Workshop on Machine Protection, focusing on Linear Accelerator complexes : 6th - 8th June, 2012



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Overview of Failure Mode Studies for ILC and CLIC

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Failures in the ILC and in the CLIC can lead to beam loss, or even damage the machine. Also failures that do not lead to beam loss can affect the luminosity performance, in particular since some time is required to recover from them. During the last years several different failures scenarios have been investigated, and their impact on the machine performance has been being studied. At this purpose, a number of simulation codes have been developed, perfected, and utilized: to track the beam including effects such as wakefields and dynamical machine alignment; to simulate halo and tail generation; to evaluate energy deposition and beamhalo interaction with collimators. A review of the main studies is presented, including a short description of the principal tools.

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Session Classification: Beam loss mechanisms