

LArSoft - Feature #17247

Space Charge Effects (SCE) can shift the charge only within the TPC

07/21/2017 04:54 AM - Robert Sulej

Status:	Accepted	Start date:	07/21/2017
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:	Simulation	Estimated time:	0.00 hour
Target version:		Spent time:	0.00 hour
Experiment:	-	Co-Assignees:	
Description			
Hi,			
The displacement due to SCE can project the charge to the TPC which is different than TPC corresponding to the original G4Step position. Maybe SCE should be used to calculate which TPC is involved in the LArVoxelReadout::ProcessHits, before the fixed tpc number is passed to LArVoxelReadout::DriftIonizationElectrons in http://nusoft.fnal.gov/larsoft/doxsvn/html/LArVoxelReadout_8cxx_source.html#l00324 ? Just guessing, but anyway SCE in ProtoDUNE SP and DP is big and basically can move charge between TPCs, or from dead areas between TPCs towards active areas.			
Thanks, Robert			

History

#1 - 07/31/2017 10:59 AM - Lynn Garren

- Tracker changed from Bug to Feature
- Category set to Simulation
- Status changed from New to Accepted

#2 - 01/09/2018 03:01 PM - Katherine Lato

- Subject changed from SCE can shift the charge only within the TPC to Space Charge Effects (SCE) can shift the charge only within the TPC