

SNS HFIR User Group (SHUG) Executive Committee Minutes
Archived at <http://neutrons.ornl.gov/users/shug>

Teleconference held November 13, 2012, 1:00pm EST.

Attendees

- Executive Committee: Greg Beaucage (chair), Dave Belanger, Yan Gao, Malcolm Guthrie, Fred Heberle, Cora Lind, Tyrel McQueen, Hanno zur Loye
- Guests: Kevin Jones, Kelly Beierschmitt, Steve Nagler, Laura Morris Edwards, Al Ekkebus

Minutes submitted for review November 13, 2012 by F.A. Heberle.

ACTION ITEMS:

- Share the daily reports of the target status with SHUG Executive Committee (Al)
- Statement from SHUG to general users regarding SNS target issues (Greg)
- Gather information about what other facilities have done, in terms of recognizing outstanding theses, papers (Al)
- Share job postings for group leaders with the SHUG Executive Committee (Al).
- Email your vote for the next SHUG chair to Greg (all).

WEBSITES of interest from the teleconference:

- Updated SNS operating schedule:
<http://neutrons.ornl.gov/facilities/SNS/schedule-FY13.shtml>
- Recent science highlight:
http://www.ornl.gov/info/press_releases/get_press_release.cfm?ReleaseNumber=mr20121023-00

1. Status updates (Kelly, Kevin)

SNS

Target status update (Kevin). The decision was made last Friday to go ahead with installation of the best spare target (this target has been thoroughly examined, with one minor repair). Installation has begun and will conclude by next Monday (Nov. 19th). The [revised run schedule](#) has been published. The instrument will be turned on Monday Nov. 26th, with user operation starting Wednesday Nov. 28th. There will be a short break for the Christmas holiday, but otherwise SNS will be running continuously until May.

One spare target remains, which has a weld joint we don't like. We're currently exploring ways to repair or strengthen the weld joint without doing other damage to the target. We are expediting procurement of a target currently under fabrication with Oak Ridge Tool (this will be the first target they've delivered). The mercury vessel of this target is in good condition, and we're now looking at the water shroud and leak sensors. The sensors were problematic but repairs were made. Effort is now being devoted to getting another spare target in house, so that we're confident we have sufficient backup.

The failure mode appears to be a defective weld. This has been identified in the same general location (the same weld joint) on each failed target. This knowledge is now being applied to targets under construction. The five week outage was treated as a maintenance outage, with additional work being done on the accelerator and target hall that would normally be done during a maintenance outage. Because of this, about half the time will come back to the users by shortening the length of future maintenance outages.

Additional comments (Kelly). The team here has done an extraordinary job with target diagnostics, which had to proceed behind shielding, using manipulators. What we've learned from diagnostics, tooling, and operating procedures, will serve the facility well going forward. We've learned things that will fundamentally change the way targets are built. Many possible failure modes were identified, and Kevin's team investigated all of them. The organization has leaped ahead many years in experience during this single outage. Daily reports have been shared with NAB and DOE, and we will make these reports available to the SHUG Executive Committee (action item, AI).

Malcolm asked if user days are being lost due to the outage. Kelly: The total loss for the year is ~ 500 MWh. The loss was approximately cut in half by doing additional maintenance over the outage. Overall we expect a ~ 10% reduction compared to 2012A, which amounts to ~ 10 days. Laura notes that all users that had accepted proposals for 2012B will be able to complete their experiments by the end of 2013A.

HFIR

HFIR cycle 444 ended Nov 2nd; cycle 445 begins Nov. 21st.

2. User Office updates (Laura)

Approved projects for 2012B are being rescheduled, with some carryover into 2013A. The 160 proposals accepted (out of 546 submitted) for 2013A are currently being scheduled.

The next proposal call deadline (2013B) is March 6th. The SRC will meet April 22-23rd to review the proposals.

3. Instrument and science highlights

Steve Nagler: Data collected at ARCS and SEQUOIA has revealed that nitrogen atoms in uranium nitride form a nearly ideal realization of the isotropic quantum harmonic oscillator. This work has just been published in [Nature Communications](#). Uranium nitride has potential application as a fuel for the next generation of more efficient nuclear power reactors. Adam Aczel is the lead author on the paper.

Kelly: Based on feedback from the SRC and individual users, we are currently resetting priorities for instrument buildout, and getting better data reduction in place. All of this

was discussed last week at the offsite review. We made good progress against the 5 year plan last year, and expect to make even better progress this year. Kelly will share details with the SHUG committee, pending new information on the federal budget, so that we know where we sit for the balance of the year. Kelly will be meeting with our DOE sponsor on Dec. 10th to provide an update of the 5 year plan.

4. Best paper awards discussion (AI)

AI: As we're maturing as a user facility, is there some way to recognize outstanding papers and dissertations, along the lines of the Compton Award (APS) or the Rosen Prize (LANSCE)? One comment that some high impact research areas may tend to dominate the awards, and perhaps it is good to do instrument-specific awards. This is still a general idea, and more information is needed before we can proceed. AI will survey other labs and see what awards are provided (action item).

5. Upcoming events

- High resolution neutron scattering workshop to measure slow dynamics (March 12-14, 2013)
- High pressure workshop (June 3-5, 2013)
- Planning for POWGEN (June 6-8, 2013)
- Joint X-ray and Neutron Scattering School (Aug. 2013)

6. Other items

- Kelly: Thomas Proffen has been hired as the Division Director for the Neutron Data Analysis and Visualization Division. We now need to fill Thomas's old position, as well as positions for three group leaders in diffraction, chemical spectroscopy, and engineering materials. The group leader positions are not instrument specific. Group leaders report to Mike Simonson. The SHUG committee is encouraged to provide input or recommendations to Mike.
- Election for the next SHUG Chair (was supposed to have been done in February). Please email your vote for either Tyrel or Dave, to Greg.

Next telecon date: Tuesday December 4, 2012, at 1:00pm EST