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## Simulation and performance of an artificial retina algorithm for 40 MHz track reconstruction

*Thursday 15 May 2014 15:00 (30 minutes)*

We present the results of a detailed C++ simulation of the artificial retina pattern-recognition algorithm, designed to reconstruct events with hundreds of charged-particle tracks in pixel detectors at 40 MHz. The detailed geometry and charged-particle's activity of a large tracking detector are simulated and used to assess the performance of the artificial retina algorithm. We find that offline-like quality tracking is possible with sub microsecond latencies.

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