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Weightfield: Ultra Fast Silicon Detectors simulator

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This presentation reports on the development of *Weightfield*, a simulation program with the aim to evaluate the performance of silicon detectors. The program is controlled by a graphical interface that allows the user to select the type of silicon detector (n-in-n, n-in-p, microstrip, pads), the running conditions (depletion voltage, applied voltage, temperature, magnetic field), the type of incident particle (alpha, ideal MIP, real MIP) and the electronics used to measure the signal.

Weightfield can also be configured to study the performance of Low Gain Avalanche Detector, as it has a user-configurable gain mechanism. The program predictions have been also validated by laboratory measurements.

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