

**Memorandum of Understanding**  
**between**  
**Global Design Effort for the International Linear Collider**  
**and**  
**the University of California - Lawrence Berkeley National Laboratory**

**December 7, 2005**

**1. Introduction**

**1.1 *General Description***

The DOE High Energy Physics Advisory Panel (HEPAP) has stated the need for a 500 GeV electron-positron linear collider to address fundamental particle physics questions at the TeV energy scale, and recommended that such a facility be the next major project for the U.S. High Energy Physics program. The International Linear Collider (ILC) is envisioned to be a globally international project to construct such a linear collider to address this mission need. Research and Development (R&D) for the ILC is being carried out by an international collaboration of laboratories and universities, in three regions of the world (the Americas, Asia, and Europe), under the direction of an international Global Design Effort (GDE). The GDE is a virtual organization with members drawn from existing laboratories and universities. Overall coordination of the technical activities within the Americas region is the responsibility of the GDE-Americas Regional Director.

This Memorandum of Understanding (MoU) establishes a collaboration between the University of California - Lawrence Berkeley National Laboratory (LBNL) and the GDE, hereinafter referred to as the "Parties", to work jointly on the technical design and R&D needed for the ILC Collaboration. This agreement between the Parties is made in the context of existing national and international collaborations, does not alter those collaborations, and is not exclusive; other laboratories or universities may establish technical design and R&D collaborations with GDE under similar MoUs.

This MoU does not constitute a legal contractual obligation on the part of either of the Parties. The rights and obligations of the Parties to this MoU are governed by LBNL's prime contract with DOE.

All work performed by LBNL as part of the ILC Collaboration will be coordinated by the LBNL ILC Program Leader. Definition of the scope of work and planning of specific work to be done at LBNL are the responsibilities of the GDE-Americas Regional Director and the LBNL ILC Program Leader. The scope of work done at LBNL will be documented in this MoU and

future Amendments to it. Detailed work packages to be completed in a specific frame of time will be described separately in Addenda to this MoU.

## **1.2 *Objective***

The objective of this MoU is to document the terms of agreement between GDE and LBNL under which work in support of the ILC is to be performed at LBNL.

## **1.3 *Scope***

This MoU covers work to be performed at LBNL during the R&D and technical design phase of the project. The scope of work to be done by LBNL may include elements of conceptual design and modeling, engineering, procurement, fabrication and testing of prototypes, preparation of documentation, and participation in review and management processes. This agreement does not specify the time of performance of tasks in any particular category, nor does it preclude the addition of tasks by amendment to this MoU.

## **2. *General Provisions***

### **2.1 *Terms and Conditions***

The Lawrence Berkeley National Laboratory is managed and operated by the University of California under contract with DOE, number DE-AC02-05CH11231. All work performed by LBNL in support of the ILC Collaboration will be consistent with the terms and conditions of this contract.

### **2.2 *Funding***

Funds for the work to be accomplished at LBNL will be agreed to by the GDE-Americas Regional Director and the LBNL ILC Program Leader. These funds will be defined in annual Addenda to this MoU. Funds for work done at LBNL in support of the ILC Collaboration will reside at LBNL, and transfer of funds to LBNL will be made by DOE Financial Plan Transfer. Funding will typically be transferred at six-month intervals to allow for possible adjustments in the work to be done at LBNL.

### **2.3 *Cost Recovery***

It is understood that LBNL is operated as a full cost recovery facility. All costs of work done at LBNL under this MoU in support of the ILC Collaboration are to be covered by the funds described in Section 2.2 above, and the LBNL ILC Program Leader will be responsible for management of these funds. The GDE-Americas Regional Director, in consultation with the LBNL ILC Program Leader, may request at any time that specific work under this MoU on the

ILC Collaboration at LBNL be redirected or terminated. LBNL will respond to such requests as quickly as possible within DOE and LBNL personnel management guidelines.

## **2.4 *Reporting***

LBNL will submit to the GDE-Americas Regional Office semiannual progress reports of the work done at LBNL under this MoU. These reports will contain descriptions of technical progress, statements of goals for the next reporting period, and indications of long-range plans for all work at LBNL under this MoU. These reports will be submitted at the midpoint and close of the Fiscal Year, and will become part of technical and budget planning for the GDE.

LBNL will submit to the GDE-Americas Regional Office a quarterly statement of costs and commitments incurred for all work being done using the funds described in Section 2.2 above. These reports will become part of the technical and budget planning for the GDE.

## **2.5 *Ownership of Equipment***

All equipment purchased or fabricated using the funds described in Section 2.2 above at LBNL will be the property of DOE/LBNL and shall be subject to the LBNL property management system. All new equipment purchased by LBNL for exclusive use in the R&D effort under this MoU or incorporated into ILC prototypes will remain under control of the GDE until it is deemed by the GDE-Americas Regional Office that such equipment is no longer needed. New equipment which is jointly shared by the ILC Collaboration R&D effort and other programs of LBNL will be controlled jointly by LBNL and the GDE-Americas Regional Office. New equipment which is supplied to laboratories outside the Americas region for ILC Collaboration R&D efforts will remain under the control of the GDE Regional Office in that region until it is deemed by the GDE that such equipment is no longer needed.

## **2.6 *Intellectual Property and Scientific Publication***

All publications and all intellectual property developed under this MoU are subject to LBNL's procedures and LBNL's contract DE-AC02-05CH11231 with the United States Department of Energy, which includes a requirement that all publications receive prior intellectual property review. "Intellectual property" includes but is not limited to patents, trademarks, copyrights, and trade secrets, which may include inventions, technical data, and software.

Rights to intellectual property developed jointly through ILC Collaboration work addressed by this MoU and any similar MoUs between GDE and other institutions shall be negotiated among the parties contributing to the intellectual property. Any publication of material generated by this work must be cleared by authorized representatives of the parties contributing to the material. Publications will be collaborative, although any contributing party has the right to publish information in part or in whole, independent of other contributors, subject to informing the other contributors in writing of its intention to do so at least 90 calendar days

prior to any anticipated publication. It is the intention of the parties to this MoU to ensure that the rights of LBNL and other institutions who jointly develop intellectual property through ILC Collaboration work addressed by this MoU and any similar MoUs with GDE are protected and made the subjects of negotiated agreements.

It is the intention of the Parties that if LBNL or any other single institution under a similar MoU with GDE for ILC work elects to file and prosecute a patent application on a joint invention of its own accord, should the other contributing parties choose not to do so, each contributing party not electing to file and prosecute the patent application on the joint invention shall then perform all lawful acts necessary and requested by the other institutions to perfect its title in and to obtain or maintain patent protection on the joint invention anywhere in the world. The institution proceeding on its own accord shall bear all costs and is entitled to benefit from all rights pertaining to those patent applications and patents. All publications are required to indicate the party or parties that contributed to that publication.

All work covered by this MoU will be unclassified. The Parties to this MoU may in principle share proprietary information generated by ILC Collaboration work, subject to concurrence by authorized representatives of the owner of the proprietary information and the sponsoring agency. The sharing of proprietary information will be in accordance with mutually acceptable terms and conditions regarding the use and protection of such information to which the owner and recipient of the proprietary information shall hereafter agree. Such terms and conditions shall be articulated in a separate agreement.

## **2.7 *Amendments***

This MoU may be modified or amended from time to time by written agreement of both Parties.

## **2.8 *Public Information Coordination***

Subject to applicable laws and regulations, decisions on the disclosure of information to the public regarding the ILC Collaboration program shall be made by the GDE-Americas Regional Director following consultation with the LBNL ILC Program Leader when appropriate.

## **2.9 *Laws and Regulations***

The Parties shall each individually observe all applicable United States and foreign laws and regulations (if any) with respect to the export, re-export, diversion or transfer of the intellectual property, related technical data and direct products thereof, including, without limitation, the United States International Traffic in Arms Regulations (ITAR) and the Export Administration Regulations.

### 3. Plan of Work

Under this MoU, LBNL will carry out activities in the main program areas listed in Section 1.3. Particular activities and deliverables will be specified and agreed upon by the LBNL ILC Program Leader and the GDE-Americas Regional Director and documented in Addenda to this MoU.

### 4. Execution

#### 4.1 *Effective Date*

This MoU shall become effective upon the latter date of signature of the Parties. It shall remain in effect until superseded or five years from the effective date, whichever comes first.

#### 4.2 *Approvals*

The following concur in the terms of this Memorandum of Understanding:

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Dr Barry Barish,  
Director, GDE

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Dr Steven Chu,  
Laboratory Director, LBNL

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Date

\_\_\_\_\_  
Date

\_\_\_\_\_  
Dr Gerry Dugan,  
GDE-Americas Regional Director

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Dr James Siegrist,  
Associate Laboratory Director, LBNL

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Dr Andrzej Wolski,  
LBNL ILC Program Leader