

SING IDT Videoconf. 21st Oct. 2008

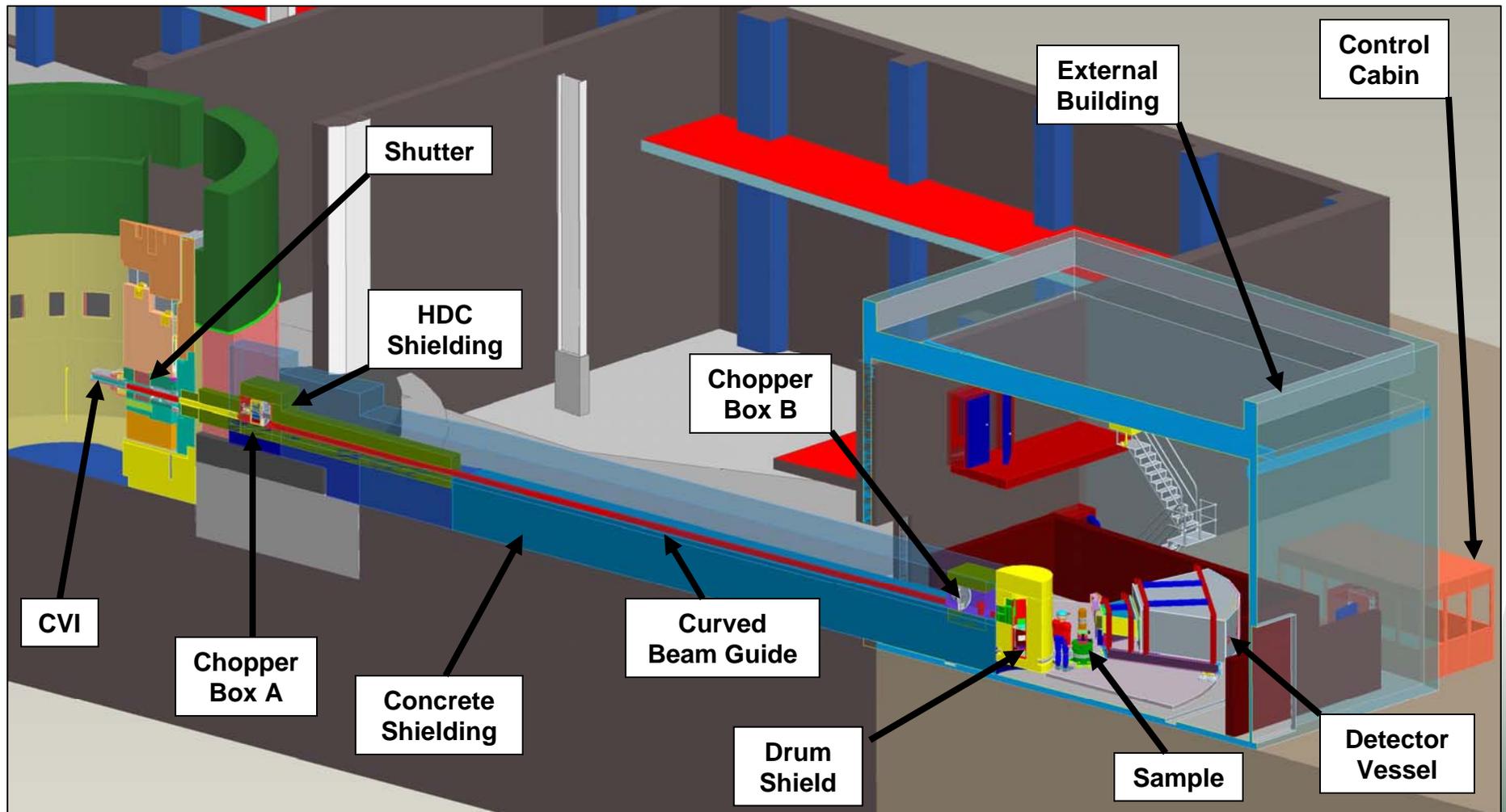


HYSPEC

Mark Hagen

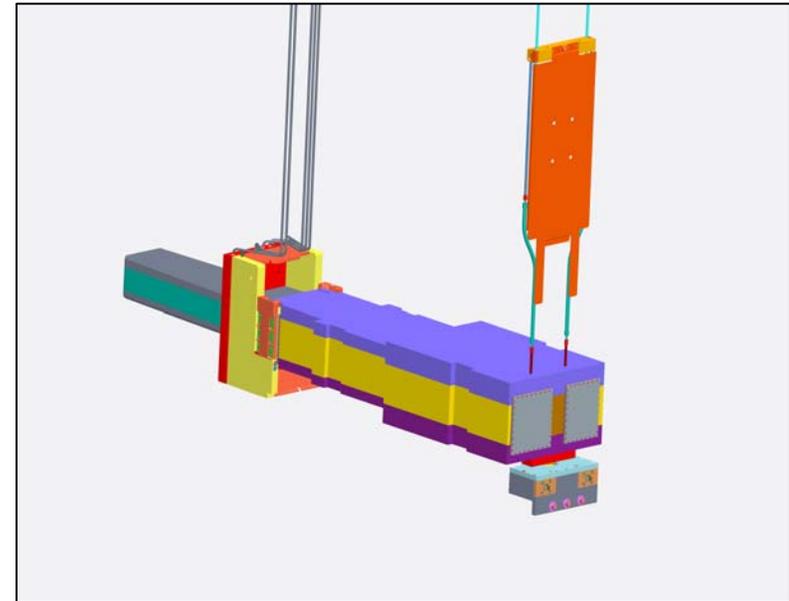
Instrument Scientist

Design Status



Shutter Insert

- Jointly with BL14A
- Shutter Insert constructed by Oak Ridge Tool & Engineering (Already delivered to SNS)
- Guide for HYSPEC & 14A inserts to be delivered in December
- Shutter gate/top/bottom sections are at SNS
- Guide/shutter insert/ shutter to be installed in Jan/ Feb shutdown.

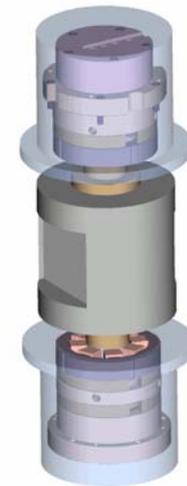
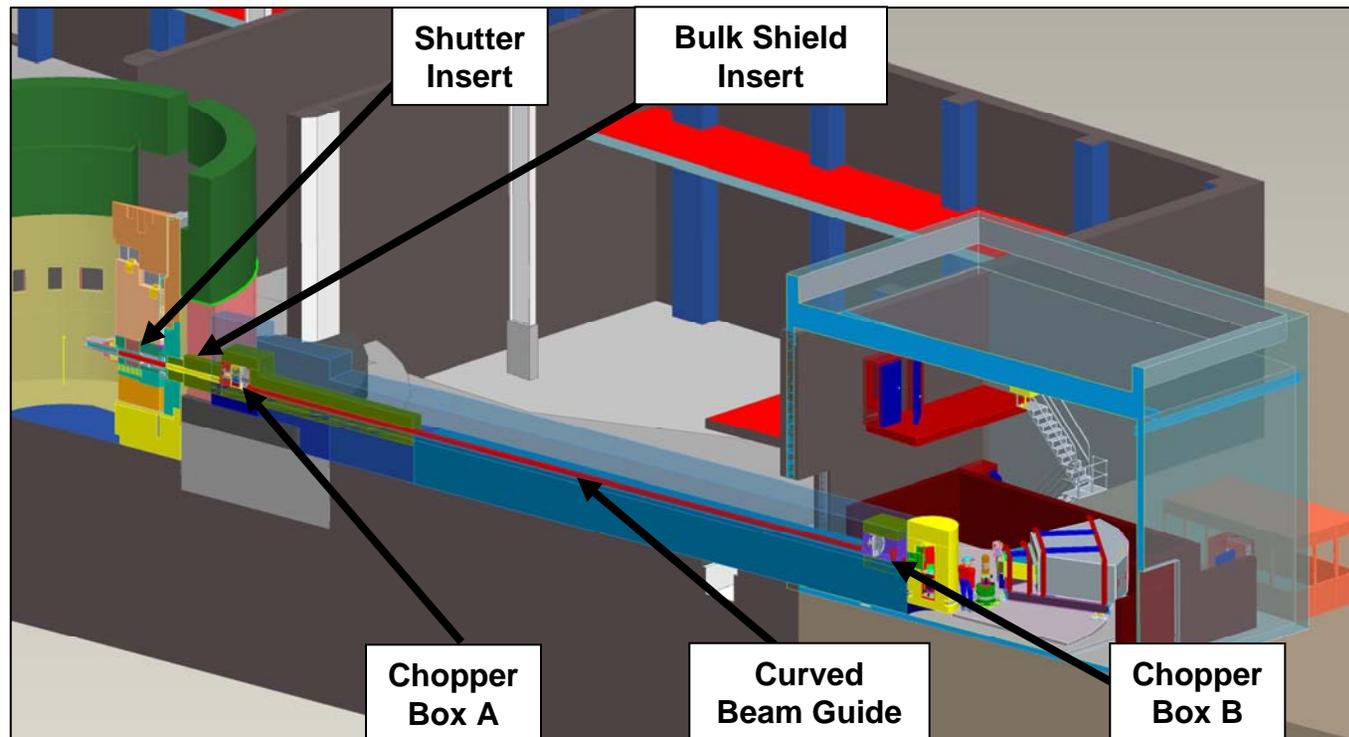
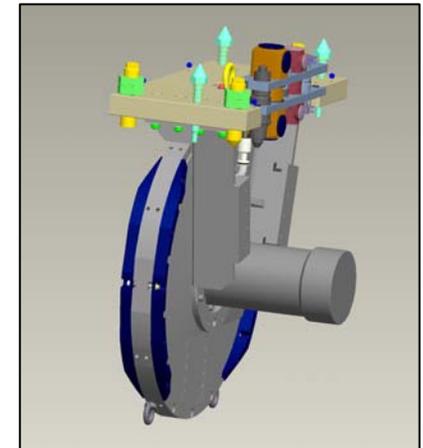


Primary Beamline System

- ~36 metres of beamguide for 14B + shutter guide for 14A
- 2 disk choppers, 1 Fermi chopper + electronics
- Vacuum jackets & chopper boxes

Contract with Mirrotron/SKF → Conceptual Design Review
Nov. 17th – 20th @ SNS

Final Design Review → Phase I (Jan '09), Phase II (Mar '09)



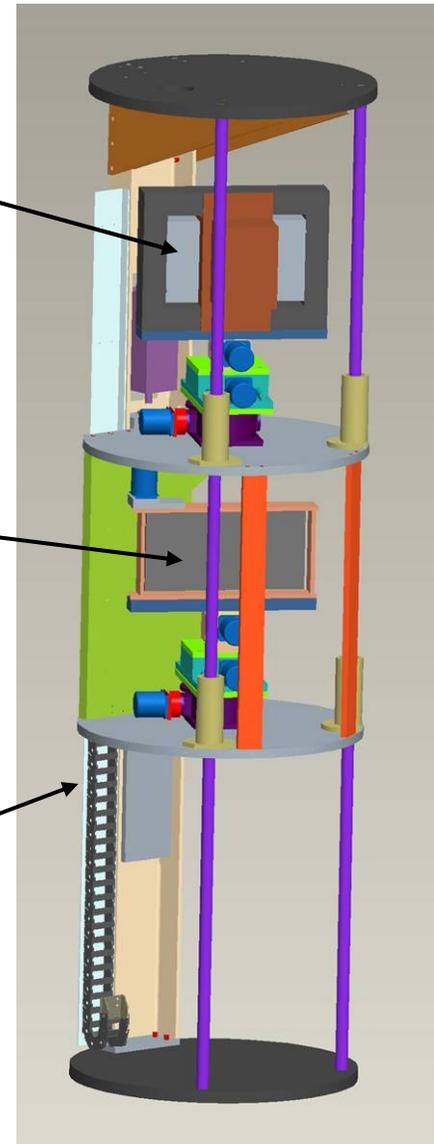
Focusing Crystal System



Polarizing (Heusler)
Focusing mechanism
Field calculations
Alignment & mounting
Crystals from I.L.L (33)



Non-Polarizing (HOPG)
Focusing mechanism
Alignment & mounting
Crystals from Momentive
Performance Materials (78)
Checked at HFIR

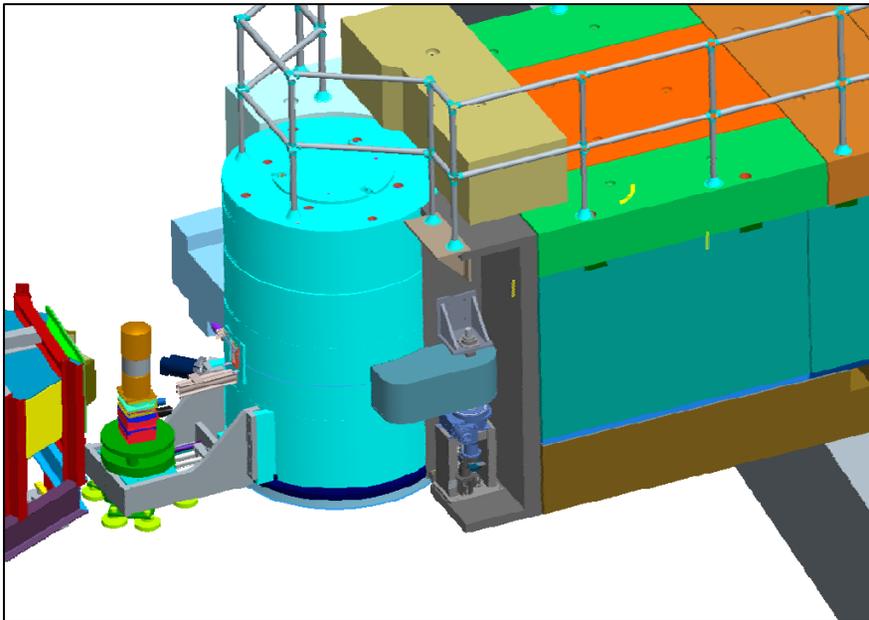
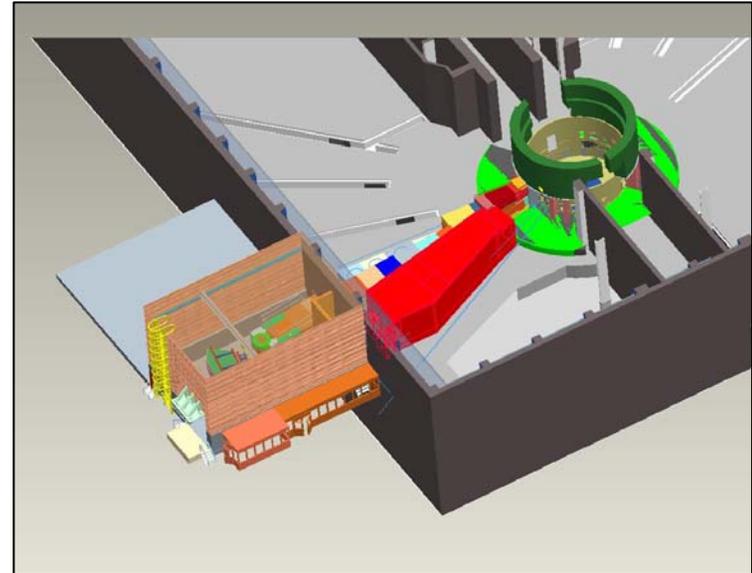


Translating mechanism to exchange focusing crystal systems, rotation tables, goniometers, motors, encoders, switches, motor control & software.

- Contract Awarded to Swiss Neutronics
- Conceptual Design Review on Nov. 20th
- Final Design Review in Jan. '09.

External Building

- Jointly with BL13 (FnPB)
- A&E Design by CH2M Hill – complete set of drawings, structural calcs etc.
- Currently awaiting ORNL approval for release of the RFQ.
- Award of contract ~Jan '09

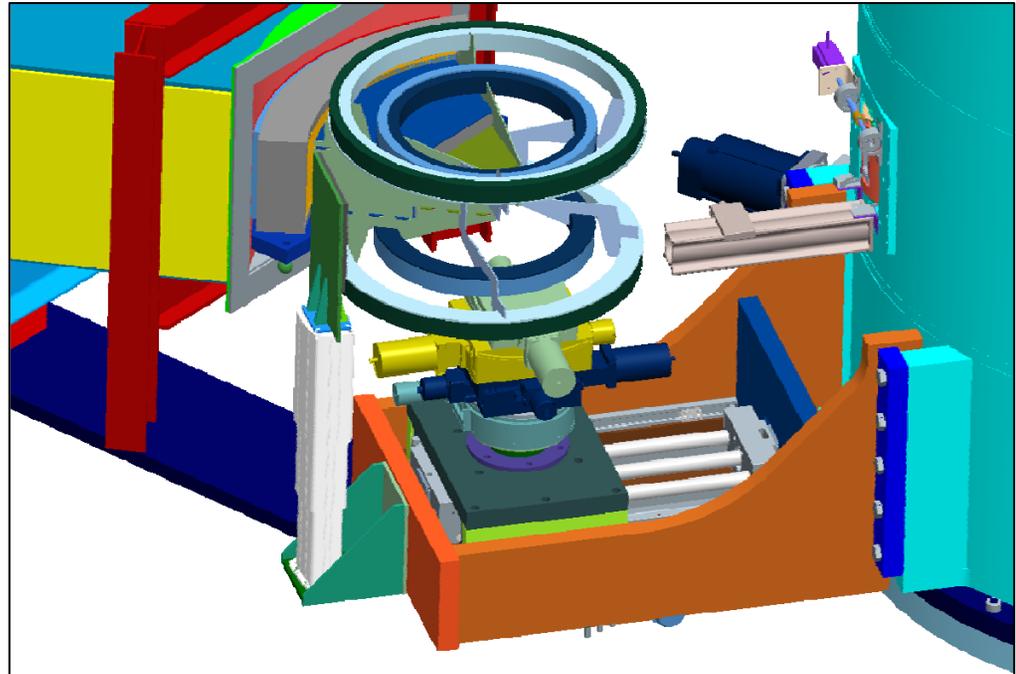


Drum Shield

- Design is complete – currently in checking
- MCNPX of as-designed has been done, completing some last parts
- Anticipate RFQ released in December – contract award in ~ February '09

Sample Stage

- DS to sample arm
- Variable sample position
- Sample goniometer
- Beamstop (drops down when the detector vessel passes)
- Rotation stage for the detector vessel
- Radial collimator specification
- Design of detector vessel + ^3He analyzer is last piece of major design work



^3He Polarization Analyzer

- Project involving HYSPEC & Instrument Development Group
- Xin Tong (a.k.a Tony) from IDG is working on this with us
- Calculations for coils completed (minimize gradient over cell)
- Have made cells at ORNL, can also procure from ILL
- Working on attaching coils to detector vessel (use same radial collimator)
- Tony is designing “miniaturized” SEOP filling station

