



***NUFO 2015
Annual Meeting***

***Oak Ridge
National Laboratory***

April 21–23, 2015

HFIR/SNS

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April 21, 2015

BES investment has created 2 advanced neutron scattering user facilities

High Flux Isotope Reactor (HFIR)
Intense steady-state neutron flux
and a high-brightness cold neutron source



Spallation Neutron Source (SNS)
World's most powerful
accelerator-based neutron source



For Fiscal Year 2014

HFIR

- Delivered 3682 production hrs for users over 6 cycles
- 100% predictability
- Operated at 85 MW
- Completed 50 cycles with cold source



SNS

- Delivered 4424 production hrs for users at 94.1% availability against planned hrs
- Operated at ~1.0 MW and 60 Hz
- World record 1.4 MW for pulsed linac
- Developed plan to extend target life-time

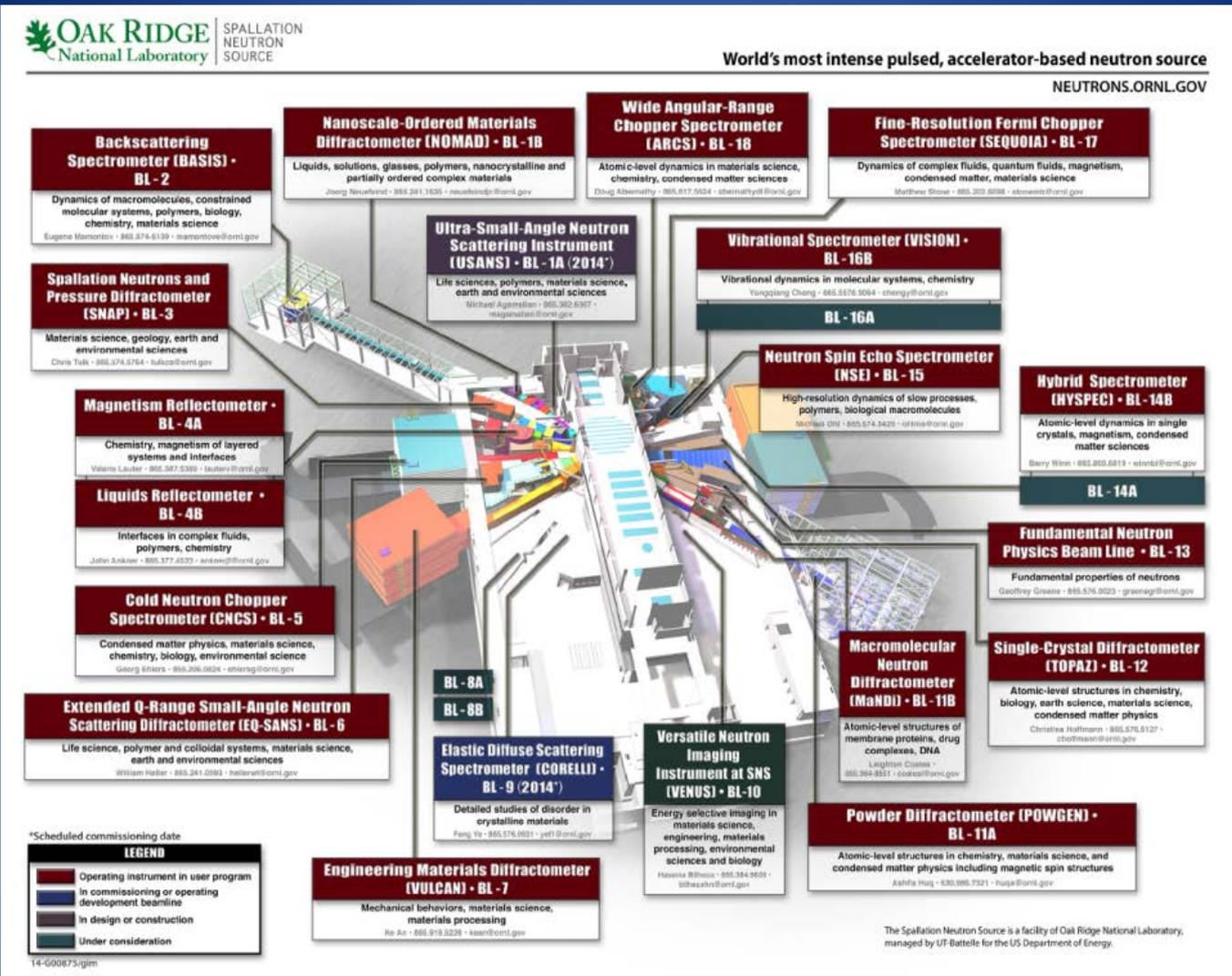


Science program

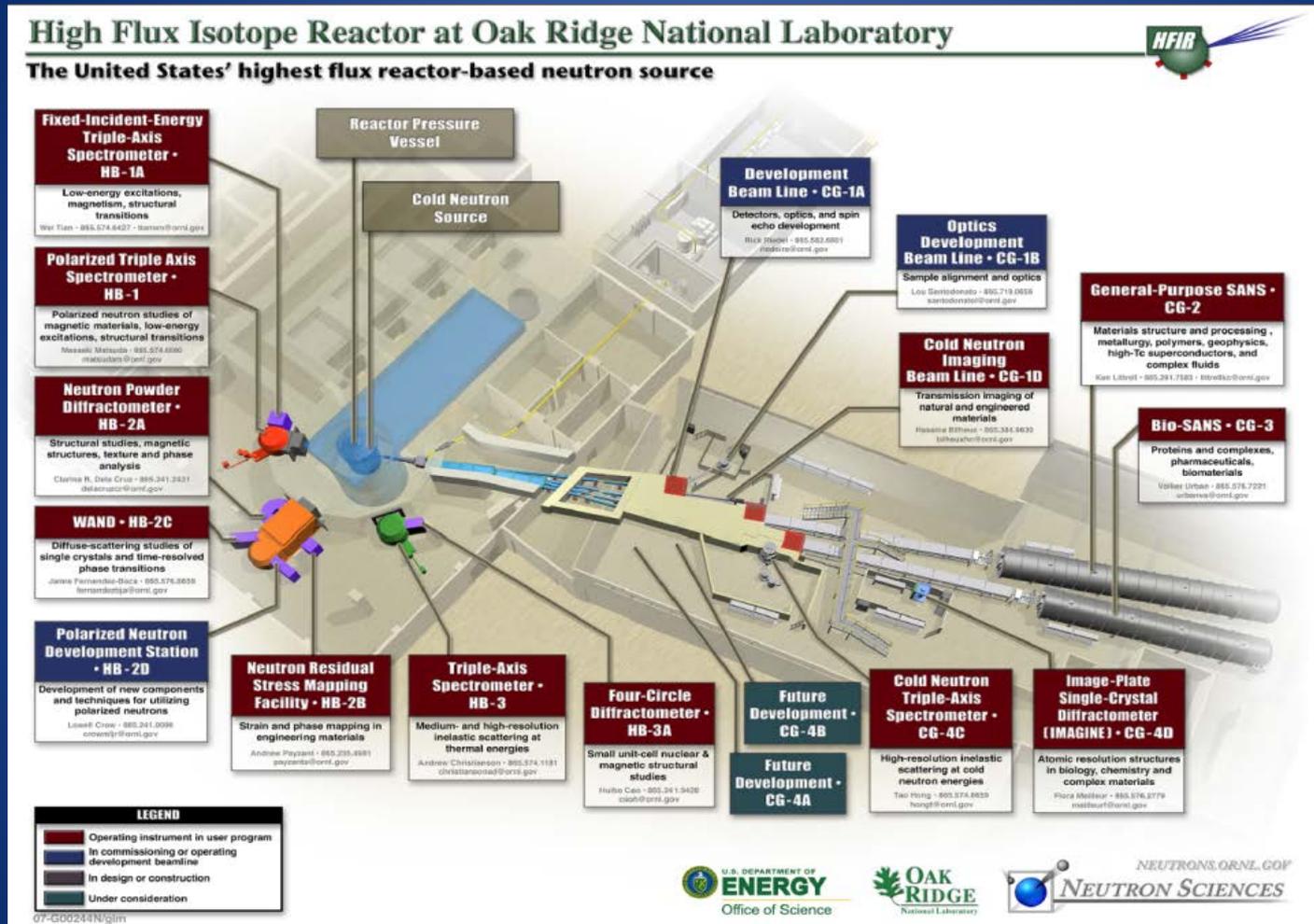
- Supported 893 unique users at SNS and 453 unique users at HFIR
- Over 900 proposals received during last proposal call setting a new facility record
- HFIR is also an exceptional resource for materials irradiation and neutron activation analysis and continuing mission in isotope production



SNS Beamlines



HFIR Beamlines



What we do well....

- Quick Start Guides
- Lab Video
- Sample Handling (tracking)
- Operational Feasibility (SAs)



Challenges...

- Sample Handling
- User Training (how much is enough?)
- Science case vs actual work steps



Operational risk...



MBraun Glove Box



MBraun Glovebox

Potential Hazards while performing these activities		
	Electrical Hazard	This equipment is operated on a high voltage system and may remain charged after being powered off
	Heat Hazard	Some models have vacuum ovens installed. The ovens produce heat and may cause burns. Use caution around oven or other heat sources.
	Suffocation Hazard	There is a risk of asphyxiation when working with inert gasses.
	General Hazards	Depending on the type of work being performed in the box, thermal, mechanical, electrical, and/or chemical hazards may be present.

Preventions to reduce exposure to hazards:		
	Eye Protection	Wear safety glasses with side shields while operating equipment and working in laboratory.
	Protective Gloves	Wear appropriate gloves for heat and chemical usage over top of glove box gloves. Keep glove box gloves away from hot surfaces
	Read Manual	Become familiar with this guide before operating.

