

Charge collection test and TCAD simulation of OVERMOS, a CMOS 180nm MAPS detector

Tuesday 27 November 2018 14:10 (20 minutes)

We will present results of charge collection of OVERMOS, a high resistivity TJ 180nm CMOS MAPS, obtained using 1064 nm calibrated laser source.

Result include charge collection over pixel region, sampled with 5 um resolution, and charge collection time.

Test results are compared with 3D TCAD optical simulations, taking into account SiO₂ and CoSi₂ attenuation.

Primary authors: Dr VILLANI, E. Giulio (STFC Rutherford Appleton Laboratory); Dr DOPKE, Jens (Rutherford Appleton Laboratory); Dr FRENCH, M. Marcus (Rutherford Appleton Laboratory); Prof. MCMAHON, Stephen (Rutherford Appleton Laboratory); Dr SEDGWICK, Iain (Rutherford Appleton Laboratory); Dr SELLER, Paul (Rutherford Appleton Laboratory); Prof. WILSON, Fergus (Rutherford Appleton Laboratory); Dr ZHANG, Zhige (Rutherford Appleton Laboratory); Prof. WORM, Steve (University of Birmingham); Dr LIANG, Zhijun (Institute of High Energy Physics,CAS); Prof. ZHU, Hongbo (Institute of High Energy Physics,CAS); Prof. XIU, Qing lei (Institute of High Energy Physics,CAS)

Presenters: Dr VILLANI, E. Giulio (STFC Rutherford Appleton Laboratory); VILLANI, Enrico Giulio (Science and Technology Facilities Council STFC (GB)); VILLANI, Enrico Giulio (STFC - Science & Technology Facilities Council (GB)); VILLANI, Giulio (Rutherford Appleton Laboratory)

Session Classification: Device Simulation