

Instrument Development Team Agreement
between
UT-Battelle, LLC
and
Brookhaven National Laboratory
for the
Hybrid Polarized Beam Spectrometer (HYSPEC)
at
Oak Ridge National Laboratory's Spallation Neutron Source

This Instrument Development Team (IDT) Agreement is entered into between UT-Battelle, LLC (UT-Battelle) and Brookhaven National Laboratory (BNL). UT-Battelle is a limited liability corporation organized and existing under the laws of the State of Tennessee. UT-Battelle is the management and operation contractor for the Oak Ridge National Laboratory (ORNL), pursuant to its Prime Contract DE-AC05-00OR22725 with the U.S. Department of Energy (DOE). BNL is a DOE laboratory operated by Brookhaven Science Associates, a partnership between Battelle and Stony Brook University.

Background

The Neutron Sciences Directorate (NScD) at ORNL operates the Spallation Neutron Source (SNS) and High Flux Isotope Reactor (HFIR) for DOE. By 2015, it is anticipated that SNS will have 19 instruments and HFIR will have 12 instruments in the General User Program or completing commissioning. There are two basic modes of user access to the instruments at these facilities, General User Access and Instrument Development Team (IDT) Scientific Program Mode. The modes of access are outlined below in *Beam Time Allocation and Scheduling*.

General Users are individuals or groups who request access to beam time to carry out their research using existing beam lines and supplying samples, and perhaps custom sample environment or instrumentation for their experiment. General Users apply for beam time by submission of a proposal that is evaluated by a Scientific Review Committee (SRC).

To engage the neutron scattering community, DOE and NScD management developed partnerships known as Instrument Development Teams (IDTs). Some instruments at SNS have been developed by IDTs and funded by the DOE based on proposals submitted by these IDTs, and subsequently have been designated by NScD management as IDT instruments. When instrument construction is completed, IDTs help build the instrument's science program, further develop the instrument, participate in the commissioning of an instrument, and assess modifications to an instrument that would benefit the science program. IDT instruments have a portion of their beam time allotted for the scientific program of the IDT.

In recognition of their contributions, the IDT's are allocated a portion of available beam time on an instrument for carrying out the IDT science program. This allocation is apportioned for three years. A review of the IDT science program at the end of the term by NScD management will determine whether the IDT beam time allocation will be renewed. Each IDT has an Executive Committee that includes the

principal investigator (PI) and representatives from the IDT with a chairperson who acts as a spokesperson for the IDT and the principal point of contact with NScD management. IDTs manage their own scientific program and allocate their apportioned beam time among their members in a process approved by NScD management.

HYSPEC IDT Purpose and Scope

The HYSPEC is one of the five instruments in the SING project and received a sub-project baseline budget of \$12.6 million. HYSPEC has been developed in collaboration with the BNL-led IDT and funded by DOE following a proposal submitted by Dr. I. Zaliznyak and Dr. S. Shapiro of BNL. The primary role of the HYSPEC IDT is to assist NScD management in building a world-class scientific program on the instrument, in collaboration with NScD scientists or external users, as appropriate.

This IDT Agreement outlines the roles and responsibilities of the HYSPEC IDT, Executive Committee (EC) and NScD management. It also establishes the process for beam time allocation and scheduling, including allocation for contributions made by HYSPEC IDT Members.

Roles and Responsibilities

A **HYSPEC IDT Executive Committee** will participate in the instrument commissioning and provide counsel regarding modifications to the instrument that would benefit the science program as quickly as possible. The Executive Committee is responsible for defining the IDT's Scientific Plan and allocating the available beam time among the IDT members. The Executive Committee is responsible for submitting to NScD management the process used by the team for approving experiments and allocating beam time. The Executive Committee is also responsible for submitting a progress report and list of IDT members to NScD management by October 1 each year. The Executive Committee will manage the IDT membership issues, including but not limited to, election of the new IDT members, election of the new Executive Committee members, the Executive Committee Chair, and is responsible for resolving disputes among members. The IDT Scientific Plan and beam allocation is subject to the approval of NScD management.

The Executive Committee for the HYSPEC IDT will be comprised of five members. Brookhaven National Laboratory will have a representative on the Executive Committee. The composition of the HYSPEC IDT and its Executive Committee at the beginning of FY 2014 is attached in Appendix A. An Executive Committee Chair position will be named annually by October 1. Dr. I. Zaliznyak will serve as the chairperson of the HYSPEC IDT Committee in FY 2014.

The **Executive Committee Chair** will have the primary responsibility for the IDT science program's execution and annual reporting, including reporting of the IDT membership and publications arising from use of IDT beam time. In addition, it is the responsibility of the Executive Committee Chair to ensure that the IDT Scientific Plan, beam time allocations, membership list, and reports are submitted to NScD management. The Executive Committee Chair is responsible for ensuring scientific review of the experiments that are part of the IDT Scientific Plan.

The **Instrument Scientists** will be employed by UT-Battelle. They will execute the design, acquisition, installation, commissioning and operation for the HYSPEC instrument. Each Instrument Scientist is an ex-officio member of the IDT Executive Committee and will coordinate commissioning and experimental efforts with the IDT.

NScD Management will provide for the commissioning and operation of the instrument.

Each **IDT Institutional Participant** will provide staff with the required skills and experience to properly discharge the responsibility assumed by the participant. Staff assigned to the IDT will be fully accountable for the work scope given to them and be flexible with regard to work locations to best suit the needs of the IDT.

Beam Time Allocation and Scheduling

NScD management has the ultimate responsibility and accountability for effective and efficient utilization of time on all beam lines at the facility. The Instrument Scientist will provide an estimate to the HYSPEC Executive Committee of the numbers of days available to the IDT during a given proposal cycle.¹ The NScD User Office will calculate the days available to the IDT based upon the operating schedule and instrument commissioning activities.

The experiments that compose the IDT Scientific Plan must be submitted through the NScD Integrated Proposal Tracking System (IPTS) and clearly identified as a HYSPEC IDT Scientific Plan Proposal. HYSPEC IDT members will submit proposals in IPTS as a HYSPEC IDT Scientific Plan Proposal. The Executive Committee Chair must notify the NScD User Office of its membership so User Office personnel can establish roles within IPTS so IDT members can submit IDT proposals. The Executive Committee Chair will automatically be notified when proposals are submitted in IPTS as a HYSPEC IDT Scientific Plan Proposal. The HYSPEC IDT Executive Committee Chair will then identify those experiments that will comprise the HYSPEC IDT Scientific Plan based on the proposals submitted in IPTS. Those proposals not selected as part of the HYSPEC IDT Scientific Plan will be converted to General User Program proposals and reviewed by the Scientific Review Committee.

The HYSPEC IDT Scientific Plan must be submitted by the Executive Committee Chair to NScD management within 10 business days after the date and time the proposal call closes. Upon receipt of the Scientific Plan, NScD management will review the experiments for feasibility and notify the Executive Committee Chair if the proposals are acceptable. If the HYSPEC IDT does not submit a Scientific Plan within 10 business days after the proposal call closes, the IDT will forfeit its time for that cycle. It is the responsibility of the IDT Executive Committee to apportion the beam time among its members and their experiments. The Scientific Plan provided to NScD must include the ranking of the experiments which should be performed and the days required for each experiment. If all experiments outlined in the

¹ The actual number of days available to the IDT will vary each cycle based upon operating conditions and facility needs. If the number of neutron production days are reduced due to unforeseen operating conditions, priority will be given to the General User Program.

Research Plan cannot be performed in the days allocated to the IDT, the Instrument Scientist will notify the Executive Committee Chairperson.

NScD management cannot provide the HYSPEC IDT Executive Committee Chair a list of the proposals submitted for HYSPEC through the General User Program; therefore, the Executive Committee Chair must develop a process so IDT members notify the Executive Committee Chair that they submitted a proposal.

Proposals in the IDT Scientific Plan will be reviewed by NScD staff for potential conflicts of interest, scientific merit, feasibility and safety on par with the General User Program proposals. NScD management will determine if the beam time requested is commensurate with the complexity of the experiment and may adjust the number of days per experiment. The IDT Executive Committee Chair will be notified if it is determined that a proposed experiment cannot be performed. The IDT Scientific Plan can be modified after submittal based upon approval by NScD management. To modify the plan, the IDT Executive Committee must notify NScD and the HYSPEC Instrument Scientist of the experiment they intend to substitute. Any additions to the Scientific Plan must be entered into the IPTS. The substitute experiments will be reviewed by NScD management for potential conflicts, scientific merit, feasibility and safety. The Instrument Scientist will work with IDT members to schedule accepted experiments set forth in the IDT Scientific Plan.

The final decision on performing all experiments resides with the NScD Associate Laboratory Director (ALD).

General Provisions

Policies and Requirements: The IDT members will follow all standard NScD User Policies and Requirements.

Environment, Safety, and Health (ES&H) Services: Work performed at SNS will comply with the ORNL ES&H policies. NScD staff will review and approve all equipment designs for ES&H considerations.

Security and Building Access: Security and building access will be determined by ORNL policy.

Information Technology Infrastructure: All software and hardware related to the instrument must be able to integrate with SNS software and hardware and use the standards set by the SNS.

Export Control: Export Control requirements are described in the ORNL Standard User Agreement currently in place between BNL and UT-Battelle.

Assignment: It is understood and agreed that this Agreement is entered into by UT-Battelle and that administration of this Agreement may be transferred from UT-Battelle to DOE or to its designee.

Conflicts: Conflicts or issues may arise which cannot be resolved between project personnel by the Parties. Such conflicts or issues should be raised to supervisory or managerial personnel for direct communication between the Parties to seek resolution. If a satisfactory resolution cannot be obtained

at this level, the designated points of contact will take the issues to their respective organizational leaders for guidance in seeking a mutually agreeable solution.

Effective Date: This Agreement is effective when the HYSPEC instrument entered the General User Program (Proposal Call 2013B) and will remain in effect for a period of three (3) years, at which point the IDT achievements will be reviewed by NScD management. A new agreement may be proposed if it is determined in the review that continuation of the IDT is in the best interest of the instrument's future development.

Amendments and Termination: This Agreement may be modified or terminated by either Participant upon ninety (90) day advance notice to the other. Modifications to this MOU will be published as an addendum.

Intellectual Property: Intellectual Property Provisions are described in the ORNL Standard User Agreement currently in place between BNL and ORNL.

Reporting: The IDT Executive Committee will provide an annual progress report on all aspects of its activities by September 30 of each year to NScD management. NScD management may occasionally request additional updates beyond the annual report.

Communications

The Parties will appoint points-of-contact for notices and communications in connection with this Agreement within 30 days after signature. A Party can modify the point-of-contact by notifying the other with the revised information.

Authorized Signatures

Those individuals whose signatures appear below hereby certify that they are duly authorized to sign on behalf of the respective Parties of this Agreement. This Agreement will be executed in duplicate, and is not effective until signed by both Parties.

Date

Date