

HYSPEC News - September, 2015.

Dear HYSPEC ID Team Members,

As all of you know, the deadline for the next SNS proposal cycle is coming in less than about two weeks, see http://neutrons.ornl.gov/sites/default/files/2016-A_Call_for_proposals.pdf and <http://neutrons.ornl.gov/users/proposals.shtml> for details. Now is a good time to prepare your HYSPEC proposals.

Two years have now passed since HYSPEC entered the User Program, and we are seeing the first science publications coming out. Our first, FY2015 IDT report had just been submitted to the SNS,

http://neutrons.phy.bnl.gov/HYSPEC/documents/HYSPEC_memos/HYSPEC_IDT_report_2015.pdf. Up to now, user experiments were mainly performed using un-polarized neutrons, although some half-polarized measurements with incident neutron beam polarized using the Heusler monochromator were also performed. Finally, however, after overcoming various technical and logistical hurdles, the full polarization analysis option using the wide-angle supermirror transmission polarizer has been commissioned. Over the last week of September, 2015, I have participated in the first friendly-user commissioning measurement, and am happy to report that polarized beam option is operational, and is ready for the friendly user IDT experiments. The measured flipping ratio is 16.8 ($E_i = 15$ meV), 14.7 ($E_i = 20$ meV), 12.3 ($E_i = 25$ meV). Some preliminary results of the polarized beam commissioning are summarized in

http://neutrons.phy.bnl.gov/HYSPEC/documents/HYSPEC_memos/supermirror_1st_results_HYSPEC.pdf.

For the upcoming cycle the IDT members are encouraged to submit experiments that require polarization analysis for scattered energies up to 25 meV. Such experiments would be awarded 'alternate' status, where the plan is that an Instrument Team would activate those alternate experiments after some initial commissioning with neutrons in the 2016A cycle.

Another change that has occurred during this past summer shutdown, is that HYSPEC, along with SEQUOIA, has transferred to a new, EPICS-based instrument control system. While the new user interface still requires some honing and debugging, it is in working shape and is on its way to meet the broad set of user expectations. Finally, the instrument had a number of incremental tune-ups and improvements, including new cable management, which lifted most limitation on the sample rotation stage, and which have noticeably improved its performance.

The memorandum of understanding between the SNS and the HYSPEC IDT, http://neutrons.phy.bnl.gov/HYSPEC/IDT/IDTHYSPEC020614_IZ.pdf, had been finalized and signed slightly more than a year ago. The official mode of running the HYSPEC science program remains similar to what it was in the past. All proposals have to be submitted to the ORNL-SNS IPTS system before the deadline. The IPTS webpage now accommodates the way to identify IDT proposals by having a question on the "instrument selection" page to identify proposals to be considered for HYSPEC IDT time. One starts the proposal process, however, by selecting "general user", which could be confusing / frustrating (no HYSPEC IDT member

is even able to select “IDT time” at the start of the proposal process). The detailed step-by-step instructions can be found at http://neutrons.phy.bnl.gov/HYSPEC/IDT/IPTS_for_HYSPEC_IDT.pdf. If you would like your proposal to be considered by the IDT Executive Committee (EC) for the IDT beam time, you would also have to send an email to the EC Chair (currently, it is zaliznyak@bnl.gov) with the proposal IPTS number and a copy of the statement of research, as soon as you submit the proposal to the IPTS, and before the SNS proposal deadline. In the case that the IDT proposals could be accommodated in less than 20% of the instrument time, which is the maximum amount available for the IDT science program, the balance of the neutron beam time would be used by the SNS for the general user program.

HYSPEC TEAM UPDATE

BNL-ISSP collaborative HYSPEC experiments are now included in the US-Japan Cooperative Program on Neutron Scattering. This collaboration will certainly serve to enhance and invigorate the HYSPEC science program. Hence, it was very natural that Professor T. Sato (Tohoku University) was elected a new member of the HYSPEC IDT Executive Committee (EC). Another new member of the EC is Professor A. Goldman (Ames/Iowa State University). Professor Sato and Professor Goldman fill vacancies which arose from departure of Dr. J. Rhyne and Dr. R. McQueeney, who took appointments that are conflicting with their participation in the EC. The role of the EC members in running the IDT science program is to consider, review, and select the IDT proposals for the beam time allocation.

For the most current news and information about HYSPEC, please visit the HYSPEC IDT website at BNL, <http://neutrons.phy.bnl.gov/HYSPEC>, or the ORNL SNS HYSPEC site, <http://neutrons.ornl.gov/hyspec/>.

With best regards,

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