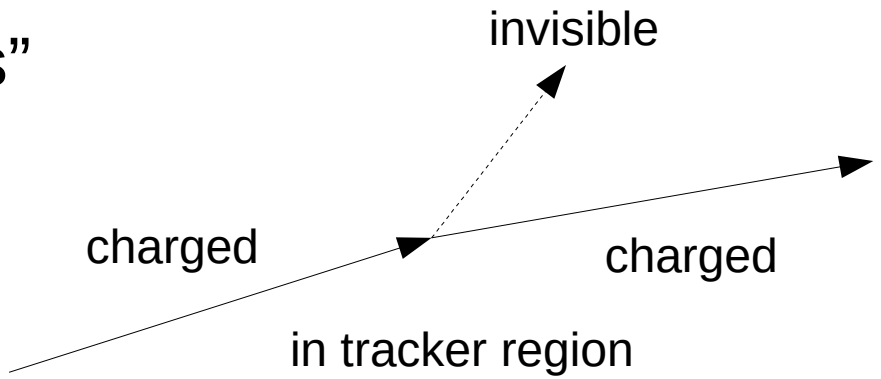
looking at “kinks”

Daniel Jeans
30 Oct 2020



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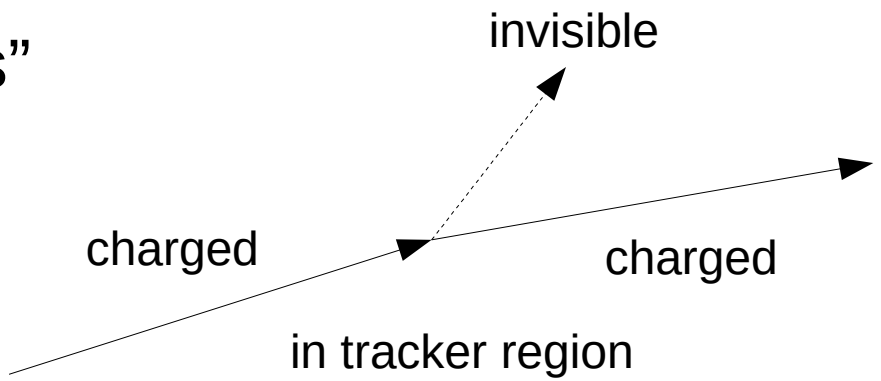
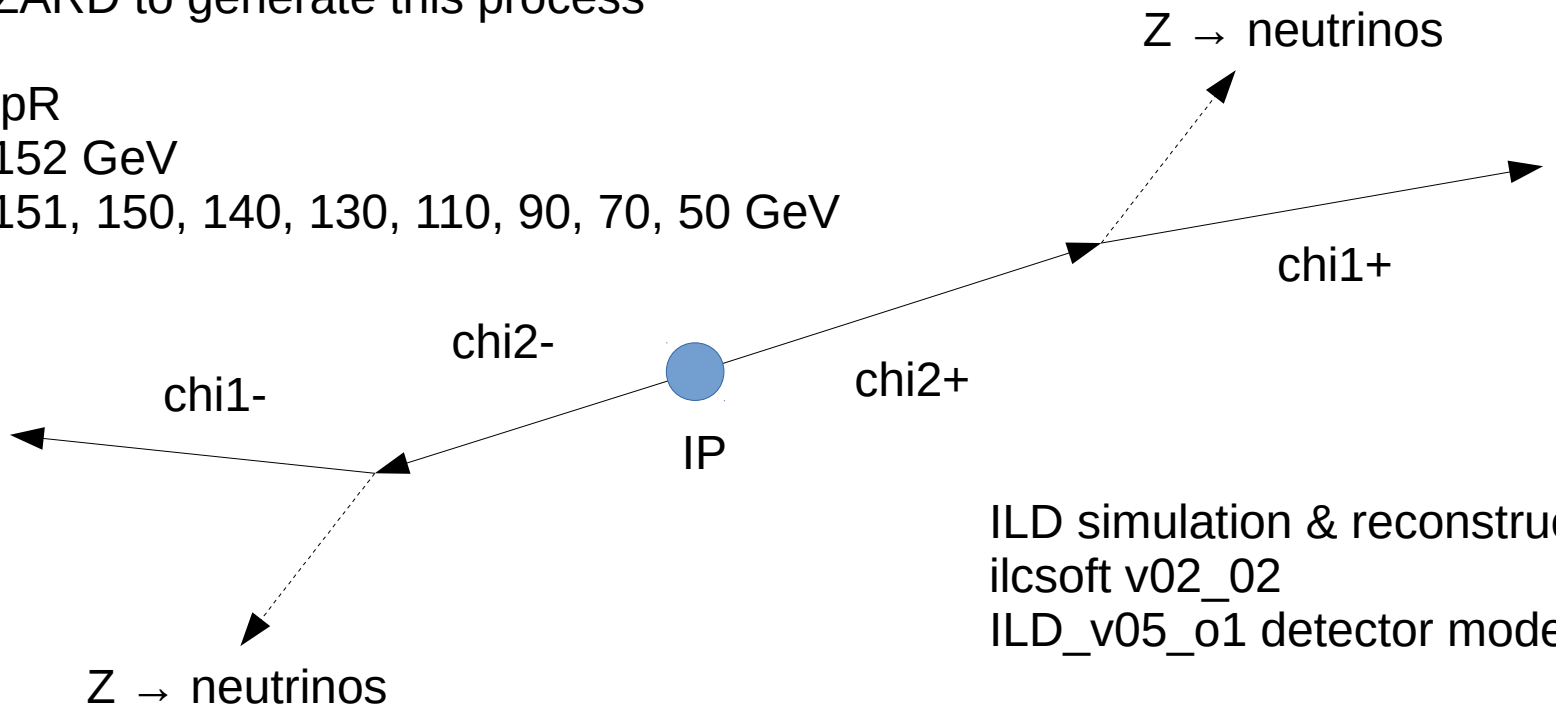


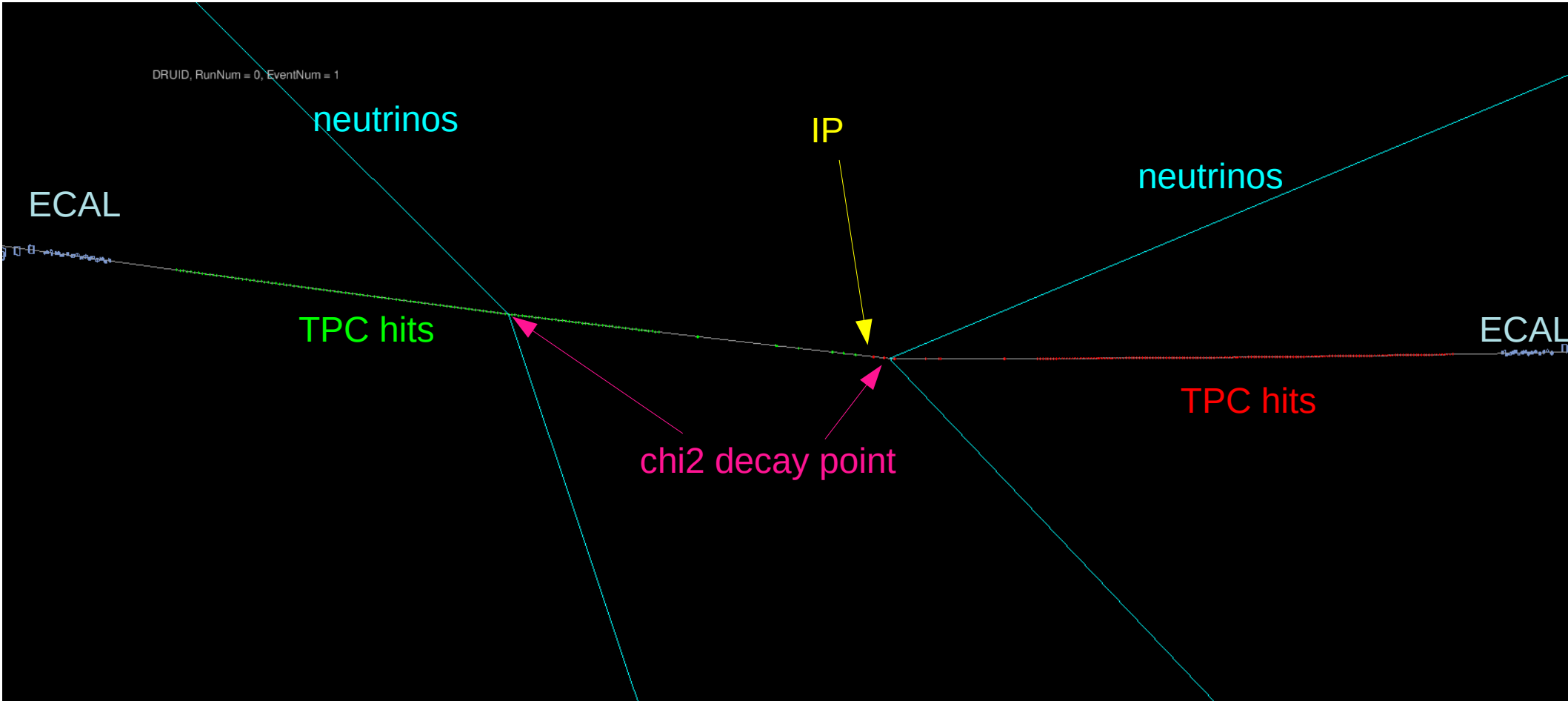
used WHIZARD to generate this process

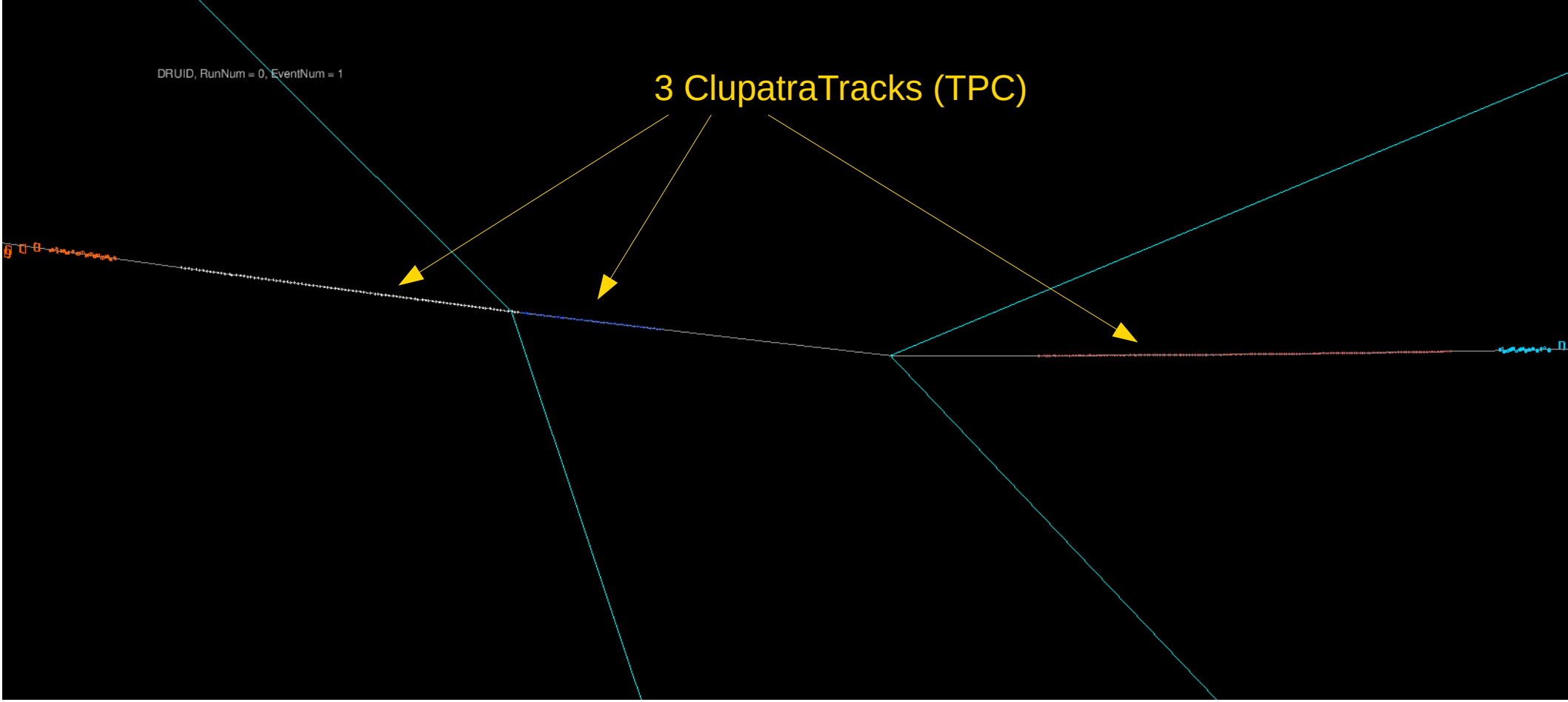
ILC500 eLpR
m_chi1 = 152 GeV
m_chi2 = 151, 150, 140, 130, 110, 90, 70, 50 GeV

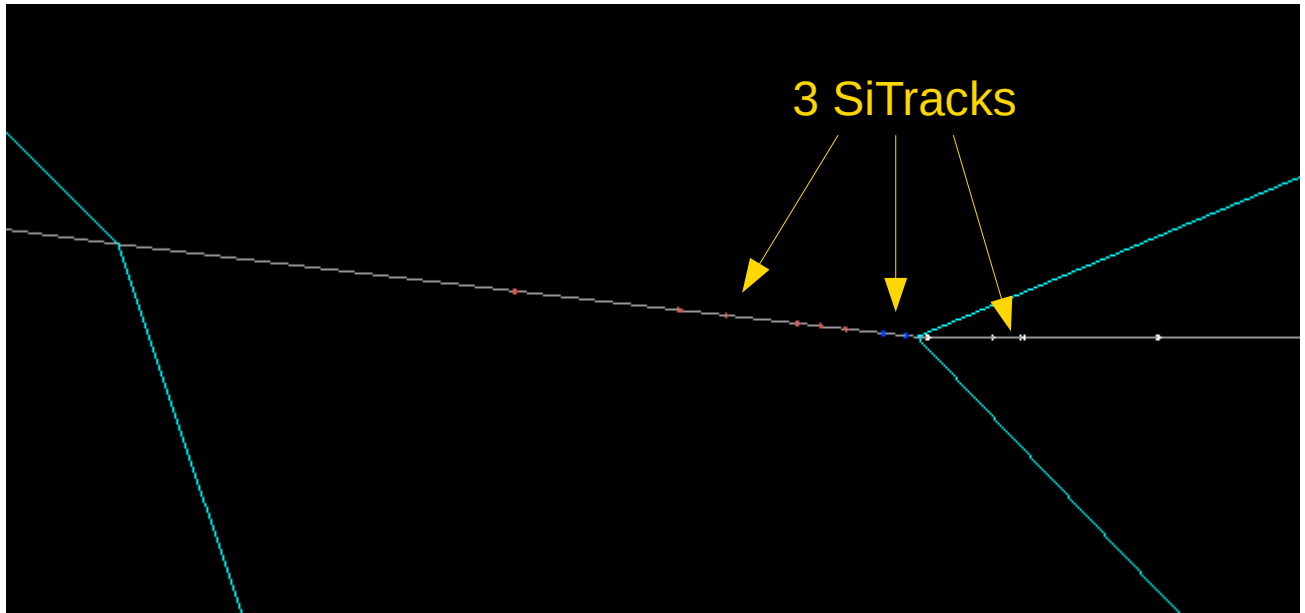


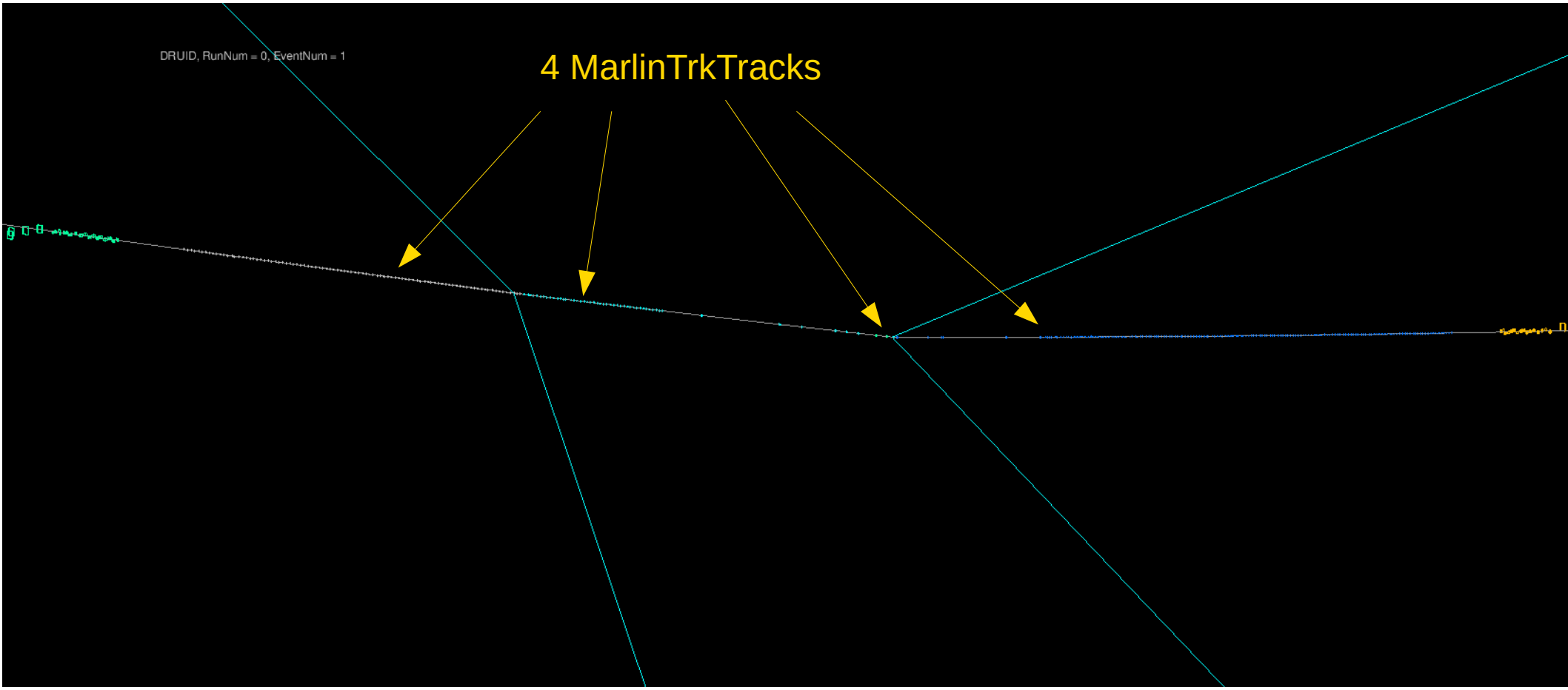
ILD simulation & reconstruction
ilcsoft v02_02
ILD_v05_o1 detector model

m_chi2 = 152 GeV ; m_chi1 = 140 GeV



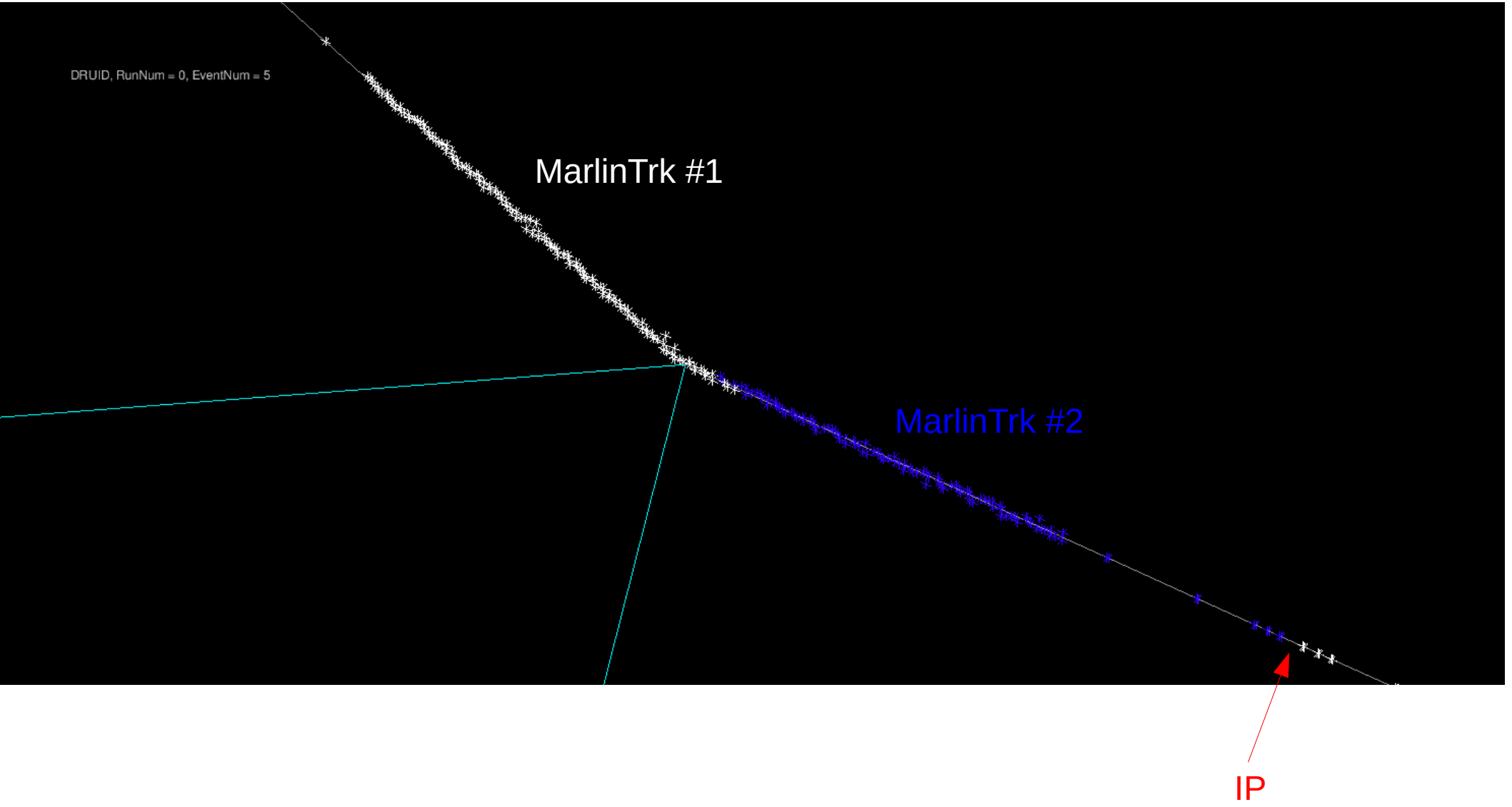

DRUID, RunNum = 0, EventNum = 1
3 ClupatraTracks (TPC)


3 SiTracks

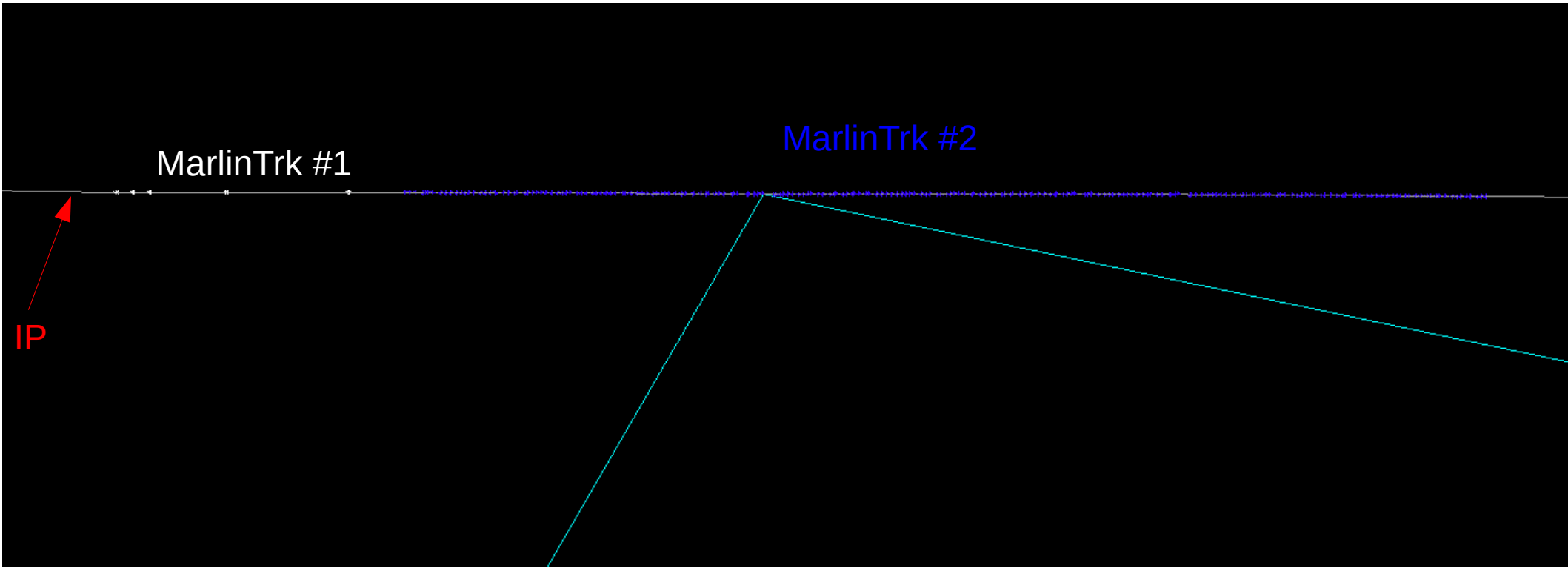


this event was perfectly reconstructed !

transition between tracks often shifted from correct place
seems to be bias towards smaller radius ?



more difficult: m_chi2 = 152 GeV ; m_chi1 = 150 GeV



here reco track is broken between si and TPC
true decay is in TPC

default kink-finder finds almost 0 of these kinks,
but I can see kinks by eye in the event display

it seems a lot of improvements are possible