

**Memorandum of Agreement  
between  
The Spallation Neutron Source  
and  
Lawrence Berkeley National Laboratory**

**1. Introduction**

The Spallation Neutron Source (SNS) Project is being accomplished by a partnership between six laboratories – Argonne National Laboratory (ANL), Brookhaven National Laboratory (BNL), Lawrence Berkeley National Laboratory (LBNL), Los Alamos National Laboratory (LANL), Oak Ridge National Laboratory (ORNL) and the Thomas Jefferson National Accelerator Facility (TJNAF). The current project schedule provides for LBNL's subproject to be completed by the end of July 2002 with the delivery of the front end, but it is anticipated that the SNS Project, as well as LBNL, will mutually benefit from a continued collaboration. This Memorandum of Agreement (MOA) provides the overall framework for the business relationship between the SNS and LBNL in two areas of work; i.e., the commissioning of the SNS front end at ORNL and a Research and Development (R&D) effort for a highly reliable, high-intensity H<sup>-</sup> ion source. The Department of Energy (DOE), through ORNL, provides funding for some of this work to LBNL.

**2. Scope**

The MOA formalizes a mutual agreement to further develop and investigate new types of high-intensity, high reliability H<sup>-</sup> ion sources. It represents the agreement of the signatory laboratories ORNL and LBNL to work towards this goal. It also represents a framework for LBNL to support the work on SNS beyond the duration of the front-end construction project.

**3. Roles and Responsibilities**

LBNL, represented by a lead physicist in Berkeley, will be responsible for managing the overall R&D program for high-intensity ion sources. SNS will fund one FTE for a period of three years at LBNL to support this R&D program. The ion sources group leader in Oak Ridge will represent SNS and will participate with his group in the program.

In addition, LBNL will make a best effort to provide qualified technical personnel to SNS as requested to support the commissioning of the SNS Front-End Systems. Such requests will be made by SNS only in case of emergency, and SNS will fund all expenses arising from them.

**4. Provisions**

**Staffing and Equipment**

It is LBNL's responsibility to set up the R&D program and provide staffing. Beyond the contribution specified in Section 3 SNS, if necessary, will make contributions in kind or lend property that will return to SNS after termination of the MOA.

## **Costs and Accountability**

LBNL is responsible to seek funding support to cover all costs except as contributed by ORNL under the provisions in Section 3 and in the preceding paragraph. LBNL is responsible for adhering to proper accounting procedures and for maintaining records. The representatives of both participating laboratories will annually provide a written report to management of both laboratories documenting the progress of the R&D program. This yearly report will include a cost/expense summary.

## **5. MOA Implementation**

### **Enactment**

This document will become valid when properly executed by the directors of ORNL, LBNL, and the SNS Project. It shall remain in effect for three years or until superseded. The actual efforts described in this MOA will start on a date to be specified by separate agreement of the undersigned parties.

### **Change Procedure**

If changes to this MOA are deemed necessary, such changes will be implemented by mutual agreement between SNS/ORNL and LBNL and will become effective upon reissue of the properly signed, revised edition of this MOA. A new MOA shall bear a revision number and effective date as a footer on each page.

### **Approvals**

The undersigned concur with the terms of the Memorandum of Agreement:



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William J. Madia, Director  
Oak Ridge National Laboratory

\_\_\_\_\_  
December 19, 2001

Date



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Charles V. Shank, Director  
Lawrence Berkeley National Laboratory

\_\_\_\_\_  
December 20, 2001

Date



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Thomas E. Mason, Associate Laboratory Director  
Spallation Neutron Source

\_\_\_\_\_  
December 17, 2001

Date

