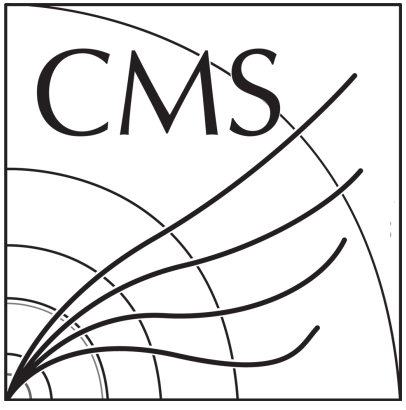
Offline Electron Seeding Validation - Update

Caleb Fangmeier
Ilya Kravchenko, Greg Snow

University of Nebraska - Lincoln

August 28, 2017



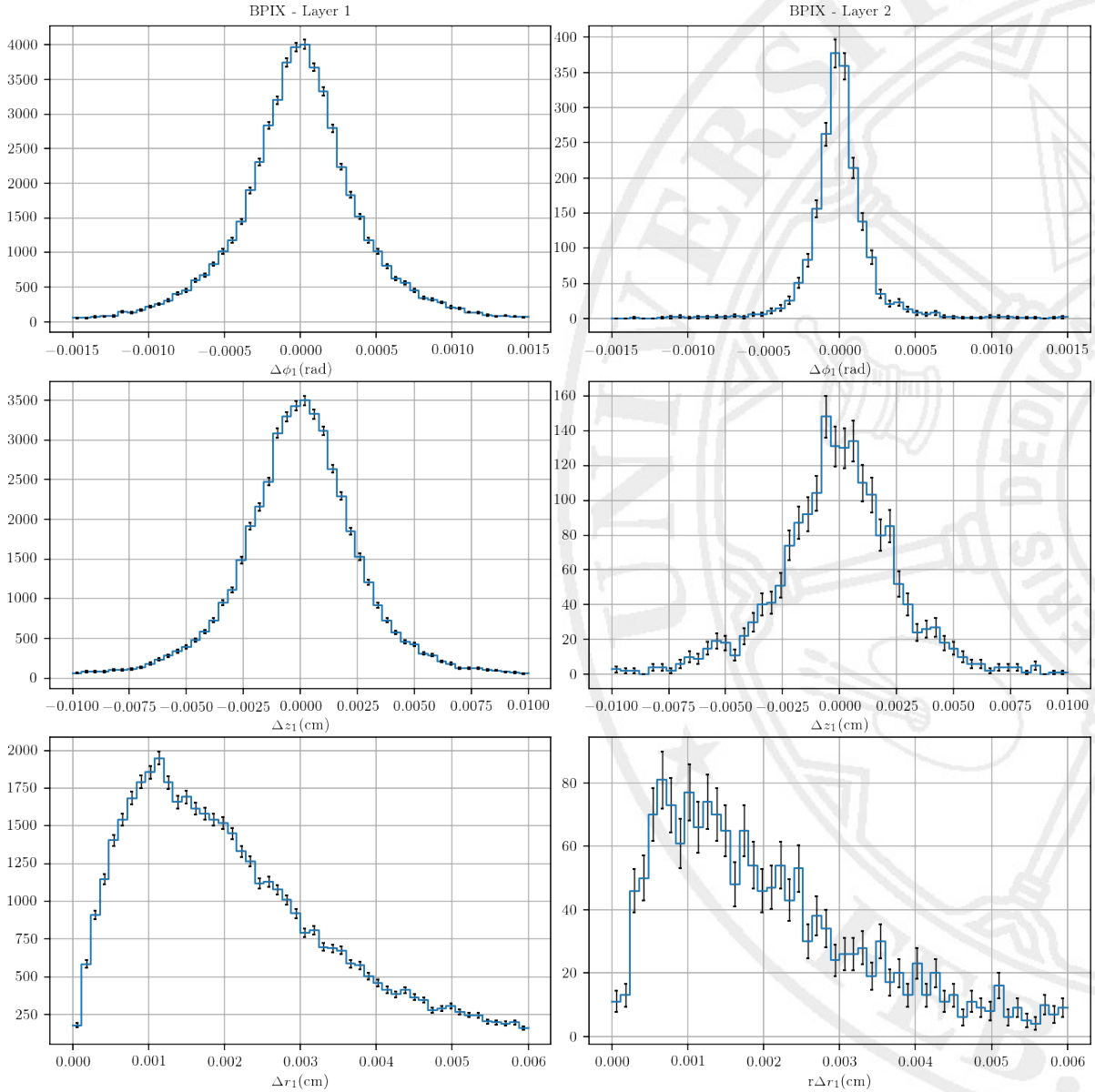
Introduction

- Our goal is to study **seeding** for the **offline** Gsf tracking with the **new pixel detector**.
- Previous talk gave introduction/motivation to approach
- Since Then,
  - Migrated Code from `8_1_0` to `9_0_2`
  - Regenerated `trackingNtuples` for dataset

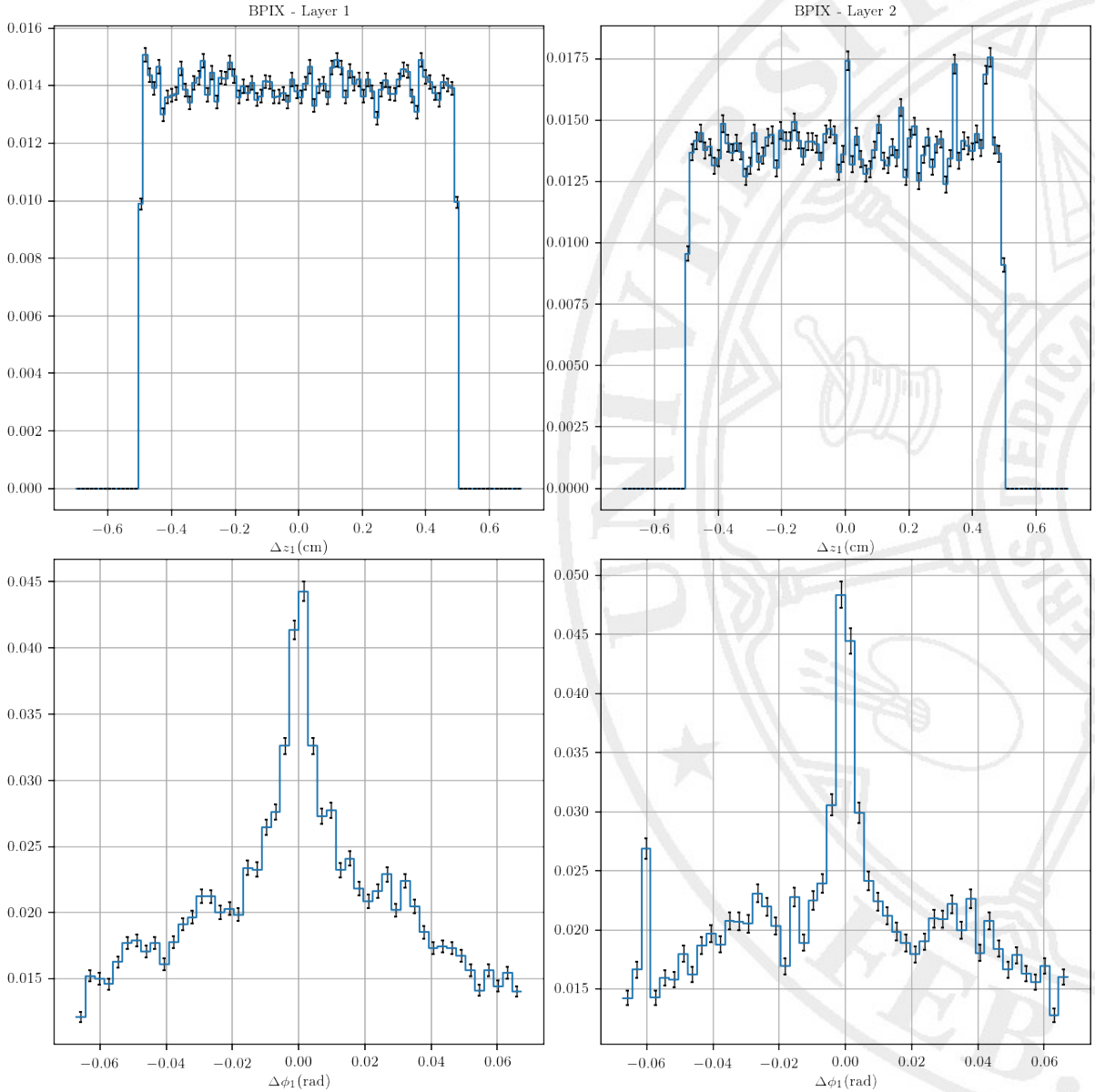
`/DYJetsToLL_M-50_TuneCUETP8M1_13TeV-madgraphMLM-pythia8`
`/PhaseISpring17DR-FlatPU28to62HcalNZS_90X_upgrade2017_realistic_v20-v1/GEN-SIM-RAW`

  - Calculated $\Delta\phi_{1,2}/\Delta z_{1,2}$ for distances between extrapolated SC and reconstructed pixel hit
  - In previous talk, gave distributions of the above for distances between

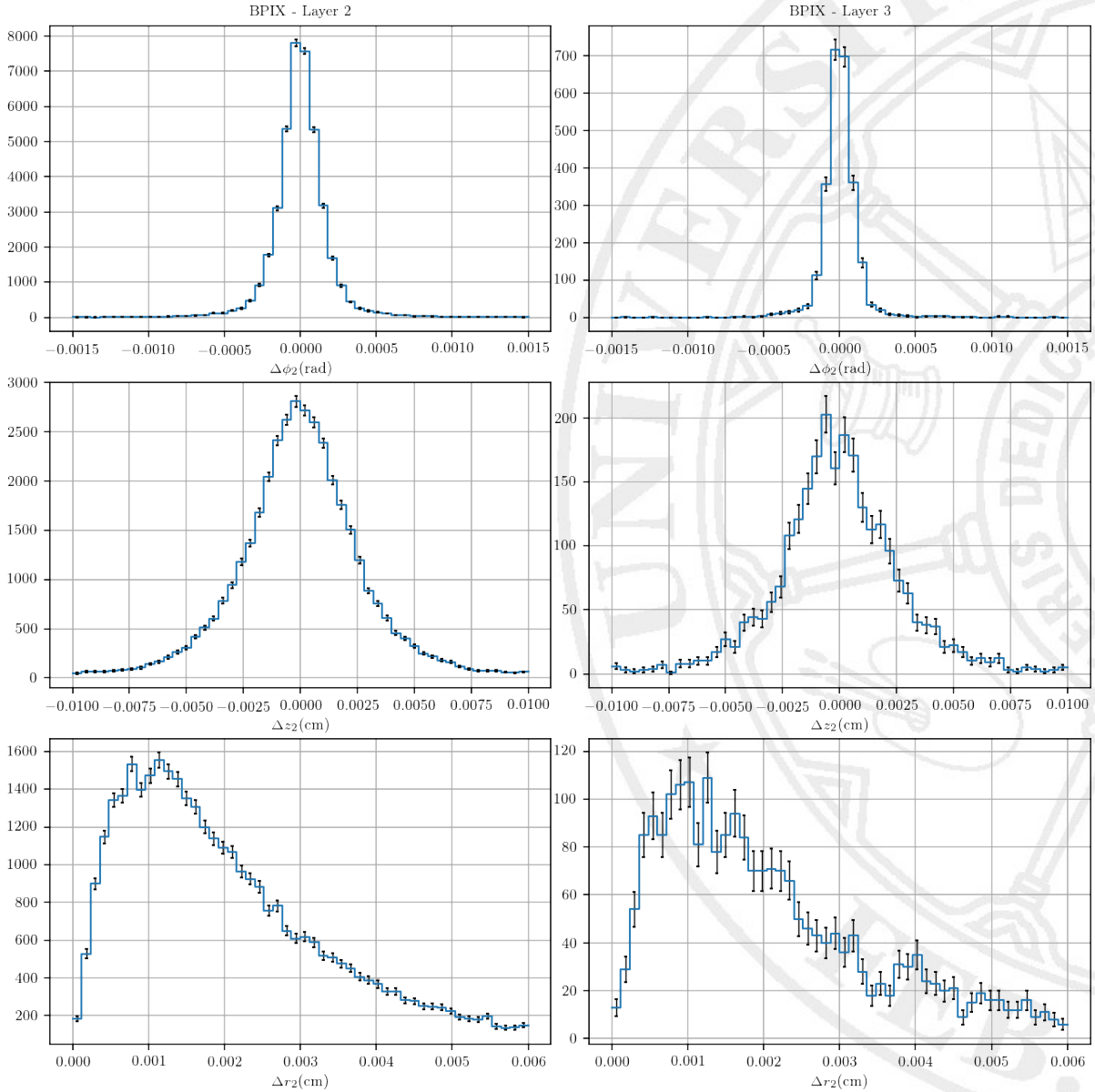
First matched hit resolutions (SimHit - RecHit)



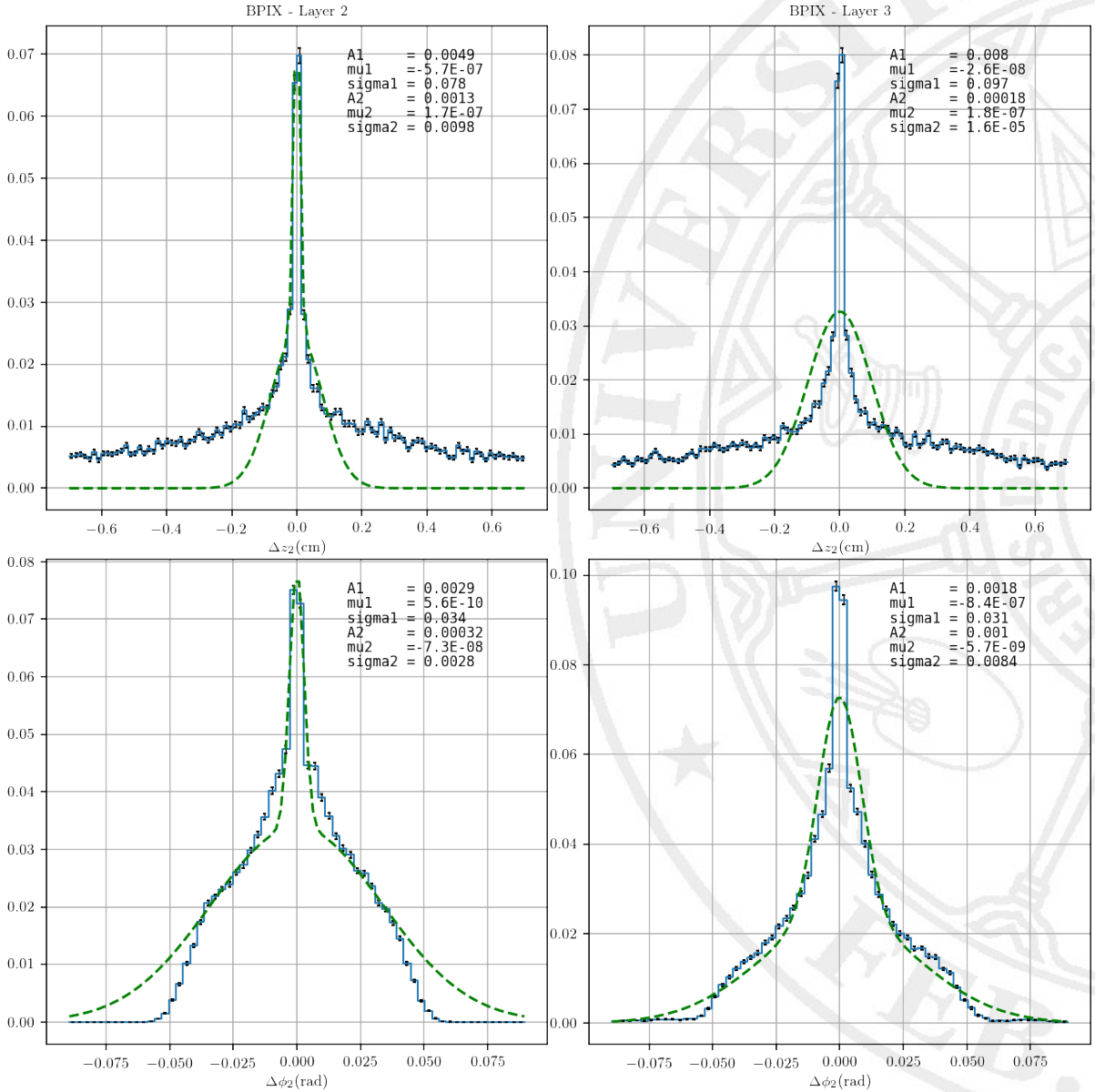
First matched hit resolutions (SC Extrapolation)



SECOND MATCHED HIT RESOLUTIONS (SIMHIT - RECHIT)



Second matched hit resolutions (SC Extrapolation)



Outlook

- Investigate spikes in $\Delta\phi_1/\Delta z_1$ distributions
- Add cross-references between SC info and matched seeds/hits to ntuple
- Suggestions from experts?