

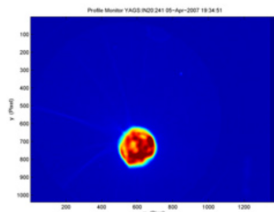
The LCLS Bursts into Life

by Brad Plummer

Last Thursday, after years of work, LCLS physicists and engineers for the first time fired up the newly installed electron injector system, successfully creating and accelerating a pulse of electrons.

Last May, the LCLS collaboration cut the ribbon to the [injector facility](#) at Sector 20, and since then workers have been busy installing various components of the system. A custom-built drive laser initiates the process by sending a short burst of UV light to the [RF gun](#) located in the injector vault 30 feet below ground. The RF gun turns the laser light into electron pulses, which then accelerate through the injector pipes and into the linac. [An animation of this process is available online.](#)

This marks the official start of commissioning for the LCLS. To commemorate this achievement, this week SLAC will host a Friday afternoon Ice Cream Social on the main lawn in front of the A&E Building, starting at 2:00 p.m. Join your friends and colleagues to celebrate and relax with music and free ice cream. Check back with *SLAC Today* this week for more details.



The first electron beam produced by the LCLS injector. (Click on image for larger version and further description.)



First Electrons from the LCLS

Last week SLAC and LCLS collaborators took a major step toward making the world's first hard x-ray free electron laser a reality. After nearly a year of intensive preparations, the LCLS injector system generated its first pulse of electrons, marking the official beginning of commissioning for the LCLS. The photograph in the main article above, taken last Thursday night, shows the sustained electron beam. This is a genuinely remarkable moment for the lab. On behalf of all of SLAC I offer my warmest congratulations to the LCLS organization and the various SLAC teams upon which LCLS has depended in achieving this milestone, including those who developed the RF gun, the drive laser, the accelerator injector system, and to all who have worked so hard to make this achievement possible.

On a technical level, getting first electrons was no small feat. Ribbon cutting for the injector vault and drive laser facility at Sector 20 took place in May of 2006. Installation and commissioning of the drive laser and accompanying vacuum and control systems, began last July, and fabrication and testing of the RF gun used to create the pulse of electrons has taken nearly four years. Meeting these challenges required the cooperation of departments all over the lab—including the controls department, klystron department, accelerator group, power conversion department, mechanical fabrication department and metrology. [Read more...](#)

Reminder: Director's Search Focus Groups

The Director's Search Committee invites staff to help in the search process by sharing what they consider to be attributes of the ideal director and well as the opportunities and challenges facing the lab in the next decade. Focus group sessions take place on:

Tuesday, April 10
Kavli Auditorium
Bargaining unit members
7:00 - 8:00 a.m.
All supervisors
8:30 - 9:30 a.m.
All staff
10:00 - 11:00 a.m.

Wednesday, April 11
Kavli Auditorium
All staff
11:00 a.m. - 12:00 p.m.
All supervisors
2:30 - 3:30 p.m.
All staff
4:00 - 5:00 p.m.

Safety Firsts

by John Cornuelle

I have received complaints that I seem to be (unfairly) picking on airline pilots since I regularly feature mistakes they have made. This is in fact not the case; I cite pilot decisions because they are extremely well documented, and because pilot behaviors are the best illustration of the thinking that surrounds most of our injuries at SLAC. Do you find it obvious why this is the case? (If you don't answer yes I am not doing a very good job communicating.)

Events [\(see all | submit\)](#)

April 9: (4:00 p.m.) [ES&H Seminar: Calculation of Water Activation in the Water Circuits of the LHC](#)
April 10: (7:00 a.m., 8:30 a.m., 10:00 a.m.) [Director's Search Focus Group Sessions](#)
April 10: (12:30 p.m.) [Experimental Seminar: First Run II Measurement of the W Boson Mass with CDF](#)
April 10: (1:30 p.m.) [ExpSingle Molecule Imaging with FEL: Current Project Status](#)

Access [\(see all\)](#)

[Alpine Gate & PEP Ring Road](#) closed
[Gates 17 & 30 open 24-7](#)
[Research Yard bisected](#)

Announcements [\(see all | submit\)](#)

Lab Announcements

[New Publication: ESH Manual, Chapter 49, Service Subcontractor Safety](#)

Community Bulletin Board

[Spring Help Center Workshops](#)
[Behavior Change/Weight Management Program](#)
[Upcoming Financial Fairs](#)

News [\(see all | submit\)](#)

[Massive particle accelerator revving up](#)
NPR
[Space capsule carrying 3 men and toothsome food to dock with ISS](#)
International Herald Tribune

[Flea Market](#)
[Linear Café Menu](#)
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