

49th ICFA Advanced Beam Dynamics Workshop on Electron Cloud Physics: ELOUD10

The 49th ICFA Advanced Beam Dynamics Workshop will take place from October 8 to 12, 2010 at Cornell University, Ithaca, New York, USA.

The development of the electron cloud (EC) in accelerator vacuum systems remains a significant issue for the operation of present and planned high intensity accelerators. The interaction of the cloud with the beam can lead to single and multi-bunch instabilities, emittance growth, and betatron tune shifts. The presence of the cloud in the beam chambers can result in a rapid rise in vacuum pressure, significant heat loads on cryogenic surfaces, and can interfere with beam diagnostics. Since the last ELOUD workshop in 2007, an intense R&D effort has been underway to further understand the physics of the EC and to investigate new methods to mitigate the EC effects. The ELOUD10 program will focus on: a review of EC observations at existing machines; recent experimental efforts to characterize the EC (including EC diagnostics, experimental techniques, characterization of mitigation methods, and characterization of beam instabilities and emittance growth); the status of EC physics models and simulation codes and their comparison to recently acquired experimental data; and, the mitigation requirements and potential performance limitations imposed by the EC on upgraded and future machines. In addition to the technical reports at the workshop, ELOUD10 will present a set of introductory lectures for students and those new to the field on the opening day of the workshop.

The meeting will be held at the Statler Hotel on the campus of Cornell University overlooking picturesque Cayuga Lake. We are looking forward to a gathering where we can enjoy the beautiful foliage as Fall begins in the Finger Lakes region. The workshop will include a tour of the facilities at Wilson Laboratory.

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