special seminar

Wednesday, 7.11.2007, 17h

SemR 4

Fermilab, the ILC, and Project X

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Fermilab, the US's primary laboratory for particle physics, proposes a plan to maintain leadership for the laboratory and U.S. particle physics in the quest to discover the fundamental nature of the physical universe in the decades ahead. Discoveries of the physics of the Quantum Universe will come from powerful nextgeneration particle accelerators. Fermilab's Tevatron, currently the world's most powerful particle accelerator, will shut down by the end of this decade after the Large Hadron Collider at CERN begins operations. At the LHC, U.S. physicists will join scientists from around the world in the exploration of the physics of the Terascale. To follow the LHC, physicists propose the International Linear Collider, a globally funded and operated accelerator to build on LHC results and illuminate Terascale science. Fermilab will work to host the proposed ILC in the U.S. as soon as possible, maintaining the nation's historic leadership of frontier particle physics. Should events postpone the start of the ILC, Fermilab has developed a plan to keep the laboratory and particle physics in the U.S. on the pathway to discovery. Using ILC technology, Fermilab would build an intensity-frontier accelerator at one percent of the ILC's length and combine it with existing Fermilab accelerators to create Project X. Project X's intense beams would give Fermilab's scientific users a new way into the world of neutrinos and precision physics, where physicists expect to discover answers to compelling Quantum Universe questions. With its ILC technology, Project X would spur U.S. industrialization and reduce costs of ILC components while advancing accelerator science for future applications in particle physics and beyond. Fermilab's plan would maintain the nation's leadership in particle physics, keeping the laboratory and U.S. particle physics on the pathway to discovery both at the Terascale with the ILC and in the domain of neutrinos and precision physics at the intensity frontier.

- **Tea and cookies will be served at 16.45h**
- **After the seminar there is a chance for private discussions with the speaker over wine and pretzels**