Latest PRELIMINARY Results from Run 2 at DØ

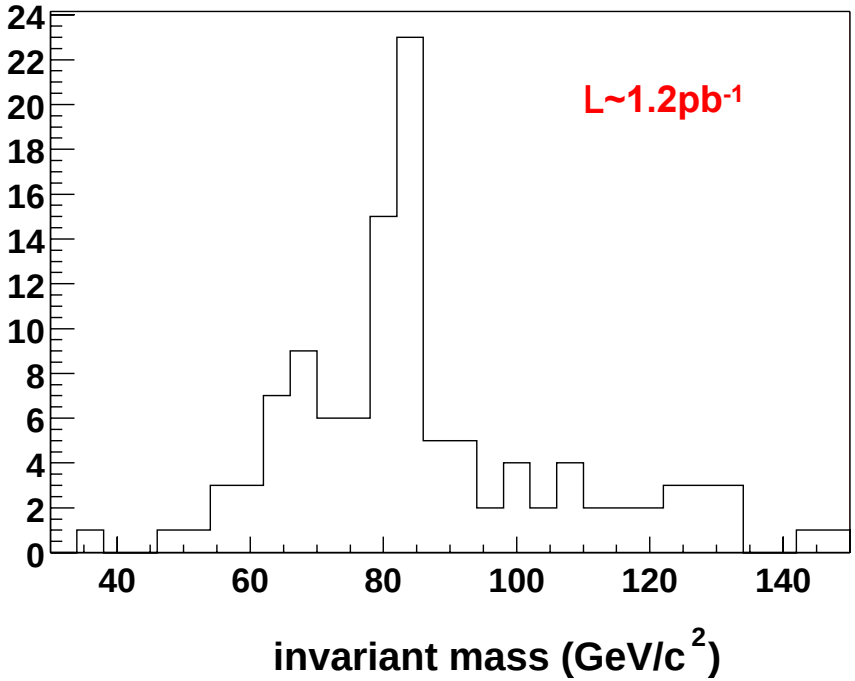
Last updated – Nov. 29, 2001

Boaz Klima

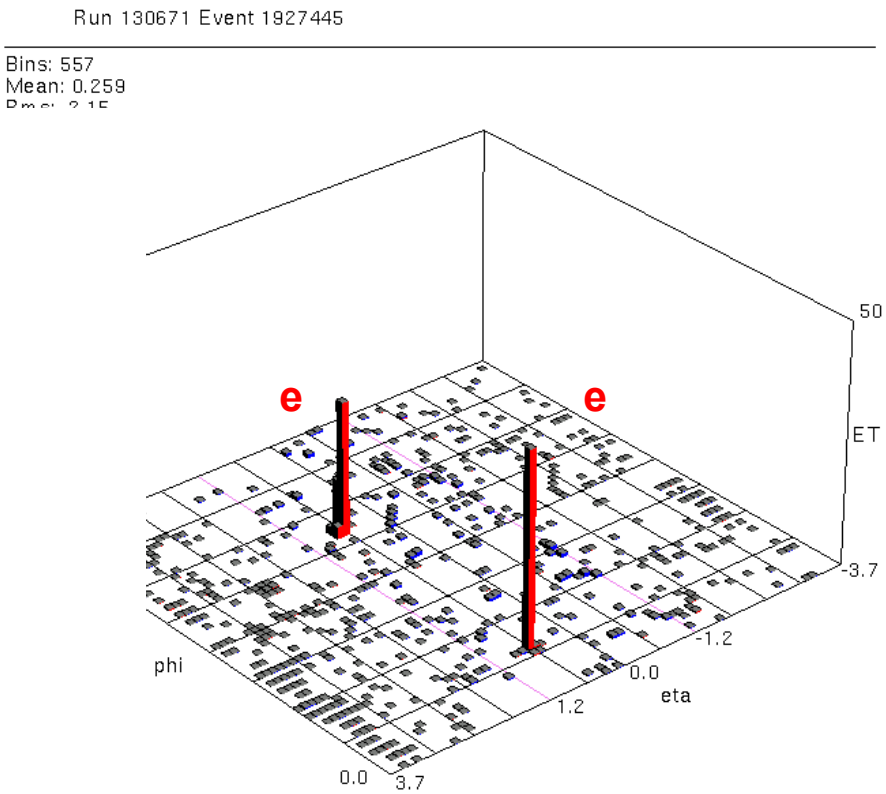
(klima@fnal.gov)

$Z \rightarrow e^+e^-$ Candidates

2 EM objects, E_T > 20 GeV, isolation and shower shape cuts

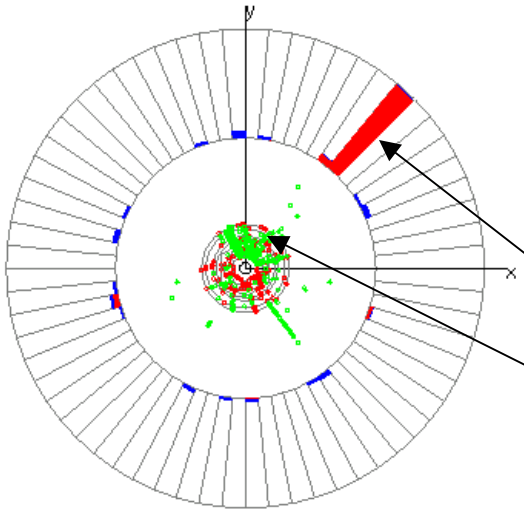


(uncalibrated energy scale)



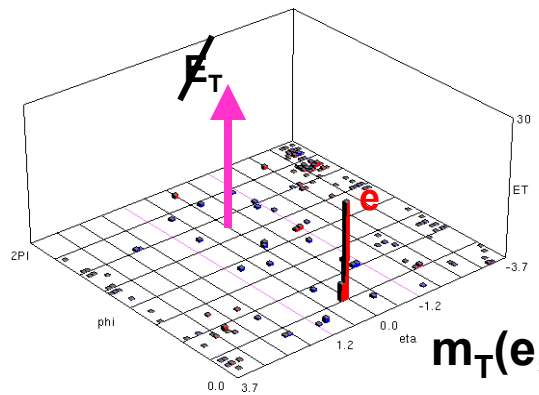
Leo Chan, Rochester

W→ eν Candidates

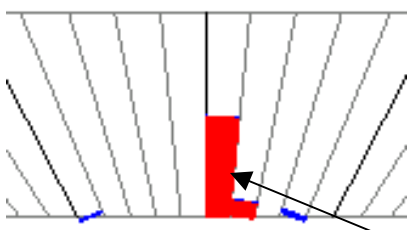


Vishnu Zutshi, NIU
Leo Chan, Rochester

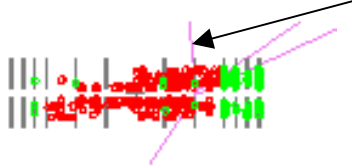
EM cluster with track

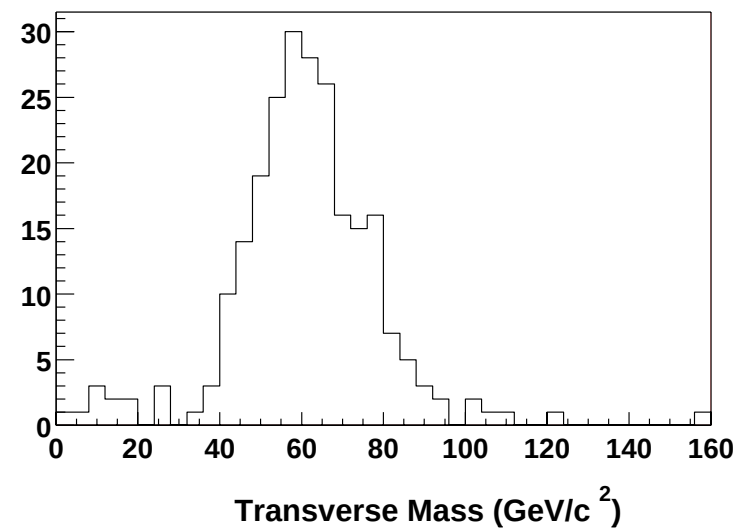


$m_T(e,\nu)$ L~0.7pb^{-1}



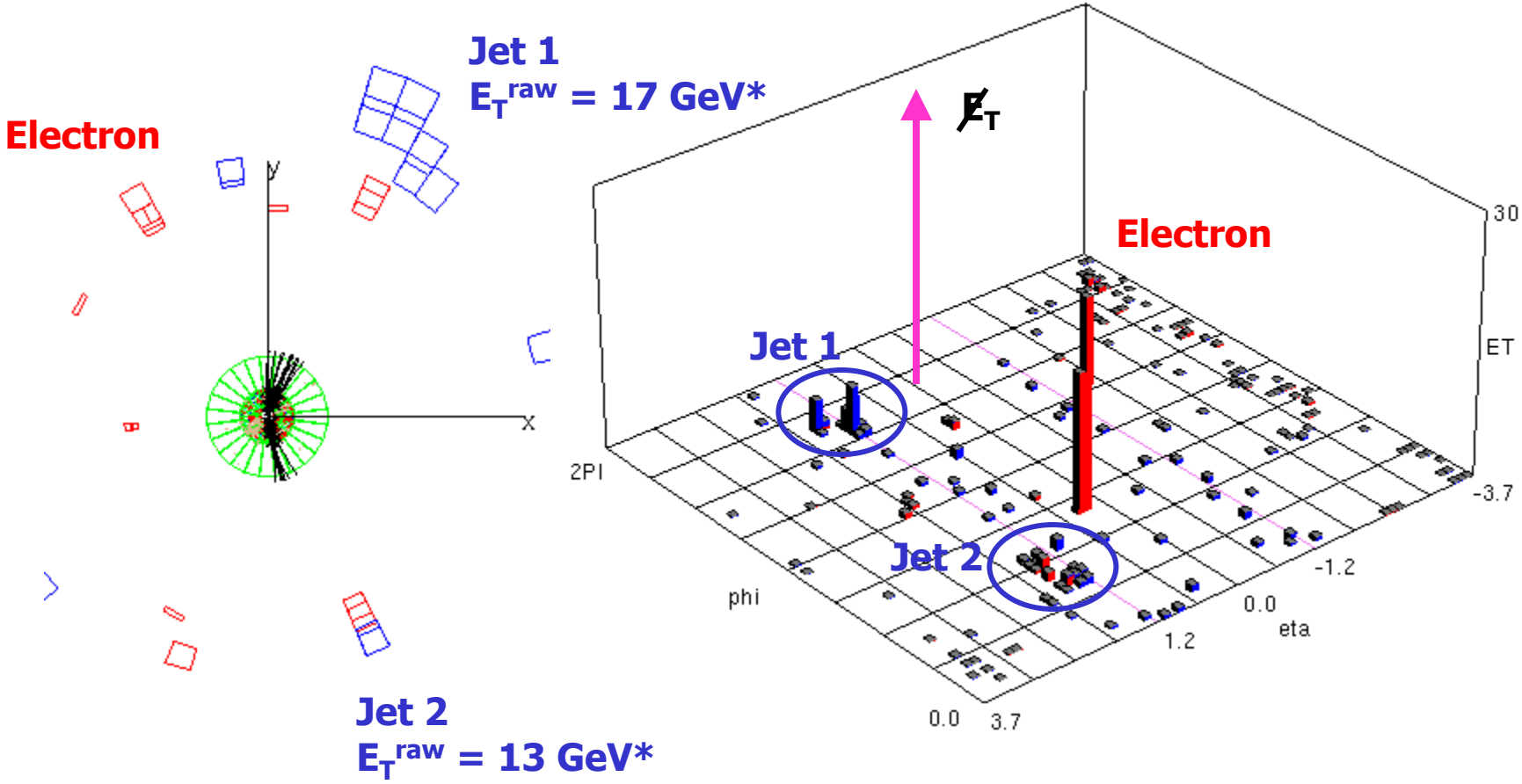
EM clust
with trac





Higgs Candidate (just kidding…)

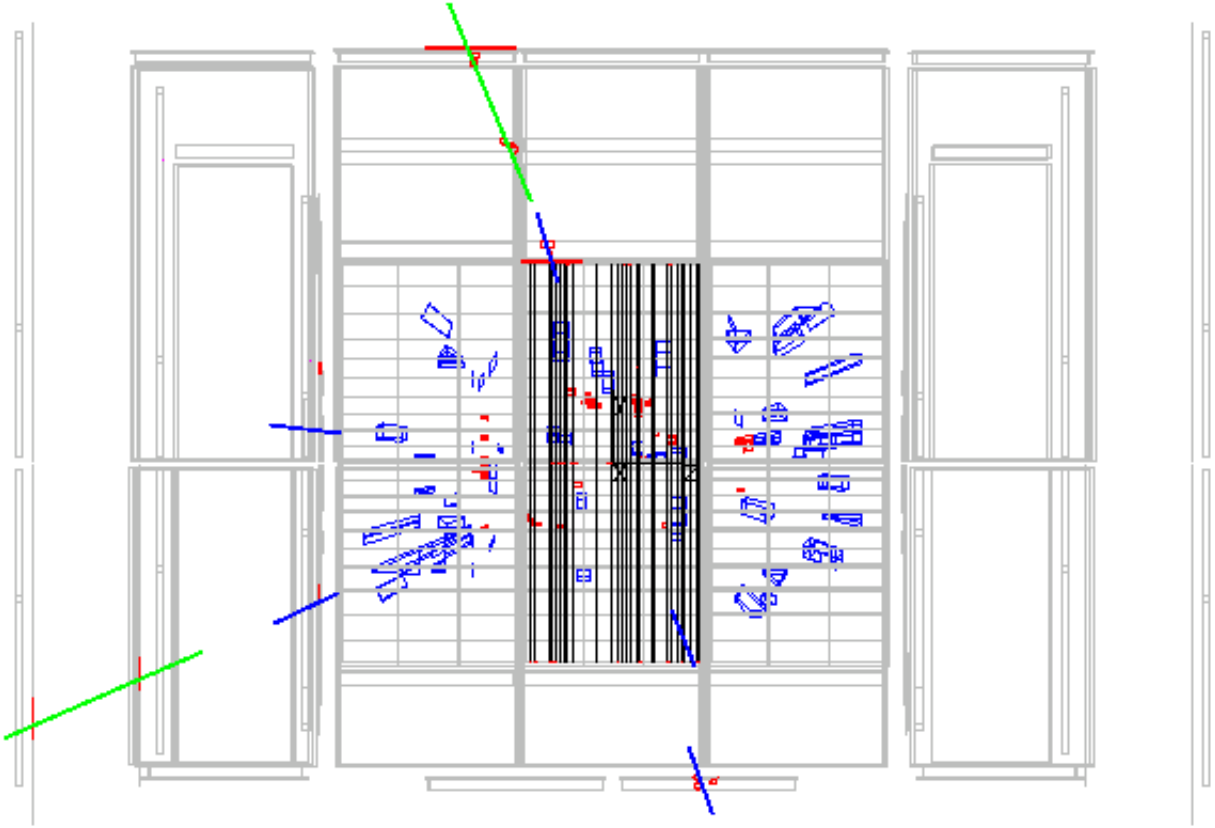
DØ W + 2 jet candidate



*** Jet E_T corrections will be relatively large**

$Z \rightarrow \mu^+\mu^-$ Candidate

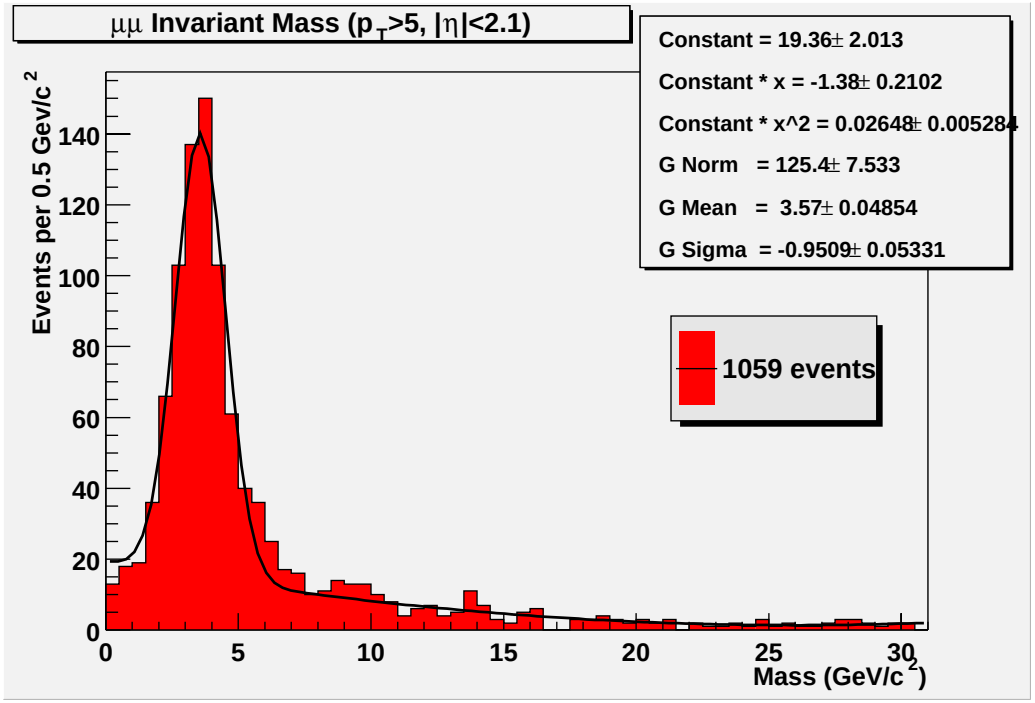
- Two muons recoiling against a jet
- Dimuon invariant mass ~ 55 GeV (with large uncertainty)

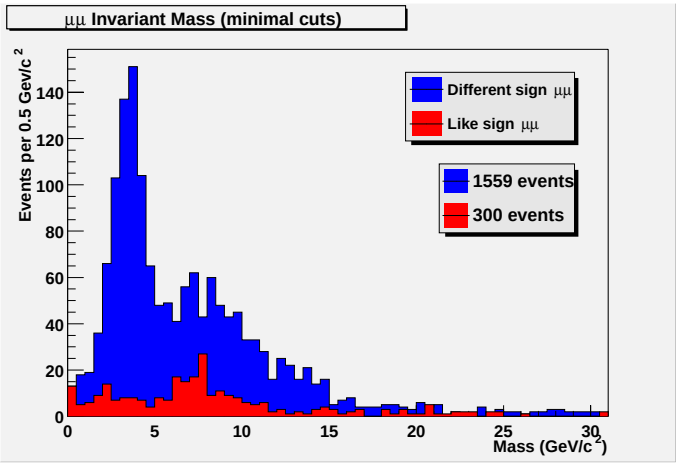


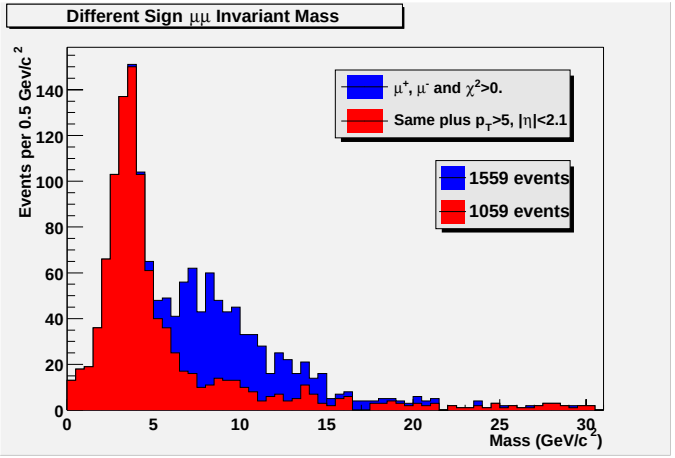
Onne Peters
NIKHEF

$J/\psi \rightarrow \mu^+\mu^-$

Di-muons reconstructed in the forward region



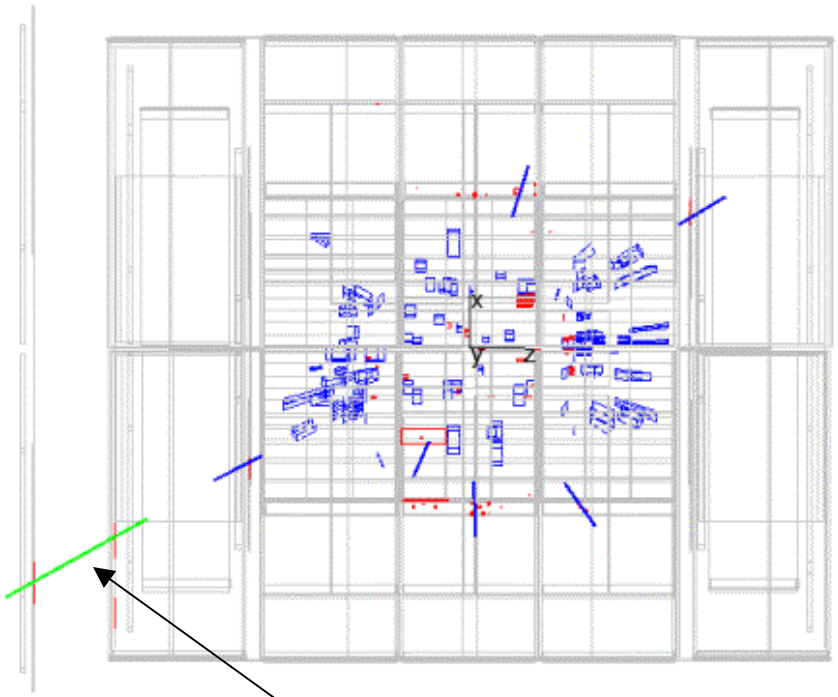


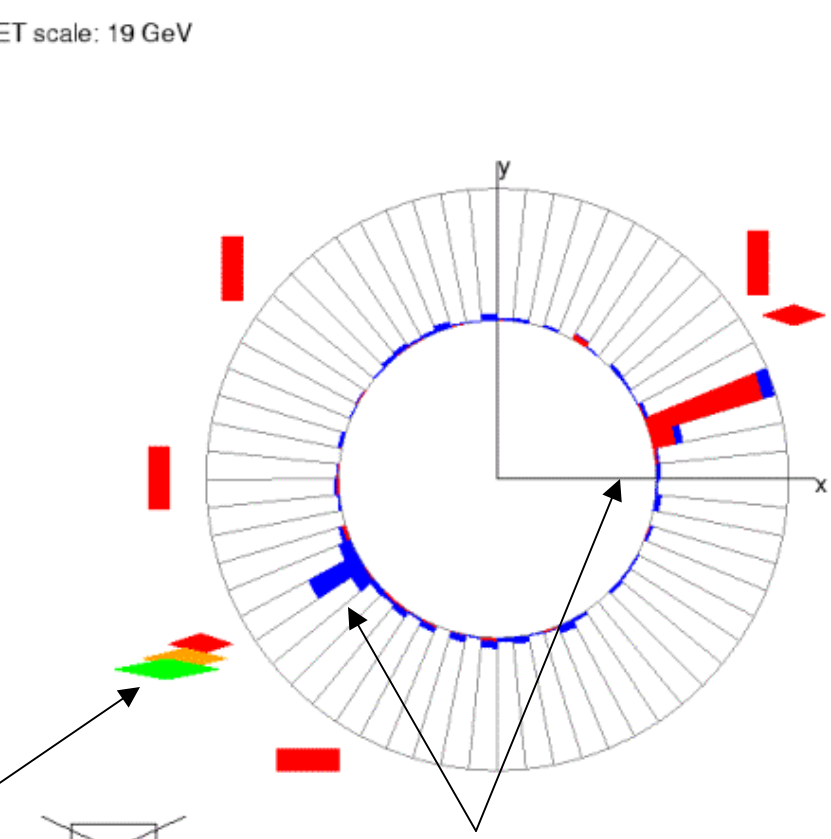


Roger Moore and
Adam Yurkewicz, MSU

Muons in Jets

Onne Peters, NIKHEF





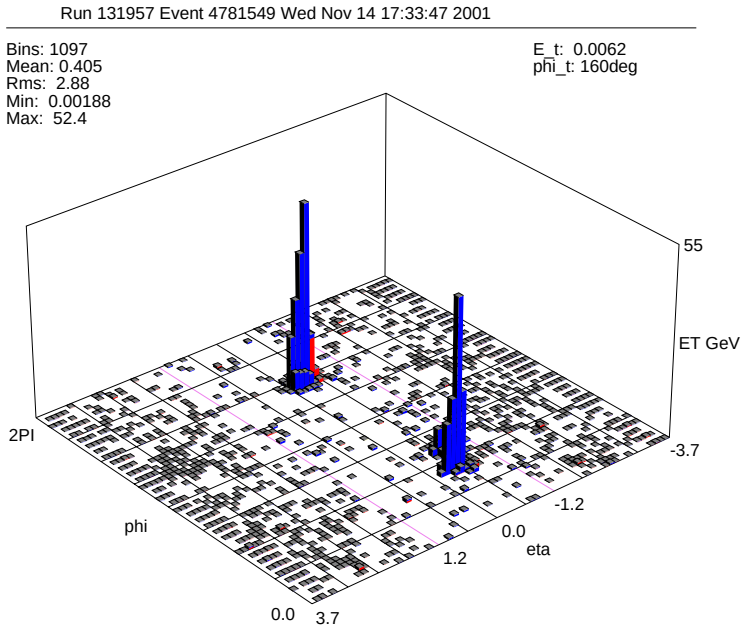
Muon in jet (b candidate)
Hits in A,B,C layers

Back to back
calorimeter jets

Jetty Events

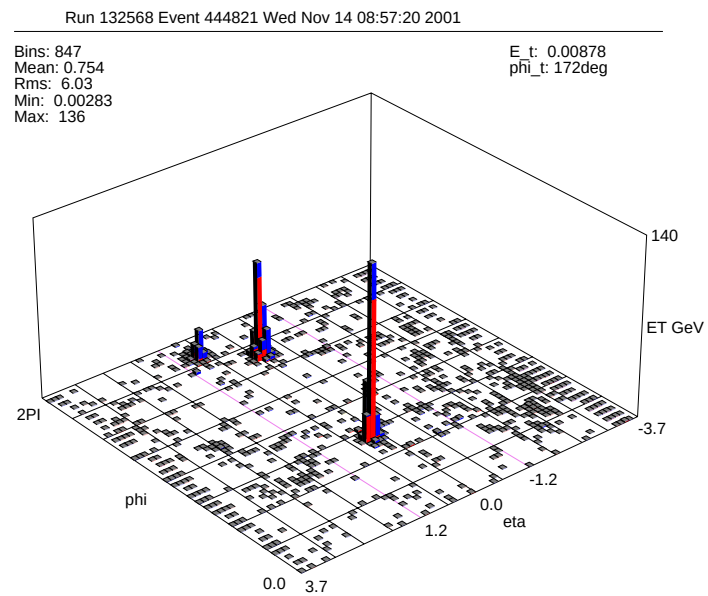
Using R=0.7 Cone Algorithm with Run 1 corrections

Alexander Kupco, Prague



3-jet event

- E_T^{jet1}~310GeV
- E_T^{jet2}~240GeV
- E_T^{jet3}~110GeV
- $\not{E}_T$~8GeV



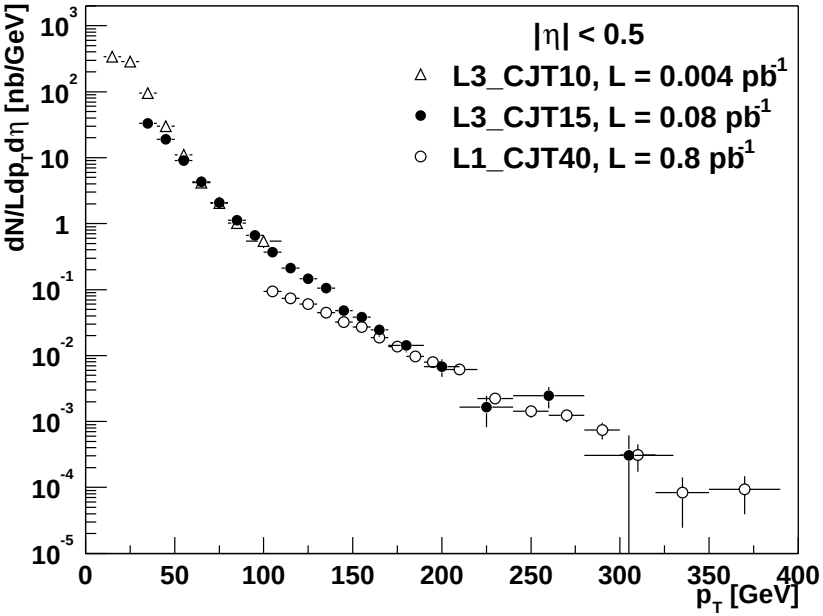
2-jet event

- E_T^{jet1}~230GeV
- E_T^{jet2}~190GeV

Jet Distributions

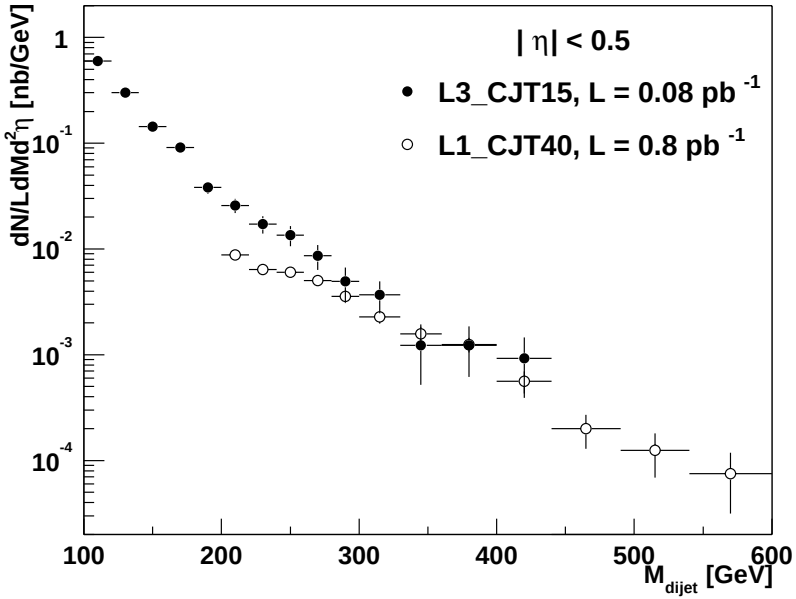
Using R=0.7 Cone Algorithm (energies partially corrected)

Alexander Kupco, Prague



Single Jet P_T

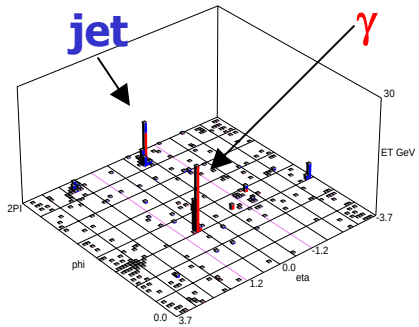
Dijet Invariant Mass



Jet Energy Calibration

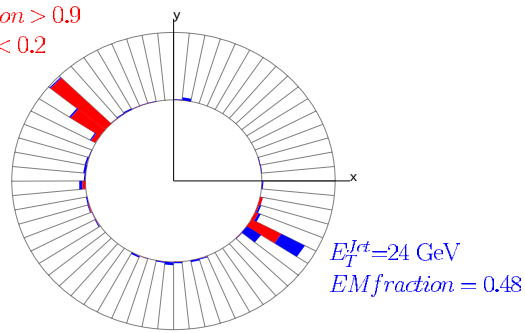
Gamma + Jet Candidate

Run 128309 Event 256324

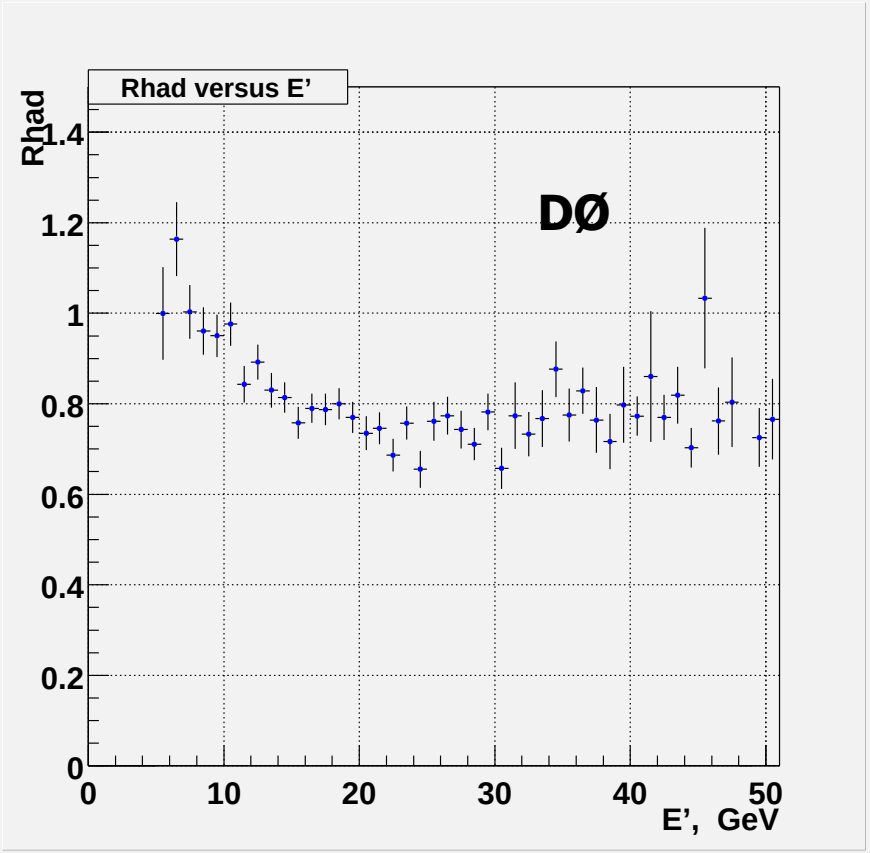


DØ

E_T^{γ}=27 GeV,
$EM fraction > 0.9$
$Isolation < 0.2$



Response in CC



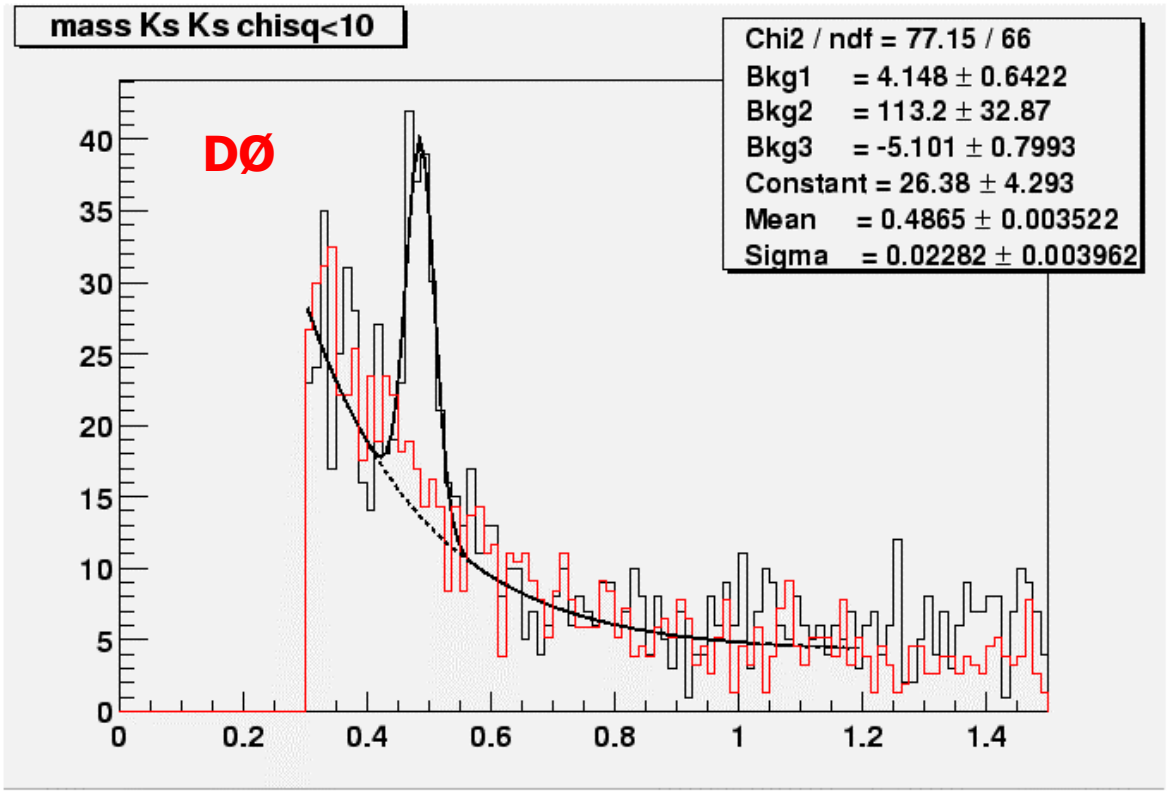
$E' = E_T^{\gamma} \times \cosh(\eta^{jet})$

Ia Iashvili, Riverside

$K_s \rightarrow \pi^+\pi^-$

Tracks reconstructed in the SMT detector

Brad Abbott, Oklahoma



Black histogram – opposite-sign tracks

Red histogram – same-sign tracks

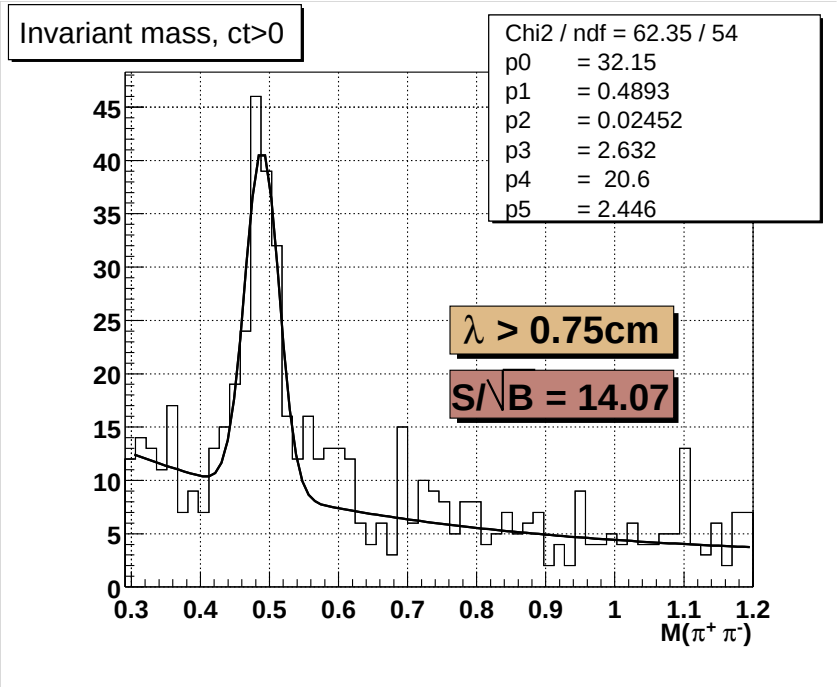
Dotted curve – fit to background

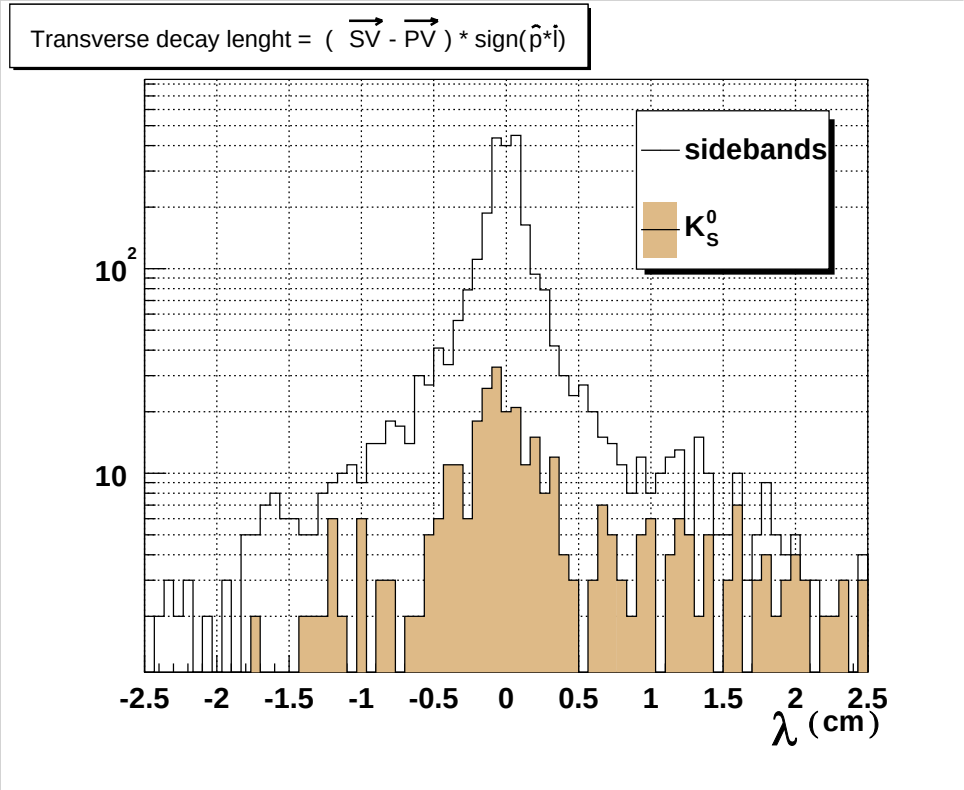
Full curve – fit to signal + background

$K_s (\rightarrow \pi^+\pi^-)$ Lifetime

Tracks reconstructed in the SMT detector

Ariel Schwartzman, Buenos Aires

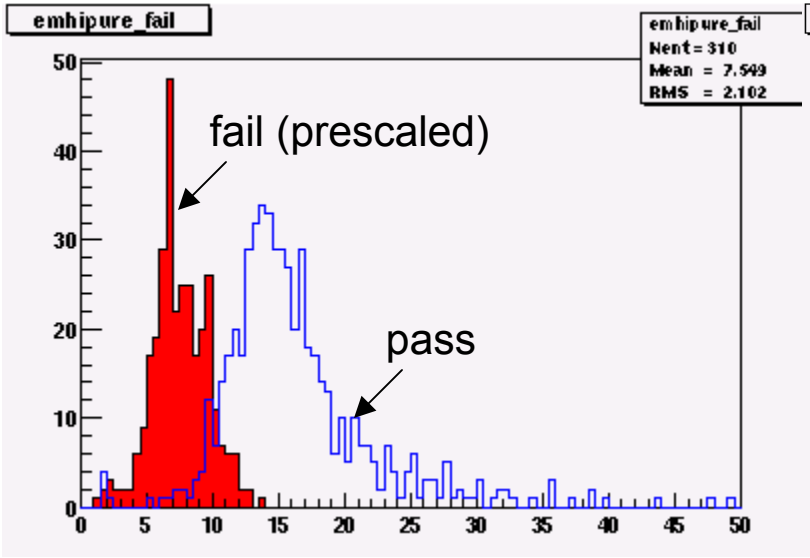


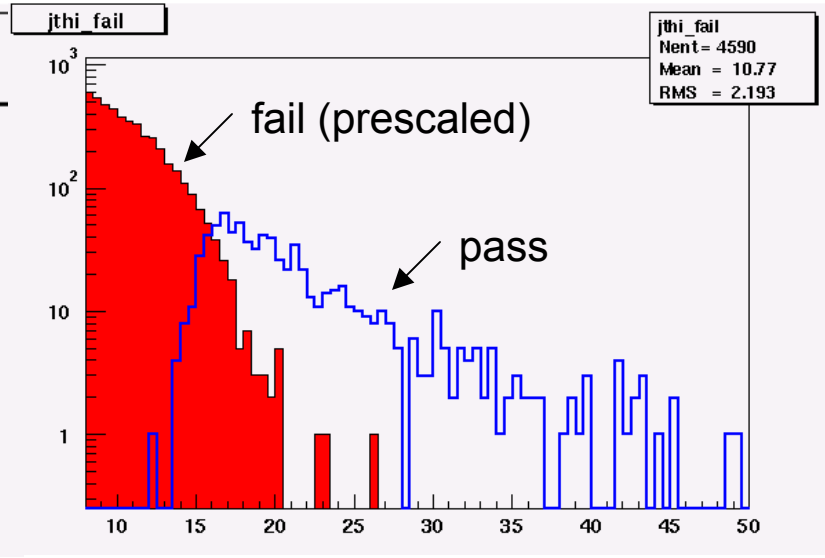


Level 3 Calorimeter Trigger

EM clusters, p_T > 10 GeV
Isolated, EM fraction > 0.9
$|\eta|$ < 1.1

Jets, p_T > 15 GeV
R = 0.7 cone
$|\eta|$ < 1.1





Volker Buescher, Mainz