About Me

James Smith

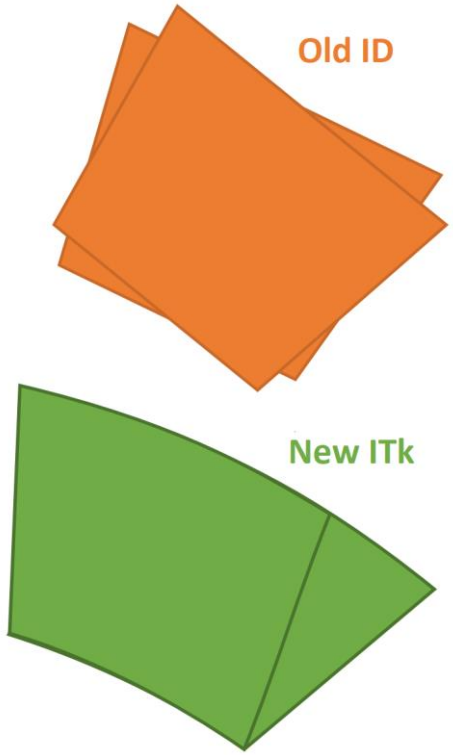
University of Liverpool / DESY

DESY Tracking Roundtable 08/02/2022

About Me

- 3rd-year PhD Student at the University of Liverpool
- 16 months into a 2-year placement at DESY
- Primarily performing tracking-focused long-lived SUSY/BSM searches
  - Disappearing Tracks – caused by particles passing the pixel layers then decaying before the SCT, with undetectable decay products
  - Sensitive to a range of SUSY/BSM models
- Supervisors: Nick Styles (DESY), Monica D'Onofrio (UoL), Helen Hayward (UoL)

Polar Co-Ordinate Strip Endcaps



- SCT endcaps were rotated trapezoids
  - Cartesian geometry used
- Strip endcaps will be annulus sections
  - Polar geometry more natural
  - Also simplifies calculations, particularly covariances
- Design class previously implemented by Paul Gessinger but never used
- QT to integrate and debug polar geometry
  - Report completed at the end of last year [CDS]
  - Continuing as OTP
- Digitisation complete, working on reconstruction and profiling performance, and master migration

Any Questions?