Update of L3 electron tool: study of shower shape cuts

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Samples

Z→ee Sample:

- ◇ 5600 single events
- ◇ plate MC
- ◇ D0TrigSim
- ◇ min.bias: 0.5

W-Higgs Sample:

- ◇ 3000 events
- ◇ plate MC
- ◇ min.bias: 0.5
- ◇ D0TrigSim

data Sample:

- ◇ 25300 events
- ◇ D0TrigSim

MC QCD Sample:

- ◇ 10500 Events,
- ◇ min.bias: 0.5
- ◇ D0TrigSim L3E variables

Precuts for the following plots:

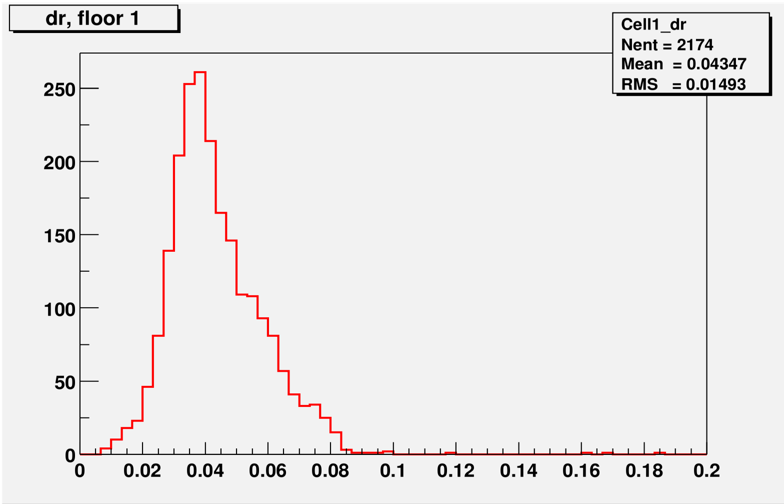
- ◇ MC Zee (WH) : Electron stemming from Z(W), fiducial region
- ◇ $|\eta| < 0.8$

Δr in Floor 1

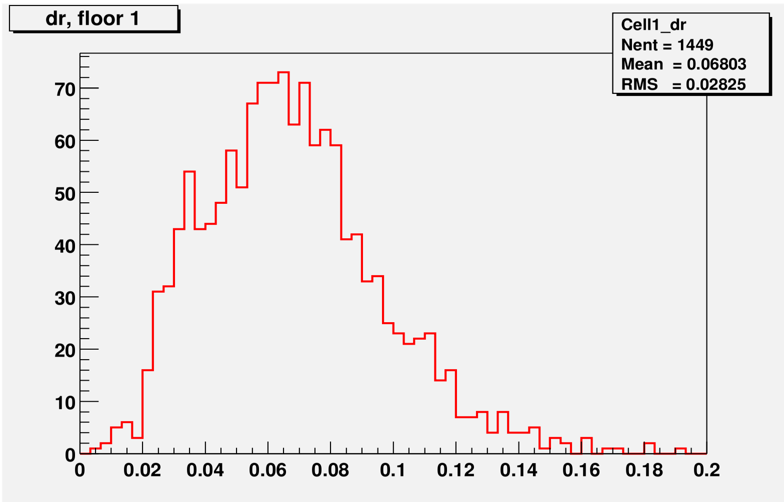
$$\Delta r = \frac{\sum \mathrm{E_i} \sqrt{(\phi_\mathrm{i} - \phi)^2 + (\eta_\mathrm{i} - \eta)^2}}{\sum \mathrm{E_i}} \quad (1)$$

ϕ, η : energy weighted cluster position in floor 3

Zee Sample:

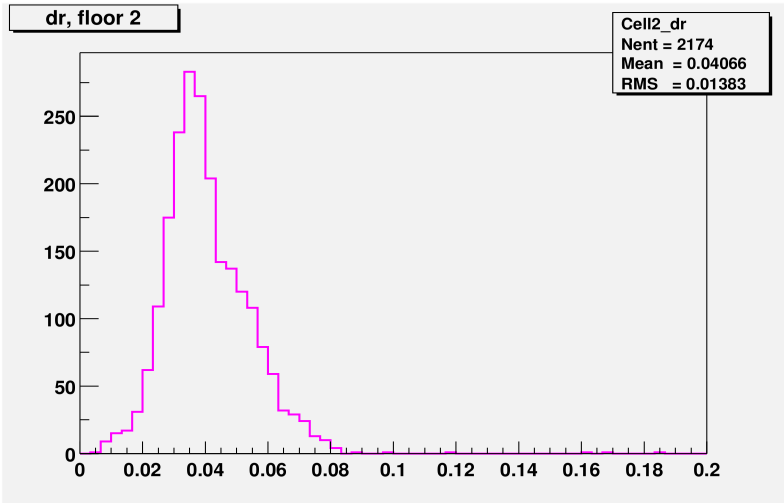


dataSample:

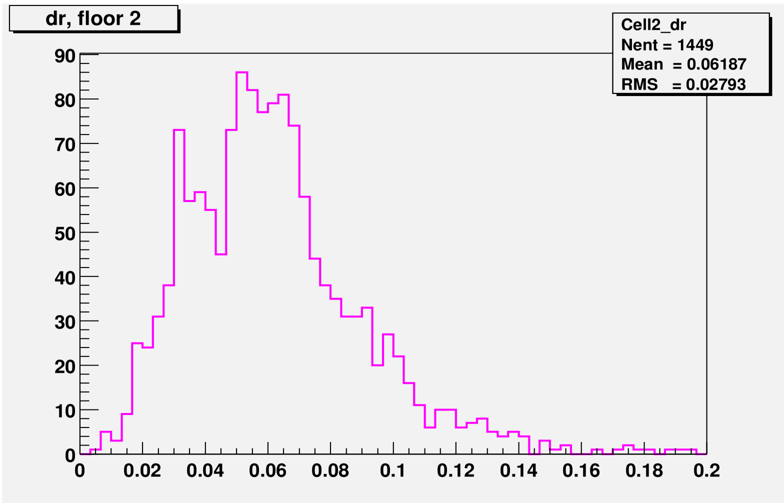


Δr in Floor 2

Zee Sample:

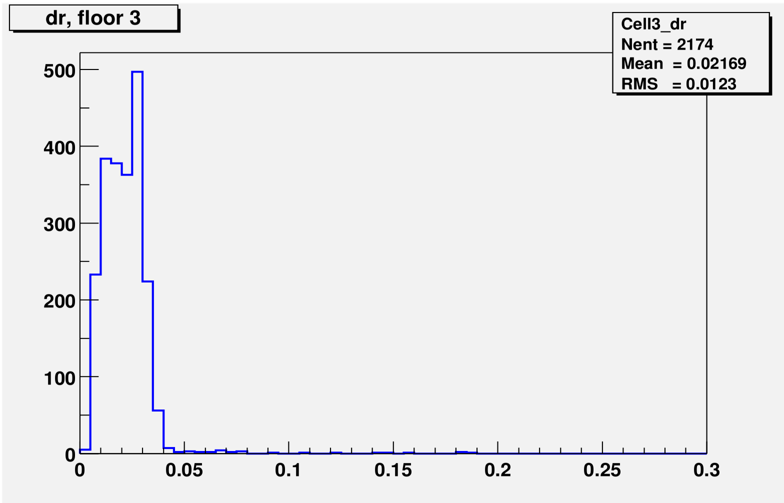


Data Sample:

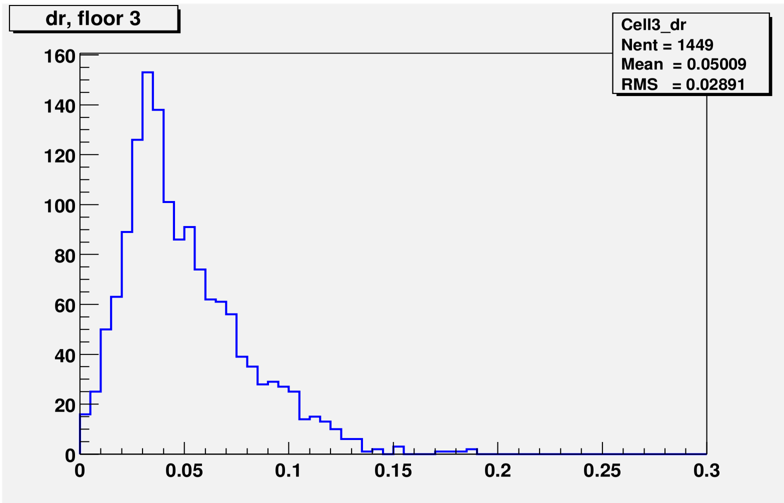


Δr in Floor 3

Zee Sample:

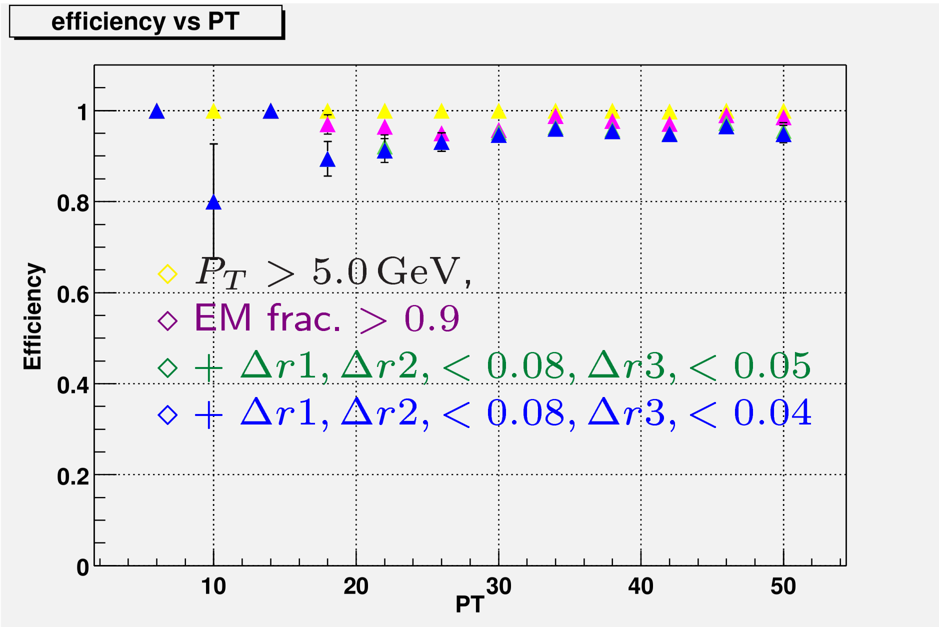


Data Sample:

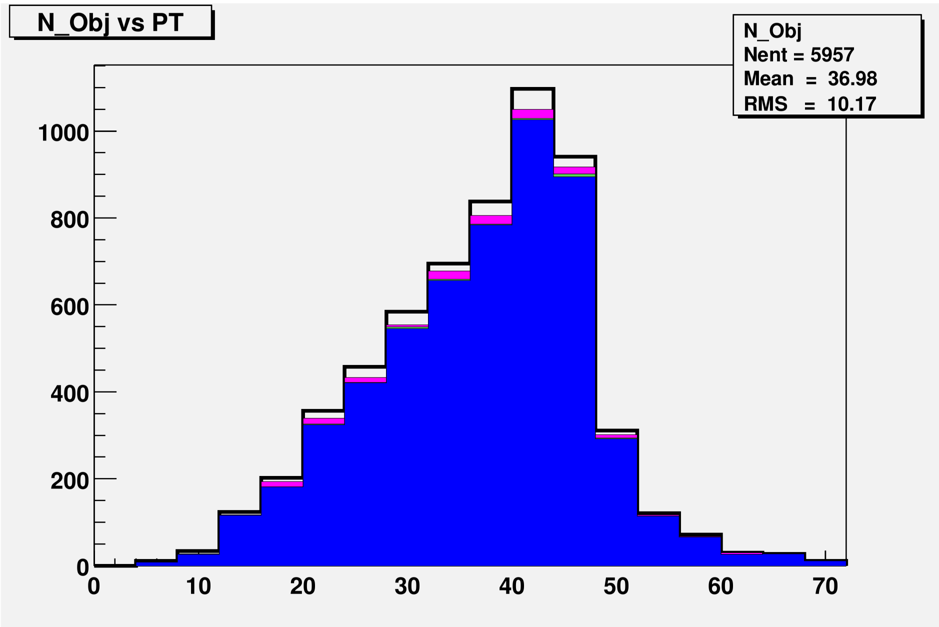


MC Zee Efficiencies

◇ Efficiency vs P_T

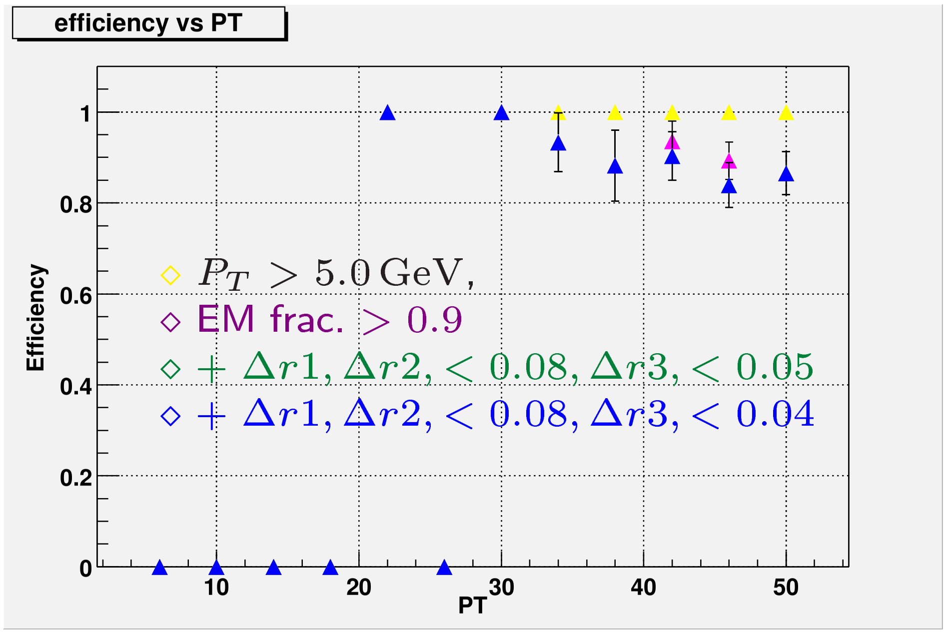


◇ Pt distribution

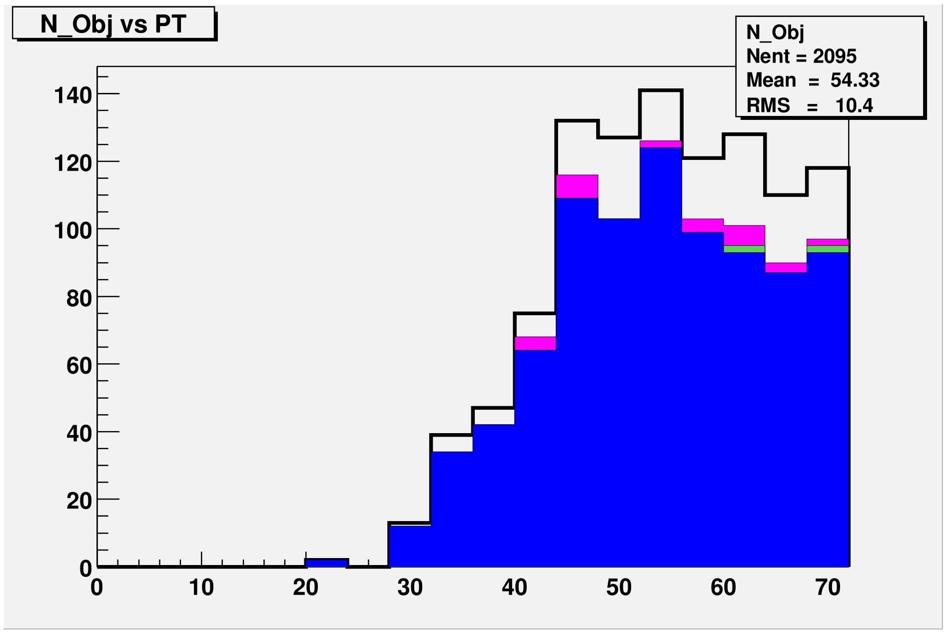


MC WH Efficiencies

◇ Efficiency vs P_T

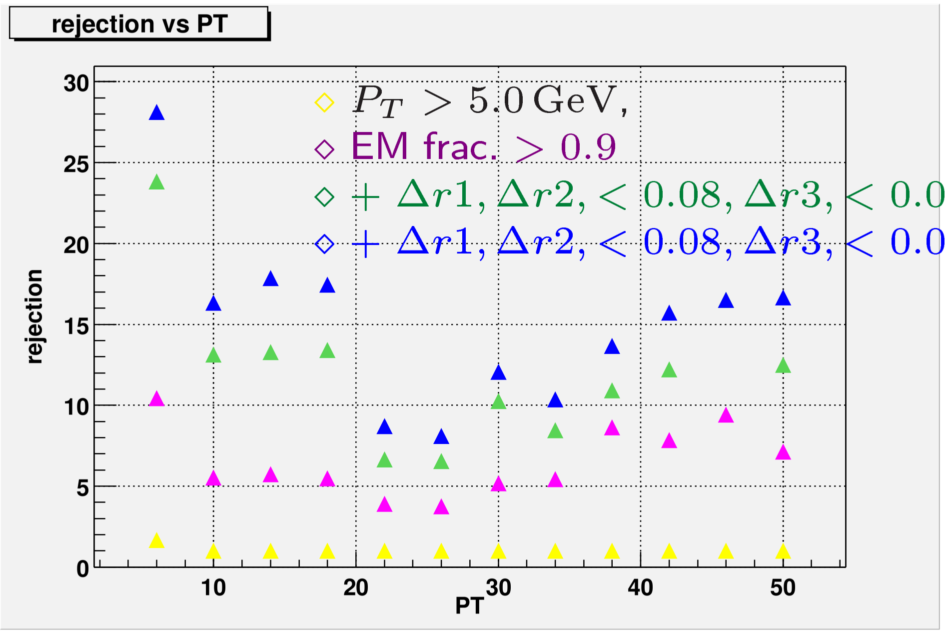


◇ Pt distribution



Data Rejection

◇ Rejection vs P_T



◇ Pt distribution