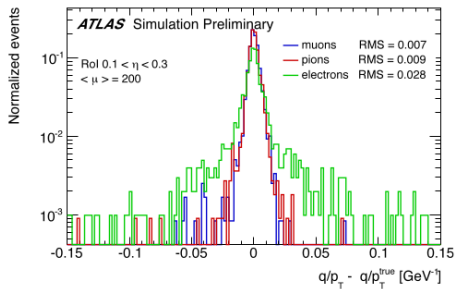


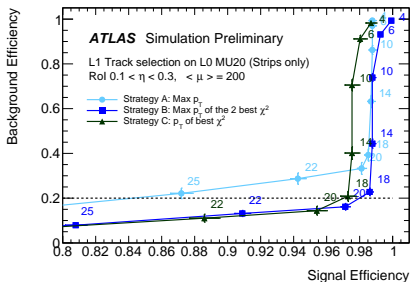
Level 1 Track Trigger Performance

- Test quality of track fitting for single isolated μ , e & π
- Evaluate performance in realistic physics Rols created from overlaying single muons with $\langle \mu \rangle = 200$ pileup

Single particle curvature resolution:



Level 0 μ Trigger Efficiency:



twiki.cern.ch/twiki/bin/view/AtlasPublic/L1TrackPublicResults

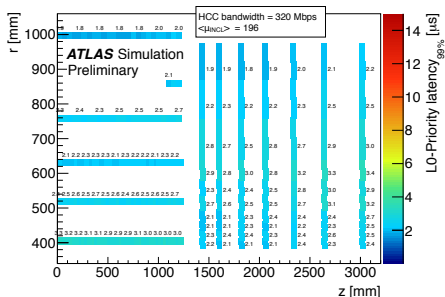
Three strategies to choose the best candidate track within an Rol:

- (A) Take highest p_T track of all candidate $\chi^2 < 40$
- (B) Highest p_T of two with lowest χ^2 (also $\chi^2 < 40$)
- (C) Candidate track with best χ^2

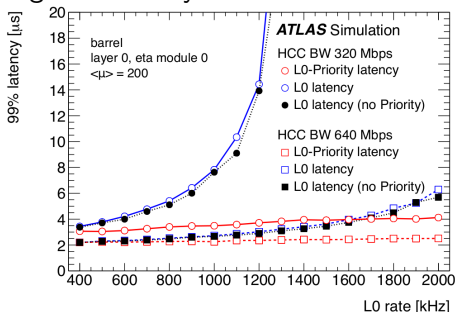
Latency Estimate

- To get data into L1Track quickly: mark clusters falling within L0 Rols as “Priority” → jump ahead when bottlenecking
- Expect maximum of 10% marked as prioritised

Map of Prioritised Latency:



Highest Latency Barrel Module:



twiki.cern.ch/twiki/bin/view/AtlasPublic/L1TrackPublicResults

- Little cost to latency of non-prioritised data
- Prioritised data safe within rough limit of $6\mu\text{s}$ for 1MHz rate
- Investigating higher bandwidth links and readout scenarios