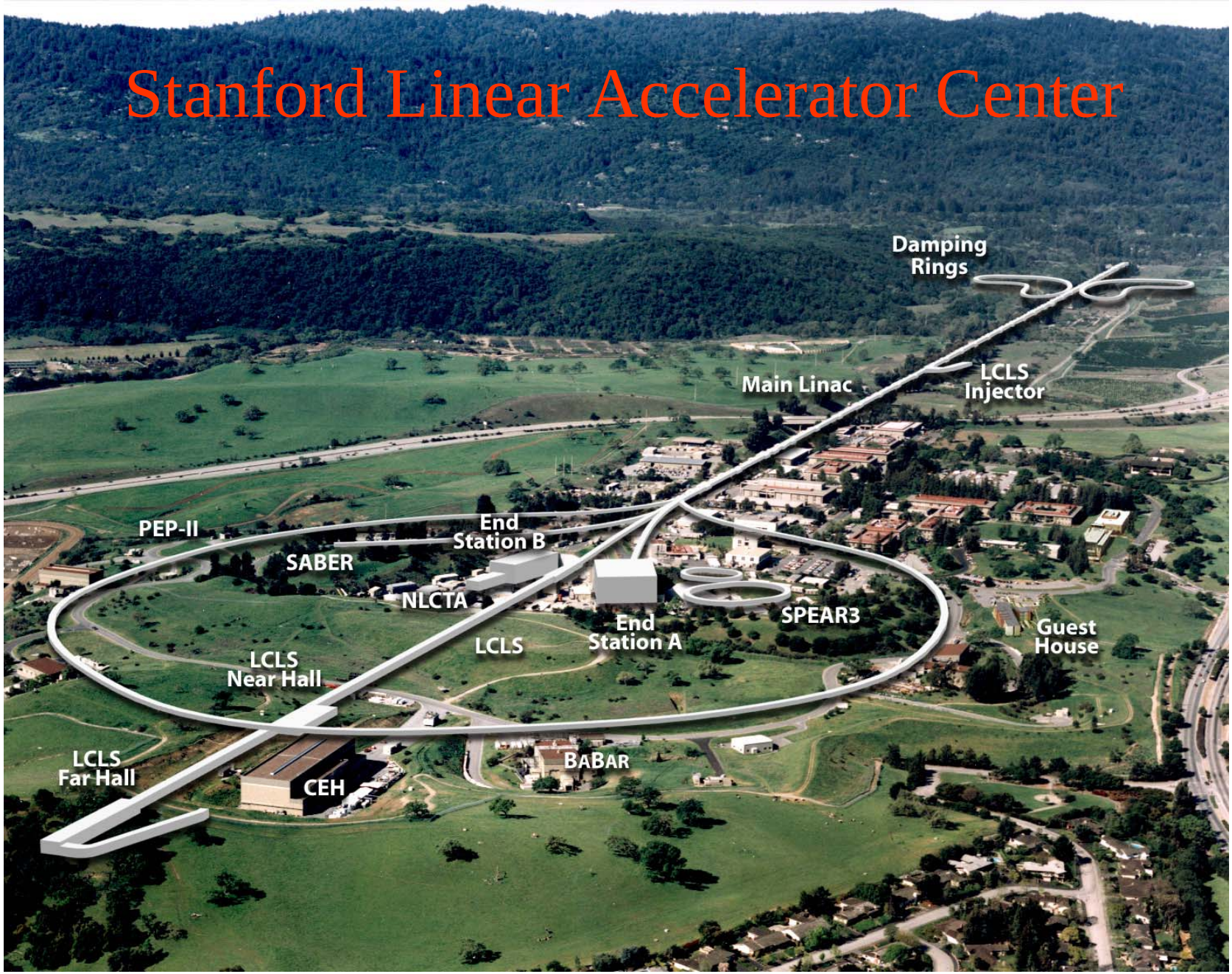

Stanford Linear Accelerator Center
Damping Rings
Main Linac
LCLS Injector
PEP-II
End Station B
SABER
NLCTA
SPEAR3
End Station A
LCLS
Guest House
LCLS Near Hall
LCLS Far Hall
CEH
BABAR

The 2006 Chemistry Nobel Prize Winner Did the Crucial Measurements at SLAC

SLAC today

Thursday - October 5, 2006

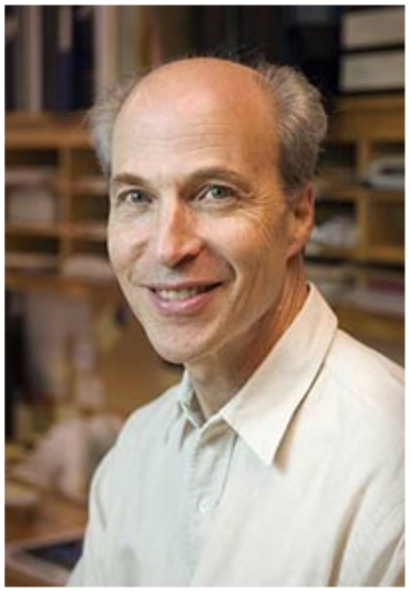
SLAC was Indispensable, says Nobel Prize Winner

by Brad Plummer and Kelen Tuttle

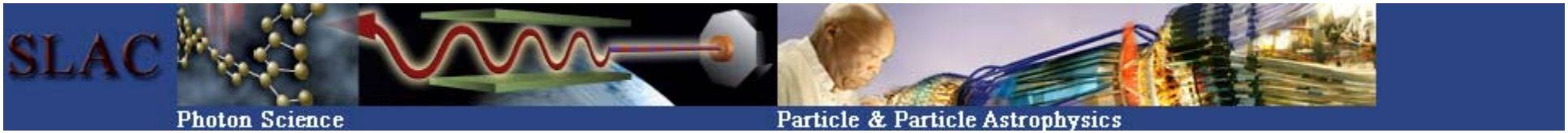
Upon receiving the Nobel Prize for Chemistry yesterday, Stanford Professor Roger Kornberg praised SLAC and the Stanford Synchrotron Radiation Laboratory facility. "We could not have solved the problem that was noted in the Nobel Prize announcement without the exceptional facilities given to us by SLAC. They were indispensable," Kornberg said.

Kornberg received the award for determining how DNA's genetic blueprint is read and subsequently used to direct the process for protein manufacture. Since the early 1990s, Kornberg has studied this transcription process at SSRL's Beamline 9-2 and 11-1. By passing the lab's extremely bright x-rays through crystallized proteins and watching how the x-rays scattered, Kornberg revealed the three-dimensional atomic structure of proteins in high resolution. The high level of detail in these images offered the first real understanding of the defining events of transcription.

"Congratulations to Dr. Roger Kornberg for his outstanding research," said Under Secretary for Science Raymond L. Orbach. "I am pleased and proud that the experimental work that led to Dr. Kornberg's Nobel Prize award took place at two Department of Energy funded synchrotron radiation laboratories. I congratulate all the staff at these two world-class laboratories on their high quality work." Read SLAC's press release...



Roger Kornberg
(Image courtesy of Linda A. Cicero, Stanford News Service.)



Linac Coherent Light Source at SLAC

The Next Revolution in X-RayScience

Stanford Linear Accelerator Center

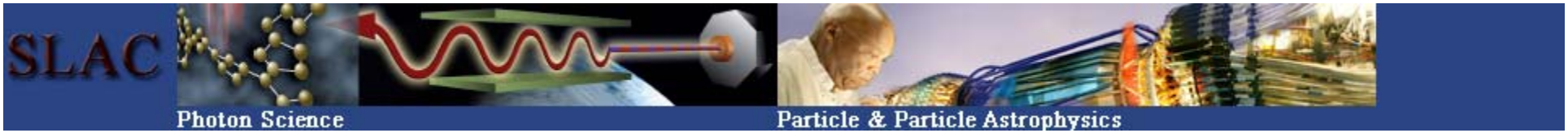
SSRL

Advanced Photon Source

UCLA

Current Scope of CMS @ SLAC

- **Current services include:**
  - **e-Commerce**
  - **On-line catalogue**
  - **JIT logistics**
  - **Off-site, vendor managed inventory**
  - **Point-of-use delivery**
  - **MSDS Management**
  - **ESH reporting platform**
  - **Incentives for cost and waste reduction**

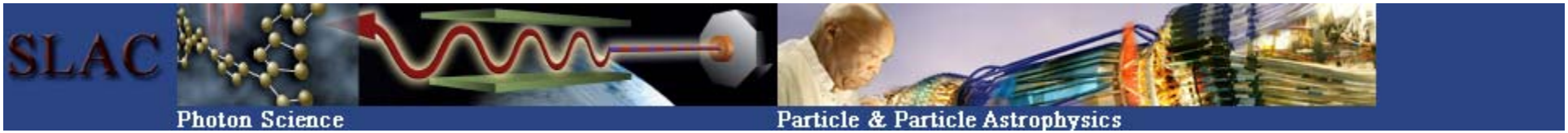


Recent Accomplishments

- **Meeting/Exceeding Contractual Performance Metrics**
  - Overall User Satisfaction
  - Exercise of First Two-year Option
  - Recent Audit: No Significant CMS Findings

- **ESH Highlights:**
  - Bulk Tank Removals (~ 15%)
  - Gas Cylinder Removals (~ 10%)
  - Elimination of SLAC Stores
  - Reduced Shop Inventories
  - Hex Chrome Elimination Project
  - ESH reporting platform
  - Preparation for Global Harmonization

- **September Benchmarking Visit with PNNL**



General Challenges: Selling CMS

"Always Been There…"

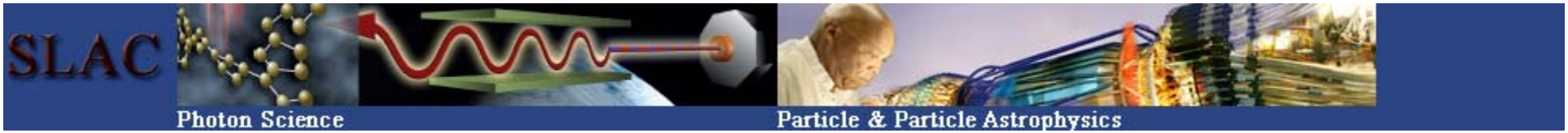
- Laboratory Director
- Legal Department
- Computing Management and Staff
- ESH/Division Management
- SSRL Facility Management

"Now That It's Successful…"

- Purchasing
- Stores
- ESH/Waste Management

"Tell Me Again…"

- Budgets/Financial Controls
- SSRL Individual Researchers

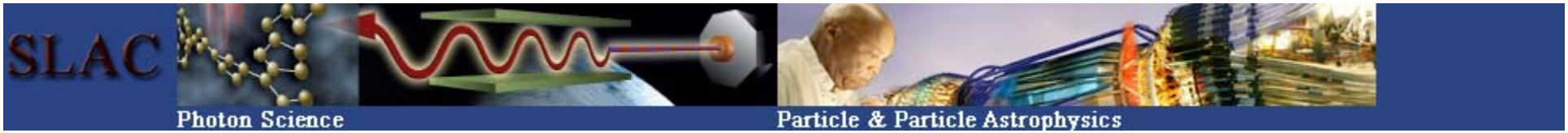


Government Sector Challenges

- *"our hardest competition is against your previous way of doing business"*
- *Were these SLAC's issues or the entire sector's?*
  - *Infatuation with P-Cards*
  - *No Sense of Strategic Relationships*
  - *Bias Against Lengthy Service Contracts*
  - *No Measurement of Delivery, Service, and ESH Metrics*
  - *"Weak" Chemical Inventory Data*
  - *History of "Silo-ing" ESH Information Systems*
  - *Bias Against Outsourcing*
  - *No Contract Administrators (in the Private Corporation Sense)*

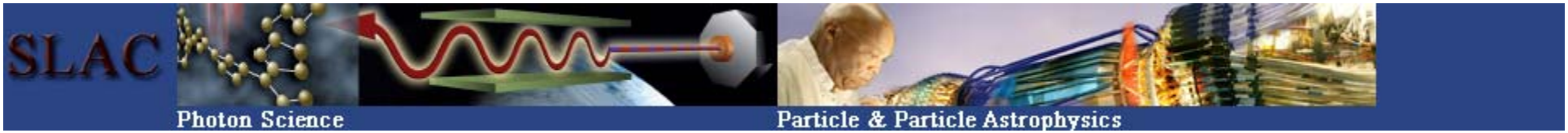
Government Sector Challenges

- ***DOE Data Security Issues***
  - *NNSA labs require all data to be housed onsite – would tend to eliminate the ASP data model our particular CMS vendor uses?*
- ***DOE Order 151.1C – Operational Emergency Hazardous Materials Program Issues***
- ***DOE Audit Frequency***
- ***Supply Chain Management and Documentation***
  - *Potential helium supply interruptions: BLM vs. subtier supplier*
  - *Union issues: both at SLAC and on campus*
  - *Financial auditor issues: lack of familiarity with documentation*
  - *Planned CMS "White Paper" along ISO 9000 lines*

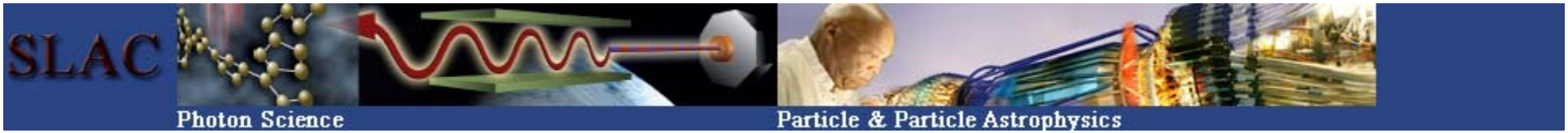


Future Directions

- **Near-term Projects**
  - Final Phase of Legacy Cleanout
  - Quantitative Documentation of Onsite Reductions
  - Supply Chain White Paper
  - Integration with NWTS
  - Further "time-to-researcher" improvements?
- **Future services might potentially address:**
  - Metals supply chain services
  - Hazardous and/or E-waste management
  - Radiological materials management
  - Cooling towers and analytical testing
- **Second Full Year Performance Metrics Will Be Available Shortly**



Backup Slides



What Characterizes SLAC?

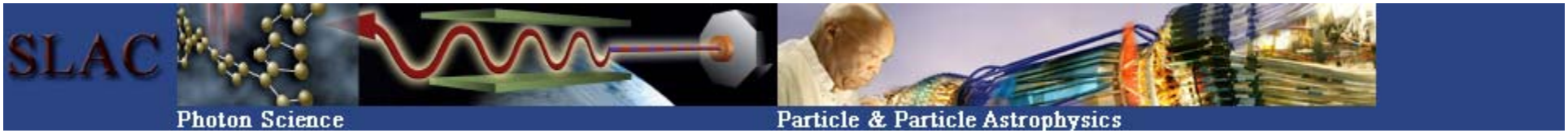
- SLAC built a world-class scientific laboratory because its program has always been:

  Driven by outstanding science which has

  Pushed the limits of discovery

  Sustained by exceptional technical innovation

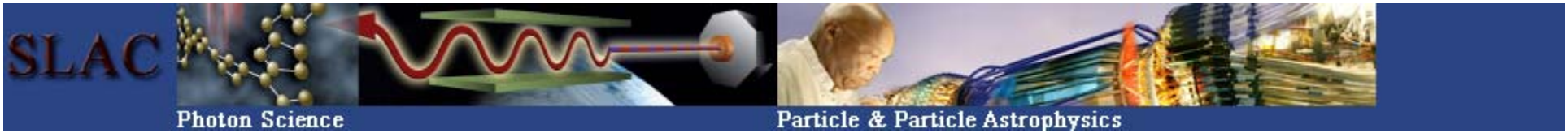
- Driven by the changing scientific imperatives of the new millennium, we have crafted a new vision for SLAC centered on the most challenging and exciting problems in X-ray Science, particle physics, and particle astrophysics/cosmology



Challenges - Culture

- ***It is very different from corporate America:***
  - ***There is an ongoing schism between academic and administrative subcultures***
  - ***It's highly decentralized with high local autonomy***
  - ***There is a resistance to centralization and standardization***
  - ***There is a sort of fragmented leadership. Everyone's a leader; no one's a leader. There's not the sort of top-down direction like you would find in corporate America.***

John Cammidge, former Stanford University IT Director



Could SLAC Extend the Model to Govt?

250+ Chemical Suppliers, Buy ~$1.2M (basis: CY02)

200+ SLAC Requestors/Receivers

BULK CRYOGENS and GASES (~53%)

- LIQUID NITROGEN
- LIQUID HELIUM
- BULK HELIUM
- BULK HYDROGEN

RESEARCH and SHOP CHEMICALS (~17%)

- PLATING SHOP
- PAINT SHOP
- KLYSTRON GROUP
- HEAVY FAB
- VACUUM ASSEMBLY
- FLUORINERT
- IPA, ETHANOL
- Wet Lab Chemicals

SPECIALTY GASES (~7%)

- H-134a
- SF6
- ISOBUTANE
- OTHER RESEARCH GASES

WATER TREATMENT CHEMICALS (~11%)

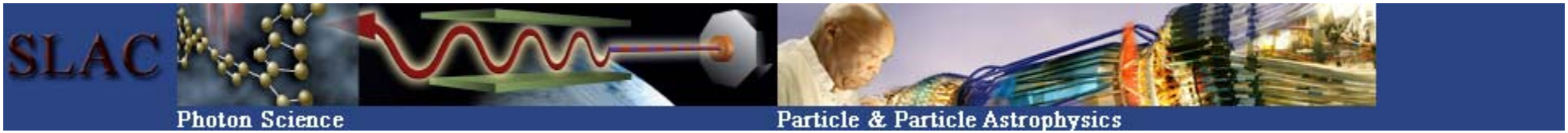
- COOLING TOWERS
- BOILER CORROSION

OTHER CHEMICALS (~8%)

- NON-SPECIALTY GASES
  - Ar, CO2, He, N2, O2
  - Compressed Air
  - Acetylene
- STORES CHEMICALS
- FACILITY SUPPORT
  - Paints
  - Epoxies

FUELS and OILS (~4%)

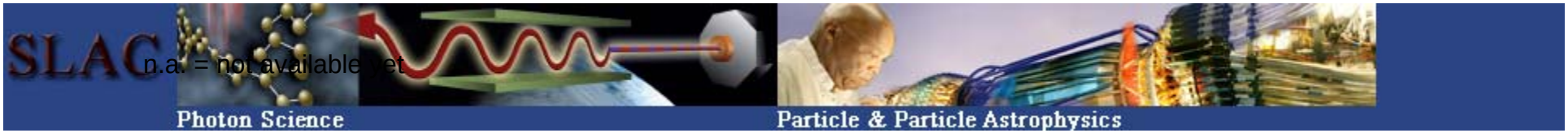
- GASOLINE
- DIESEL
- PROPANE
- HYDRAULIC OILS
- MOTOR OILS
- LUBE OILS
- VACUUM OILS



Performance Measures

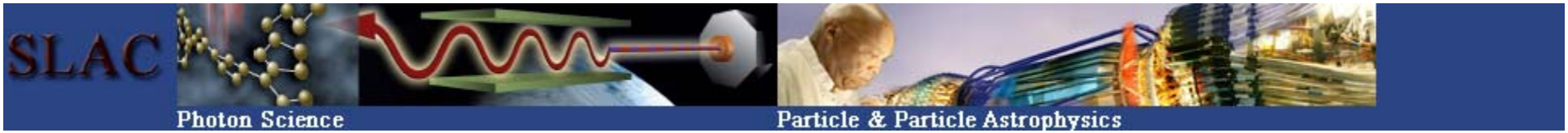
	May-05	Jun-05
Cost		
Commodity cost reduction	TBD	TBD
Management Cost Savings	n.a.	n.a.
Quality/Service		
On-time Delivery Min/Max	100%	100%
On-time Delivery OOR	99%	94%
Mission Critical (He & LN_2)	100%	100%
Acceptance rate	100%	100%
Shrinkage rate	n.a.	n.a.
Scrap/Obsolescence rate	n.a.	n.a.
ESH		
Injuries/Illness	0	0
Chemical spills/releases	0	0
Training	100%	100%
Participation in Infrastructure Improvement/ISMS	various	Various
Hazardous Waste Reduction	n.a.	n.a.

n.a. = not available yet



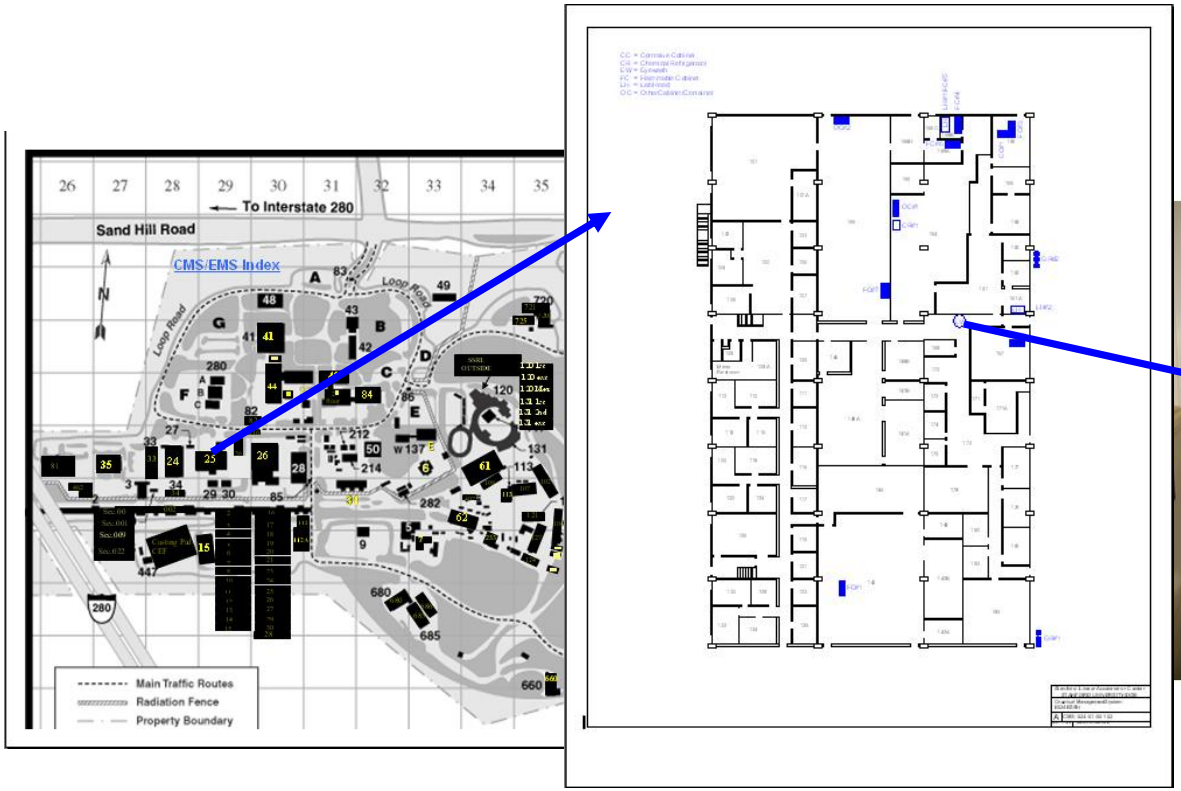
Selected Accomplishments

- First stand-alone academic or government facility to successfully implement the CMS model
- First truly paperless "e-business" system @ SLAC
- PO cycle time for chemicals averages < 1 day
- Elimination of annual hazardous materials inventory
- Development of CMS Mapping Tool http://www-group.slac.stanford.edu/esh/departments_groups/chemical_general_safety/cms
- Overall streamlining of chemical supply chain



Selected Accomplishments

- **Mapping Project –**



Lab Hood / Flammable Cabinet
LH#1/FC#5
B024 Room 158B