

SURA Jefferson Laboratory Committee report

J. L. Matthews, Chair

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- **Christoph Leemann**

- Expanded on plenary talk: JLab is thriving
 - 700+ employees
 - 2300 users from 33 states and 30 countries
 - 149 approved experiments (1096 scientists, 184 institutions, 4-5 yr backlog)
 - 101 Physical Review Letters, Physics Letters
 - 172 Ph.D.'s (38 female, 38 minority), 172 in progress (29 female, 51 minority)
 - 6 GeV high quality, high polarization beam
 - Simultaneous beam delivery to 3 experimental halls
- CD0 signed for 12 GeV upgrade!
- Exceptionally successful DOE on-site review
 - Pat Dehmer (BES): FEL “superb”
 - JLab role in national Lattice QCD project “impressive”
- Chief Scientist Tony Thomas on board
 - Strengthen theoretical program in phenomenology (2 recent hires)
 - Support/complement experimental program (analysis, simulations)
- New HR Director has been hired
- Working to optimally balance the ongoing 6 GeV program with preparation for 12 GeV
 - Partnering with NSF and foreign collaborators essential for success of 12 GeV

- **Christoph Leemann** (cont'd)
 - **Superconducting RF (cavities being built for Spallation Neutron Source)**
 - Core competency in superconducting RF key resource of Office of Science
 - Concerns about delivery schedule, quality, cost have been addressed
 - High gradient, high current capability
 - SRF basis of FEL, energy recycling linacs (collider technology of the future?)
 - **Free Electron Laser project**
 - Funds in place from Navy for commissioning 10 kW facility
 - Technical developments: megawatt IR beams, THz for spectroscopy
 - User community; strong user interest, excellent publication record
 - Applied science: nanostructures, thin films
 - Basic science: working with BES, BER; study dynamics in complex physical, chemical, and biological systems
 - **Management challenges**
 - Core challenge: balancing present and future needs with scarce resources
 - Infrastructure needs: CEBAF Center Addition (delayed); backup power
 - **Time line for 12 GeV: what is the next step?**
 - CD1 15 months from now
 - First physics in 2011?

- **Paul Stoler (Chair of JLab Users Group Board of Directors)**
 - Overall, users are happy, user program healthy
 - Users believe that SURA is the “natural” manager for JLab
 - Greatest prior concerns (Chief Scientist, 12 GeV upgrade) have now been addressed
 - Visas for foreign scientists remain large problem
 - JLab staff should endeavor to be as helpful as possible to foreign visitors
 - PAC25 (January 04)
 - 20 proposals, 6 LOI
 - 7+2 pentaquark searches (3.5 approved)
 - 4+1 two-photon exchange (0.5 approved)
 - 68, 110, 23 days approved in Halls A, B, C, respectively (13x as much as “available” in Hall B)
 - Lab has shown flexibility to respond quickly to new initiatives resulting from unexpected discoveries
 - Important to maintain user enthusiasm prior to, during, and after 12-GeV upgrade
 - Workshop on pre-upgrade physics (“The Next Seven Years”) being planned for June 04

- Presentation by Alex Dzierba, Indiana, on Hall D and the GlueX experiment (“Gluon Excitations”)
 - Study structure of exotic quark-gluon states
 - Primary motivation for 12 GeV upgrade (12 GeV electron/photon beam, hermetic detector needed to produce and detect these rare, exotic, short-lived particles)
 - Large (100 physicists and growing) international collaboration
 - Many young people (including undergraduates) involved in design, construction and testing of detector components and electronics

JLab Committee Structure (Tab 5)

- **Steering Group (Tabs 5, 6 (Resolution))**
 - Recommended by Executive Committee
 - To be appointed by Jerry Draayer in consultation with Christoph Leemann and JLM
 - 6 members, staggered 3-year terms
 - June Matthews, chair
 - Three ex-officio members (Draayer, Leemann, JLab user group chair)
 - Will have expertise in SURA physics program, research management, interaction with DOE
 - Will work with SURA and JLab management to strengthen SURA oversight of JLab and to fulfill its contractual responsibilities more effectively
 - Proposed quarterly meetings of Steering Group with JLab management; annual review of JLab by Steering Group + experts
 - There will be minor changes in the statement of Steering Group responsibilities

Jlab Subcommittee Structure (Tab 7)

- Subcommittee for the Proposed Awards and Honors Program (Tab 8)
 - Don Geesaman, Argonne, chair
- Sabbatical/Research Leave and MSI Sabbatical Program (Tab 9)
 - Dave Ernst, Vanderbilt, chair
 - Presentation on this initiative by Keith Baker, Hampton
 - Proposal to DOE discussed and approved (with minor caveats, changes in wording, compensation guidelines) by JLab Committee
- Subcommittee for the Distinguished Faculty Lecturer/Graduate Student Education program (Tab 10)
 - Alan Nathan, Illinois, chair
- Subcommittee for the Graduate Fellowship Program (Tab 11)
 - Tom Clegg, UNC-Chapel Hill, chair

- Distinguished Faculty Lecturer/Graduate Student Education program
 - Enhance graduate education at JLab
 - Proposal: course in nuclear and particle physics be taught by prestigious physicist (who is also an excellent lecturer) to graduate students at JLab
 - Approved by SURA Board of Trustees in November 2003
 - Some details still to be worked out, in consultation with Tony Thomas (only recently arrived at JLab)
 - Hope to begin program in Fall 2004 or Spring 2005

Recompetition of SURA M&O Contract for JLab

- Presentation on DOE's Competitive Procurement Process by Grace Plummer
 - Process Overview
 - From Source Selection Official to designation of Source Evaluation Board to RFP to Proposal to evaluation process to Selection and Award
 - Strawman Timetable
 - SSO and SEB appointed (10/1/04) – Selection decision (8/31/05)
 - Typical RFP contents
 - Offeror Proposal Preparation
 - Initial SURA Actions
 - Obtain necessary SURA Board Resolution (Tab 4)
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 - Expectations by DOE
 - Contractor responsive and responsible
 - Incumbent must separate bid and proposal costs from DOE contract funding
 - Can be no decrement in laboratory performance
 - Environment
 - Blue Ribbon Commission recommended competition
 - Current DOE Management believes competition will have meaningful and positive results
 - Competition of so many labs is a huge change in laboratory management strategy for DOE