the date and time "17:08 29/08/2015".

Canadian Nuclear Laboratories | Laboratoires Nucléaires Canadiens

Franglais Contact Additional Resources

Enter keyword Search

Home » Facilities & Expertise » Canadian Neutron Beam Centre

Canadian Neutron Beam Centre

Share this [f](#) [t](#) [e](#) [+](#) [2](#)

The Canadian Neutron Beam Centre (CNBC) is a unique and versatile element of Canada's research infrastructure. The CNBC enables academia, government and industry to use neutron beams as tools for world-class materials research, providing new understanding of materials and improving products for businesses. Each year, over 200 scientists, engineers, and students participate in research that depends on access to the CNBC's six neutron beamlines.

Why work with us

Improved safety and reliability, reduced costs, or opening of markets are a few of the benefits industrial clients have gained from employing neutron beams as part of their research

Facilities & Expertise

- All Facilities
- Canadian Neutron Beam Centre
- National Research Universal
- ZED-2 Research Reactor

Contact

Email: cnbc@cnl.ca

Start 17:08 29/08/2015

CNBC (Canada)

http://www.cnl.ca/site/media/Parent/Spectrometers_Eng.pdf - Internet Explorer

http://www.cnl.ca/site/media/Parent/Spectrometers_Eng.pdf Canadian Neutron Beam Centre cnl.ca

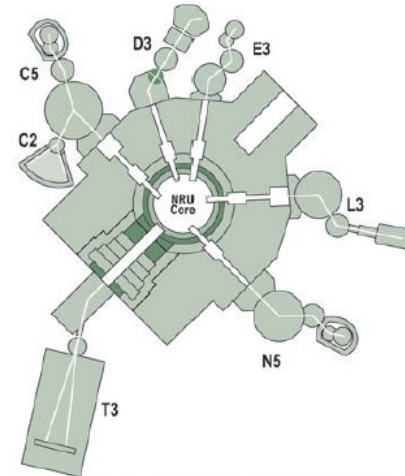
File Edit Go to Favorites Help

Google Search Share More >> Sign In

Suggested Sites ISIS Internal Information Se... Yahoo! UK ISIS - ISIS Home Page RCUK SSC Orade Portal Google Maps STFC Intranet Home Web Slice Gallery

Probing Materials for Science and Industry
Canadian Neutron Beam Centre
www.neutrons.ca

Neutron Spectrometers



The diagram shows a central reactor core labeled 'NRU Core'. Seven instruments are positioned around the core, each connected by a beam line. The instruments are labeled as follows: C5 (top left), C2 (middle left), D3 (top), E3 (top right), L3 (right), N5 (bottom right), and T3 (bottom left).

The location of seven neutron beam instruments on the main floor of the NRU reactor is shown. Each instrument is identified by the designation of the reactor beam hole on which it is located. More information on each instrument is provided below.

[Source and Main Beam Specifications](#)

[C2 High Resolution Powder Diffractometer](#)

[C5 Polarized Beam Triple-Axis Spectrometer](#)

Start [Taskbar icons] 17:11 29/08/2015

SNS (USA)

Neutron Sciences | Neutron Science at ORNL - Internet Explorer

https://neutrons.ornl.gov/

sns usa - Google Search

Neutron Sciences | Neutron ... X

File Edit View Favorites Tools Help

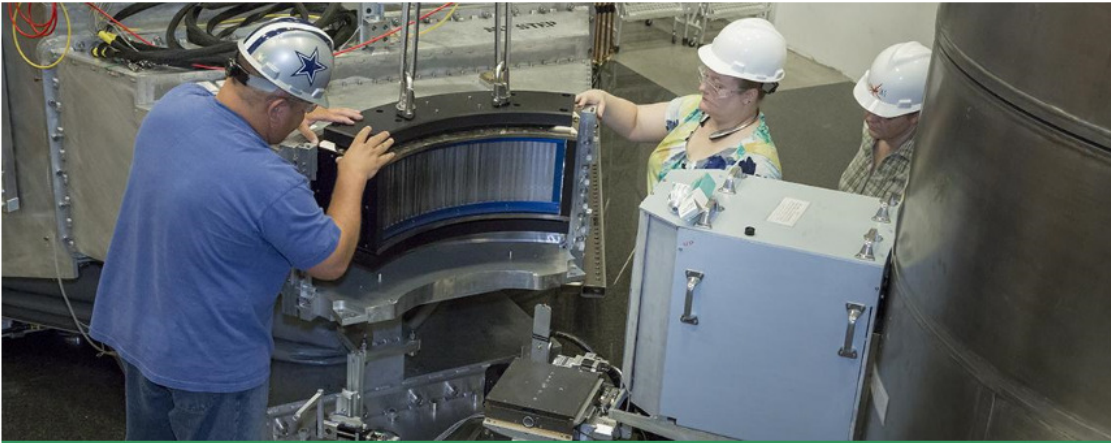
Google sns neutron Search Share More >> Sign In

Suggested Sites ISIS Internal Information Se... Yahoo! UK ISIS - ISIS Home Page RCUK SSC Orade Portal Google Maps STFC Intranet Home Web Slice Gallery

OAK RIDGE
National Laboratory

About ORNL Visit ORNL News Events Careers Find People Retirees & Staff Staff Site Search

Neutron Sciences FOR USERS ABOUT SCIENCE INSTRUMENTS & SUPPORT PUBLICATIONS NEWS CAREERS



HYSPEC Gets High-Performance Upgrade

Neutron Sciences at ORNL is home to the [High Flux Isotope Reactor \(HFIR\)](#) and [Spallation Neutron Source \(SNS\)](#), providing researchers with unmatched capabilities for understanding the structure and properties of materials, macromolecular and biological systems, and the fundamental physics of the neutron.

Start [Icons] 11:07 29/08/2015

SNS (USA)

Neutron Science Instruments | Neutron Science at ORNL - Internet Explorer

https://neutrons.ornl.gov/instruments

sns usa - Google Search

sns neutron

Suggested Sites: ISIS Internal Information Se..., Yahoo! UK, ISIS - ISIS Home Page, RCUK SSC Orade Portal, Google Maps, STFC Intranet Home, Web Slice Gallery

OAK RIDGE National Laboratory | SPALLATION NEUTRON SOURCE

World's most intense pulsed, accelerator-based neutron source
NEUTRONS.ORNL.GOV

Backscattering Spectrometer (BASIS) - BL-2
Dynamics of macromolecules, condensed matter systems, polymers, biology, chemistry, materials science

Nanoscale-Ordered Materials Diffractometer (NOMAD) - BL-1B
Liquids, solutions, glasses, polymers, nanocrystalline and partially ordered organic materials

Wide Angular-Range Chopper Spectrometer (WACS) - BL-1B
Atom-level dynamics in molecular science, chemistry, condensed matter, materials science

Fine-Resolution Fermi Chopper Spectrometer (SEQUOIA) - BL-17
Dynamics of complex fluids, quantum fluids, magnets, condensed matter, materials science

Ultra-Small-Angle Neutron Scattering Instrument (USANS) - BL-1A
Life sciences, polymers, materials science, earth and environmental sciences

Vibrational Spectrometer (VISION) - BL-16B
Vibrational dynamics in molecular systems, chemistry

Neutron Spin Echo Spectrometer (NSE) - BL-15
High-resolution dynamics in slow processes, polymers, biological macromolecules

Hybrid Spectrometer (HYSPICE) - BL-14B
Atom-level dynamics in single crystals, magnets, condensed matter, materials science

Spallation Neutrons and Pressure Diffractometer (SNAP) - BL-3
Materials science, geology, earth and environmental sciences

Magnetism Reflectometer - BL-4A
Chemistry, magnetism of layered systems and interfaces

Liquids Reflectometer - BL-4B
Interface in complex fluids, polymers, chemistry

Cold Neutron Chopper Spectrometer (CNCS) - BL-5
Condensed matter physics, materials science, chemistry, biology, environmental science

Extended Q-Range Small-Angle Neutron Scattering Diffractometer (EQ-SANS) - BL-6
Life sciences, polymer and colloidal systems, materials science, earth and environmental sciences

Elastic Diffuse Scattering Spectrometer (CORELLI) - BL-9
Crystal structure of polymers in crystalline materials

Versatile Neutron Imaging Instrument at SNS (VENUS) - BL-10
Energy selective imaging in materials science, engineering, materials processing, environmental sciences and biology

Macromolecular Neutron Diffractometer (MANDI) - BL-11B
Atomic-level structures of membrane proteins, drug delivery, DNA

Single-Crystal Diffractometer (TOPAZ) - BL-12
Atomic-level structures in chemistry, biology, earth science, materials science, condensed matter physics

Fundamental Neutron Physics Beam Line - BL-13
Fundamental properties of neutrons

Engineering Materials Diffractometer (VULCAN) - BL-7
Mechanical behavior, structural systems, materials processing

Powder Diffractometer (POWGEN) - BL-11A
Atom-level structures in chemistry, materials science, and condensed matter physics including magnetic spin structures

LEGEND

- Operating instrument in user program
- In commissioning or operating development facilities
- In design or construction
- Under development

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SNS Instruments

- BL-1A | USANS
Ultra-Small-Angle Neutron Scattering Instrument
- BL-1B | NOMAD
Nanoscale-Ordered Materials Diffractometer
- BL-2 | BASIS
Backscattering Spectrometer
- BL-3 | SNAP
Spallation Neutrons and Pressure Diffractometer
- BL-4A | MR
Magnetism Reflectometer
- BL-4B | LR
Liquids Reflectometer
- BL-5 | CNCS
Cold Neutron Chopper Spectrometer
- BL-6 | EQ-SANS
Extended Q-Range Small-Angle Neutron Scattering Diffractometer
- BL-7 | VULCAN
Engineering Materials Diffractometer
- BL-9 | CORELLI
Elastic Diffuse Scattering Spectrometer

Start

11:09 29/08/2015

Lujan centre (USA)

Los Alamos NATIONAL LABORATORY
EST. 1943

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Lujan Center at LANSCE

LANSCE » Lujan Center

Lujan Center Mission

The Lujan Center delivers science by exploiting the unique characteristics of intense beams of moderated pulsed neutrons for academia, national security, and industry.

Lujan Center Vision

The Lujan Center will operate a world class user program in the service of the nation. Lujan Center scientists will be recognized for their leadership and innovation in neutron scattering.

Lujan Center at LANSCE

The Lujan Center is one of five user facilities supported by the LANSCE accelerator which is stewarded by NNSA. Together these instruments provide capability for basic and applied neutron science relevant to academia, national security and industry.

Lujan Center User Capabilities

The Lujan Center instruments operate in time of flight mode receiving neutrons from a tungsten spallation target. Four moderators provide epi-thermal, thermal and cold neutrons to specialized beamlines. The facility operates for a total of 3,000 hours per year. At the core of the Lujan Center is a 20Hz spallation neutron target and the LANSCE proton accelerator, which operates at an energy of 800 MeV with typical beam currents of 100 – 125 μ A. The Lujan Center's highly optimized tungsten spallation target provides a high peak flux with a broad wavelength bandwidth per frame. Two liquid hydrogen moderators provide high intensity cold neutron beams ideally suited for nuclear physics, reflectometry, inelastic scattering and small angle scattering. Water moderators provide thermal neutrons for neutron imaging, nuclear physics and diffraction beamlines. In addition, because of its low repetition rate, long wavelength neutrons can be used without significant frame overlap allowing the collection of data over a broad range of time constants and length scales, ideally suited for Total scattering and diffraction studies. The Lujan Center offers access to a large variety of specialized sample environments, including low temperatures down to 40mK, magnetic fields up to 7T, high temperature furnaces up to 2400C and uniaxial stress ($F_{max}=250kN$) and fluid as well as anvil cell pressure capabilities (30GPa-2000K).

Instrument Suite

Crystallography: NPDF, HIPD, HIPPO, PCS
Engineering and Strain: HIPPO, SMARTS, NPDF
Disordered Materials: NPDF, HIPD, HIPPO
Large Scale Structures: LQD, ASTERIX
Magnetism: ASTERIX, HIPD, HIPPO
Biology: PCS, LQD
Neutron Imaging: HIPPO, SMARTS, NPDF
Nuclear Science and Technology: DANCE, FP5, FP12

CONTACTS

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Experiment Coordinator
Victor Fanelli
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Start | 11:10 29/08/2015

Asia-Oceania-Africa

Reactors

- [Japan Research Reactor 3 - JRR3 \(Japan - *awaiting permission to restart*\)](#)
- [Australia Nuclear Science and Technology Organisation – ANSTO, OPAL reactor \(Australia\)](#)
- [High flux Advanced Neutron Application Reactor - HANARO \(South Korea\)](#)
- Bombay Atomic Research Centre - BARC (India)
- South Africa Nuclear Energy Corporation – NECSA, Safari reactor (South Africa)
- [China Advanced Research Reactor \(CARR – *not yet operational*\)](#)
- China Mianyang Research Reactor(CMRR)

Spallation sources

- [J-PARC Materials and Life Science Facility - MLF \(Japan\)](#)
- [China Spallation Neutron Source \(CSNS – *under construction*\)](#)

JRR-3 (Japan)

Research reactors and Accelerators / Japan Atomic Energy Agency / Nuclear Science Research Inst - Internet Explorer

https://www.jaea.go.jp/english/04/ntokai/kasokuki/kasokuki_01.html

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Google JRR-3 Search Share More >> Sign In

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JAEA Japan Atomic Energy Agency
Tokai Research and Development Center
Nuclear Science Research Institute

JAEA home / Japanese font size S M L

site search search

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JRR-3

JRR-3 achieved its first criticality in 1962 as the first research reactor constructed with domestic technology and has been utilized by a multitude of researchers since the dawn of nuclear research and industry. In 1990, JRR-3 was modified to improve its performance, and it resumed operation as a high-performance and multipurpose research reactor with thermal power of 20 MW. JRR-3 has several facilities for neutron beam experiments, irradiation experiments for nuclear fuel and material, and production of RI and silicon semiconductors. Cold neutron (very low energy neutron) beams are available and utilized for research of life phenomena by analyzing the structure of polymer molecules, for example.



An outside view of the JRR-3 reactor building



A bird's-eye view of the JRR-3 reactor building



Research reactors and Accelerators

- JRR-3
- JRR-4
- NSRR
- Tandem Accelerator & Tandem Booster

Publish

- JAEA Reports
- Peer-reviewed papers

Users office

- JRR-3 Users Office
- J-PARC Center Users Office

Start

09:53 29/08/2015

JRR-3 (Japan)

Japan Atomic Energy Agency JRR-3 - Internet Explorer

http://jrr3.jaea.go.jp/jrr3e/2/21.htm

Japan Atomic Energy Agency

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Japan Atomic Energy Agency
JRR-3
Japan Research Reactor-3

About JRR-3 Utilization facilities Applications Gallery

Utilization facilities of JRR-3 [PAGE TOP](#)

The JRR-3 has been utilized as a top-level high performance research reactor in the world for beam experiments and neutron irradiations. There are 9 irradiation facilities for irradiation tests on nuclear fuel and material, production of RI and silicon semiconductor and neutron activation analysis. Furthermore, there are total 31 instruments for neutron beam experiments including 13 and 18 instruments belonging to universities and the JAEA, respectively. List of neutron irradiation facilities and instruments are shown below.

The diagram illustrates the layout of the JRR-3 reactor facility. It shows the reactor room on the left, connected to a central beam hall. Various irradiation facilities and instruments are labeled throughout the facility, including TAS-1, BIX-3, HIRFO, BIX-1, CPTAS, PEN-A, TORAN, TMBF, AGNES, VIN, NSP, NOP, SANS-II, SANS-U, VPGA, SUREN, CHOP, SANS-U, ULS, FONDTR, RESA, MUSAS, TMS, HRR, AKANE, HELM, and CNS. A legend indicates that yellow areas represent JAEA thermal neutron beams, orange areas represent JAEA cold neutron beams, blue areas represent university thermal neutron beams, and light blue areas represent university cold neutron beams. The diagram also shows the reactor room with its four fuel elements (1G, 2G, 3G, 4G) and the beam hall with its various instruments and facilities.

Start

10:19
29/08/2015

Opal (Australia)

The screenshot shows a web browser window displaying the ANSTO website. The browser's address bar shows the URL: <http://www.ansto.gov.au/ResearchHub/Bragg/Facilities/OPALReactor/index.htm>. The browser's search bar contains the text "opal ansto". The website header features the ANSTO logo and navigation links for "News & Media", "Visiting ANSTO", "Careers", and "Safety at ANSTO". A search bar is also present. The main navigation menu includes "HOME", "ABOUT ANSTO", "EVENTS", "NUCLEAR FACTS", "BUSINESS SERVICES", "RESEARCH HUB", "RESOURCES", and "CONTACT US". The "RESEARCH HUB" menu is expanded, showing a list of facilities including "Bragg Institute", "Institute for Environmental Research", "Institute of Materials Engineering", "ANSTO LifeSciences", "Centre for Accelerator Science", "Facilities and instruments", "User access", "Scholarships", and "Research staff profiles". The "OPAL reactor" facility is selected. The main content area is titled "OPAL Reactor" and contains the following text:

ANSTO's Open Pool Australian Lightwater (OPAL) reactor is a state-of-the-art 20 Megawatt reactor that uses low enriched uranium (LEU) fuel to achieve a range of research, scientific, industrial and production goals.

Opened by the Prime Minister in 2007, OPAL is one of a small number of reactors with the capacity for the commercial production of radioisotopes. This capacity, combined with the open pool design, the use of LEU fuel and the wide range of applications, places OPAL among the best research reactors in the world.

While OPAL is the centrepiece of ANSTO's research facilities, the suite of neutron beam instruments housed next to the reactor building and operated by the Bragg Institute represent a significant addition to ANSTO's research capabilities. Former Minister for Industry, Innovation, Science, Research and Tertiary Education, Senator Kim Carr, described ANSTO's contribution to Australian science by saying:

"Having started out as a specialist organisation...at Lucas Heights, ANSTO is now driving innovation in nuclear science and technology right around the country. The Government is very aware of how important this work is."

OPAL is operated and maintained by the Reactor Operations group within the Nuclear Operations division.

The role of research reactors

While virtually every research reactor is unique, OPAL is one of a number of similar production facilities around the world, including the Safari-1 reactor in South Africa, the HFR reactor at Petten in the Netherlands and the NRU reactor at Chalk River in Canada. These reactors play a vital role in

The page also features a photograph of the reactor's interior structure.

The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the date and time: 09:57 29/08/2015.

Opal (Australia)

Instruments - ANSTO - Internet Explorer
http://www.ansto.gov.au/ResearchHub/Bragg/Facilities/Instruments/

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Australian Government **Ansto** News & Media | Visiting ANSTO | Careers | Safety at ANSTO
Australian Nuclear Science and Technology Organisation Search... [Social Media Icons]

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▼ Bragg Institute
▼ Facilities
▼ Instruments
Bilby
Dingo
Echidna
Emu
Joey
Koala
Kookaburra
Kowari
Pelican
Platypus
Quokka
Sika
Taipan
Wombat
SAXS
X-ray Reflectometer
Neutron Beam
Analysis of neutron scattering

Instruments

Thirteen neutron beam instruments are either operational or commissioning at the new OPAL reactor. ANSTO expects to add more instruments within five years. The facility has the capacity for further expansion, including potential for a second neutron guide hall.

A suite of sample-environment equipment allows studies at different temperatures, pressures and magnetic fields. Scientific references are available for most of our instruments.

11 Operational Instruments (named after Australian and overseas fauna):

- [ECHIDNA High-Resolution Powder Diffractometer \(*Tachyglossus aculeatus*\)](#)
- [WOMBAT High-Intensity Powder Diffractometer \(*Vombatus ursinus*\)](#)
- [KOALA Laue Diffractometer \(*Phascolarctos cinereus*\)](#)
- [KOWARI Strain Scanner \(*Dasyuroides byrnei*\)](#)
- [PLATYPUS Neutron Reflectometer \(*Ornithorhynchus anatinus*\)](#)
- [QUOKKA Small-Angle Neutron Scattering \(*Setonix Brachyurus*\)](#)
- [TAIPAN Thermal Neutron 3-Axis Spectrometer \(*Oxyuranus scutellatus*\)](#)
Beryllium-filter option on TAIPAN - completed in 2014, currently in commissioning
- [KOOKABURRA Ultra Small-Angle Neutron Scattering \(*Dacelo novaeguineae*\)](#)
- [PELICAN Time-of-Flight Spectrometer \(*Pelecanus conspicillatus*\)](#)
- [DINGO Neutron Radiography/Imaging/Tomography \(*Canis lupus dingo*\)](#)
- [SIKA Cold Neutron 3-Axis Spectrometer \(*Cervus nippon*\)](#)

Start [Taskbar Icons] 10:18 29/08/2015

Hanaro (South Korea)

korea Atomic Energy Research Institute -> Research Reactor Utilization - Internet Explorer

https://www.kaeri.re.kr/english/sub/sub03_04_01_01.jsp

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- Reactor Research
- Fuel Cycle Research
- Innovative Tech. Research
- Radiation Research
- Research Reactor Utilization

Print

Neutron Beam Facilities

- Old Neutron Research Facilities
- Capsule Irradiation Test Facility
- Fuel Test Loop

Neutron Beam Facilities

Neutron Radiography Facility(NRF), High Resolution Powder Diffractometer(HRPD), Four Circle Neutron Diffractometer (FCD), Residual Stress Instrument(RSI), Vertical Neutron Reflectometer(REF-V), Horizontal Neutron Reflectometer(REF-H), High Intensity Powder Diffractometer(HIPD), Ex-core Neutron Irradiation Facility(ENF) and Prompt Gamma Neutron Activation Analysis system(PGAA) are operating at the HANARO reactor hall. In addition there is a Neutron Activation Analysis system (NAA) consisting of the irradiation facility and the radiation measurement equipment in the HANARO reactor. A 8m 8AN8 instrument installed at ON horizontal port was dismantled and moved to the cold neutron laboratory and currently the cold neutron guide system is installed at ON port area. The Bio-Diffractometer(Bio-D) at ST3 port and Triple Axis Spectrometer (TAB) at ST4 are scheduled to be installed at the reactor hall. Three new cold neutron scattering instruments will be developed and installed in the cold neutron guide hall and three neutron instruments currently existing in the reactor hall will be moved after upgrades. Three new instruments are 40M Small Angle Neutron Scattering Instrument(40M-SANS), Cold Triple Axis Spectrometer(Cold-TAS) and Disk Chopper Time of Flight(DO-TOF) and three upgrade instruments are 12M-SANS, REF-V and Bio-REF.

In-service Under way

- IR Port: Ex-Core Neutron Irradiation Facility (ENF), 2005
- ST1 Port: Prompt Gamma Neutron Activation Analysis(PGAA), 2003
- Test Station(TS) & Residual Stress Instrument(RSI), 2003
- CN Port: Small Angle Neutron Scattering (SANS), 2001, Currently dismantled
- Cold Neutron Guide, 2009
- ST2 Port: Four Circle Diffractometer (FCD), 1999 Upgrade '05-'06
- High Resolution Powder DIF. (HRPD), 1998
- Neutron Reflectometer, (REF-H), 2009 To be moved 2010
- High Intensity Powder DIF. (HIPD), 2008
- Bio-Diffractometer (Bio-D), 2010
- Neutron Reflectometer (REF-V), 2006 To be moved 2010
- Triple Axis Spectrometer (TAS), 2010
- NR Port: Neutron Radiography Facility (NRF), 1997 Upgrade

Start | 10:01 29/08/2015

BARC (India)

Reactors - Internet Explorer

http://barc.gov.in/reactor/index.html


Reactors

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DHRUVA REACTOR



During early 1970s a strong need was felt for building a research reactor with higher neutron flux to meet the growing demand of radioisotopes and advanced research in basic sciences. This led to the setting up of a research reactor at BARC which was named Dhruva by Dr. Giani Zail Singh, the then President of India. Construction of DHRUVA was an important milestone in the development and implementation of indigenous nuclear technology in India. The reactor incorporates several features catering to the requirements of a broad-based multidisciplinary user community as also in the production of radioisotopes of high specific activity. Dhruva has been declared as a National Facility for Neutron Beam Research to cater to the needs of Indian scientific community where scientists from BARC, other units of the Department of Atomic Energy (DAE), universities and national laboratories work under collaborative projects. Many of the collaborations are supported by the University Grants Commission - DAE Consortium for Scientific Research (UGC-DAE-CSR), the Board of Research in Nuclear Sciences (BRNS) and other agencies. At present there are about 40 active projects running under the UGC-DAE-CSR scheme.


No.	Item	Description
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Start

10:09 29/08/2015


BARC (India)

**BHABHA ATOMIC RESEARCH CENTRE
MUMBAI, INDIA**



National Facility for Neutron Beam Research

DHRUVA REACTOR



During early 1970s a strong need was felt for building a research reactor with higher neutron flux to meet the growing demand of radioisotopes and advanced research in basic sciences. This led to the setting up of a research reactor at BARC which was named Dhruva by Dr. Giani Zail Singh, the then President of India. Construction of DHRUVA was an important milestone in the development and implementation of indigenous nuclear technology in India. The reactor incorporates several features catering to the requirements of a broad-based multidisciplinary user community as also in the production of radioisotopes of high specific activity. Dhruva has been declared as a National Facility for Neutron Beam Research to cater to the needs of Indian scientific community where scientists from BARC, other units of the Department of Atomic Energy (DAE), universities and national laboratories work under collaborative projects. Many of the collaborations are supported by the University Grants Commission - DAE Consortium for Scientific Research (UGC-DAE-CSR), the Board of Research in Nuclear Sciences (BRNS) and other agencies. At present there are about 40 active projects running under the UGC-DAE-CSR scheme.

No.	Item	Description
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10:09
29/08/2015

Safari (South Africa)

The screenshot shows the Safari website in an Internet Explorer browser window. The browser's address bar displays the URL <http://www.necsa.co.za/Products-and-Services>. The search bar contains the text "safari reactor south africa". The website header features the Necsa logo with the tagline "We're in your world" and the full name "South African Nuclear Energy Corporation SOC Limited". A navigation menu includes links for "Necsa", "Visitor Centre", "Products and Services" (which is highlighted), "Skills Training Centre", "Public Information", and "About US".

The main content area is divided into four sections:


- Analytical and Calibration Services (ACS)**: Describes three specialised laboratories with nuclear licences and SANAS accreditation. It lists services: [Radio Analysis Laboratories](#) (radioactivity analysis), [Pelindaba Analytical Services](#) (chemical analysis), and [Calibration Service](#) (calibration of ionising radiation and contamination monitoring/protection equipment).
- Office of Technology Transfer**: Responsible for cultivating the innovation ecosystem, recording and evaluating new ideas, and managing intellectual property (IP). It provides links for [Services](#), [News](#), and [Technologies](#), along with a [Contacts](#) link.
- Nuclear Manufacturing**: Specialises in the design, repair, and manufacturing of high-quality components. It lists services: Pressure Vessels, Heat Exchangers, Tanks and Piping Systems, and Hi-Tech fabrication. A [Read more](#) link is provided.
- Research**: The Research and Development Division of the South African Nuclear Energy Corporation, focused on nuclear energy research, development, and innovation in South Africa. It lists areas: Radiopharmaceuticals & Radiotracers, Material Characterisation, Heritage Studies, Agriculture, Geology, Mineral Beneficiation, Waste Handling, Treatment and Disposal Technology, and Uranium Beneficiation.

The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the time 10:04 and date 29/08/2015.

CARR (China)

The screenshot shows the CIAE website in Internet Explorer. The browser's address bar displays the URL <http://www.ciae.ac.cn/eng/Researchprograms/05.htm>. The search bar contains the text "carr china". The website header features the CIAE logo and the text "China Institute of Atomic Energy". A navigation menu includes links for Home, Organization, Publications, News, Cooperation, Contact Us, and Chinese Version. A left sidebar lists various categories such as "About CIAE", "Science & Technology", "R&D Results", and "Products & Techniques". The main content area is titled "First Phase Neutron Scattering Instrumentation at the China Advanced Research Reactor" and contains the following text:

After 50 years of service for the Research & Development in neutron science and technology, the Heavy Water Research Reactor (HWRR) (maximum power 10 MW) at China Institute of Atomic Energy (CIAE) was shut down in 2007. The 60MW China Advanced Research Reactor (CARR) at CIAE has taken over this role, which has reached the first criticality in May, 2010. It is a tank-in-pool type reactor using a D₂O reflector for inverse neutron trap, and the designed optimal undisturbed thermal neutron flux is 8×10^{14} n/cm²·s. The reactor experiment hall houses a set of instruments connecting to 7 horizontal thermal neutron beam tubes, two of which are dual beam ports. Additionally, cold neutrons produced by a liquid hydrogen cold source are transported via 4 guide systems to the 30 × 60m² guide hall, where a suite of scattering instruments are placed.



Guide hall

CARR is devoted to fundamental and applied research, of which the Neutron Scattering Laboratory (NSL) is responsible for neutron scattering and radiography research programs open to users in China

The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the date and time: 10:05 29/08/2015.

CMRR (China)

Chinese Neutron Scattering Society - Internet Explorer

http://english.ihep.cas.cn/cnss/zszsz/201406/t20140620_123024.html

Chinese Neutron Scattering ... X

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 **CNSS**
Chinese Neutron Scattering Society

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Chinese Neutron Facilities

- China Spallation Neutron Source (CSNS)
- China Advanced Research Reactor (CARR)
- China Mianyang Research Reactor (CMRR)**

China Mianyang Research Reactor

The China Mianyang Research Reactor (CMRR) with the power of 20 MW is located in the NP campus of Institute of Nuclear Physics and Chemistry, Mianyang city, Sichuan Province. It was open to users officially from 2012, including the thermal and cold neutron halls. The liquid hydrogen cold neutron source began to work from September 2013. The measured thermal and cold fluxes for neutron scattering experiments are 2.4×10^{14} n/cm²·s and 10^9 n/cm²·s, respectively.



NP campus of Institute of Nuclear Physics and Chemistry

CMRR is devoted to both fundamental and applied research. Its spectrometer layout is shown in the figure. In the first phase, eight neutron scattering instruments have been installed and start operation from the middle of 2014. Four thermal neutron instruments were installed in the reactor hall: a high resolution neutron diffractometer (HRND), a residual stress neutron diffractometer (RSND), a thermal

Start | 10:06 29/08/2015

J-PARC MLF (Japan)

Material and Life Science Experimental Facility | Facilities at J-PARC | J-PARC - Internet Explorer

http://www.j-parc.jp/MatLife/en/

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J-PARC

Japan Proton Accelerator Research Complex

Materials and Life Science Experimental Facility

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What's MLF

Materials and Life Science Experimental Facility (MLF) is aimed at promoting materials science and life science using the world highest intensity pulsed neutron and muon beams which are produced using 3-GeV protons with a current of 333micro-amps and a repetition rate of 25 Hz.

News & Events

- 2015/7/7 [Other](#) [The 7th AONSA School / 3rd MLF School](#)
- 2015/5/29 [Other](#) [Announcement of Cancellation: J-PARC MLF 2015B Call for General Use Proposals](#)
- 2015/5/15 [Other](#) [Information of the target problem at the MLF](#)
- 2015/5/15 [Other](#) [Notice: J-PARC MLF 2015B Call for General Use Proposals](#)
- 2015/04/14 [Other](#) [The continuous 500-kW proton beam operation for the user operation has started.](#)

Meetings

- [The 7th AONSA Neutron School / The 3rd MLF School](#)
1-5 December 2015
- [The 7th NEUTRON WAVE/Length-dependent imaging](#)
May 31st - June 3rd 2015

J-PARC Center
2-4 Shirane Shirakata, Tokai-mura, Naka-gun, Ibaraki 319-1195, Japan
Webmaster: <web-staff@j-parc.jp>

Windows taskbar: Start, 10:12, 29/08/2015

J-PARC MLF (Japan)

Material and Life Science Experimental Facility | Facilities at J-PARC | J-PARC - Internet Explorer

http://www.j-parc.jp/researcher/MatLife/en/instrumentation/ns.html

Material and Life Science Experi... Material and Life Science Ex...

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J-PARC HOME

J-PARC

Japan Proton Accelerator Research Complex

HOME > Facilities at J-PARC > Materials and Life Science Experimental Facility HOME Japanese

Materials and Life Science Experimental Facility

- News & Events
- MLF Operational Status
- For MLF Users
 - Inquiry
 - Call for Proposals
 - J-PARC Center Users Office
 - Call for LOI on Neutron Instruments
 - Instruments
 - Accepted Proposals / Experimental Reports
 - Post-visit Procedures
- Research Achievements
- Committees / Meetings
- Publications
- Neutron/Muon Calendar

Neutron Instruments

(as of April, 2014)

BL08 SuperHRPD
BL09 SPICA
BL10 NOBORU
BL11 PLANET
BL12 HRC
BL14 AMATERAS
BL15 TAIKAN
BL16 SOFIA
BL17 SHARAKU
BL06 VIN ROSE
BL05 NOP
BL04 ANNRI
BL03 IPIX
BL02 DNA
BL01 4SEASONS
BL23 POLANO
BL22 RADEN
BL21 NOVA
BL20 IMATERIA
BL19 TAKUMI
BL18 SENJU

CM Coupled moderator DM Decoupled moderator PM Poisoned moderator

available on 1-Sept

- J-PARC Operation Status
- JLAN (Internal Use Only)
- MLF-Intra (JLAN only, Japanese)

Start

10:13 29/08/2015

CSNS (China – under construction)

The screenshot shows the CSNS website in an Internet Explorer browser window. The address bar displays <http://csns.ihep.ac.cn/english/>. The search bar contains the text "csns neutron source". The website header features the CSNS logo and the text "China Spallation Neutron Source" with a date "08/29/ 115 Saturday". A navigation menu includes "Home" and "About Us". A sidebar on the left lists various sections: Introduction, Administration, Accelerator, Target, Instruments, Highlights, Publications, and Contact Us. The main content area is divided into several sections: "College students visit CSNS" with a photo of students at a construction site; "Upcoming Events" listing the 5th AONSA Neutron School and the 6th OCPA Accelerator School; "News & Events" with a "more>>" link; "Photo & Videos" with a video player; and "Quick Links to" with links to 3-PARC, SNS, PSI, and KEK. A "Contact Us" section provides the project office address: Institute of High Energy Physics, Chinese Academy of Sciences, 19B YuquanLu, Shijingshan District, Beijing, China, 100049, with contact numbers for FAX and TEL. The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the date and time "10:16 29/08/2015".

Compact Neutron Sources

UCANS - Microsoft Internet Explorer provided by STFC

http://www.ucans.org/

Search ucans

Suggested Sites: ISIS Internal Information Se..., ISIS - ISIS Home Page, RCLIK SSC Orade Portal, Welcome to the STFC, STFC Intranet Home, Sign in to Yahoo!, Twitter, Google Maps, Google Translate

UCANS
The Official Web Page of
Union for Compact Accelerator-driven Neutron Sources
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NEW: UCANS-V May 12-15, 2015 @ Padova, Italy

UCANS

Union for Compact Accelerator-driven Neutron Sources

The Union for Compact Accelerator-driven Neutron Sources (UCANS) was formed in 2008 to support the ongoing development of small accelerator based neutron sources around the world, and to promote the exchange of information on emerging science and novel applications relevant to long-pulsed and/or medium-flux neutron sources.

Accelerator-driven Neutron Sources for Science (this map is under construction)

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Start | EN | 09:59 20/08/2015

Compact Neutron Sources

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RIKEN Accelerator-driven Neutron Source, [RIKEN](#)



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Kyoto University Accelerator-driven Neutron Source, Japan



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Compact Neutron Sources



Center for Exploration of Energy and Matter
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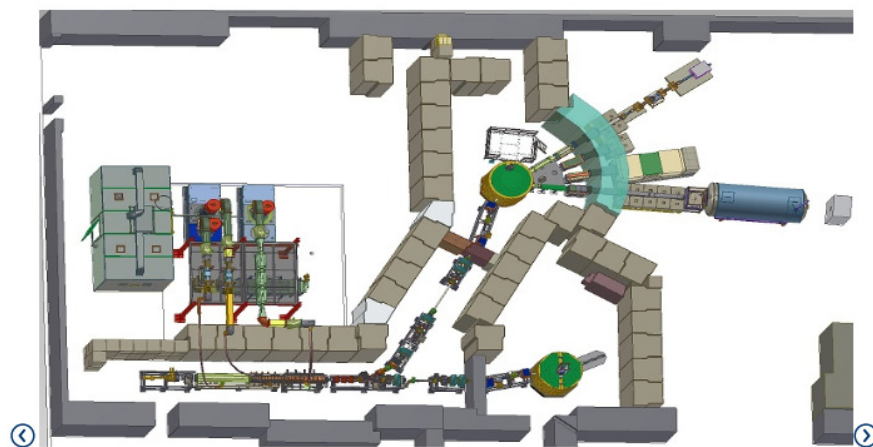
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[Neutron Radiation Effects \(NREF\) at LENS](#)



Welcome!

The Low Energy Neutron Source (LENS) is a pulsed neutron source at the **Indiana University** Center for Exploration of Energy and Matter (**CEEM**). The source utilizes a low energy p-n reaction in Be coupled with a high-current, variable-pulse-width proton accelerator to produce either short or long neutron pulses. A highly optimized moderator produces cold neutrons for use by a suite of neutron scattering instruments and development facilities.

Major on-going activities include the development of new neutron instrumentation (in particular for **neutron spin manipulation** and improved **moderators**), large scale structure studies in materials using **SANS**, **SESAME**, and **neutron radiation effects**.

Compact Neutron Sources



Hokkaido University Neutron Source

HUNS is an accelerator-driven neutron source at Hokkaido University.
Now HUNS is in operation.

(Details)

Specification

Accelerator	Electron LINAC (s-band RF)
Accelerated Particle	electrons
Max. Acc. Energy	45 MeV
Max. Current	140 μ A
Repetition	single - 200 Hz
Pulse width	10 ns ~ 3 μ s
Neutron Target	Pb
Neutron Energy	eV - Thermal - Cold
Moderator	Water, Solid Methane
Neutron Flux	

-> Ohnuma's Lab.
-> Furusaka's Lab.

