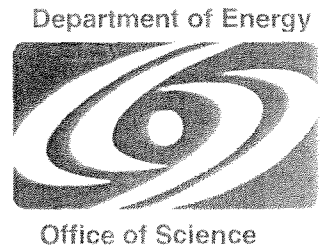




U.S. Department of Energy

Office of Science
Stanford Site Office
2575 Sand Hill Road, MS-8A
Menlo Park, CA 94025



February 5, 2008

Dr. Persis Drell, Director
Stanford Linear Accelerator Center
2575 Sand Hill Rd.
Menlo Park, California 94205

Subject: SLAC FY07 Annual Performance Evaluation Report

Dear Dr. ^{Persis}Drell:

The purpose of this letter is to transmit the Department of Energy's (DOE) Office of Science performance assessment based on criteria established in the FY07 Performance Evaluation and Management Plan (PEMP). The Office of Science Senior Management and the Stanford Site Office evaluated SLAC's FY07 performance based upon the criteria established in the FY07 PEMP. The PEMP was incorporated into the contract through execution of modification M524, Appendix B on September 29, 2006 and was revised through execution of modification M534, Appendix B on May 8, 2007. Using this process, the Science and Technology performance was rated at a B+ while the Management and Operations performance was rated at a B-. The attached evaluation provides the basis and details for these evaluations.

Of special note in the performance period was the award of the 2006 Nobel Prize for Chemistry to Roger Kornberg for his work in structural biology where a significant portion of his research was conducted at the Stanford Synchrotron Radiation Laboratory (SSRL). Additionally, the vision and momentum that the Laboratory exhibited as well as the aggressive actions that the Laboratory took at the end of this performance period, following through in FY08, are extremely encouraging. The Department of Energy is confident that SLAC is on the right track, is taking appropriate actions to reposition the Laboratory for its future missions, and that this Laboratory has a very bright future. This assessment will be placed on the Office of Science website on February 07, 2008.

Sincerely,

Paul M. Golan
Site Manager
Stanford Site Office

cc: Lecker



DOE Office of Science

FY 2007

**Performance Evaluation of
Stanford University
for the
Management and Operations of the
*Stanford Linear Accelerator Center***

February 2008



Table of Contents

I. OVERALL SUMMARY RATING	1
1.0 PROVIDE FOR EFFICIENT AND EFFECTIVE MISSION ACCOMPLISHMENT (QUALITY, PRODUCTIVITY, LEADERSHIP, AND TIMELINESS OF RESEARCH AND DEVELOPMENT)	3
1.1 SCIENCE AND TECHNOLOGY RESULTS PROVIDE MEANINGFUL IMPACT ON THE FIELD.....	4
1.2 PROVIDE QUALITY LEADERSHIP IN SCIENCE AND TECHNOLOGY.....	5
1.3 PROVIDE AND SUSTAIN OUTPUTS THAT ADVANCE PROGRAM OBJECTIVES & GOALS.....	6
1.4 PROVIDE FOR EFFECTIVE DELIVERY OF PRODUCT.....	6
2.1 PROVIDE EFFECTIVE FACILITY DESIGN(S) AS REQUIRED TO SUPPORT LABORATORY PROGRAMS	9
2.2 PROVIDE FOR THE EFFECTIVE AND EFFICIENT CONSTRUCTION OF FACILITIES AND/OR FABRICATION OF COMPONENTS	9
2.3 PROVIDE EFFICIENT AND EFFECTIVE OPERATION OF FACILITIES	10
2.4 UTILIZATION OF FACILITY TO GROW AND SUPPORT LAB'S RESEARCH BASE AND EXTERNAL USER COMMUNITY.....	11
3.0 PROVIDE EFFECTIVE AND EFFICIENT SCIENCE AND TECHNOLOGY RESEARCH PROJECT/PROGRAM MANAGEMENT.....	13
3.1 PROVIDE EFFECTIVE AND EFFICIENT STEWARDSHIP OF SCIENTIFIC CAPABILITIES AND PROGRAM VISION.....	14
3.2 PROVIDE EFFECTIVE AND EFFICIENT SCIENCE AND TECHNOLOGY PROJECT/PROGRAM PLANNING AND MANAGEMENT.....	15
3.3 PROVIDE EFFICIENT AND EFFECTIVE COMMUNICATIONS AND RESPONSIVENESS TO CUSTOMER NEEDS	15
4.1 PROVIDE A DISTINCTIVE VISION FOR THE LABORATORY AND AN EFFECTIVE PLAN FOR ACCOMPLISHMENT OF THE VISION TO INCLUDE STRONG PARTNERSHIPS REQUIRED TO CARRY OUT THOSE PLANS.....	18
4.2 PROVIDE FOR RESPONSIVE AND ACCOUNTABLE LEADERSHIP THROUGHOUT THE ORGANIZATION.....	19
4.3 PROVIDE EFFICIENT AND EFFECTIVE CORPORATE OFFICE SUPPORT AS APPROPRIATE.....	19
5.0 SUSTAIN EXCELLENCE AND ENHANCE EFFECTIVENESS OF INTEGRATED SAFETY, HEALTH, AND ENVIRONMENTAL PROTECTION	21
5.1 PROVIDE A WORK ENVIRONMENT THAT PROTECTS WORKERS AND THE ENVIRONMENT	22
5.2 PROVIDE EFFICIENT AND EFFECTIVE IMPLEMENTATION OF INTEGRATED SAFETY, HEALTH AND ENVIRONMENT MANAGEMENT	22
5.3 PROVIDE EFFICIENT & EFFECTIVE WASTE MANAGEMENT, MINIMIZATION, AND POLLUTION PREVENTION.....	23
6.1 PROVIDE AN EFFICIENT, EFFECTIVE, AND RESPONSIVE FINANCIAL MANAGEMENT SYSTEM(S)	25
6.2 PROVIDE AN EFFICIENT, EFFECTIVE, AND RESPONSIVE ACQUISITION AND PROPERTY MANAGEMENT SYSTEM(S)	25
6.3 PROVIDE AN EFFICIENT, EFFECTIVE, AND RESPONSIVE HUMAN RESOURCES MANAGEMENT SYSTEM	26
6.4 PROVIDE EFFICIENT, EFFECTIVE, AND RESPONSIVE MANAGEMENT SYSTEMS FOR INTERNAL AUDIT AND OVERSIGHT; QUALITY; INFORMATION MANAGEMENT; AND OTHER ADMINISTRATIVE SUPPORT SERVICES AS APPROPRIATE.....	27
7.0 SUSTAIN EXCELLENCE IN OPERATING, MAINTAINING, AND RENEWING THE FACILITY AND INFRASTRUCTURE PORTFOLIO TO MEET LABORATORY NEEDS.....	28
7.1 MANAGE FACILITIES AND INFRASTRUCTURE IN AN EFFICIENT AND EFFECTIVE MANNER THAT OPTIMIZES USAGE AND MINIMIZES LIFE CYCLE COSTS.....	28
7.2 PROVIDE PLANNING FOR AND ACQUIRE THE FACILITIES AND INFRASTRUCTURE REQUIRED TO SUPPORT FUTURE LABORATORY PROGRAMS.....	30
8.0 SUSTAIN AND ENHANCE THE EFFECTIVENESS OF INTEGRATED SAFEGUARDS AND SECURITY MANAGEMENT (ISSM) AND EMERGENCY MANAGEMENT SYSTEMS.....	31
8.1 PROVIDE AN EFFICIENT AND EFFECTIVE EMERGENCY MANAGEMENT SYSTEM.....	31
8.2 PROVIDE AN EFFICIENT AND EFFECTIVE SYSTEM FOR CYBER-SECURITY	32
8.3 PROVIDE AN EFFICIENT AND EFFECTIVE SYSTEM FOR PROTECTION OF SPECIAL NUCLEAR MATERIALS; AND PROPERTY	32
8.4 PROVIDE AN EFFICIENT AND EFFECTIVE SYSTEM FOR THE PROTECTION OF CLASSIFIED AND SENSITIVE INFORMATION	32
ATTACHMENT I HQ PROGRAM OFFICE EVALUATION FOR BES, BER, HEP AND WDTs.....	34



I. OVERALL SUMMARY RATING

Performance-Based Score and Adjectival Rating:

The basis for the evaluation of The Board of Trustees of the Leland Stanford Junior University (Stanford University) during FY07 centered on the Objectives found within the FY07 Performance Evaluation and Measurement Plan (PEMP):

- 1.0 Provide for Efficient and Effective Mission Accomplishment (Quality, Productivity, Leadership, & Timeliness of Research and Development)
- 2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operations of Facilities
- 3.0 Provide Effective and Efficient Science and Technology Research Project/Program Management
- 4.0 Provide Sound and Competent Leadership and Stewardship of the Laboratory
- 5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection
- 6.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)
- 7.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs
- 8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems

Performance Goal

Each Performance Goal was composed of two or more weighted Objectives and most Objectives had a set of performance measures, which assisted in determining the Contractor's overall performance in meeting that Objective. Each of the performance measures identified significant activities, requirements, and/or milestones important to the success of the corresponding Objective. The following describes the methodology utilized in determining the Contractor performance rating:

Performance Objective

Each Objective within a Goal was assigned a numerical score by the evaluating office. Each evaluation measured the degree of effectiveness and performance of the Contractor in meeting the Objective and was based on the Contractor's success in meeting the set of Performance Measures/Targets identified for each Objective as well as other performance information available to the evaluating office from other sources to include, but not limited to, the Contractor's self-evaluation report, operational awareness activities; "For Cause" reviews (if any); other outside agency reviews (OIG, GAO, DCAA, etc.), etc. If no performance measures/targets were utilized the description of the general expectations for the success of the objective was utilized as the baseline of the effectiveness and performance of the Contractor in meeting the corresponding Objective and in determining the score assigned.

Goal Scoring

The Goal score was computed by multiplying the numerical score by the weight of each Objective within a Goal. These values were then added together to develop an overall score for each Goal. This score was then compared to Table A to determine the overall grade for each Goal. A set of tables is provided at the end of each Performance Goal section of this document to assist in the calculation of Objective scores to the Goal score. The raw score (rounded to the nearest hundredth) from each calculation was carried through to the next stage of the calculation process. The raw score for Science and Technology and Management and Operations was rounded to the nearest tenth of a point for utilization in determining fee as discussed below.



Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0

Table A. FY 2007 Contractor Letter Grade Scale

FY07 Summary Scores

Based on the evaluation of Stanford University performance against the Goals and Objectives contained within the FY07 PEMP the scores and corresponding grades awarded for each are provided within Table B below. Specific information regarding the Contractor's performance in meeting each of the Goals and their corresponding Objectives is provided within Section II of this report.

S&T Performance Goal	Numerical Score	Letter Grade	Weight	Weighted Score	Total Score
1.0 Mission Accomplishment	3.7	A-	28%	1.05	
2.0 Design, Fabrication, Construction and Operations of Facilities	2.7	B-	52%	1.42	
3.0 Science and Technology Research Project/Program Management	3.1	B+	20%	0.63	
Final FY07 Score for Science and Technology					3.1
M&O Performance Goal	Numerical Score	Letter Grade	Weight	Weighted Score	Total Score
4.0 Leadership and Stewardship of the Laboratory	2.6	B-	20%	0.52	
5.0 Integrated Safety, Health, and Environmental Protection	2.2	C+	25%	0.55	
6.0 Business Systems	2.6	B-	20%	0.52	
7.0 Operating, Maintaining, and Renewing Facility and Infrastructure Portfolio	2.5	B-	15%	0.38	
8.0 Integrated Safeguards and Security Management and Emergency Management Systems	2.9	B	20%	0.58	
Final FY07 Score for Management and Operations					2.6

Table B. FY07 Contractor Evaluation Score Calculation



II. PERFORMANCE GOALS, OBJECTIVES, AND MEASURES/TARGETS

1.0 Provide for Efficient and Effective Mission Accomplishment (Quality, Productivity, Leadership, and Timeliness of Research and Development)

The Contractor produces high-quality, original, and creative results that advance science and technology; demonstrates sustained scientific progress and impact; receives appropriate external recognition of accomplishments; and contributes to overall research and development goals of the Department and its customers.

The weight of this Goal: 28%.

Provide for Efficient and Effective Mission Accomplishment Goal measured the overall effectiveness and performance of the Contractor in delivering science and technology results which contributed to and enhanced the DOE's mission of protecting our national and economic security by providing world-class scientific research capacity and advancing scientific knowledge by supporting world-class, peer-reviewed scientific results, which were recognized by others.

BES: The materials sciences research programs are world-class and have had broad impact in correlated electron systems, superconductivity, and magnetism research. Research in the area of ultrafast chemical science continues to make sustained scientific progress. The PULSE ultrafast science research center jointly supported by the materials and chemical sciences programs received strong reviews.

BER: Laboratory uses the unique resources of the Stanford Synchrotron Light Source (SSRL) to conduct and facilitate research on interfacial molecular environmental science. This science impacts programs in Life Sciences and well as Environmental Remediation Sciences, assisting those programs in meeting their long term measures.

HEP: The Laboratory is a member of the ATLAS detector group, strengthening the US participation in the LHC. It is also participating in the LHC accelerator research program (LARP). It has become a Tier-2 computer site for LHC data analysis and is partnering with UCSC and LBNL to become a west coast hub for the ATLAS community. A long-range program is being developed in accelerator research aimed towards the design of an energy-frontier International Linear Collider (ILC). SLAC is leading the design of the RF power sources for the ILC, is also working on detector designs and is engaging ~50 FTE's in these efforts. Overall, the laboratory's priorities are well aligned with the DOE mission and the national HEP program. The SLAC B-factory is one of the highest priority facilities to support advancing the DOE's strategic goals for science. The Laboratory continues to be an indispensable player and international leader in ILC R&D. It is strongly engaged in four areas including RF power sources, beam tuning and instrumentation, particle sources and the machine-detector interface

WDTS: The WDTS program is exceptionally well managed and fully supported throughout the laboratory. Students and educators are placed in challenging research positions where their scientific talents and interests are well matched with what is expected of them. Staffs in the education office are very involved with students/educators as well as the mentors ensuring that the collaboration is productive, projects are well defined, and identify any issues to resolve. Direct dialog between education program managers, division directors, mentors ensures that all interactions have at the core a commitment to the science learning.

The overall numerical score is 3.7 and grade assigned A-.



Objectives:

1.1 Science and Technology Results Provide Meaningful Impact on the Field

Numerical score = 3.8 Grade = A

BES: The X-Ray Laboratory for Advanced Materials (XLAM) and Photon Ultrafast Laser Science and Engineering (PULSE) centers fulfill a very important DOE mission in performing outstanding science-driven x-ray scattering and ultrafast research, respectively. These programs continue to make progress in the areas of nanostructures, high temperature superconductors and strongly correlated electron systems, energy conversion phenomena, and other basic research related to energy applications. The PULSE center is supported jointly by the BES Materials Sciences and Engineering Division and the Chemical Sciences, Geosciences, and Biosciences Division. Portions of the proposed research, including ultrafast imaging and magnetic materials, were deemed outstanding. The ultrafast chemical sciences component of PULSE supported by the Chemical Sciences, Geosciences, and Biosciences Division received very strong reviews and was funded. A proposal submitted in response to the FY06 BES Chemical Imaging Solicitation received positive reviews and was incorporated into the PULSE effort, along with a previously funded Field Work Proposal. These research topics emphasize fundamental understanding and control of interactions of x-ray photons with molecules and chemical systems on ultrafast time scales, a core research goal for BES and likely to impact many fields. The ultrafast chemical science programs in PULSE are well-positioned for synergy and impact with respect to future experiments to be conducted at the Linac Coherent Light Source (LCLS).

BER: The Laboratory scientists are making major contributions to research in the Environmental Remediation Sciences Program by applying their expertise in x-ray spectroscopy and x-ray microprobe technologies to basic science issues underlying the ERSD mission area. These include environmental molecular interfacial relationships and its applications in geochemistry as it relates to contaminant mobility in the environment

HEP: Babar analyzed and presented its latest results with over 310 submitted publications since 1999, of those 75 appeared during FY07. At the major biennial summer research conference in 2007, the BaBar collaboration contributed 60 papers and 5 talks on a full spectrum of new results. A highlight was BaBar's recent discovery of quantum mixing of D-zero particles with their anti-particles.

BaBar continues to make substantial progress in a comprehensive set of measurements for CP-violating asymmetries, a systematic exploration of rare decay processes, and detailed studies to elucidate the dynamics of processes involving heavy quarks. Its accurate, high precision studies test the limitations of the Standard Model; constrain possible new physics discoveries at the LHC and show hints of new physics which might be further elucidated at the LHC. In addition, its discovery of new heavy quark states in the multi-GeV region may lead to greater understanding of Quantum chromo dynamics, the theory of the strong interaction of quarks and gluons. *BABAR* is an international effort, supported in part by funding agencies from Canada, France, Germany, Italy, the Netherlands, Norway, Russia, Spain, and the United Kingdom. More than 150 graduate students and 90 postdoctoral researchers use the BaBar data for their research. The experimental collaboration produces almost 1.4 journal articles per week. SLAC's research staff contributes significantly to these achievements.

WDTS: The Laboratory has a long-standing, well established mentor culture within the lab and they continue to advance that culture. The success of the undergraduate internship program funded by WDTS is based on the careful attention given to matching mentors and students. Mentors are pleased to have WDTS interns because the education staff manages the placements and mentor/protégé experience to the greatest advantage of both. Students are placed in challenging research environments and are carefully guided to a productive outcome. Student products and outputs are always of excellent quality as validated by peer review and headquarters annual evaluation.



1.2 Provide Quality Leadership in Science and Technology

Numerical score = 3.6 Grade = A-

BES: The research projects supported at the Laboratory by the BES Materials Sciences and Engineering Division that are deemed world leading are those in correlated electron systems, nanomagnetism, ultrafast science and materials synthesis as evidenced by the latest program and mail reviews and results published in the scientific literature. Recent hires in the area of extreme environments and hydrogen storage materials and in scattering theory will ensure the leadership in the programs in the aforementioned fields and in other energy relevant areas.

The PULSE Director is a preeminent scientist in the international physics community, noted for his leadership in the investigation of ultrafast x-ray interactions with atoms, molecules, and materials. He is assembling a world class team of co-principal investigators and collaborators at PULSE. The group is recognized for pioneering work in this field using novel sources, including the Sub-Picosecond Pulse Source (SPPS) at the Laboratory which serves as a development platform for future methods to be used at the LCLS.

BER: The SSRL structural molecular biology program is unique among the programs in this field at DOE synchrotron light sources in having leaders in each of the major technologies—crystallography, spectroscopy and small angle x-ray scattering. The Laboratory scientists collaborated on research projects with more than a dozen ERSP-funded investigators, contributing insights from x-ray spectroscopy to these projects.

HEP: SLAC contributes significantly to the ILC R&D program, focusing on development of critical technologies such as klystrons and solid-state modulators, design and test of high gradient structures, examination of final-focus requirements, and an aggressive R&D program in the NLCTA program.

The Kavli Institute for Particle Astrophysics and Cosmology (KIPAC), which is connected to both Stanford University and the Laboratory, completed its fourth full academic year and strengthened the Laboratory's impact on particle astrophysics research. The scientific program at KIPAC is quite diverse, ranging from traditional astrophysics topics to investigations of dark matter and energy that are of interest to HEP. The LSST R&D project, a major initiative for several KIPAC faculty members, will focus in part on dark energy and dark matter investigations.

Laboratory joined the ATLAS detector group in 2006, strengthening the US participation in the LHC. It is also participating in the LARP. It has become a Tier-2 computer site for LHC data analysis and is partnering with UCSC and LBNL to become a west coast hub for the ATLAS community.

WDTS: Undergraduate interns and educators at the Laboratory are fully integrated into the lab operation and gain significant research capability and are placed on equal footing with other laboratory researchers and benefit from that immersion experience.



1.3 Provide and sustain Outputs that Advance Program Objectives & Goals

Numerical score = 3.8 Grade = A

BES: The research supported by the BES Materials Sciences and Engineering Division at the Laboratory produces high quality publications in prestigious journals in the areas of photoemission studies of HiTc superconductors, x-ray scattering of magnetic materials, ultrafast science, and discovery of complex oxides and rare earth compounds with novel properties. The quantity and quality of BES Chemical Sciences, Geosciences, and Biosciences Division supported research outputs in peer-reviewed journals has been deemed fully acceptable by peer review.

BER: Both BER programs at SSRL are highly productive, as measured by peer-reviewed journal articles and by depositions in international databases.

HEP: The Laboratory currently operates a cutting edge program in high energy physics based on the B-factory, a space-based astroparticle physics experiment (GLAST), a number of initiatives for non-accelerator based experimental proposals, theoretical physics in particle and particle-astrophysics, and an advanced accelerator research program. SLAC is a member of the ATLAS detector group, and is also participating in the LHC accelerator research program (LARP). It is a Tier-2 computer site for LHC data analysis and is developing into a west coast hub for the ATLAS community. SLAC has been a leader in ILC R&D for some time and is leading the design of the RF power sources for the ILC, is also working on detector designs.

WDTS: Met expectations.

1.4 Provide for Effective Delivery of Product

Numerical score = 3.8 Grade = A

BES: The activities supported by the Materials Sciences and Engineering Division have been effective in transmitting the results to the community.

BES Chemical Sciences, Geosciences, and Biosciences Division supported research programs have been effective and efficient in meeting scientific objectives and milestones, as measured by peer review; the programs have been responsive to requests from BES for information and research highlights.

BER: The SSRL programs continue to meet research objectives and milestones

HEP: Laboratory staff is involved in an advanced accelerator research program with a wide variety of topics covering performance enhancement of current accelerators, research and design for near-future facilities, research in fundamental aspects of accelerator and beam physics, and accelerator physics and technology relevant to high gradient acceleration and advanced concepts. It has recently reorganized its accelerator research efforts into a new center to better coordinate its diverse efforts in this field.

Laboratory contributes significantly to the ILC R&D program, focusing on development of critical technologies such as klystrons and solid-state modulators, examination of final-focus requirements, and an aggressive R&D program in the NLCTA program. The lab is engaged in a new High Gradient collaborative effort which designs and tests various high gradient structures. The FFTB, which was dismantled in the summer of 2006 to make way for LCLS construction, is planned to relocate to sector 20 of the Linac and become the FACET project.

WDTS: Met expectations



Science Program Office ¹	Letter Grade	Numerical Score	Weight	Weighted Score	Overall Score
Office of Basic Energy Sciences					
1.1 Impact	A	3.9	50%	1.95	
1.2 Leadership	A	3.9	20%	0.78	
1.3 Output	A	3.8	15%	0.57	
1.4 Delivery	A	3.8	15%	0.57	
Overall BES Total					3.87
Office of Biological and Environmental Research					
1.1 Impact	B+	3.1	30%	0.93	
1.2 Leadership	B+	3.1	20%	0.62	
1.3 Output	A	3.8	20%	0.76	
1.4 Delivery	A	3.8	30%	1.14	
Overall BER Total					3.45
Office of High Energy Physics					
1.1 Impact	A-	3.6	30%	1.08	
1.2 Leadership	B+	3.4	30%	1.02	
1.3 Output	A	3.8	30%	1.14	
1.4 Delivery	A	3.8	10%	0.38	
Overall HEP Total					3.62
Office of Workforce Development for Teachers and Scientists					
1.1 Impact	B+	3.1	25%	0.78	
1.2 Leadership	B+	3.1	30%	0.93	
1.3 Output	A	3.8	30%	1.14	
1.4 Delivery	A	3.8	15%	0.57	
Overall WDTS Total					3.42

Table 1.1 – 1.0 SC Program Office Performance Goal Score Development

Science Program Office	Letter Grade	Numerical Score	Funding Weight (BA)	Weighted Score	Overall Weighted Score
Office of Basic Energy Sciences	A	3.87	39.8%	1.54	
Office of Biological and Environmental Research	A-	3.45	0.5%	0.02	
Office of High Energy Physics	A-	3.62	59.6%	2.16	
Office of Workforce Development for Teachers and Scientists	B+	3.42	0.1%	0.00	
Performance Goal 1.0 Total					3.72

Table 1.2 – SC Program Office Overall Performance Goal Score Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 1.3 – 1.0 Goal Final Letter Grade

¹ A complete listing of the S&T Goals & Objectives weightings for the SC Programs is provided within Attachment I to this plan.



2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operations of Facilities

The Contractor provides effective and efficient strategic planning; fabrication, construction and/or operations of Laboratory facilities; and is responsive to the user community.

The weight of this Goal is 52%.

Provide for Efficient and Effective Design, Fabrication, Construction and Operations of Research Facilities Goal measures the overall effectiveness and performance of the Contractor in planning for and delivering leading-edge specialty research and/or user facilities to ensure the required capabilities are present to meet today's and tomorrow's complex challenges. It also measured the Contractor's innovative operational and programmatic means for implementation of systems that ensures the availability, reliability, and efficiency of these facilities; and the appropriate balance between R&D and user support.

BES: Stanford Synchrotron Radiation Laboratory (SSRL) researchers benefited from the increased photon brightness and stability resulting from the SPEAR 3 upgrade. The FY07 reviews at the Linac Coherent Light Source (LCLS) revealed weaknesses in human resources in the project. The LCLS Ultrafast Science Instruments (LUSI) project required two Conceptual Design reviews to reach the CD-1 milestone.

BER: The beamlines and experimental stations used by the structural molecular biology and molecular environmental science communities have shown a high level of availability and are fully utilized by the user community and demonstrate a high level of demand for beam time by external scientists.

HEP: The B-Factory failed to reach its luminosity milestone for FY07 by a wide margin. This miss is particularly serious in light of the extended upgrade effort which immediately preceded it.

The SABER proposal to relocate the FFTB facility did not review successfully. A new proposal has been requested and the future of the Laboratory's highly regarded plasma Wakefield experimental program is now in doubt.

Other Laboratory research programs and facilities are in general well managed, and the scientific productivity is high, in spite of difficulties from the tightly constrained budget, limited manpower and some recent performance problems.

The overall numerical score is 2.7 and grade assigned B-.



Objectives:

2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs

Numerical score = 2.6 Grade = B-

BES: In FY07, the LUSI project underwent two Conceptual Design Reviews by the Office of Science's Office of Project Assessment. The need for a second review is evidence of poor planning; however, the LUSI project team did succeed on its second review in satisfying the review committee on the issues that it had been charged to examine. As a result, at the end of FY07, LUSI completed a "Critical Decision One" (CD-1) milestone. This project has required significant BES attention and has suffered delays that could have been avoided with better management.

HEP: The FFTB, which was dismantled in the summer of 2006 to make way for LCLS construction, is planned to relocate to sector 20 of the Linac and become the FACET project. SLAC's plan to move the FFTB to the South Arc reviewed poorly and the OHEP requested the lab to prepare an alternative plan. The FACET proposal is under review in the OHEP.

EXO-200, designed to confirm or refute the Majorana nature of the neutrino and estimate its mass, is well underway. However, with limited available resources, the R&D progress continues to be slow and the detector deployment to underground testing has only recently been accomplished after several delays of several months each.

The LSST R&D project, a major initiative for several KIPAC faculty members, will focus in part on dark energy and dark matter investigations. The design and construction of the camera may become a DOE project if the R&D efforts are successful and review well.

2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components

Numerical score = 2.7 Grade = B-

BES: Laboratory has made progress in the LCLS project by ensuring that the essential civil construction activities continued despite a lengthy Continuing Resolution in FY07 and other challenges. However, the project continues to suffer from a lack of human resources, as evidenced in the timeliness and quality of information provided to BES and outside reviews. The project underwent two reviews by SC's Office of Project Assessment in FY07, the last of which revealed a need to identify all items and the associated costs needed for successful completion of the project in preparation for a Baseline Change Request. This information should have been developed in advance, and was not well presented in a follow-on Office of Project Assessment mini-review in September 2007.



2.3 Provide Efficient and Effective Operation of Facilities

Numerical score = 2.5 Grade = B-

BES: During FY07, substantial changes at the Laboratory and SSRL were implemented. With the reorganization of SLAC, the SSRL Director will report directly to the Laboratory Director, giving SSRL a key role in influencing SLAC's future directions and programs. Under the current SSRL Director leadership, several key issues raised in a 2005 BES Scientific User Facility Division review were effectively addressed. Career and promotion paths were established for staff scientists with the implementation of 4 staff levels, and staff members were given approval to be principal investigators on proposals to DOE. The newly-formed SSRL Scientific Advisory Committee was actively engaged in the development of an SSRL strategic plan, as was the SSRL user community. Annual User Surveys were implemented to identify user science and support priorities.

The SPEAR3 emittance improvement was employed in user operations beginning in the middle of the 2007 run. A reliability of 98% was achieved, with 5,300 hours of operation scheduled. Several injector improvements were carried out to prepare for top-off commissioning in FY08 and operation in FY 2009. These included completion of the booster-to-SPEAR injection line, improvement of the booster power supply, and a factor of 30 increases in electron emission from the Linac gun using laser-stimulated emission. The first SSRL hard x-ray undulator, which was also its first in-vacuum undulator, was commissioned for a new macromolecular crystallography beamline.

BER: The award of the 2006 Nobel Prize in Chemistry for structural biology research done largely at SSRL is recognition of the major role that this laboratory plays in the field.

The beamlines and experimental stations used by the structural molecular biology and molecular environmental science communities have shown a high level of availability during FY07, with minimal downtimes due to equipment failures or other reasons. The SSRL structural molecular biology program is unique among the programs in this field at DOE synchrotron light sources in having leaders in each of the major technologies, crystallography, spectroscopy and small-angle x-ray scattering in charge of developing new techniques for the national user community. The molecular environmental science program, while smaller in size, also has staff that is making notable contributions to development of new techniques and methodologies.

HEP: The Laboratory's B-Factory performance was only partially success in FY07. For the entire FY07, PEP-II delivered $90.2 fb^{-1}$, which was 31 % below its target of $130 fb^{-1}$, and 12% below the lower range of the target, $103 fb^{-1}$. (The lower range of the target is defined as 80% of the target, using standard DOE definitions.) This milestone failure was due in large part to three weeks of lost running in May 2007 due to vacuum bursts. These problems were fixed and the performance of PEP-II improved considerably late in the summer when record daily integrated and instantaneous luminosities were recorded. By the end of the FY07 run the B-Factory had accumulated an integrated luminosity of over $1/2 ab^{-1}$.

Laboratory is awaiting the launch of GLAST after passing all of its space readiness milestones and is currently at NASA's launch. The launch itself is now scheduled for early 2008. The LAT is expected to generate data which will make fundamental discoveries in our search for the dark matter which makes up a large fraction of all the matter in the universe. SLAC is prepared to analyze that data in their Instrument Science Operations Center (ISOC).



2.4 Utilization of Facility to Grow and Support Lab's Research Base and External User Community

Numerical score = 3.8 Grade = A

BES: The SSRL continues to be a key facility for Stanford campus researchers and for the external user community. The improvements in SPEAR reliability and emittance have improved its attractiveness to the user community. The user community is being actively engaged in discussions of how to increase scientific capabilities on the SSRL beamlines.

BER: The beamlines developed for structural molecular biology and for molecular environmental science are fully utilized by the user community and demonstrate a high level of demand for beamtime by external scientists. The staff is effective in reaching out to potential users in their respective research communities, for example at annual meetings of Principal Investigators. The implementation of new technologies at the hard x-ray microprobe for environmental applications has enabled adding to the external user community in this field.



Science Program Office ²	Letter Grade	Numerical Score	Weight	Weighted Score	Overall Score
Office of Basic Energy Sciences					
2.1 Design of Facility	B-	2.7	10%	0.27	
2.2 Construction of Facility	B-	2.7	60%	1.62	
2.3 Operation of Facility	A	3.8	20%	0.76	
2.4 Utilization of Facility	A	3.8	10%	0.38	
Overall BES Total					3.03
Office of Biological and Environmental Research					
2.1 Design of Facility			0%	0.0	
2.2 Construction of Facility			0%	0.00	
2.3 Operation of Facility	A	4.0	90%	3.60	
2.4 Utilization of Facility	A	3.9	10%	0.39	
Overall BER Total					3.99
Office of High Energy Physics					
2.1 Design of Facility	B-	2.5	20%	0.50	
2.2 Construction of Facility			0%	0.00	
2.3 Operation of Facility	C	2.0	80%	1.60	
2.4 Utilization of Facility			0%	0.00	
Overall HEP Total					2.10

Table 2.1 – 2.0 SC Program Office Performance Goal Score Development

Science Program Office	Letter Grade	Numerical Score	Funding Weight (BA)	Weighted Score	Overall Weighted Score
Office of Basic Energy Sciences	B	3.03	65.5%	1.99	
Office of Biological and Environmental Research	A	3.99	1.7%	0.07	
Office of High Energy Physics	C+	2.10	32.7%	0.69	
Performance Goal 2.0 Total					2.74

Table 2.2 SC Program Office Overall Performance Goal Score Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 2.3 – 2.0 Goal Final Letter Grade

² A complete listing of the S&T Goals & Objectives weightings for the SC Programs is provided within Attachment I to this plan.



3.0 Provide Effective and Efficient Science and Technology Research Project/Program Management

The Contractor provides effective program vision and leadership; strategic planning and development of initiatives; recruits and retains a quality scientific workforce; and provides outstanding research processes, which improve research productivity.

The weight of this Goal is 20%.

Provide Effective and Efficient Science and Technology Research Project/Program Management Goal measured the Contractor's overall leadership in executing S&T programs. Dimensions of program management covered included: 1) providing key competencies to support research programs to include key staffing requirements; 2) providing quality research plans that take into account technical risks and identify actions to mitigate risks; and 3) maintaining effective communications with customers to include providing quality responses to customer needs.

BES: Laboratory management has made progress in the LCLS construction project. Program planning and management is in transition for the Condensed Matter Physics and Materials Chemistry Program; the management and budgetary details of the Photon Sciences Division, within which the programs would be housed, is a concept that still not fully developed. The formation of PULSE will help to ensure the Laboratory's leadership in ultrafast science.

BER: The SSRL staff has achieved outstanding results in developing capabilities for structural molecular biology and molecular environmental science.

HEP: Laboratory future as a high energy physics laboratory continuous to be developed. The Laboratory is a major player in the design stage of the ILC and is taking on more responsibilities, both in computer support and phenomenology, of the LHC, and it continues to lead world class research efforts in new accelerator concepts. However, it has not developed a plan in high energy experimental physics program that will replace the B-factory which is scheduled to close by the end of FY2008. The Laboratory, therefore, risks losing its vitality and relevance in the field, and its other plans in high energy physics will eventually be negatively impacted by this lack of initiative.

WDTS: The education office has focused time and talent on operating as a well integrated team and the results demonstrate a significant increase in productivity where student outputs are of superior quality and the research experience is a rich, productive experience.

The overall numerical score is 3.1 and grade assigned B+.



Objectives:

3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision

Numerical score = 3.0 Grade = B

BES: The Laboratory has been an excellent steward of strategic research areas in materials research via the close coupling of SSRL and the LCLS capabilities. Their efforts in photoemission spectroscopy, x-ray microscopy, coherent lensless imaging, and time-dependent x-ray imaging are viewed as the best in the world. The formation of the XLAM and PULSE centers will help to ensure the Laboratory's leadership in x-ray and ultrafast science. The PULSE Director is providing strong vision and leadership for the laboratory's research efforts in ultrafast science.

The project's management at LUSI is still in evolution. Continued management attention is required in the LCLS project. The SRRL management is effective and efficient with excellent customer service (user's access and satisfaction).

BER: The SSRL staff has achieved outstanding results in developing capabilities for structural molecular biology and molecular environmental science. The development of beamline 12.2 was largely completed during FY 2007; it will have outstanding capabilities for protein crystallography, and although developed with private funding it will contribute to the available general user beamtime. The staff for both program elements is outstanding and well matched to the capabilities of SSRL and to the needs of the external community.

HEP: The dismantled FFTB has yet to be replaced by a new facility due to poor planning. This failure endangers the Laboratory's long term commitment to advanced accelerator R&D. Laboratory is a leader in the design stage of the ILC, and is becoming involved in the LHC.

Its EXO-200 project will probe the fundamental character of the neutrino with the goal of determining if it is its own anti-particle. This project has been slow in development and in moving underground which is a crucial step in deciding its efficacy in meeting its goal.

Its R&D project on dark energy, the LSST, has passed a Conceptual Design Review run by its major funding agency, the National Science Foundation. KIPAC continues to do highly regarded research on the interface of astrophysics and high energy physics.

Laboratory's High Gradient AARD program is making good progress in developing acceleration mechanisms which are more powerful than those planned for the ILC.

WDTS: Met expectations.



3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management

Numerical score = 3.2 Grade = B+

BES: Laboratory's planning and management is in a transitional stage. The overall structure of the laboratory programs supported by the BES Materials Sciences and Engineering Division, along with management and budgetary details of the Photon Sciences division within which the programs would be housed, is a concept that is still not fully developed. Laboratory was requested to reorganize and rearticulate its scientific thrust areas in order to fashion the program into a truly synergistic endeavor; this is still a work in progress. The program has used its scientific advisory committee to help in its strategic planning. The recent PULSE center review process revealed a lack of understanding by Laboratory management of BES expectations regarding proper allocation of resources based on peer review guidance. The development of the appropriate scope and transparent budget reporting for PULSE required significant intervention from BES in order to bring them up to acceptable DOE lab standards. In the aspect of facilities design and construction, there is an evolving structure for project management, but a sound and efficient organization is still missing.

BER: The major long-range program plan at SSRL has been to upgrade and renew beamlines so that full use can be made of the 500 mA capabilities of SPEAR 3. Considerable progress was made in FY 2007 in completing the upgrades with plans for renewal of beamline 4-2 (small angle x-ray scattering) with a move to a new location being completed.

HEP: The B-Factor is generally well managed. Unfortunately various components of PEP-II are aging and replacing failing parts is taking more time. Management has kept the productivity high even in the face of these problems. GLAST and its ISOC are well managed and are on track.

Laboratory's involvement in the ATLAS project is developing and a user support center structured around Laboratory's Tier-2 computing center is promising.

KIPAC is organized well and LSST R&D on the facility's camera electronics is progressing

WDTS: Laboratory is outstanding in their development and assessment of policies, procedures, and outcomes both for the intern/educator as well as the mentor and the research division. Laboratory uses a "selection committee" to review applications and assign placements to mentors and divisions. This process ensures that not only the best students are selected but to include students/educators for whom the opportunity will make a difference.

3.3 Provide Efficient and Effective Communications and Responsiveness to Customer Needs

Numerical score = 3.3 Grade = B+

BES: BES communication with SLAC management is open and usually effective. PULSE management communicates frequently, effectively, and along properly defined lines. SSRL has an efficient facility operation management structure and is very responsive to customer needs.

BER: The SSRL programs in structural molecular biology and molecular environmental science have strong ties to the external user community and communicate effectively with program managers in BER as well. The approach of having a single, unified management for each of these fields for the entire facility has enabled rapid response to requests from BER staff for information about all aspects of the programs. The staff and management of SSRL are highly responsive to all customer requests.

HEP: The BaBar collaboration is well managed and functions with high productivity. This is a large international collaboration which has been a model of success.



WDTs: Commitment to communication and an appreciation for learning and research is a basic principle for operation within the laboratory. It is a quality that is impressed upon every participant and guides all interactions between mentor and protégé, as well the effective program relationship between WDTs and the education staff.

Science Program Office ³	Letter Grade	Numerical Score	Weight	Weighted Score	Overall Score
Office of Basic Energy Sciences					
3.1 Effective and Efficient Stewardship	B	3.0	40%	1.20	
3.2 Project/Program Planning and Management	B	3.0	30%	0.90	
3.3 Communications and Responsiveness	B+	3.4	30%	1.02	
Overall BES Total					3.12
Office of Biological and Environmental Research					
3.1 Effective and Efficient Stewardship	A	4.0	20%	0.80	
3.2 Project/Program Planning and Management	A	3.8	30%	1.14	
3.3 Communications and Responsiveness	A	4.0	50%	2.00	
Overall BER Total					3.94
Office of High Energy Physics					
3.1 Effective and Efficient Stewardship	B	3.0	40%	1.20	
3.2 Project/Program Planning and Management	B+	3.3	40%	1.32	
3.3 Communications and Responsiveness	B	3.0	20%	0.60	
Overall HEP Total					3.12
Office of Workforce Development for Teachers and Scientists					
3.1 Effective and Efficient Stewardship	B+	3.2	20%	0.64	
3.2 Project/Program Planning and Management	B+	3.2	40%	1.28	
3.3 Communications and Responsiveness	B+	3.4	40%	1.36	
Overall WDTs Total					3.28

Table 3.1 – 3.0 SC Program Office Performance Goal Score Development

Science Program Office	Letter Grade	Numerical Score	Funding Weight (BA)	Weighted Score	Overall Weighted Score
Office of Basic Energy Sciences	B+	3.12	56.2%	1.75	
Office of Biological and Environmental Research	A	3.94	1.7	0.07	
Office of High Energy Physics	B+	3.12	42.1%	1.31	
Office of Workforce Development for Teachers and Scientists	B+	3.28	0.1%	0.00	
Performance Goal 3.0 Total					3.13

Table 3.2 – SC Program Office Overall Performance Goal Score Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 3.3 – 3.0 Goal Final Letter Grade

³ A complete listing of the S&T Goals & Objectives weightings for the SC Programs is provided within Attachment I to this plan.



4.0 Provide Sound and Competent Leadership and Stewardship of the Laboratory

The Contractor's Leadership provides effective and efficient direction in strategic planning to meet the mission and vision of the overall Laboratory; is accountable and responsive to specific issues and needs when required; and corporate office leadership provides appropriate levels of resources and support for the overall success of the Laboratory.

The weight of this Goal is 20%.

Provide Sound and Competent Leadership and Stewardship of the Laboratory Goal measured the Contractor's Leadership capabilities in leading the direction of the overall Laboratory. It also measured the responsiveness of the Contractor to issues and opportunities for continuous improvement and corporate office involvement/commitment to the overall success of the Laboratory.

For most of FY07, there was (a) a lack of clear vision and drive to the new SLAC mission, (b) a lack of engagement and oversight by Stanford University in SLAC, and (c) a lack of clear and effective governance of SLAC by SU. Corporate governance of the Laboratory by SU especially in the area of M&O oversight was not adequate and there was not an effective system-wide assessment process employed by SU. Corporate oversight of the Laboratory's business and logistics systems was not conducted to provide either tactical or strategic solutions; SU only conducted independent audits of selected business processes during the year and lacked an overall assessment of the M&O function and processes to understand the magnitude and severity of the deficiencies. For most of FY07, there was no regular communication with DOE SC or SSO on SU's oversight activities which resulted in SU not clearly understanding DOE's expectations for lab mission and corporate oversight. Additionally, SLAC was not able to fill critical positions for extended periods of time (ESH Director, & Facilities Director, as well as key assistance in procurement).

The Laboratory realized excellent science: all three focus areas (photon science, particle physics and particle astrophysics) producing many high quality publications. A truly significant achievement of FY07 was when Roger Kornberg was awarded the 2006 Nobel Prize in chemistry; the crucial data supporting his discovery was taken at SPEAR.

SU took very aggressive actions at the end of FY07 to bolster the Laboratory leadership and oversight. A dynamic new leadership team was established at the end of FY07 that has taken aggressive and important steps in moving the laboratory forward. SU Leadership is commended for these actions and for sponsorship of the SLAC change initiatives. SU brought the McCallum-Turner (McT) Team in for a critical self assessment of laboratory systems, structures, and processes. McT reported that SLAC was the "most ready" of all the labs they have reviewed.

President Hennessey has been actively involved with the Laboratory and articulates the work and value the Laboratory provides to the country and to the scientific enterprise. He is personally engaged and continues to interact well with DOE leadership and has taken decisive action to correct the deficiencies at the Laboratory.

The overall numerical score is 2.6 and grade assigned B-.



4.1 Provide a Distinctive Vision for the Laboratory and an Effective Plan for Accomplishment of the Vision to Include Strong Partnerships Required to Carry Out those Plans

Objective Weight = 35%

Numerical Score = 2.9 Grade = B

During FY07, the Laboratory struggled to develop a compelling strategic plan for the new and evolving missions. Transition from HEP to BES continued to be challenging for the Laboratory, although this issue was being addressed at the end of FY07. The Laboratory was slow to adapt the multi-purpose operating concept and had difficulty accepting and adopting that operating model. The business plan and business systems were not aligned to fully support the laboratory and its evolving mission. Implementation of the Mc-T recommendations for sound business systems is key to success in FY08 and beyond.

At the end of FY07, the Laboratory and SU took aggressive steps to significantly raise the level of engagement and involvement in the areas of strategic planning, laboratory vision (OneLab), and business systems improvement with the Mc-T assessment and subsequent SLAC Improvement Initiative (SII).

The Laboratory has developed very strong strategic partnerships across the DOE, with other universities, as well as with international partners. Some of these partnerships include:

- The user community at SPEAR3 - A major support for the SSRL DOE support comes from the National Institutes of Health (NIH).
- *BABAR* was constructed as a partnership of DOE and HEP funding agencies in eight foreign countries, with foreign governments providing 40% of the construction funds. The collaborating nations, which now number 10, have continued to provide significant portions of the *BABAR* Operating Common Fund and computing costs. Half of the over 600 scientists working on *BABAR* are from non-US institutions. Researchers from both LBNL and LLNL work on *BABAR*; the remainder of the US users come from about 35 US university groups.
- GLAST is a collaboration of DOE and NASA in the US and HEP and space agencies from Italy, Japan, Sweden and France. NASA-funded SLAC efforts in FY07 of \$6.2M are primarily in support of the GLAST LAT instrument integration with the spacecraft.

Laboratory communications and outreach goals continue to be outstanding with the Education Office developing strong and positive relationships with the local high schools and community colleges. The extremely popular Public Lecture Series continues to be widely attended by the local community. Work on the *Symmetry* magazine through its print and electronic versions bring the central messages of particle physics to a wide variety of key audiences: policy makers and opinion leaders, the news media, local community members, students and teachers, the science-interested public and the worldwide particle physics community. Laboratory and Fermilab will actively continue to seek feedback on all aspects of the publication.



4.2 Provide for Responsive and Accountable Leadership throughout the Organization

Objective Weight = 35%

Numerical Score = 2.4 Grade = B-

For most of the reporting period, the Laboratory continued to lack leadership and drive in changing to a multi-purpose laboratory and in dealing with projects that were not succeeding or struggling with safety. The Laboratory leadership was unable to fill critical vacancies in FY07 and did not respond appropriately and timely to SC's Infrastructure Initiative. While new leadership is providing strong vision and leadership, it had not paid sufficient attention to the Laboratory's infrastructure and the evolving nature of the laboratory.

The SLAC Policy Committee, which reports to the SU President, was not effectively used nor equipped to provide oversight, especially in the area of M&O operations. There was a lack of a clear governance model for operating and overseeing the laboratory. In March, 2007, President Hennessy strengthened the corporate oversight by naming a Special Assistant to the President for the Laboratory, charged with the coordination of Stanford's plan to remedy the Laboratory M&O shortcomings. Although actual progress in this area has been slow, there was significant improvement in the engagement and involvement of Laboratory by SU at end of FY07 addressing key issues.

While Corrective Actions Plans have been put in place, tracked, and actions closed, the effectiveness of the actions were less than adequate as evidenced by continued repeat occurrences and safety incidents. There continued to be issues of work control and work authorization resulting in incidents and accidents at unacceptable rates. However, there is improvement in this area as demonstrated by the Laboratory's response, notification, and senior leadership involvement in the September 13th pipe explosion incident. The internal investigative process improved and resulted in identifying root causes that could effectuate change in the safety culture of the laboratory.

4.3 Provide Efficient and Effective Corporate Office Support as Appropriate

Objective Weight = 30%

Numerical Score = 2.5 Grade = B-

Corporate governance of the Laboratory by SU especially in the area of M&O oversight was not adequate. There was not an effective system-wide assessment process employed by SU. Corporate oversight of the Laboratory business and logistics systems was not conducted to provide either tactical or strategic solutions. SU only conducted independent audits of selected business processes during the year and lacked an overall assessment of the M&O function and processes to understand the magnitude and severity of the deficiencies. For most of FY07, there was no regular communication with DOE SC or SSO on SU's oversight activities which resulted in SU not clearly understanding DOE's expectations for lab mission and corporate oversight.

SU took very aggressive actions at the end of FY07 to bolster Laboratory leadership and oversight. President Hennessey has been actively involved with the Laboratory and articulates the work and value the Laboratory provides to the country and to the scientific enterprise. He is personally engaged and continues to interact well with DOE leadership and has taken decisive action to correct the deficiencies at the Laboratory.



ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
4.0 Effectiveness and Efficiency of Contractor Leadership and Stewardship					
4.1 Provide a Distinctive Vision for the Laboratory and an Effective Plan for Accomplishment of the Vision to Include Strong Partnerships Required to Carry Out those Plans	B	2.9	35%	1.01	
4.2 Provide for Responsive and Accountable Leadership throughout the Organization	B-	2.4	35%	.84	
4.3 Provide Efficient and Effective Corporate Office Support as Appropriate	B-	2.5	30%	.75	
Performance Goal 4.0 Total					2.6

Table 4.1 – 4.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 4.2 – 4.0 Goal Final Letter Grade



5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection

The Contractor sustains and enhances the effectiveness of integrated safety, health and environmental protection through a strong and well deployed system.

The weight of this Goal is 25%.

Laboratory continues to maintain a high regard for safety at the laboratory; however, the main area for improvement in ISM and EMS includes proactive development of safety management processes and more effective implementation of requirements at the institutional and working level, versus developing a safety process in response to an incident in the context of a reactive mode.

SLAC had an unacceptably high accident (TRC) and injury rate (DART) throughout FY07 that stemmed from the fact that there were deficiencies implementing effective work control processes across the entire site. The TRC rate of 1.49 was 2.3 times higher than the Office of Science performance goal and the DART rate of 1.05 was over 4 times higher than the Office of Science performance goal

Laboratory is continuing with the implementation of 10 CFR 851; however, there is a lack of consistent site-wide flow down of requirements and implementation of formal work planning and authorizations at the subcontractor level. SLAC needs to improve in the area of work planning and work control, as recurrent incidences in this area are indicative of weaknesses in subcontractor oversight and other safety system and process implementation issues. Construction safety on the LCLS project continues to be a concern at the subcontractor level. SLAC needs to be more proactive in safety process planning. With further refinements in safety process development, the lab will be on track for significant improvement in FY08.

The overall numerical score is 2.2 and grade assigned C+.



5.1 Provide a Work Environment that Protects Workers and the Environment

Objective Weight = 30%

Numerical Score = 1.6 Grade = C-

TRC and DART rates continue to exceed the DOE/SC targets, and remain a significant concern. The TRC/DART rates versus the established goal for this area are listed in the table below:

	End of FY2006		FY2007 Cumulative Totals		
	Cases FY06	Rates FY06	SLAC Cases FY07	SLAC Rates FY07	SC Performance Measure Goal FY2007
TRC	(24 Cases)	1.23	(31 Cases)	1.49	0.65
DART	(15 Cases)	.77	(22 Cases)	1.05	0.25

Although this is a trailing metric, it does in effect serve to indicate that more remains to be done to promote worker safety.

In FY2007, two separate incidents involving a PVC pipe explosion on the SORI project and a worker injured at the LCLS construction site by a concrete pump hose resulting in significant days away from work demonstrate a lack of effective site-wide work planning and controls and oversight and implementation of requirements on work involving Laboratory subcontractors.

There were no reportable occurrences of releases to the environment. There were no overdue corrective actions. Laboratory continues to do a commendable job in terms of occurrence reporting to DOE/SSO in a timely manner with effective corrective actions and lessons learned follow-up.

5.2 Provide Efficient and Effective Implementation of Integrated Safety, Health and Environment Management

Objective Weight = 50%

Numerical Score = 2.2 Grade = C+

SLAC continued improvements to the ES&H training program, with a completion of 95% of all mandatory training. For FY07, SLAC tracked 23 Assessments (248 corrective actions) from ISM reviews and DOE assessments; completing 97% (above the target in this area) by the DOE/SSO approved completion dates. Although SLAC completed numerous actions to address specific weaknesses identified in previous ISMS reviews, SLAC still has not yet fully evolved the systems nor has it effectively implemented follow-up actions necessary to address all findings and concerns from the OIO ISMS Review in 2006 and the 2005 ISMS Review. Significant issues remain in the area of implementing effective work control and the consistent integration of the ISM program across the laboratory complex. In FY07, there were incidents of unauthorized work involving subcontractors authorizing construction work to continue after the Laboratory had issued a stop activity. The annual review of EMS at SLAC documented one finding involving the need to develop more measurable environmental management program targets and objectives.

In response to the Sector 30 PVC pipe explosion on September 13, 2007, the Laboratory chartered an Incident Analysis Board (IAB) to perform a thorough investigation of the incident to identify the root cause and contributing causal factors and to correct these factors. This review was very well done and should serve as a model for the Laboratory to adapt. Additionally, corrective actions from the review



were not limited to the incident itself, but looked more broadly across the entire site. Corrective actions will become part of the ES&H tactical plan for FY08.

Laboratory completed an Accelerator Operations Safety Audit of the Stanford Synchrotron Radiation Laboratory (SSRL) and SLAC's Office of Assurance (OA) completed an Internal Independent Assessments (IIAs) of the Job Hazard Analysis and Mitigation (JHAM) Program.

The OA continued to provide independent verification and validation of the efficiency of the Laboratory's self-assessment activities, closeouts of corrective actions, and effectiveness in incident/injury analysis. OA validated 100% of the corrective actions that were completed during FY07. Implementation of ISMS at the working level still needs to be further developed. It is anticipated that further development and effective implementation of systems and processes down to the subcontractor performing work will provide measures for improvement in this area.

5.3 Provide Efficient and Effective Waste Management, Minimization, and Pollution Prevention

Objective Weight = 20%

Numerical Score = 3.3% Grade = B+

In FY07, the Laboratory continued to make good progress in the areas of waste minimization, pollution prevention and other risk reduction activities related to management of hazardous and low level radioactive waste. Specifically, the Laboratory submitted seven (7) Pollution Prevention Opportunity Assessments, exceeding their performance goal for FY07. The Chemical Management Services Program that was fully implemented in FY06 has resulted in continued improvements in the site's chemical management procurement practices and life cycle tracking, although the full potential of the CMS to support regulatory compliance programs at the Laboratory has not been fully realized. The Laboratory achieved its FY07 performance goals for hazardous waste reduction and sanitary waste recycling. The annual DOE review of the Laboratory EMS documented only one finding that was related to improving the measurability of the Environmental Management Programs. SLAC is commended for effectively integrating the ISMS and EMS in the site's programmatic documentation.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection					
5.1 Provide a Work Environment that Protects Workers and the Environment	C-	1.6	30%	.48	
5.2 Provide Efficient and Effective Implementation of Integrated Safety, Health and Environment Management	C+	2.2	50%	1.10	
5.3 Provide Efficient and Effective Waste Management, Minimization, and Pollution Prevention	B+	3.3	20%	.66	
Performance Goal 5.0 Total					2.2

Table 5.1 – 5.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 5.2 – 5.0 Goal Final Letter Grade



6.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)

The Contractor sustains and enhances core business systems that provide efficient and effective support to Laboratory programs and its mission(s).

The weight of this Goal is 20%.

Provide Business Systems that Efficiently and Effectively Support the Overall Mission of the Laboratory Goal measured the Contractor's overall success in deploying, implementing, and improving integrated business system that efficiently and effectively support the mission(s) of the Laboratory.

6.1 Financial Management System: SLAC's overall delivery of efficient, effective, and responsive Financial Management Systems (FMS), section 6.1, has met its targets and rated a B+. SLAC's FMS effectiveness, as determined by external reviews (e.g., A-123 review results), was positive. SLAC's FMS continual improvements, based on self-assessments were useful. FMS timeliness expectations of month-end and year-end, closings; A-123 submissions, and all DOE required financial reports submissions were met. SLAC's budget submission timeliness, format and validation met their performance targets. SLAC met the performance requirement for effective management of direct and indirect costs.

6.2 Procurement: In June 2007, the Laboratory procurement authority was reduced to \$100K due to findings from the Procurement Evaluation and Review Team (PERT). The Laboratory's procurement organization has been unsuccessful in demonstrating that the Laboratory has an effective Purchasing System.

6.2 Property: The property Balanced Scorecard (BSC) results received an adjectival rating of Excellent. The Laboratory Property/Fleet underwent an independent PERT review in August 2007. There were a total of 10 findings, 23 observations, and 10 noteworthy practices as a result of their PERT review.

6.3 Human Resources: SSO was unable to validate the effectiveness of the Laboratory Human Resources systems/process/services through the use of a customer service survey which had a low volume of responses. There were a number of critical leadership vacancies that have remained unfilled for extended periods of time at the Laboratory.

Between FY06 to FY07 the Laboratory's feeder programs increased diversity in minority representation from 57.9% to 60.0% and female representation from 44.7% to 46.7%. These performance efforts could enhance their opportunity to increase diversity Laboratory-wide.

6.4 Internal Audits and Oversight: SLAC provided efficient, effective, and responsive management systems for internal audit and oversight, and generally met its performance targets. Two expectations of performance under one measure were not met. OMB Circular A-123 testing reviews were positive with no material weaknesses or reportable conditions identified. Three other reviews performed by the Stanford University Internal Audit Department, and the Allowable Cost Review, were completed with no negative findings. The SLAC use of MOUs instead of subcontracts and the payment of certain consulting fees were not caught by SLAC internal controls.

The overall numerical score is 2.6 and grade assigned B-.



6.1 Provide an Efficient, Effective, and Responsive Financial Management System(s)

Objective Weight = 20%

Numerical Score = 3.1 Grade: B+

Although multiple audits were performed, SLAC's was not timely in the collection of advance users' fees for SSRL facility users. Reviews of the Laboratory's A-123 input by both Chicago Service Center (pre-transition) and the Oakridge Service Center (ORO) resulted in positive results and comments. No inadequate controls or unallowable costs were found.

The Laboratory CFO has expressed and shown documentation for continuing self-assessments and improvements based on those self-assessments. These included enhanced processes in AP for voucher processing and check printing; an evaluation of the Audit Command Language (ACL) Software for potential purchase by Laboratory; and implementation of recommendation from PEER Reviews.

Timeliness expectations of month-end and year-end, closings; A-123 milestone completions and output products/results; and submission of all DOE required financial reports were met. Timeliness was substantiated by ORO in their comments to SSO.

The Laboratory submitted all the budget documentation and supporting documentation in a timely manner.

The Laboratory met the performance target for effective management of costs (direct and indirect). Laboratory presented their semi-annual analyses to the site office at the mid-year evaluation and at an August 28, 2007, meeting for the annual presentation to the site office.

The Laboratory's overall delivery of efficient, effective, and responsive Financial Management Systems (FMS), section 6.1, has met its targets. The Laboratory's FMS effectiveness, as determined by external reviews (e.g., A-123 review results), was positive. The Laboratory's FMS continual improvements, based on self-assessments were useful. FMS timeliness expectations of month-end and year-end, closings; A-123 submissions, and all DOE required financial reports submissions were met. Laboratory's budget submission timeliness, format and validation met their performance targets. Laboratory met the performance requirement for effective management of direct and indirect costs.

6.2 Provide an Efficient, Effective, and Responsive Acquisition and Property Management System(s)

Objective Weight = 40%

Numerical Score = 2.0 Grade = C

Procurement: One aspect in which the Laboratory Procurement is measured is the Balanced ScoreCard (BSC) methodology, a tool used to assess Four Operational Perspectives (Customer, Internal, Learning and Growth, Financial). The Laboratory received an overall rating of *good* based upon the BSC objectives. However, based upon operational awareness and external reviews it was determined that the Laboratory purchasing department did meet the general expectations of a successful efficient, effective, and responsive acquisition system.

The PERT findings and recommendations resulted in a reduction of the Laboratory Purchasing Department's thresholds for approval to \$100K for all contract actions. This decision also took into account the findings of the two reviews conducted on the LCLS Procurement Cell for the Jacobs Engineering and Turner Construction contracts. Both of these reviews validated that reliable procurement practices were not followed and/or deficiencies in the areas of policies, procedures, updated terms, and conditions that were not aligned with the prime contract nor good business practices.



The Laboratory continues to struggle in the "learning curve" concerns/issues, which was evident by the Site Office review of contract files, unauthorized signatory authority and vendor inquiries of why the Laboratory did not follow their own procedures. Laboratory Purchasing Department has developed Corrective Action Plans based upon the reviews. Laboratory is utilizing Stanford University's Internal Audit Department for effectiveness review of PERT Corrective Actions.

Property: There were three areas in the BSC in which the National Targets were not met. The first was in Vehicle Utilization. The National Target is 94%. Laboratory fleet vehicle has 221 vehicles, of which 180 met or exceeded the utilization goals for a vehicle usage of 81.45% (Excellent). The second area was to ensure that personal property acquired via purchase card is recorded in the property and financial database within 72 hours of receipt of property. The National Target is 98%. There were 298 items acquired via purchase card, of which 270 were recorded in the database within 72 hours, for an overall percentage of 90.60% (Good). The third area was to compare each non-law enforcement sport utility vehicle (SUV) with the number of trips made that required driving other than normal road conditions with the total number of trips the SUV made. The National Target is 90%. Only 6.75% of SLAC's SUV trips were logged as "off road", and so the Laboratory therefore, did not meet this measure.

The Laboratory Property/Fleet underwent an independent Procurement Evaluation and Review Team (PERT) review in August 2007. There were a total of 10 findings, 23 observations, and 10 noteworthy practices as a result of the PERT review.

6.3 Provide an Efficient, Effective, and Responsive Human Resources Management System

Objective Weight = 20%

Numerical Score = 2.9 Grade = B

Although the effectiveness of Human Resource (HR) system/process/services as validated using a customer service survey has been a performance measure for several years at the Laboratory only 8.3% of the employees respond to the survey. The low volume of responses received from the survey, as well as the Laboratory untimely submittal of the data, and the inability to validate the data effective the target lower the grade.

The Laboratory reviewed one HR system, the Human Resource Information System (HRIS) process for improvement of its efficiency and control in handling the personnel information.

The Laboratory was unable hire key positions during this performance period. The ES&H Director position had been vacant for over two years. The Procurement Deputy Director's position was vacant since June 2007 and the Facilities Director since spring of 2007. Some of expectations set by the performance measure were not met and although the turnover data is nearly identical to last year, it is clear that by SLAC's inability to hire and attract the above key positions, had the potential to negatively impact the Objective and the overall Laboratory mission.

The Laboratory's employee turnover rate was lower that Stanford University. The data to support the results of the employee turnover rate, turnover rate for PhD and engineers as well, as the in-hire compensation package data were to be provided to the SSO prior to the end of the FY07, SLAC was untimely in submitting this data.

The Laboratory increased diversity in feeder programs, the minority representation from 57.9% to 60.0% and female representation increased from 44.7% to 46.7%. These performance efforts could enhance their opportunity to increase diversity Laboratory-wide.



6.4 Provide Efficient, Effective, and Responsive Management Systems for Internal Audit and Oversight; Quality; Information Management; and Other Administrative Support Services as Appropriate

Objective Weight = 20%

Numerical Score = 3.0 Grade = B

The Laboratory met the performance target with exception of two items; (a) three of eight recommendations in the PeopleSoft Application Security Review, which are currently being implemented but not yet closed out, and (b) the Laboratory use of Memorandums of Understanding (MOUs) instead of subcontracts, and the excess consulting fees paid to certain consultants that were not caught by the SLAC internal controls reduced the grade to a B-. The OMB Circular A-123 testing (HR and Payroll Review) was carried out and no material weaknesses or reportable conditions were identified. ORO commented favorably about this in their annual feedback to SSO. Three other reviews were performed by SIAD: Accounts Payable, HR and Payroll Review, and the Allowable Cost Review were completed with no negative findings. SIAD has closed out the recommendations from those reviews as completed. Laboratory met the assessment of continual improvement of business systems' performance target by performing the required comparison of IT business system expenditure.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
6.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)					
6.1 Provide an Efficient, Effective, and Responsive Financial Management System(s)	B+	3.1	20%	0.62	
6.2 Provide an Efficient, Effective, and Responsive Acquisition and Property Management System(s)	C	2.0	40%	0.80	
6.3 Provide an Efficient, Effective, and Responsive Human Resources Management System	B	2.9	20%	0.58	
6.4 Provide Efficient, Effective, and Responsive Management Systems for Internal Audit and Oversight; Quality; Information Management; and Other Administrative Support Services as Appropriate	B	3.0	20%	0.60	
Performance Goal 6.0 Total					2.6

Table 6.1 – 6.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 6.2 – 6.0 Goal Final Letter Grade



7.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs

The Contractor provides appropriate planning for, construction and management of Laboratory facilities and infrastructures required to efficiently and effectively carry out current and future S&T programs.

The weight of this Goal is 15%.

Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs Goal measured the overall effectiveness and performance of the Contractor in planning for, delivering, and operations of Laboratory facilities and equipment needed to ensure required capabilities are present to meet today's and tomorrow's complex challenges.

7.1 Facilities and Infrastructure Usage and Life Cycle: Laboratory achieved an MII of 1.933%, based on the approved adjusted Replacement Plant Value (RPV). Deferred maintenance (DM) reduction exceeded the planned level for FY07 although there was an increase in the overall DM backlog. Energy related initiatives and projects fell short of expectations.

Laboratory made some progress towards implementing DOE O 413.3A, Program & Project Management for the Acquisition of Capital Assets but did not meet expectations. SLAC also made some progress towards Project completion but not at the expected levels.

7.2 Planning and Acquiring Facilities and Infrastructure: (this is for the maintenance portion only) Significant progress was noted in implementation of the Computerized Maintenance Management system (CMMS). Integrated planning for DM, rehab and maintenance need further improvement.

The overall numerical score is 2.5 and grade assigned B-.

7.1 Manage Facilities and Infrastructure in an Efficient and Effective Manner that Optimizes Usage and Minimizes Life Cycle Costs

Objective Weight = 50%

Numerical Score = 2.5

Grade = C+

SLAC's adjusted RPV determined by excluding the systems and components of Laboratory's high value low maintenance unique assets that typically does not require maintenance was approved in late September 2007. Based on this "Adjusted Replacement Plant Value" or RPV, SLAC achieved an MII of 1.933% which falls slightly short of the Office of Science MII goal of 2%. There was significant reduction in DM which exceeds the planned level. However, overall there was an increase in DM backlog which was primarily the result of the VFA study completed and approved by OECM in FY07.

Work scheduling process needs improvement. Computerized Maintenance Management System milestones have been met. Significant progress was noted in the implementation of the Computerized Maintenance Management program. Newly recruited staff with prior work experience on this topic will be a welcome asset to the Laboratory in continuing progress in this important area.

SLAC was unsuccessful in achieving all energy plan goals due to funding shortfalls. The metering plan was not completed on schedule and the energy project for upgrading the lighting in several buildings at the Laboratory has not yet complete due to scope change and funding short falls.



The Acquisition Executive (AE) made a decision to award a majority of the EM restoration work at SLAC to an Indefinite Delivery/Indefinite Quantity (ID/IQ) contractor midway through the FY07 performance year. Therefore, implementation all of the specific performance measures listed in Target 7.1.5.1 is no longer expected during the FY07 performance period since the scope of work for the M&O Contractor has been substantially changed. Implementation of relevant and applicable requirements of DOE O 413.3A requirements that have not been impacted by the AE decision will be the basis of whether "Efficient and Effective Implementation of Project Management" has occurred.

SLAC submitted a FY07 Work Plan that was accepted by DOE. SLAC also committed to complete carryover work from FY06 as part of their recovery plan. Completion of these two scopes of work represents DOE's expectations for progress during this performance period. The performance measures identified in Target 7.1.6.1 were extracted from the scope of work assigned to the Laboratory at the beginning of this performance period. Issuing the Feasibility Study for the Groundwater VOC Operable Unit was delayed by lack of Core Team agreement and was beyond the control of the Laboratory. Similarly, data package progress was impacted by the Core Team. Both of these negative schedule variances of \$285,419 and \$233,393, respectively, will not be included in the overall schedule variance analysis.

Two of the specific activities listed in Target 7.1.6.1 (complete Plating Shop design, commence construction of Plating Shop DPE) were removed from SLAC's scope due to the Laboratory's projected increased cost for all FY07 planned work so those were not completed. The removal actions have started but have not been completed. Design and construction of the FSUST DPE was completed. Adequate progress on the data packages has been made.

Overall, the Laboratory completed 76% of the work they committed based on the FY07 Work Plan and FY06 carryover work. The Laboratory completed the year with a negative \$1,519,302 schedule variance based on the \$6,288,380 of work to be performed in FY07 (i.e., \$4,789,129 FY07 BCWS, plus \$830,000 FY07 scope removed due to projected increased cost, plus \$954,670 of FY06 carryover work, less \$285,419 for the GW VOC FS, and less \$233,393 for the data packages).



7.2 Provide Planning for and Acquire the Facilities and Infrastructure Required to support Future Laboratory Programs

Objective Weight = 50%

Numerical Score = 2.6 Grade = B-

Significant improvements have been made in maintenance planning. Implementation of Computerized Maintenance Management System (CMMS) is effectively pursued by knowledgeable staff and is currently ahead of schedule. However, there is lack of 100% integrated planning milestones identified and agreed to by DOE and the Laboratory's in the areas of deferred maintenance (DM), maintenance planning, FIMS and Rehab and Improvement Cost.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
7.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs					
7.1 Manage Facilities and Infrastructure in an Efficient and Effective Manner that Optimizes Usage and Minimizes Life Cycle Costs	C+	2.5	50%	1.20	
7.2 Provide Planning for and Acquire the Facilities and Infrastructure Required to support Future Laboratory Programs	B-	2.6	50%	1.30	
Performance Goal 7.0 Total					2.5

Table 7.1 – 7.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 7.2 – 7.0 Goal Final Letter Grade



8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems

The Contractor sustains and enhances the effectiveness of integrated safeguards and security and emergency management through a strong and well deployed system.

The weight of this Goal is 20%.

Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems Goal measured the Contractor's overall success in safeguarding and securing Laboratory assets that supports the mission(s) of the Laboratory in an efficient and effective manner and provides an effective emergency management program.

8.1 Emergency Management System: Inadequate internal assessment of the Laboratory's Emergency Management and Response plans and programs. External exercises and reviews conducted by DOE indicated that there is much to be improved in this area.

8.2 Cyber Security: The Laboratory has met all of the five targets.

8.3 Protection of Special Nuclear Materials; and Property: During this performance period, SLAC had no reportable events. SLAC performed a survey in support of the semiannual inventory of Nuclear Material Safeguards and Security in which no issues were found. The Laboratory nuclear materials staff completed the MCA-101D course from the DOE Central Training Academy on 11 Sept 2005. Based on this training, the Laboratory training materials were updated to be in agreement with DOE M 470.4-6. These materials have been found to be adequate by DOE/SSO.

8.4: Protection of Classified and Sensitive Information: Commitment to strong protection of sensitive data was not impacted since PII data was stolen by a temporary Laboratory employee. The severity of the incident was limited, as one employee is known to have been impacted. The Laboratory did not provide a formal assessment with corrective actions of security systems for the protection of Personally Identifiable Information (PII) by the end of 2nd quarter to SSO.

The overall numerical score is 2.9 and grade assigned B.

8.1 Provide an Efficient and Effective Emergency Management System

Objective Weight = 30%

Numerical Score = 2.4 Grade = C+

There were no unreported emergency events documented in FY07.

There were inadequate Internal Assessment of SLAC Emergency Management Response plans and program. Although such an assessment was conducted by the Laboratory, there were significant gaps in the analysis and its conclusions and findings.

ERAP and COOP plans were not completed on schedule. Internal assessment not conducted by 3rd Quarter FY07. Preliminary reports and indications from the DOE's No Notice Exercise (NNX) and review indicate that there is much to be improved in this area.



8.2 Provide an Efficient and Effective System for Cyber-Security

Objective Weight = 40%

Numerical Score = 3.3 Grade = B+

Laboratory has met the objective by all machines suspected of being involved in a compromise were immediately router blocked to eliminate any network flowing to or from the machine off its subnet.

Scan for common Windows vulnerabilities are performed three times each day. Scans for vulnerable versions of third-party software are performed at least weekly. The machines not updated by the patch deadline are router blocked.

DOE/SSO was provided with the current list of Plan of Action and Milestones (POA&Ms) each quarter, as they are updated for required Federal Information Security Management Act (FISMA) reporting.

8.3 Provide an Efficient and Effective System for Protection of Special Nuclear Materials; and Property

Objective Weight = 10%

Numerical Score = 3.3 Grade = B+

There were no significant safeguard reported during FY07. The ISC/OR conducted an NMC&A inspection as part of the Focused Audit on Security in July 2007 and there were no corrective actions requiring completion in FY06. There were no issues identified during the ISC/OR NMC&A inspection in July 2007.

8.4 Provide an Efficient and Effective System for the Protection of Classified and Sensitive Information

Objective Weight = 20%

Numerical Score = 2.5 Grade = C+

The Laboratory did not provide a formal assessment with corrective actions of security systems for the protection of Personally Identifiable Information (PII) by the end of 2nd quarter to SSO.



ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM)					
8.1 Provide an Efficient and Effective Emergency Management System	C+	2.4	30%	.72	
8.2 Provide an Efficient and Effective System for Cyber-Security	B+	3.3	40%	1.32	
8.3 Provide an Efficient and Effective System for the Protection of Special Nuclear Materials, and SLAC Property	B+	3.3	10%	.33	
8.4 Provide an Efficient and Effective System for the Protection of Sensitive Information	C+	2.5	20%	.50	
Performance Goal 8.0 Total					2.9

Table 8.1 – 8.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-08	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 8.2 – 8.0 Goal Final Letter Grade



Attachment I

HQ Program Office Evaluation for BES, BER, HEP and WDTS



**Office of
Science**

U.S. DEPARTMENT OF ENERGY

Laboratory Year-End Performance Assessment Report

Date:
11/13/2007

Headquarters Program Office Fiscal Year 2007 Evaluation of Stanford University
for Management and Operation of the Stanford Linear Accelerator Center

Agency:
U. S. Department of Energy

Program Office:
Office of Basic Energy Sciences (BES)

FY Funding Level: (Budget Authority)
194,703,000

Evaluator:
Harriet Kung, Acting Associate Director for Basic Energy Scien...

Phone Number:
301-903-3427

E-mail Address:
harriet.kung@science.doe.gov

Goal 1.0 Provide for Efficient and Effective Mission Accomplishment

Goal Score: 3.87 Goal Grade: A

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

Goal 1.0 Performance Summary Statement:

The materials sciences research programs are world-class and have had broad impact in correlated electron systems, superconductivity, and magnetism research. Research in the area of ultrafast chemical science continues to make sustained scientific progress. The PULSE ultrafast science research center jointly supported by the materials and chemical sciences programs received strong reviews and was funded.

Objective 1.1 Science and Technology Results Provide Meaningful Impact on the Field

Score: 3.9 Grade: A Weighting: 50

Objective 1.1 Performance Summary Statement:

The X-Ray Laboratory for Advanced Materials (XLAM) and Photon Ultrafast Laser Science and Engineering (PULSE) centers fulfill a very important DOE mission in performing outstanding science-driven x-ray scattering and ultrafast research, respectively. Programs supported under the XLAM by the BES Condensed Matter Physics and Materials Chemistry programs were not reviewed in FY 2007. These programs continue to make progress in the areas of nanostructures, high temperature superconductors and strongly correlated electron systems, energy conversion phenomena, and other basic research related to energy applications. The PULSE center supported jointly by the BES Materials Sciences and Engineering Division and the Chemical Sciences, Geosciences, and Biosciences Division was mail reviewed, and portions of the proposed research, including ultrafast imaging and magnetic materials, were deemed outstanding. The ultrafast chemical sciences component of PULSE supported by the Chemical Sciences, Geosciences, and Biosciences Division received very strong reviews and was funded. A proposal submitted in response to the FY 2006 BES Chemical Imaging Solicitation received positive reviews and was incorporated into the PULSE effort, along with a previously funded Field Work Proposal. These research topics emphasize fundamental understanding and control of interactions of x-ray photons with molecules and chemical systems on ultrafast time scales, a core research goal for BES and likely to impact many fields. The ultrafast chemical science programs in PULSE are well-positioned for synergy and impact with respect to future experiments to be mounted at the Linac Coherent Light Source (LCLS).

Objective 1.2 Provide Quality Leadership in Science and TechnologyScore: 3.9

Grade: A

Weighting: 20

Objective 1.2 Performance Summary Statement:

The research projects supported at SLAC by the BES Materials Sciences and Engineering Division that are deemed world leading are those in correlated electron systems, nanomagnetism, ultrafast science and materials synthesis as evidenced by the latest program and mail reviews and results published in the scientific literature. Recent hires in the area of extreme environments and hydrogen storage materials and in scattering theory will ensure the leadership in the programs in the aforementioned fields and in other energy relevant areas.

The PULSE Director is a preeminent scientist in the international physics community, noted for his leadership in the investigation of ultrafast x-ray interactions with atoms, molecules, and materials. He is assembling a world class team of co-principal investigators and collaborators at PULSE. The group is recognized for pioneering work in this field using novel sources, including the Sub-Picosecond Pulse Source (SPPS) at SLAC which serves as a development platform for future methods to be used at the LCLS.

Objective 1.3 Provide and Sustain Science and Technology Outputs that Advance Program Objectives and GoalsScore: 3.8

Grade: PASS

Weighting: 15

Objective 1.3 Performance Summary Statement:

The research supported by the BES Materials Sciences and Engineering Division at SLAC produces high quality publications in prestigious journals in the areas of photoemission studies of HiTc superconductors, x-ray scattering of magnetic materials, ultrafast science, and discovery of complex

oxides and rare earth compounds with novel properties.

The quantity and quality of BES Chemical Sciences, Geosciences, and Biosciences Division supported research outputs in peer-reviewed journals has been deemed fully acceptable by peer review.

Objective 1.4 Provide for Effective Delivery of Science and Technology

Score: 3.8

Grade: PASS

Weighting: 15

Objective 1.4 Performance Summary Statement:

The activities supported by the Materials Sciences and Engineering Division have been effective in transmitting the results to the community.

BES Chemical Sciences, Geosciences, and Biosciences Division supported research programs have been effective and efficient in meeting scientific objectives and milestones, as measured by peer review; the programs have been responsive to requests from BES for information and research highlights.

Goal 2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operation of Research Facilities

Goal Score: 3.03

Goal Grade: B

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

Goal 2.0 Performance Summary Statement:

Stanford Synchrotron Radiation Laboratory (SSRL) researchers benefited from the increased photon brightness and stability resulting from the SPEAR 3 upgrade. The FY 2007 reviews at the Linac Coherent Light Source (LCLS) revealed weaknesses in human resources in the project. The LCLS Ultrafast Science Instruments (LUSI) project had to undergo two Conceptual Design reviews to garner the CD-1 milestone.

Objective 2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs (i.e., activities leading up to CD-2)

Score: 2.7

Grade: B-

Weighting: 10

Objective 2.1 Performance Summary Statement:

In FY 2007, the LCLS Ultrafast Science Instruments (LUSI) project underwent two Conceptual Design Reviews by the Office of Science's Office of Project Assessment. The need for a second review is evidence of poor planning; however, the LUSI project team did succeed on its second review in satisfying the review committee on the issues that it had been charged to examine. As a result, at the end of FY 2007, LUSI garnered a "Critical Decision One" (CD-1) milestone. This project has required significant BES attention and has suffered delays that could have been avoided with better management.

Objective 2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components (execution phase, Post CD-2 to CD-4)

Score: 2.7

Grade: B-

Weighting: 60

Objective 2.2 Performance Summary Statement:

SLAC has made progress in the LCLS project by ensuring that the essential civil construction activities continued despite a lengthy Continuing Resolution in FY 2007 and other challenges. However, the project continues to suffer from a lack of human resources, as evidenced in the timeliness and quality of information provided to BES and outside reviews. The project underwent two reviews by SC's Office of Project Assessment in FY 2007, the last of which revealed a need to identify all items and the associated costs needed for successful completion of the project in preparation for a Baseline Change Request. This information should have been developed in advance, and was not well presented in a follow-on Office of Project Assessment mini-review in September 2007.

Objective 2.3 Provide Efficient and Effective Operation of Facilities

Score: 3.8

Grade: A

Weighting: 20

Objective 2.3 Performance Summary Statement:

During FY 2007, substantial changes at SLAC and the Stanford Synchrotron Radiation Laboratory (SSRL) were implemented. With the reorganization of SLAC, the SSRL Director will report directly to the SLAC Director, giving SSRL a key role in influencing SLAC's future directions and programs. Under the current SSRL Director leadership, several key issues raised in a 2005 BES Scientific User Facility Division review were effectively addressed. Career and promotion paths were established for staff scientists with the implementation of 4 staff levels, and staff members were given approval to be principal investigators on proposals to DOE. The newly-formed SSRL Scientific Advisory Committee was actively engaged in the development of an SSRL strategic plan, as was the SSRL user community. Annual User Surveys were implemented to identify user science and support priorities.

The SPEAR3 emittance improvement was employed in user operations beginning in the middle of the 2007 run. A reliability of 98% was achieved, with 5300 hours of operation scheduled. Several injector improvements were carried out to prepare for top-off commissioning in FY 2008 and operation in FY 2009. These included completion of the booster-to-SPEAR injection line, improvement of the booster power supply, and a factor of 30 increase in electron emission from the Linac gun using laser-stimulated emission. The first SSRL hard x-ray undulator, which was also its first in-vacuum undulator, was commissioned for a new macromolecular crystallography beamline.

Objective 2.4 Utilization of Facilities to Grow and Support Lab's Research Base and External User Community

Score: 3.8

Grade: A

Weighting: 10

Objective 2.4 Performance Summary Statement:

The SSRL continues to be a key facility for Stanford campus researchers and for the external user community. The improvements in SPEAR reliability and emittance have improved its attractiveness to the user community. The user community is being actively engaged in discussions of how to increase scientific capabilities on the SSRL beamlines.

Goal 3.0 Provide Effective and Efficient Science and Technology Program Management

Goal Score:

Goal Grade:

Goal Score: 3.12

Goal Grade: B+

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

Goal 3.0 Performance Summary Statement:

Laboratory management has made progress in the LCLS construction project. Program planning and management is in transition for the Condensed Matter Physics and Materials Chemistry Program; the management and budgetary details of the Photon Sciences Division, within which the programs would be housed, is a concept that still not fully developed. The formation of PULSE will help to ensure SLAC's leadership in ultrafast science.

Objective 3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision

Score: 3.0

Grade: B

Weighting: 40

Objective 3.1 Performance Summary Statement:

The SLAC has been an excellent steward of strategic research areas in materials research via the close coupling of SSRL and the LCLS capabilities. Their efforts in photoemission spectroscopy, x-ray microscopy, coherent lensless imaging, and time-dependent x-ray imaging are viewed as the best in the world. The formation of the XLAM and PULSE centers will help to ensure SLAC's leadership in x-ray and ultrafast science. The PULSE Director is providing strong vision and leadership for the laboratory's research efforts in ultrafast science.

The project's management at LUSI is still in evolution. Continued management attention is required in the LCLS project. The SRRL management is effective and efficient with excellent customer service (user's access and satisfaction).

Objective 3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management

Score: 3.0

Grade: B

Weighting: 30

Objective 3.2 Performance Summary Statement:

SLAC's planning and management is in a transitional stage. The overall structure of the laboratory programs supported by the BES Materials Sciences and Engineering Division, along with management and budgetary details of the Photon Sciences division within which the programs would be housed, is a concept that is still not fully developed. SLAC was requested to reorganize and rearticulate its scientific thrust areas in order to fashion the program into a truly synergistic endeavor; this is still a work in progress. The program has used its scientific advisory committee to help in its strategic planning. The recent PULSE center review process revealed a lack of understanding by SLAC management of BES expectations regarding proper allocation of resources based on peer review guidance. The development of the appropriate scope and transparent budget reporting for PULSE required significant intervention from BES in order to bring them up to acceptable DOE lab standards.

In the aspect of facilities design and construction, there is an evolving structure for project management, but a sound and efficient organization is still missing.

Objective 3.3 Provide Efficient and Effective Communications and Responsiveness to Customer

Needs

Score: 3.4

Grade: B+

Weighting: 30

Objective 3.3 Performance Summary Statement:

BES communication with SLAC management is open and usually effective. PULSE management communicates frequently, effectively, and along properly defined lines. SSRL has an efficient facility operation management structure and is very responsive to customer needs.



Laboratory Year-End Performance Assessment Report

Date:
11/26/2007

Headquarters Program Office Fiscal Year 2007 Evaluation of Stanford University
for Management and Operation of the Stanford Linear Accelerator Center

Agency:
U.S. Department of Energy

Program Office:
Office of Biological and Environmental Research (BER)

FY Funding Level: (Budget Authority)
4,741,000

Evaluator:
Jerry Elwood
Phone Number:
301-903-3281
E-mail Address:
jerry.elwood@science.doe.gov

Goal 1.0 Provide for Efficient and Effective Mission Accomplishment

Goal Score: 3.45

Goal Grade: A-

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

Goal 1.0 Performance Summary Statement:

SLAC uses the unique resources of the Stanford Synchrotron Light Source (SSRL) to conduct and facilitate research on interfacial molecular environmental science. This science impacts programs in Life Sciences and well as Environmental Remediation Sciences, assisting those programs in meeting their long term measures.

Objective 1.1 Science and Technology Results Provide Meaningful Impact on the Field

Score: 3.1

Grade: B+

Weighting: 30

Objective 1.1 Performance Summary Statement:

SLAC scientists are making major contributions to research in the Environmental Remediation Sciences Program by applying their expertise in x-ray spectroscopy and x-ray microprobe technologies to basic science issues underlying the ERSD mission area. These include environmental molecular interfacial relationships and its applications in geochemistry as it relates to contaminant mobility in the environment.

Objective 1.2 Provide Quality Leadership in Science and Technology

Score: 3.1

Grade: B+

Weighting: 20

Objective 1.2 Performance Summary Statement:

The SSRL structural molecular biology program is unique among the programs in this field at DOE synchrotron light sources in having leaders in each of the major technologies—crystallography, spectroscopy and small angle x-ray scattering. SLAC scientists collaborated on research projects with more than a dozen ERSP-funded investigators, contributing insights from x-ray spectroscopy to these projects.

Objective 1.3 Provide and Sustain Science and Technology Outputs that Advance Program Objectives and Goals

Score: 3.8

Grade: PASS

Weighting: 20

Objective 1.3 Performance Summary Statement:

Both BER programs at SSRL are highly productive, as measured by peer-reviewed journal articles and by depositions in international databases.

Objective 1.4 Provide for Effective Delivery of Science and Technology

Score: 3.8

Grade: PASS

Weighting: 30

Objective 1.4 Performance Summary Statement:

The SSRL programs continue to meet research objectives and milestones.

Goal 2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operation of Research Facilities

Goal Score: 3.99

Goal Grade: A

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

Goal 2.0 Performance Summary Statement:

The beamlines and experimental stations used by the structural molecular biology and molecular environmental science communities have shown a high level of availability and are fully utilized by the

user community and demonstrate a high level of demand for beamtime by external scientists.

Objective 2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs (i.e., activities leading up to CD-2)

Score: NA

Grade: NA

Weighting: 0

Objective 2.1 Performance Summary Statement:

Objective 2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components (execution phase, Post CD-2 to CD-4)

Score: NA

Grade: NA

Weighting: 0

Objective 2.2 Performance Summary Statement:

Objective 2.3 Provide Efficient and Effective Operation of Facilities

Score: 4.0

Grade: A

Weighting: 90

Objective 2.3 Performance Summary Statement:

The award of the 2006 Nobel Prize in Chemistry for structural biology research done largely at SSRL is recognition of the major role that this laboratory plays in the field.

The beamlines and experimental stations used by the structural molecular biology and molecular environmental science communities have shown a high level of availability during FY 2007, with minimal downtimes due to equipment failures or other reasons.

The SSRL structural molecular biology program is unique among the programs in this field at DOE synchrotron light sources in having leaders in each of the major technologies, crystallography, spectroscopy and small-angle x-ray scattering in charge of developing new techniques for the national user community. The molecular environmental science program, while smaller in size, also has staff that is making notable contributions to development of new techniques and methodologies.

Objective 2.4 Utilization of Facilities to Grow and Support Lab's Research Base and External User Community

Score: 3.9

Grade: A

Weighting: 10

Objective 2.4 Performance Summary Statement:

The beamlines developed for structural molecular biology and for molecular environmental science are fully utilized by the user community and demonstrate a high level of demand for beamtime by external

scientists. The staff are effective in reaching out to potential users in their respective research communities, for example at annual meetings of Principal Investigators. The implementation of new technologies at the hard x-ray microprobe for environmental applications has enabled adding to the external user community in this field.

Goal 3.0 Provide Effective and Efficient Science and Technology Program Management

Goal Score: 3.94

Goal Grade: A

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

Goal 3.0 Performance Summary Statement:

The SSRL staff have achieved outstanding results in developing capabilities for structural molecular biology and molecular environmental science.

Objective 3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision

Score: 4.0

Grade: A

Weighting: 20

Objective 3.1 Performance Summary Statement:

The SSRL staff have achieved outstanding results in developing capabilities for structural molecular biology and molecular environmental science. The development of beamline 12.2 was largely completed during FY 2007; it will have outstanding capabilities for protein crystallography, and although developed with private funding it will contribute to the available general user beamtime. The staff for both program elements is outstanding and well matched to the capabilities of SSRL and to the needs of the external community.

Objective 3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management

Score: 3.8

Grade: A

Weighting: 30

Objective 3.2 Performance Summary Statement:

The major long-range program plan at SSRL has been to upgrade and renew beamlines so that full use can be made of the 500 mA capabilities of SPEAR 3. Considerable progress was made in FY 2007 in completing the upgrades with plans for renewal of beamline 4-2 (small angle x-ray scattering) with a move to a new location being completed.

Objective 3.3 Provide Efficient and Effective Communications and Responsiveness to Customer Needs

Score: 4.0

Grade: A

Weighting: 50

Objective 3.3 Performance Summary Statement:

The SSRL programs in structural molecular biology and molecular environmental science have strong

ties to the external user community and communicate effectively with program managers in BER as well. The approach of having a single, unified management for each of these fields for the entire facility has enabled rapid response to requests from BER staff for information about all aspects of the programs. The staff and management of SSRL are highly responsive to all customer requests..



Laboratory Year-End Performance Assessment Report

Date:
10/17/2007

Headquarters Program Office Fiscal Year 2007 Evaluation of Stanford University
for Management and Operation of the Stanford Linear Accelerator Center

Agency:
U. S. Department of Energy

Program Office:
Office of High Energy Sciences (HEP)

FY Funding Level: (Budget Authority)
145,786

Evaluator:
Dennis Kovar

Phone Number:
301-903-3624

E-mail Address:
Dennis.Kovar@science.doe.gov

Goal 1.0 Provide for Efficient and Effective Mission Accomplishment

Goal Score: 3.62

Goal Grade: A-

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

Goal 1.0 Performance Summary Statement:

The Stanford Linear Accelerator Center (SLAC) currently operates a cutting edge program in high energy physics based on the B-factory, a space-based astroparticle physics experiment (GLAST), a number of initiatives for non-accelerator based experimental proposals, theoretical physics in particle and particle-astrophysics, and an advanced accelerator research program. SLAC is a member of the ATLAS detector group, strengthening the US participation in the LHC. It is also participating in the LHC accelerator research program (LARP). It has become a Tier-2 computer site for LHC data analysis and is partnering with UCSC and LBNL to become a west coast hub for the ATLAS community. A long-range program is being developed in accelerator research aimed towards the design of an energy-frontier International Linear Collider (ILC). SLAC is leading the

design of the RF power sources for the ILC, is also working on detector designs and is engaging ~50 FTE's in these efforts

Overall, the laboratory's priorities are well aligned with the DOE mission and the national HEP program. The SLAC B-factory is one of the highest priority facilities to support advancing the DOE's strategic goals for science. SLAC continues to be an indispensable player and international leader in ILC R&D. It is strongly engaged in four areas including RF power sources, beam tuning and instrumentation, particle sources and the machine-detector interface

Objective 1.1 Science and Technology Results Provide Meaningful Impact on the Field

Score: 3.6

Grade: A-

Weighting: 30

Objective 1.1 Performance Summary Statement:

Babar analyzed and presented its latest results with over 310 submitted publications since 1999, of those 75 appeared during FY2007. At the major biennial summer research conference in 2007, the BaBar collaboration contributed 60 papers and 5 talks on a full spectrum of new results. A highlight was BaBar's recent discovery of quantum mixing of D-zero particles with their anti-particles.

BaBar continues to make substantial progress in a comprehensive set of measurements for CP-violating asymmetries, a systematic exploration of rare decay processes, and detailed studies to elucidate the dynamics of processes involving heavy quarks. Its accurate, high precision studies test the limitations of the Standard Model, constrain possible new physics discoveries at the LHC and show hints of new physics which might be further elucidated at the LHC. In addition, its discovery of new heavy quark states in the multi-GeV region may lead to greater understanding of QCD, the theory of the strong interaction of quarks and gluons. *BABAR* is an international effort, supported in part by funding agencies from Canada, France, Germany, Italy, the Netherlands, Norway, Russia, Spain, and the United Kingdom. More than 150 graduate students and 90 postdoctoral researchers use the BaBar data for their research. The experimental collaboration produces almost 1.4 journal articles per week. SLAC's research staff contributes significantly to these achievements.

Objective 1.2 Provide Quality Leadership in Science and Technology

Score: 3.4

Grade: B+

Weighting: 30

Objective 1.2 Performance Summary Statement:

SLAC contributes significantly to the ILC R&D program, focusing on development of critical technologies such as klystrons and solid-state modulators, design and test of high gradient structures, examination of final-focus requirements, and an aggressive R&D program in the NLCTA program.

The Kavli Institute for Particle Astrophysics and Cosmology (KIPAC), which is connected to both Stanford University and SLAC, completed its forth full academic year and strengthened SLAC's impact on particle astrophysics research. The scientific program at KIPAC is quite diverse, ranging from traditional astrophysics topics to investigations of dark matter and energy that are of interest to HEP. The LSST R&D project, a major initiative for several KIPAC faculty members, will focus in part on dark energy and dark matter investigations.

SLAC joined the ATLAS detector group in 2006, strengthening the US participation in the LHC. It is also participating in the LHC accelerator research program (LARP). It has become a Tier-2 computer

site for LHC data analysis and is partnering with UCSC and LBNL to become a west coast hub for the ATLAS community.

Objective 1.3 Provide and Sustain Science and Technology Outputs that Advance Program Objectives and Goals

Score: 3.8

Grade: PASS

Weighting: 30

Objective 1.3 Performance Summary Statement:

The Stanford Linear Accelerator Center (SLAC) currently operates a cutting edge program in high energy physics based on the B-factory, a space-based astroparticle physics experiment (GLAST), a number of initiatives for non-accelerator based experimental proposals, theoretical physics in particle and particle-astrophysics, and an advanced accelerator research program. SLAC is a member of the ATLAS detector group, and is also participating in the LHC accelerator research program (LARP). It is a Tier-2 computer site for LHC data analysis and is developing into a west coast hub for the ATLAS community. SLAC has been a leader in ILC R&D for some time and is leading the design of the RF power sources for the ILC, is also working on detector designs.

Objective 1.4 Provide for Effective Delivery of Science and Technology

Score: 3.8

Grade: PASS

Weighting: 10

Objective 1.4 Performance Summary Statement:

SLAC staff is involved in an advanced accelerator research program with a wide variety of topics covering performance enhancement of current accelerators, research and design for near-future facilities, research in fundamental aspects of accelerator and beam physics, and accelerator physics and technology relevant to high gradient acceleration and advanced concepts. It has recently reorganized its accelerator research efforts into a new center to better coordinate its diverse efforts in this field.

SLAC contributes significantly to the ILC R&D program, focusing on development of critical technologies such as klystrons and solid-state modulators, examination of final-focus requirements, and an aggressive R&D program in the NLCTA program. The lab is engaged in a new High Gradient collaborative effort which designs and tests various high gradient structures. The FFTB, which was dismantled in the summer of 2006 to make way for LCLS construction, is planned to relocate to sector 20 of the Linac and become the FACET project. The FACET proposal is currently under review at the OHEP.

Goal 2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operation of Research Facilities

Goal Score: 2.10

Goal Grade: C+

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

Goal 2.0 Performance Summary Statement:

The B-Factory failed to reach its luminosity milestone for FY07 by a wide margin. This miss is particularly serious in light of the extended upgrade effort which immediately preceded it.

The SABER proposal to relocate the FFTB facility did not review successfully. A new proposal has been requested and the future of SLAC's highly regarded plasma wakefield experimental program is now in doubt.

Other SLAC research programs and facilities are in general well managed, and the scientific productivity is high, in spite of difficulties from the tightly constrained budget, limited manpower and some recent performance problems.

Objective 2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs (i.e., activities leading up to CD-2)

Score: 2.5

Grade: B-

Weighting: 20

Objective 2.1 Performance Summary Statement:

The FFTB, which was dismantled in the summer of 2006 to make way for LCLS construction, is planned to relocate to sector 20 of the Linac and become the FACET project. SLAC's plan to move the FFTB to the South Arc reviewed poorly and the OHEP requested the lab to prepare an alternative plan. The FACET proposal is under review in the OHEP.

EXO-200, designed to confirm or refute the Majorana nature of the neutrino and estimate its mass, is well underway. However, with limited available resources, the R&D progress continues to be slow and the detector deployment to underground testing has only recently been accomplished after several delays of several months each.

The LSST R&D project, a major initiative for several KIPAC faculty members, will focus in part on dark energy and dark matter investigations. The design and construction of the camera may become a DOE project if the R&D efforts are successful and review well.

Objective 2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components (execution phase, Post CD-2 to CD-4)

Score: NA

Grade: NA

Weighting: 0

Objective 2.2 Performance Summary Statement:

Objective 2.3 Provide Efficient and Effective Operation of Facilities

Score: 2.0

Grade: C

Weighting: 80

Objective 2.3 Performance Summary Statement:

SLAC's B-Factory performance was only partially success in FY2007. For the entire FY07, PEP-II

delivered 90.2 fb^{-1} which was 31 % below its target of 130 fb^{-1} , and 12% below the lower range of the target, 103 fb^{-1} .

(The lower range of the target is defined as 80% of the target, using standard DOE definitions.) This milestone failure was due in large part to three weeks of lost running in May 2007 due to vacuum bursts. These problems were fixed and the performance of PEP-II improved considerably late in the summer when record daily integrated and instantaneous luminosities were recorded. By the end of the FY07 run the B-Factor had accumulated an integrated luminosity of over $1/2 \text{ ab}^{-1}$.

SLAC is awaiting the launch of GLAST. It has passed all of its space readiness milestones and is in NASA's hands. The launch itself is now scheduled for early 2008. The LAT is expected to generate data which will make fundamental discoveries in our search for the dark matter which makes up a large fraction of all the matter in the universe. SLAC is prepared to analyze that data in their Instrument Science Operations Center (ISOC).

Objective 2.4 Utilization of Facilities to Grow and Support Lab's Research Base and External User Community

Score: NA

Grade: NA

Weighting: 0

Objective 2.4 Performance Summary Statement:

Goal 3.0 Provide Effective and Efficient Science and Technology Program Management

Goal Score: 3.12

Goal Grade: B+

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

Goal 3.0 Performance Summary Statement:

SLAC's future as a high energy physics laboratory is continuously being developed. It is a major player in the design stage of the ILC, it is taking on more responsibilities, both in computer support and phenomenology, of the LHC, and it continues to lead world class research efforts in new accelerator concepts. However, it has not developed a plan in high energy experimental physics program that will replace the B-factory which is scheduled to close by the end of FY2008. SLAC, therefore, risks losing its vitality and relevance in the field, and its other plans in high energy physics will eventually be negatively impacted by this lack of initiative.

Objective 3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision

Score: 3.0

Grade: B

Weighting: 40

Objective 3.1 Performance Summary Statement:

The dismantled FFTB has yet to be replaced by a new facility due to poor planning. This failure endangers SLAC's long term commitment to advanced accelerator R&D.

SLAC is a leader in the design stage of the ILC, and is becoming involved in the LHC.

Its EXO-200 project will probe the fundamental character of the neutrino with the goal of determining if it is its own anti-particle. This project has been slow in development and in moving underground which is a crucial step in deciding its efficacy in meeting its goal.

Its R&D project on dark energy, the LSST, has passed a Conceptual Design Review run by its major funding agency, the NSF. The KIPAC continues to do highly regarded research on the interface of astrophysics and high energy physics.

SLAC's High Gradient AARD program is making good progress in developing acceleration mechanisms which are more powerful than those planned for the ILC.

Objective 3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management

Score: 3.3

Grade: B+

Weighting: 40

Objective 3.2 Performance Summary Statement:

The B-Factory is generally well managed. Unfortunately various components of PEP-II are aging and replacing failing parts is taking more time. Management has kept the productivity high even in the face of these problems.

Glast and its ISOC are well managed and are on track.

SLAC's involvement in the ATLAS project is developing and a user support center structured around SLAC's Tier-2 computing center is promising.

KIPAC is organized well and LSST R&D on the facility's camera electronics is progressing.

Objective 3.3 Provide Efficient and Effective Communications and Responsiveness to Customer Needs

Score: 3.0

Grade: B

Weighting: 20

Objective 3.3 Performance Summary Statement:

The BaBar collaboration is well managed and functions with high productivity. This is a large international collaboration which has been a model of success.

Management communicates regularly with the OHEP but the lab's budget is particularly complicated and the lab has not succeeded in simplifying it to map clearly onto the structure preferred by the OHEP. This causes plans to be transmitted inaccurately or in a fashion that is difficult for the OHEP to act upon. These problems are particularly serious as the lab makes its transition to a multi-disciplinary facility.



**Office of
Science**

U.S. DEPARTMENT OF ENERGY

Laboratory Year-End Performance Assessment Report

Date:

11/13/2007

Headquarters Program Office Fiscal Year 2007 Evaluation of Stanford University
for Management and Operation of the Stanford Linear Accelerator Center

Agency:

U. S. Department of Energy

Program Office:

Workforce Development for Teachers and Scientists (WDTS)

FY Funding Level: (Budget Authority)

150,000

Evaluator:

Brian O'Donnell

Phone Number:

202 586-7399

E-mail Address:

brian.o'donnell@science.doe.gov

Goal 1.0 Provide for Efficient and Effective Mission Accomplishment

Goal Score: 3.41

Goal Grade: B+

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

Goal 1.0 Performance Summary Statement:

Provide a summary of overall Goal performance

The WDTS program is exceptionally well managed and fully supported throughout the laboratory. Students and educators are placed in challenging research positions where their scientific talents and interests are well matched with what is expected of them. The staff in the education office is very involved with students/educators as well as the mentors ensuring that the collaboration is productive, projects are well defined, and identify any issues to resolve. Direct dialog between education program managers, division directors, mentors ensures that all interactions have at the core a commitment to the science learning.

Objective 1.1 Science and Technology Results Provide Meaningful Impact on the Field

Score: 3.1

Grade: B+

Weighting: 25

Objective 1.1 Performance Summary Statement:

- SLAC has a long-standing, well established mentor culture within the lab and they continue to advance that culture. The success of the undergraduate internship program funded by WDTS is based on the careful attention given to matching mentors and students. Mentors are pleased to have WDTS interns because the education staff manages the placements and mentor mentee experience to the greatest advantage of both.
- Students are placed in challenging research environments and are carefully guided to a productive outcome.
- Student products and outputs are always of excellent quality as validated by peer review and headquarters annual evaluation.

Objective 1.2 Provide Quality Leadership in Science and Technology

Score: 3.1

Grade: B+

Weighting: 30

Objective 1.2 Performance Summary Statement:

- Undergraduate interns and educators at SLAC are fully integrated into the lab operation and gain significant research capability but are placed on equal footing with other laboratory researchers and benefit from that immersion experience.

Objective 1.3 Provide and Sustain Science and Technology Outputs that Advance Program Objectives and Goals

Score: 3.8

Grade: PASS

Weighting: 30

Objective 1.3 Performance Summary Statement:

Met expectations

Objective 1.4 Provide for Effective Delivery of Science and Technology

Score: 3.8

Grade: PASS

Weighting: 15

Objective 1.4 Performance Summary Statement:

Met expectations

Goal 2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operation of Research Facilities

Goal Score:

Goal Grade:

Goal Score:

Goal Grade:

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

Goal 2.0 Performance Summary Statement:

Objective 2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs (i.e., activities leading up to CD-2)

Score: NA

Grade: NA

Weighting:

Objective 2.1 Performance Summary Statement:

Objective 2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components (execution phase, Post CD-2 to CD-4)

Score: NA

Grade: NA

Weighting:

Objective 2.2 Performance Summary Statement:

Objective 2.3 Provide Efficient and Effective Operation of Facilities

Score: NA

Grade: NA

Weighting:

Objective 2.3 Performance Summary Statement:

Objective 2.4 Utilization of Facilities to Grow and Support Lab's Research Base and External User Community

Score: NA

Grade: NA

Weighting:

Objective 2.4 Performance Summary Statement:

Goal 3.0 Provide Effective and Efficient Science and Technology Program Management

Goal Score: 3.28

Goal Grade: B+

Please complete the Objective fields then click the Calculate button to get the final Score and Grade.

Goal 3.0 Performance Summary Statement:

- The education office has focused time and talent on operating as a well integrated team and the results demonstrate a significant increase in productivity where student outputs are of superior quality and the research experience is a rich, productive experience.

Objective 3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision

Score: 3.2

Grade: B+

Weighting: 20

Objective 3.1 Performance Summary Statement:

Met Expectations.

Objective 3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management

Score: 3.2

Grade: B+

Weighting: 40

Objective 3.2 Performance Summary Statement:

- SLAC is outstanding in their development and assessment of policies, procedures, and outcomes both for the intern/educator as well as the mentor and the research division.
- SLAC uses a "selection committee" to review applications and assign placements to mentors and divisions. This process ensures that not only the best students are selected but to include students/educators for whom the opportunity will make a difference.

Objective 3.3 Provide Efficient and Effective Communications and Responsiveness to Customer Needs

Score: 3.4

Grade: B+

Weighting: 40

Objective 3.3 Performance Summary Statement:

- Commitment to communication and an appreciation for learning and research is a basic principle for operation within the laboratory. It is a quality that is impressed upon every participant and guides all interactions between mentor and mentee, as well the effective program relationship between WDTS and the education staff.