

Marco Battaglia

Simulation of the response of CMOS Monolithic Active Pixel  
Sensor response for the ILC

---

We report the results of a program of simulation of the response of CMOS pixel sensors to ionising particles for application in detailed simulation of the ILC Vertex Tracker. The simulation is based on GEANT-4 and a dedicated signal generation and digitisation program. Simulation results have been extensively validated against test beam data in terms of the pulse and cluster shape response. In particular the response to low momentum electrons and inclined tracks has been studied in details on both data and simulation and the implications in the rejection of the low-energy pair background at the ILC are discussed.