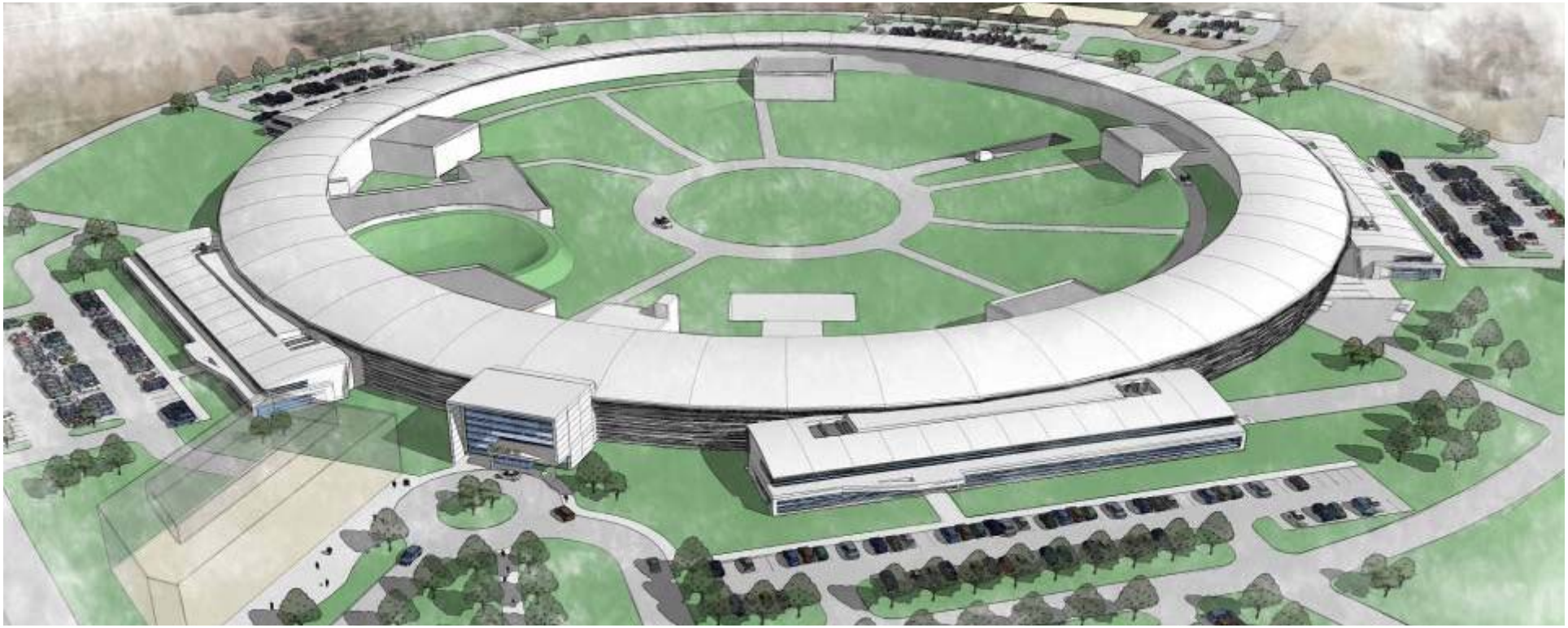
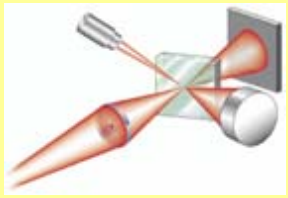
NSLS-II Overview



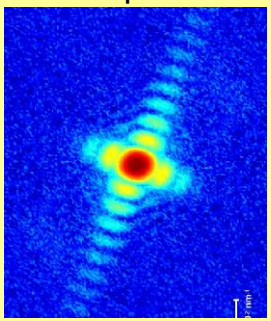
Steve Dierker
Associate Laboratory Director for Light Sources
NSLS-II Project Director
July 19, 2007

High Level Description of NSLS-II

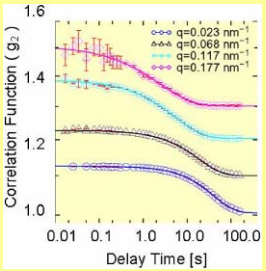
New Capabilities



Nanoprobes



Diffraction Imaging



Coherent Dynamics

A new, highly optimized x-ray synchrotron that will replace the present NSLS.

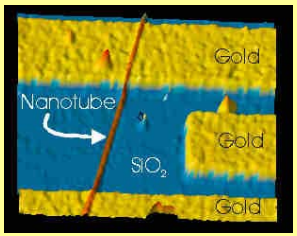
It will deliver:

- very high brightness (10,000x NSLS) and flux;
- exceptional beam stability; and
- a suite of advanced instruments, optics, and detectors that capitalize on these special capabilities.

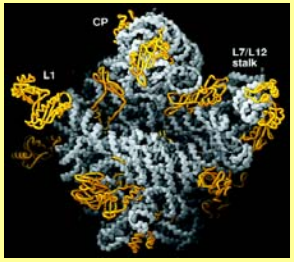
Together, these will enable:

- ~ 1 nm spatial resolution,
- ~ 0.1 meV energy resolution, and
- single atom sensitivity.

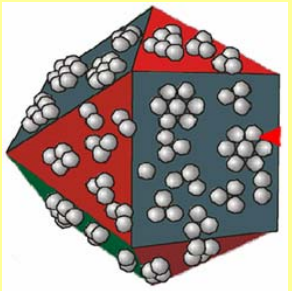
New Science



Nanoscience



Life Science

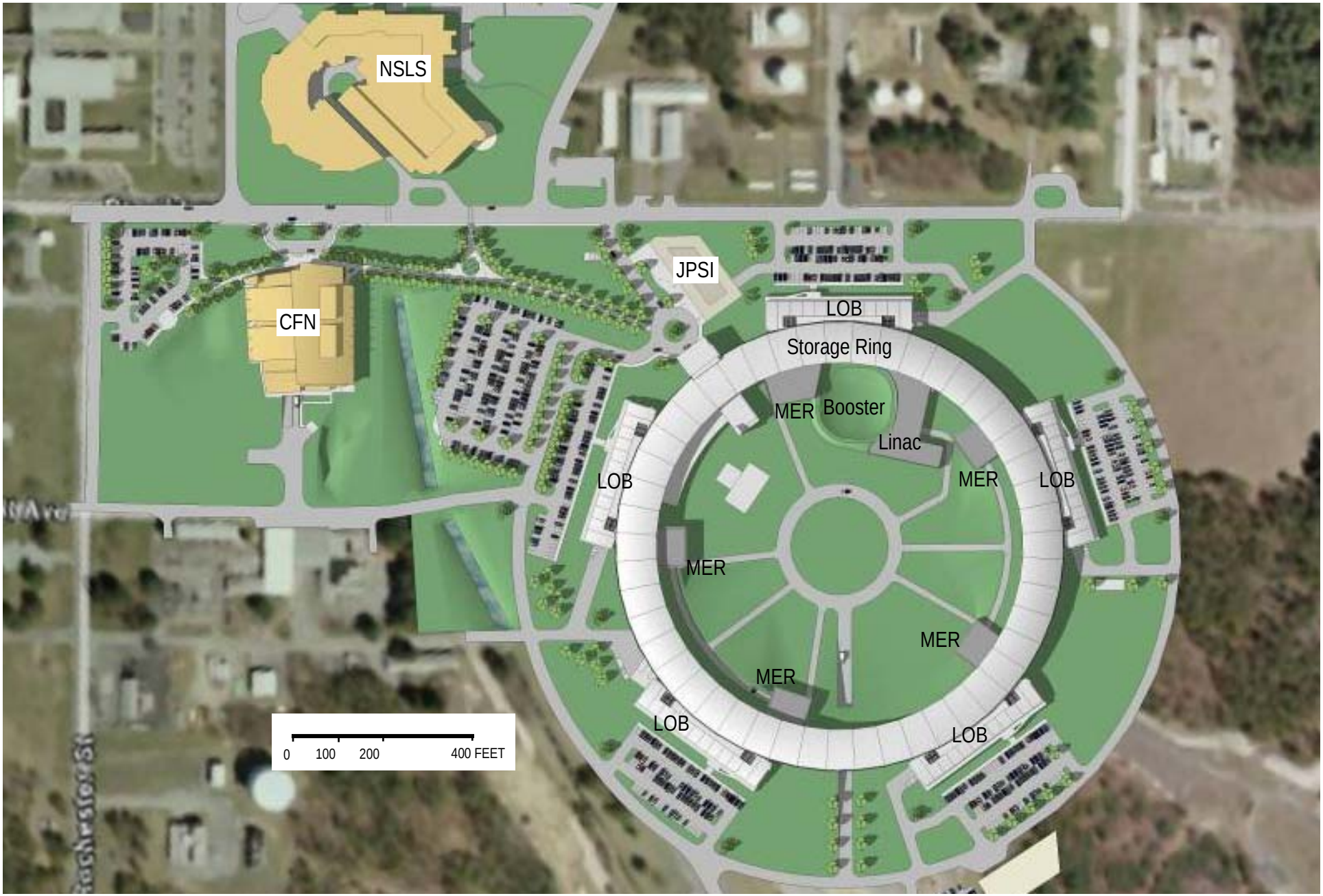


Nanocatalysis

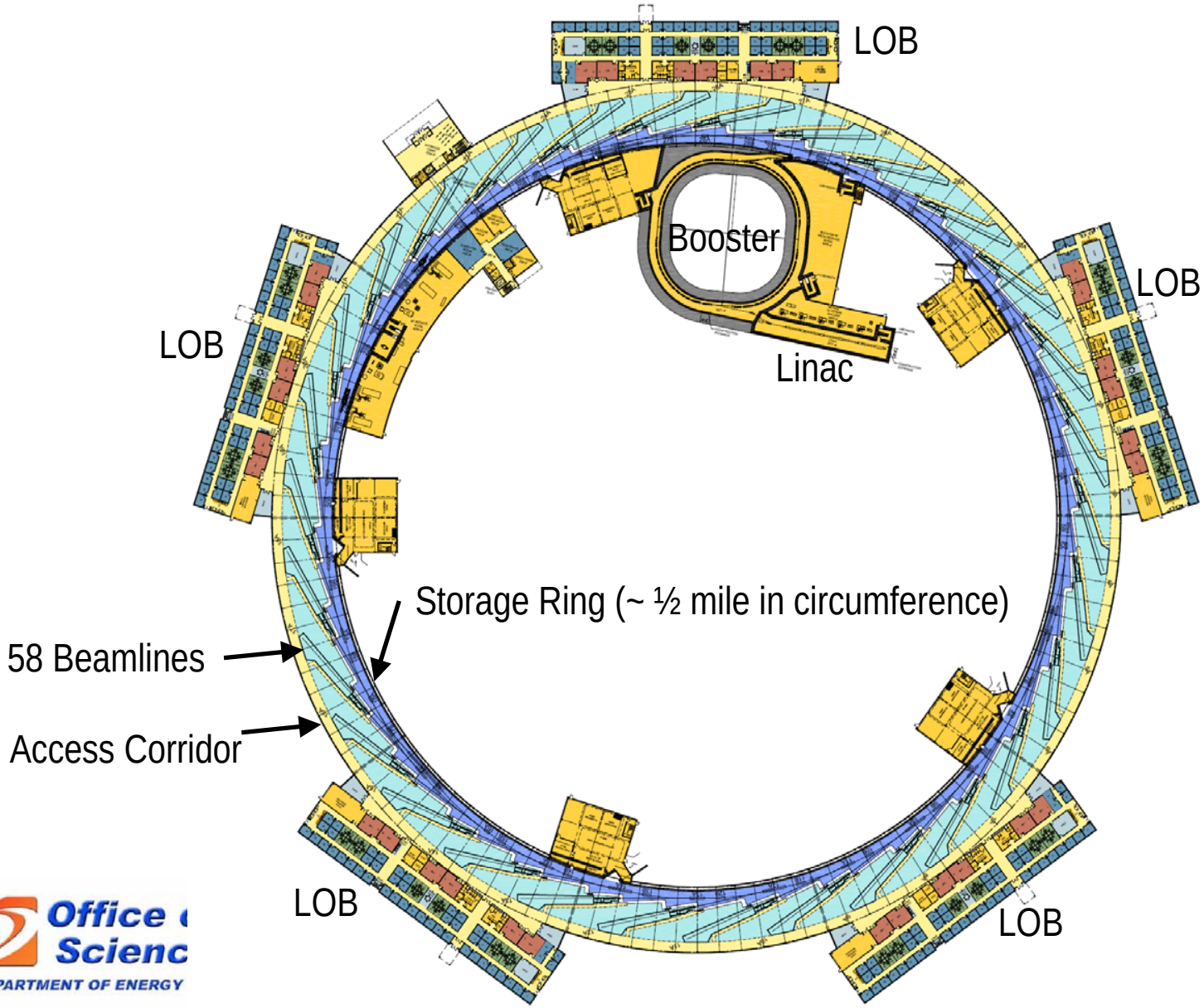
Office of Science
U.S. DEPARTMENT OF ENERGY

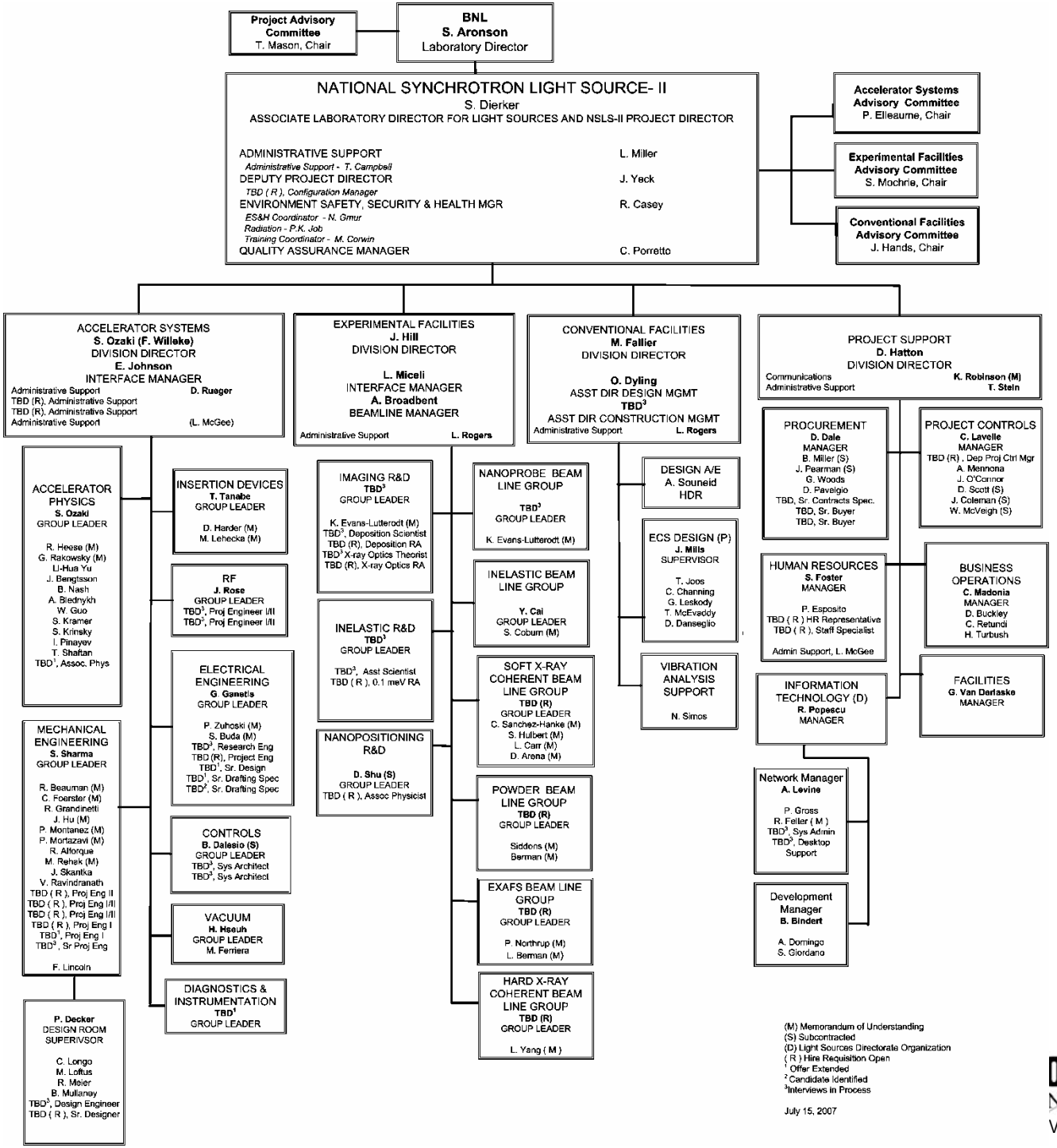
BROOKHAVEN NATIONAL LABORATORY
BROOKHAVEN SCIENCE ASSOCIATES

Site Plan

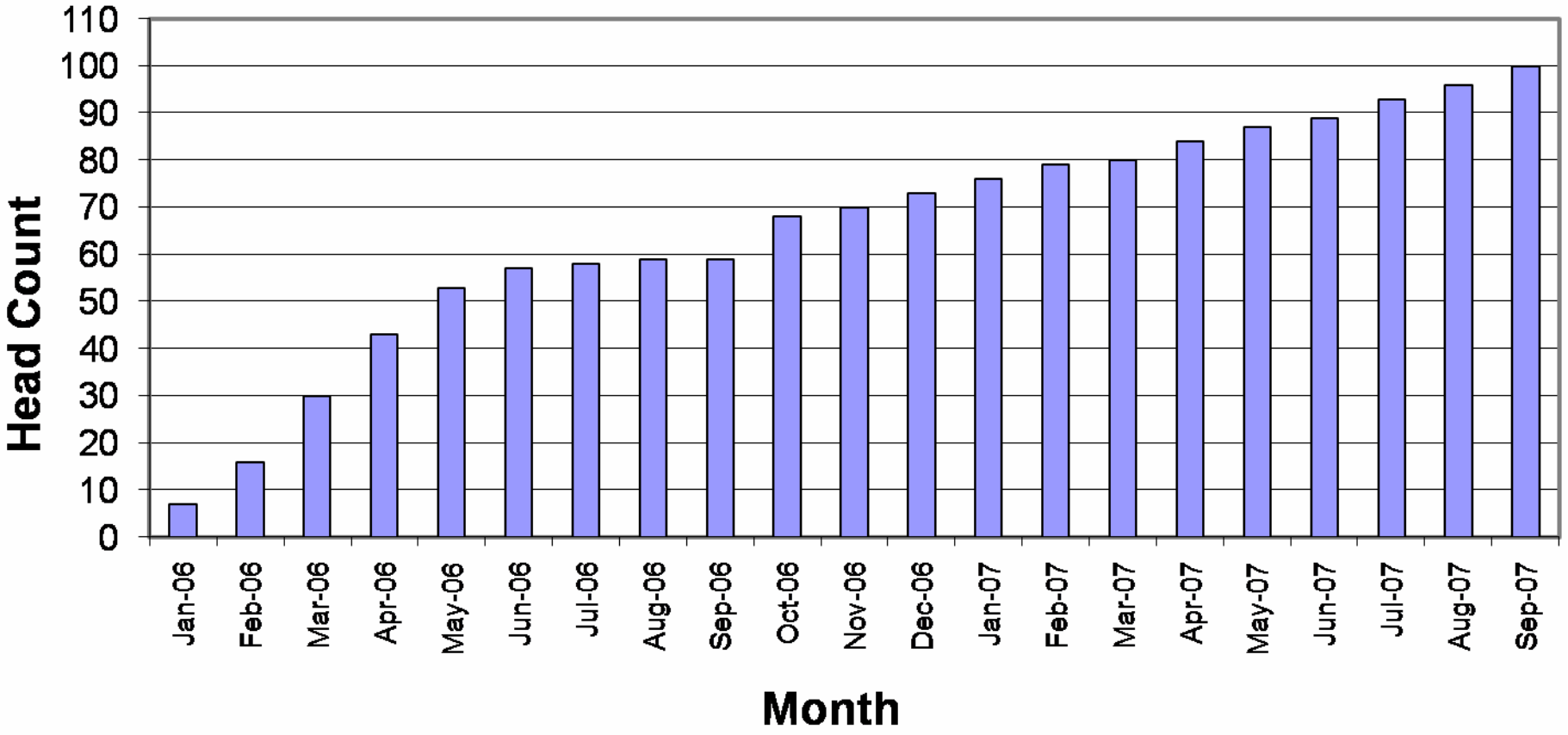

NSLS
CFN
JPSI
LOB
Storage Ring
MER
Booster
Linac
LOB
MER
LOB
MER
MER
MER
LOB
LOB
0
100
200
400 FEET

NSLS-II Floor Plan




Project Advisory Committee
T. Mason, Chair
BNL
S. Aronson
Laboratory Director
NATIONAL SYNCHROTRON LIGHT SOURCE- II
S. Dierker
ASSOCIATE LABORATORY DIRECTOR FOR LIGHT SOURCES AND NSLS-II PROJECT DIRECTOR
ADMINISTRATIVE SUPPORT
Administrative Support - T. Campbell
L. Miller
DEPUTY PROJECT DIRECTOR
TBD (R), Configuration Manager
J. Yeck
ENVIRONMENT SAFETY, SECURITY & HEALTH MGR
ES&H Coordinator - N. Gmur
Radiation - P.K. Job
Training Coordinator - M. Corwin
R. Casey
QUALITY ASSURANCE MANAGER
C. Porretto
Accelerator Systems Advisory Committee
P. Elleaume, Chair
Experimental Facilities Advisory Committee
S. Mochrie, Chair
Conventional Facilities Advisory Committee
J. Hands, Chair
ACCELERATOR SYSTEMS
S. Ozaki (F. Willeke)
DIVISION DIRECTOR
E. Johnson
INTERFACE MANAGER
Administrative Support
D. Rueger
TBD (R), Administrative Support
TBD (R), Administrative Support
Administrative Support
(L. McGee)
EXPERIMENTAL FACILITIES
J. Hill
DIVISION DIRECTOR
L. Miceli
INTERFACE MANAGER
A. Broadbent
BEAMLINE MANAGER
Administrative Support
L. Rogers
CONVENTIONAL FACILITIES
M. Fallier
DIVISION DIRECTOR
O. Dyling
ASST DIR DESIGN MGMT
TBD3
ASST DIR CONSTRUCTION MGMT
Administrative Support
L. Rogers
PROJECT SUPPORT
D. Hatton
DIVISION DIRECTOR
Communications
K. Robinson (M)
Administrative Support
T. Stein
ACCELERATOR PHYSICS
S. Ozaki
GROUP LEADER
R. Heese (M)
G. Rakowsky (M)
Li-Hua Yu
J. Bengtsson
B. Nash
A. Blednykh
W. Guo
S. Kramer
S. Krinsky
I. Pinayev
T. Shaftan
TBD1, Assoc. Phys
INSERTION DEVICES
T. Tanabe
GROUP LEADER
D. Harder (M)
M. Lehecka (M)
RF
J. Rose
GROUP LEADER
TBD3, Proj Engineer I/II
TBD3, Proj Engineer I/II
ELECTRICAL ENGINEERING
G. Ganetis
GROUP LEADER
P. Zuhoski (M)
S. Buda (M)
TBD3, Research Eng
TBD (R), Project Eng
TBD1, Sr. Design
TBD1, Sr. Drafting Spec
TBD2, Sr. Drafting Spec
CONTROLS
B. Dalesio (S)
GROUP LEADER
TBD3, Sys Architect
TBD3, Sys Architect
VACUUM
H. Hseuh
GROUP LEADER
M. Ferriera
DIAGNOSTICS & INSTRUMENTATION
TBD1
GROUP LEADER
MECHANICAL ENGINEERING
S. Sharma
GROUP LEADER
R. Beauman (M)
C. Foerster (M)
R. Grandinetti
J. Hu (M)
P. Montanez (M)
P. Mortazavi (M)
R. Alforque
M. Rehek (M)
J. Skantka
V. Ravindranath
TBD (R), Proj Eng II
TBD (R), Proj Eng I/II
TBD (R), Proj Eng I/II
TBD (R), Proj Eng I
TBD1, Proj Eng I
TBD3, Sr Proj Eng
F. Lincoln
P. Decker
DESIGN ROOM SUPERIVSOR
C. Longo
M. Loftus
R. Meier
B. Mullaney
TBD3, Design Engineer
TBD (R), Sr. Designer
IMAGING R&D
TBD3
GROUP LEADER
K. Evans-Lutterodt (M)
TBD3, Deposition Scientist
TBD (R), Deposition RA
TBD3 X-ray Optics Theorist
TBD (R), X-ray Optics RA
INELASTIC R&D
TBD3
GROUP LEADER
TBD3, Asst Scientist
TBD (R), 0.1 meV RA
NANOPOSITIONING R&D
D. Shu (S)
GROUP LEADER
TBD (R), Assoc Physicist
NANOPROBE BEAM LINE GROUP
TBD3
GROUP LEADER
K. Evans-Lutterodt (M)
INELASTIC BEAM LINE GROUP
Y. Cai
GROUP LEADER
S. Coburn (M)
SOFT X-RAY COHERENT BEAM LINE GROUP
TBD (R)
GROUP LEADER
C. Sanchez-Hanke (M)
S. Hulbert (M)
L. Carr (M)
D. Arena (M)
POWDER BEAM LINE GROUP
TBD (R)
GROUP LEADER
Siddons (M)
Berman (M)
EXAFS BEAM LINE GROUP
TBD (R)
GROUP LEADER
P. Northrup (M)
L. Berman (M)
HARD X-RAY COHERENT BEAM LINE GROUP
TBD (R)
GROUP LEADER
L. Yang (M)
DESIGN A/E
A. Souneid
HDR
ECS DESIGN (P)
J. Mills
SUPERVISOR
T. Joos
C. Channing
G. Leskody
T. McEvaddy
D. Danseglio
VIBRATION ANALYSIS SUPPORT
N. Simos
PROCUREMENT
D. Dale
MANAGER
B. Miller (S)
J. Pearman (S)
G. Woods
D. Pavelgio
TBD, Sr. Contracts Spec.
TBD, Sr. Buyer
TBD, Sr. Buyer
PROJECT CONTROLS
C. Lavelle
MANAGER
TBD (R) , Dep Proj Ctrl Mgr
A. Mennona
J. O'Connor
D. Scott (S)
J. Coleman (S)
W. McVeigh (S)
HUMAN RESOURCES
S. Foster
MANAGER
P. Esposito
TBD (R) HR Representative
TBD (R), Staff Specialist
Admin Support, L. McGee
BUSINESS OPERATIONS
C. Madonia
MANAGER
D. Buckley
C. Retundi
H. Turbush
INFORMATION TECHNOLOGY (D)
R. Popescu
MANAGER
FACILITIES
G. Van Derlaske
MANAGER
Network Manager
A. Levine
P. Gross
R. Feller (M)
TBD3, Sys Admin
TBD3, Desktop Support
Development Manager
B. Bindert
A. Domingo
S. Giordano
(M) Memorandum of Understanding
(S) Subcontracted
(D) Light Sources Directorate Organization
(R) Hire Requisition Open
1 Offer Extended
2 Candidate Identified
3 Interviews in Process
July 15, 2007

NSLS-II Staff



- Project will grow to 200-250 staff in coming years
- Currently ~ 35 open hire requisitions

NSLS-II Operations Staffing Estimates

	FTEs for Full Operations
Scientists	232
Engineers	62
Designers	40
Technicians	149
Computer Analysts	29
Admin/Secretarial	41
Total	553

Estimated Operating Cost: $140M/year

Human Resources - Diversity

- Started a strategic partnership with SUNY at Stony Brook to create a diversity-focused technical training program
- Summer Internships
- Diversity-themed recruitment flyer
- Historically Black Colleges and Universities event

Preliminary Cost Estimate ($M)

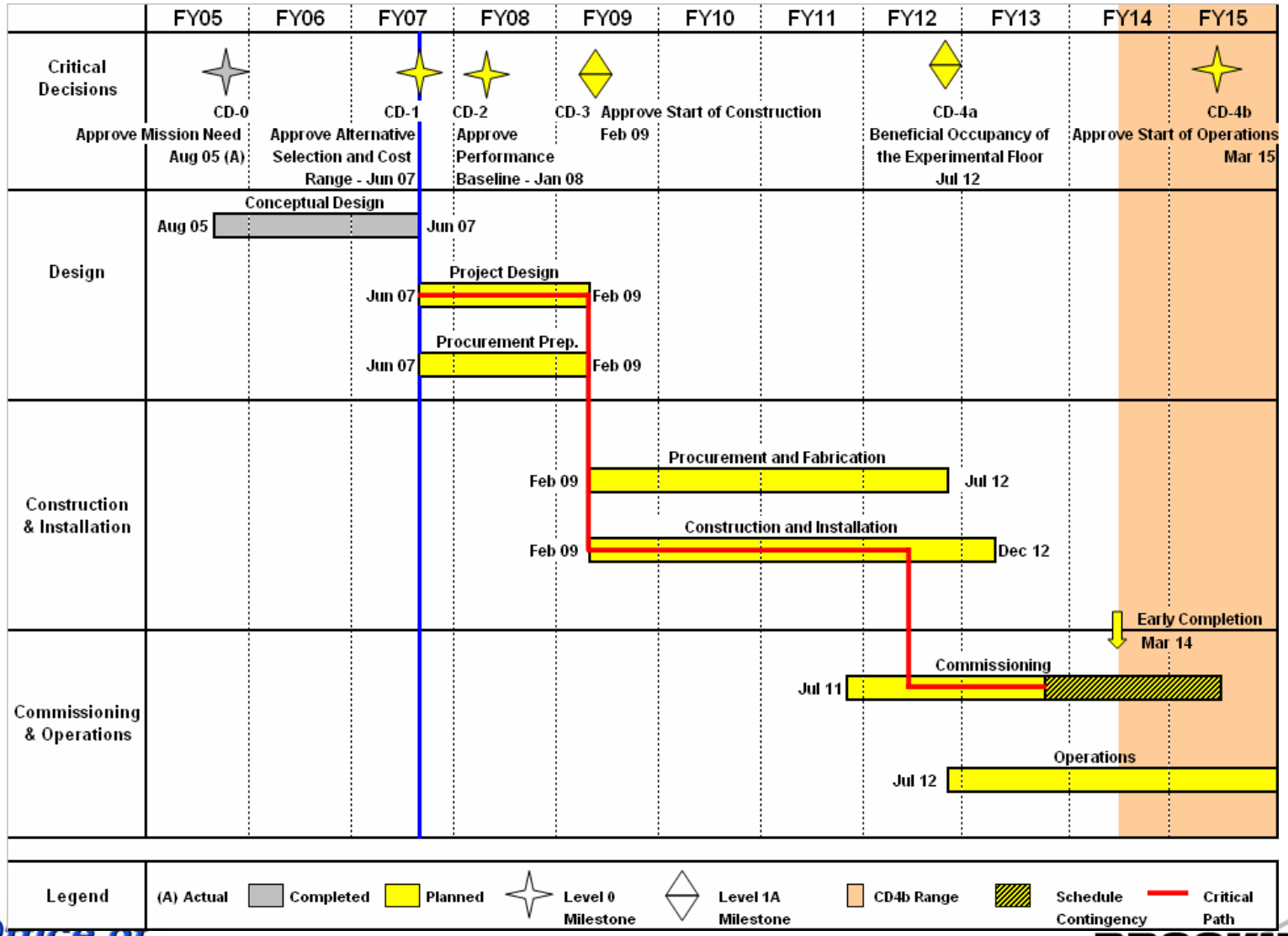
Project Management	40
Acelerator Systems	181
Conventional Facilties	220
Experimental Facilties	84
Contingency (~37% of costs listed above)	195
Total Estimated Costs (TEC)	720
Research and Development	68
Pre-Operations	95
Other Project Costs (OPC)	163
Total Project Cost (TPC)	883

Cost Range $750M to $925M

Office of Science
U.S. DEPARTMENT OF ENERGY

BROOKHAVEN NATIONAL LABORATORY
BROOKHAVEN SCIENCE ASSOCIATES

Preliminary Summary Schedule



18 Months Total Schedule Contingency

Questions?