

SPRING-8 RESEARCH FRONTIERS

SPring-8 Research Frontiers 2003 has just been published. Online request form is available at: <http://www.spring8.or.jp/e/publication-e.html>

PROPOSAL APPLICATION DEADLINE

Applications for 2005A are due no later than November 2. For details, please visit the SPring-8 website.

Beamlines at SPring-8

BL01B1	XAFS
BL02B1	Single Crystal Structure Analysis
BL02B2	Powder Diffraction
BL04B1	High Temperature and High Pressure Research
BL04B2	High Energy X-ray Diffraction
BL05SS	Accelerator Beam Diagnosis
BL08W	High Energy Inelastic Scattering
BL08B2	Hyogo BM
BL09XU	Nuclear Resonant Scattering
BL10XU	High Pressure Research
BL11XU	JAERI Materials Science II
BL12XU	NSRRC ID
BL12B2	NSRRC BM
BL13XU	Surface and Interface Structures
BL14B1	JAERI Materials Science I
BL15XU	WEBRAM
BL16XU	Industrial Consortium ID (SUNBEAM-ID)
BL16B2	Industrial Consortium BM (SUNBEAM-BM)
BL17SU	RIKEN Coherent Soft X-ray Spectroscopy
BL19LXU	RIKEN SR Physics
BL19B2	Engineering Science Research
BL20XU	Medical and Imaging II
BL20B2	Medical and Imaging I
BL22XU	JAERI Actinide Science II
BL23SU	JAERI Actinide Science I
BL24XU	Hyogo ID
BL25SU	Soft X-ray Spectroscopy of Solid
BL26B1	RIKEN Structural Genomics I
BL26B2	RIKEN Structural Genomics II
BL27SU	Soft X-ray Photochemistry
BL28B2	White Beam X-ray Diffraction
BL29XU	RIKEN Coherent X-ray Optics
BL32B2	Pharmaceutical Industry
BL33LEP	Laser-Electron Photon
BL35XU	High Resolution Inelastic Scattering
BL37XU	Trace Element Analysis
BL38B1	R&D (3)
BL38B2	Accelerator Beam Diagnosis
BL39XU	Magnetic Materials
BL40XU	High Flux
BL40B2	Structural Biology II
BL41XU	Structural Biology I
BL43IR	Infrared Materials Science
BL44XU	Macromolecular Assemblies
BL44B2	RIKEN Structural Biology II
BL45XU	RIKEN Structural Biology I
BL46XU	R&D (2)
BL47XU	R&D (1)

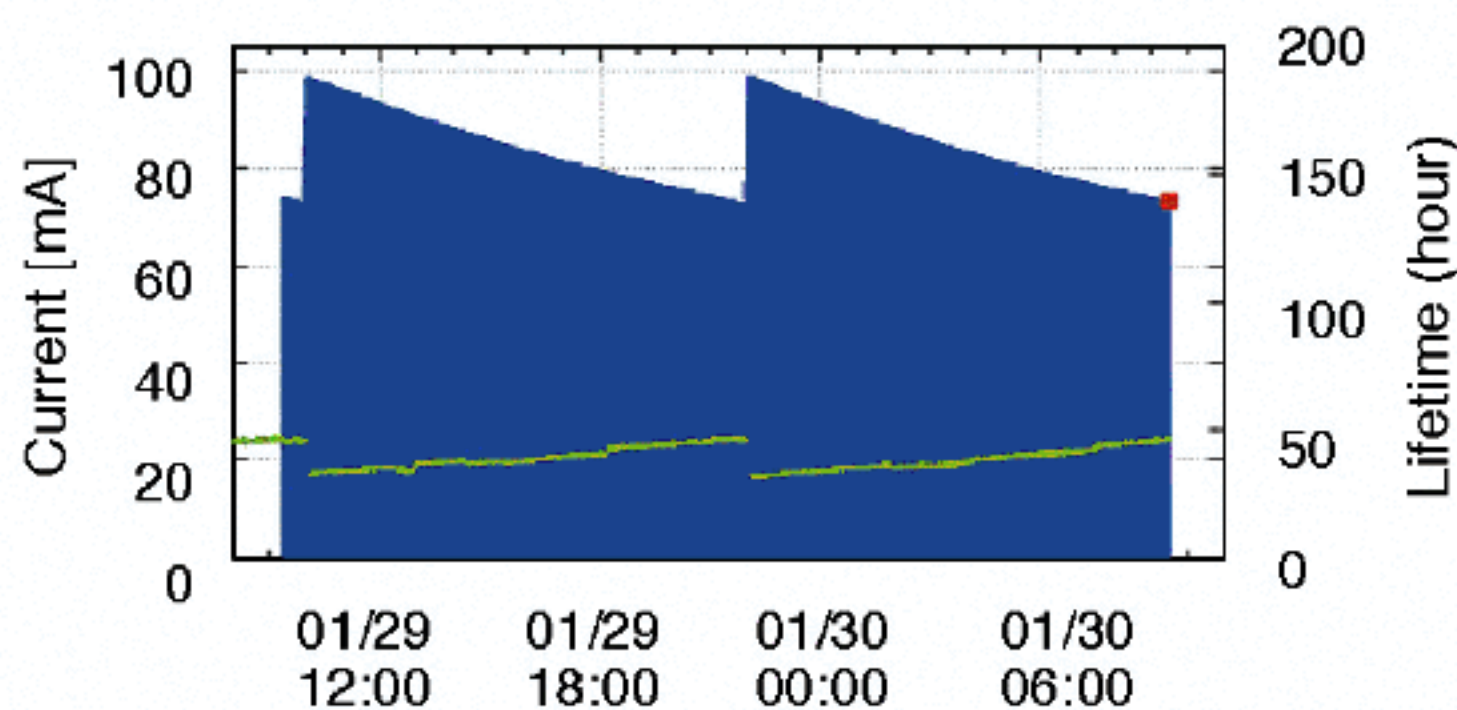
RADSYNCH'04:

The 3rd International Workshop on Radiation Safety of Synchrotron Radiation Sources, Radsynch'04, will be held at SPring-8 from 17th to 19th November 2004. <http://radsynch04.spring8.or.jp/>

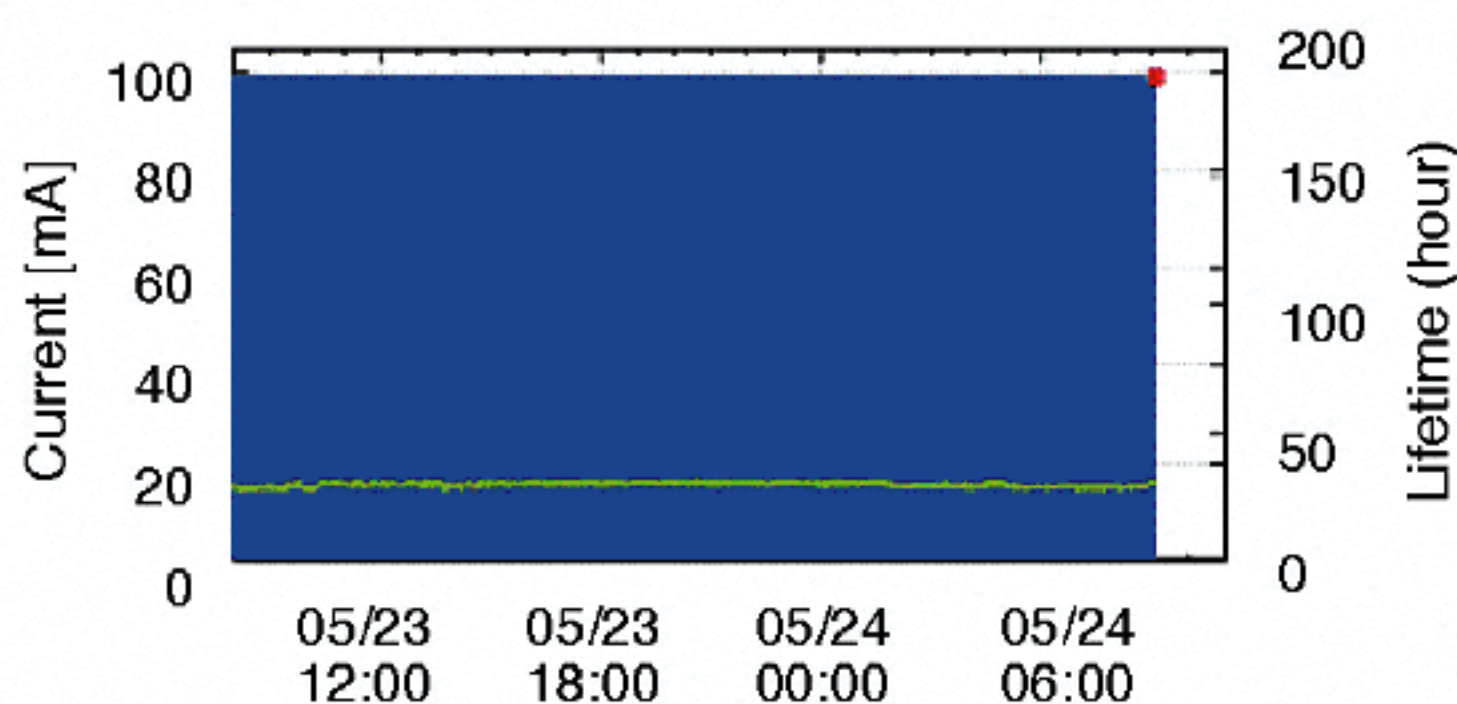
BSR 2004:

The 8th International Conference on Biology and Synchrotron Radiation, BSR2004, will be held at the Egret Himeji, Hyogo, Japan from 7th to 11th September 2004. <http://bsr2004.spring8.or.jp/>

Top-up Operation at SPring-8



Conventional operation



Top-up operation

The top-up operation at the SPring-8 storage ring successfully started. In the top-up operation, electron beam is injected with short intervals during user beamtime, and the current stored in the storage ring is kept constant. In the conventional operation, on the other hand, the stored current decayed with time and during beam injections, user experiments were interrupted due to beam orbit instabilities.

The top-up operation at SPring-8 has a number of innovative features such as (1) a perturbation-free beam

injection scheme, (2) minimum injection beam loss, (3) a high purity single-bunch beam; These features go to show that the SPring-8 top-up operation is, in a sense, an "ideal top-up operation" which many light source facilities around the world have pursued.

This success of the top-up operation offers the following benefits: (1) The time-averaged brilliance is increased by a factor of two. (2) The current stability of 0.1% or less practically does away with the normalization process to the incident intensity, as well as improves thermal stability of the X-ray optics. (3) A new filling pattern with a high bunch current is made available, which was not available in the conventional operation due to the extremely short beam lifetime. This will pave the way for new SR experiments with intense pulsed X-ray. The top-up operation was introduced on May 20, 2004 to user beamtime and users have great hopes for this new operation.

