

Canadian Light Source

Access Mechanisms



Canadian
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Source

Centre canadien
de rayonnement
synchrotron

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CLS Science Director

Our Currency: Beamtime

Beamtime is access to a CLS beamline.

Beamtime is allocated to users in 4- or 8-hour **shifts**.

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Facility Mode Legend

N Normal Beamtime

Beamtime available on all beamlines for user access

D Development

Beam used to commission or for development of part of the machine or specific beamlines

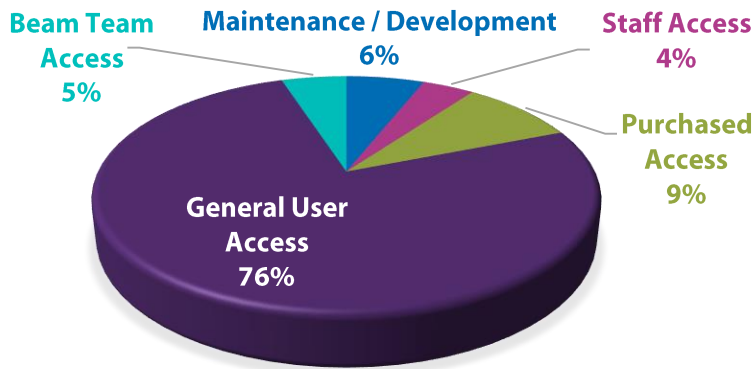
M Maintenance

Time to perform maintenance on the machine (no beam).



How is beamtime allocated?

Beamtime allocated twice a year, for the upcoming 6-month cycle, with several different available access modes, similar to other synchrotron facilities.



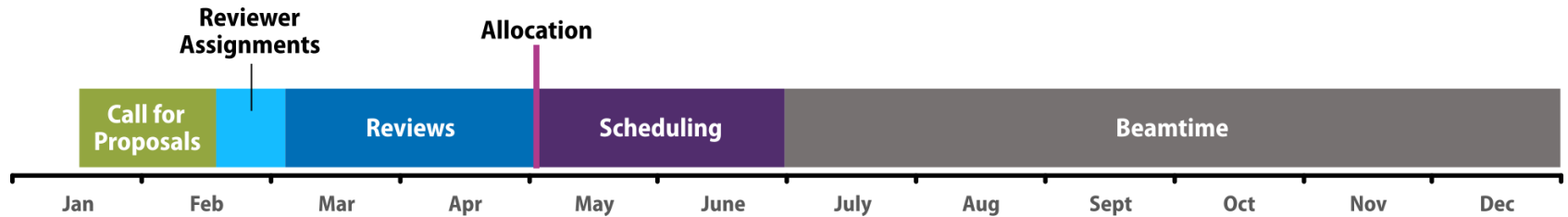
Typical Facility Usage (based on data from 2017-2021)

	MAINTENANCE / DEVELOPMENT Access for maintenance, commissioning, and development of CLS beamlines	10% OF NORMAL BEAMTIME
	STAFF ACCESS Access for CLS staff research projects	<10% OF NORMAL BEAMTIME
	PURCHASED ACCESS Available for experienced synchrotron users wanting to avoid peer review, or for proprietary research	<25% OF NORMAL BEAMTIME
	BEAM TEAM ACCESS "Partner user" access for those who have provided money and expertise to develop CLS beamlines	<25% OF NORMAL BEAMTIME
	GENERAL USER ACCESS Academic access through peer-reviewed proposals	>30% OF NORMAL BEAMTIME



CLS Peer-Review Process

CLS peer review is the evaluation of proposals for experiments at the CLS by people with similar competencies as the spokesperson. It is designed to assess the scientific merit of a proposed experiment, with the ultimate purpose of awarding beamtime to the highest-quality proposals, **emphasizing the excellence of science where there is intent to publish scientific results.**



Call for Proposals

Open twice a year
Jan/Feb for July-Dec beamtime
July/Aug for Jan-June beamtime

Reviews

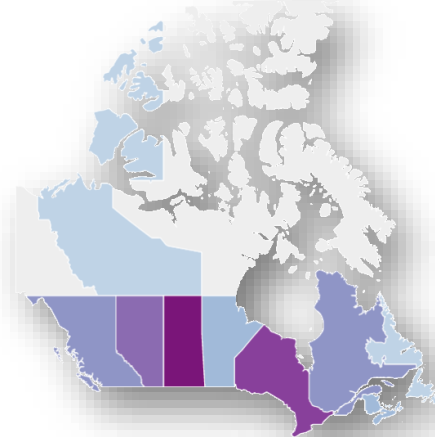
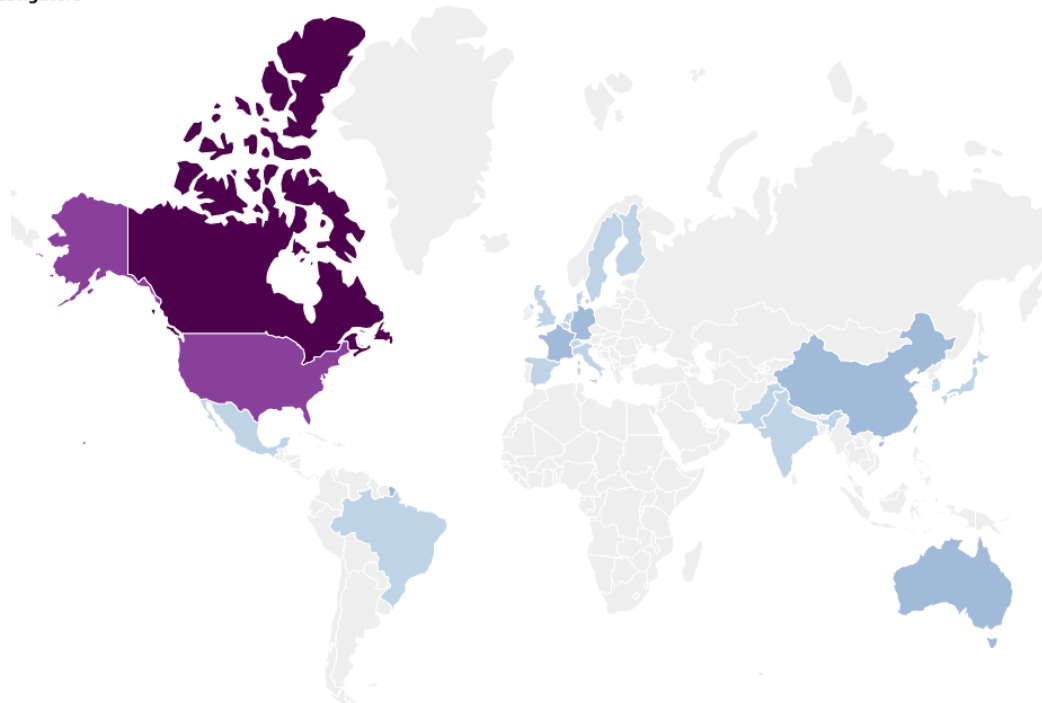
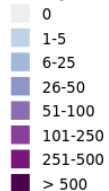
Technical Review for suitability/feasibility of proposals and capability of researchers
Scientific Merit scored by external peer reviewers

- Scientific Merit score used to rank proposals for beamtime allocation



Our User Community

Principal Investigators



Canada (non-SK)

42%

International Users

27%



Saskatchewan
31%



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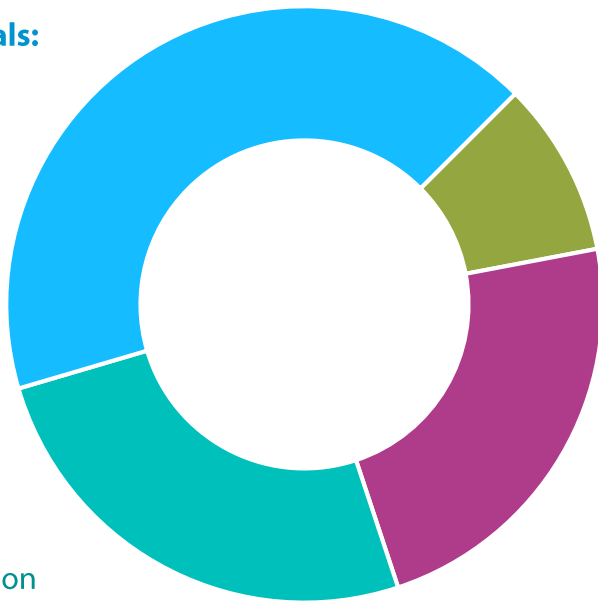
Research Applications & Results

Advanced Materials:

Nanoparticles
Catalysis
Batteries
Composites
Superconductors
Energy

Environment:

Mine Tailings
Soil erosion
Mineralogy
Geochemistry
Carbon sequestration
Uranium, Phosphorous, Arsenic



CLS Projects (based on data from 2017-2021)

Agriculture:

Soil Health
Plant Science
Animal Feed
Food Sciences

Health:

Cystic Fibrosis
Multiple Sclerosis
Arthritis
Osteoporosis
Parkinson's
Breast Cancer
Drug development /
Pharmaceuticals



3600+

PEER-REVIEWED
ARTICLES



1600+

PROTEIN DATA BANK
DEPOSITS



800+

GRADUATE
THESES

And counting...



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