Low Q^2 – tracking WG

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Most of the material from **Stephen Maple**

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Setup

- Two presentations last Tracking WG meeting:
  - Stephen Maple: slides
  - F.B.: slides
- Approach:
  - Particle gun simulation with just an electron
  - Consider the reconstructed electron to compute Q^2 (assuming a specific beam energy)
- Caveats:
  - Flat simulation in eta-pt (or theta-p): "no physics"
  - No detector inefficiencies
  - No specific track quality cuts: just considering if a simulated electron is present among the reconstructed charged particles
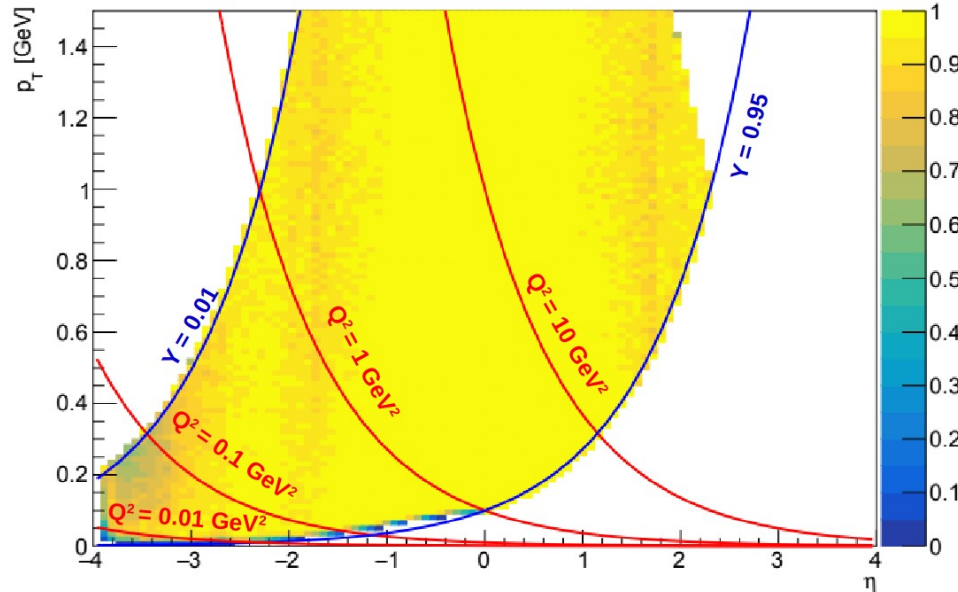
Efficiency – just tracking

From Stephen's presentation:
- Simulation flat in pT and eta
- Tracks reconstructed also at low pT and low eta give good Q2 coverage
- Some tracks are reconstructed even if they are outside the eta coverage of the Si disks,
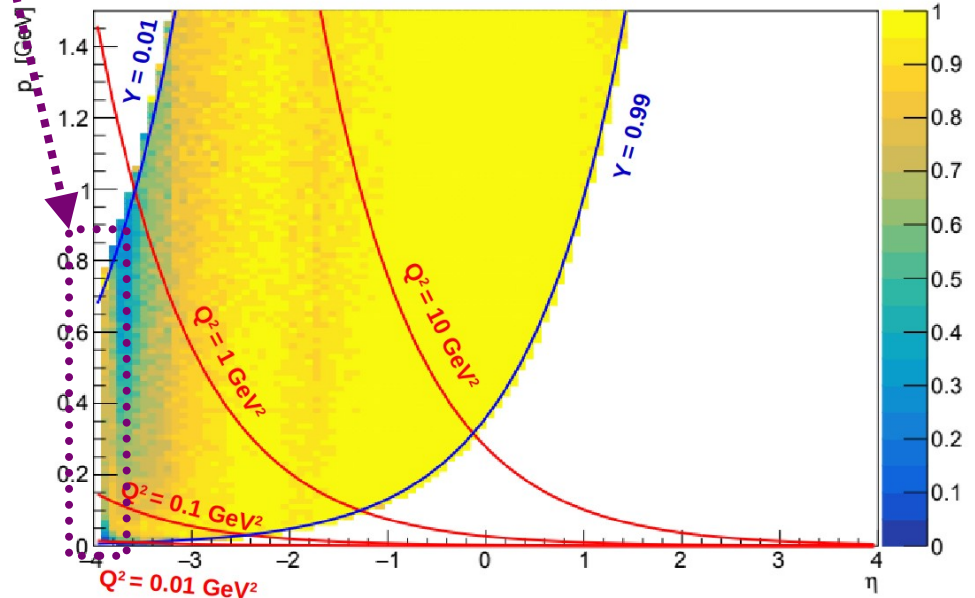To be investigated
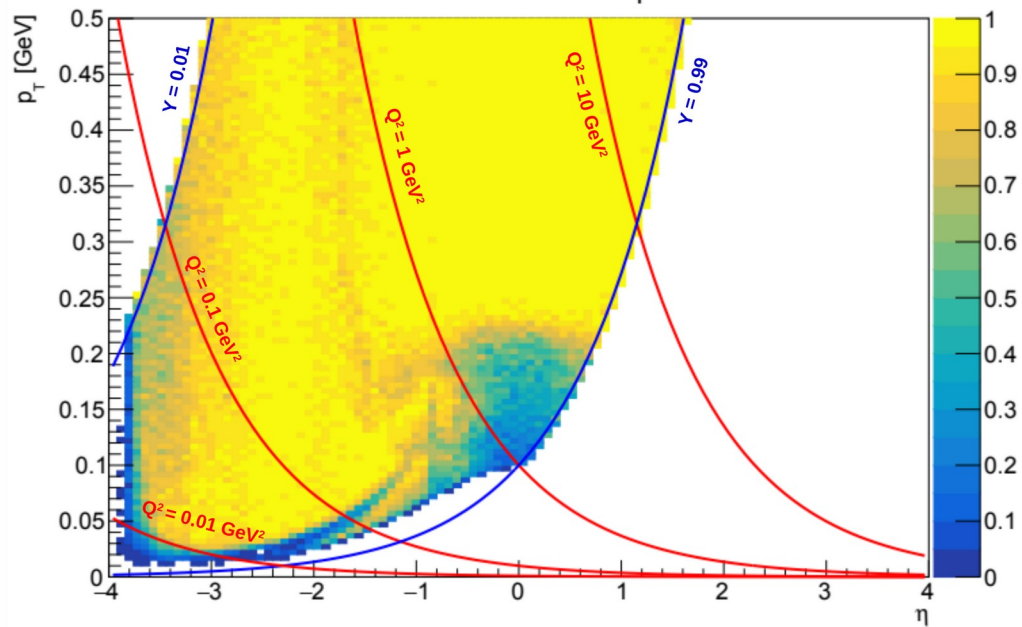
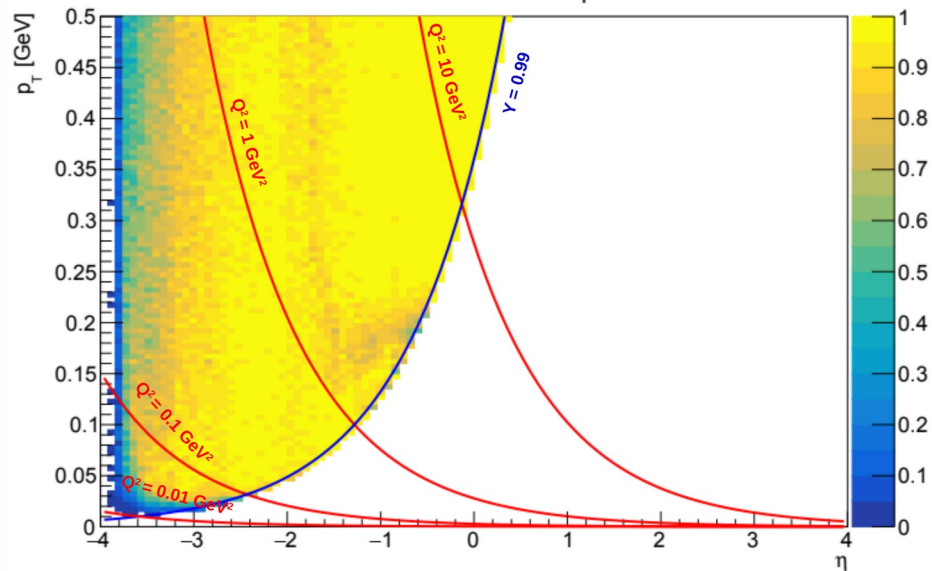### 5 GeV electron beam

18 GeV electron beam

Efficiency – Tracking + hit in EMC

18 GeV electron beam, require at least one calorimeter hit

5 GeV electron beam, require at least one calorimeter hit

At |eta| < 1, Low pT tracks, do not reach the EMC