

Positron fraction vs. time:  $20 < E < 100$  GeV

AMS-TOF Group

A. Contin

10/11/2012

B610 – 2ecal

General request: at least one ECAL shower with Energy  $> 2\text{GeV}$

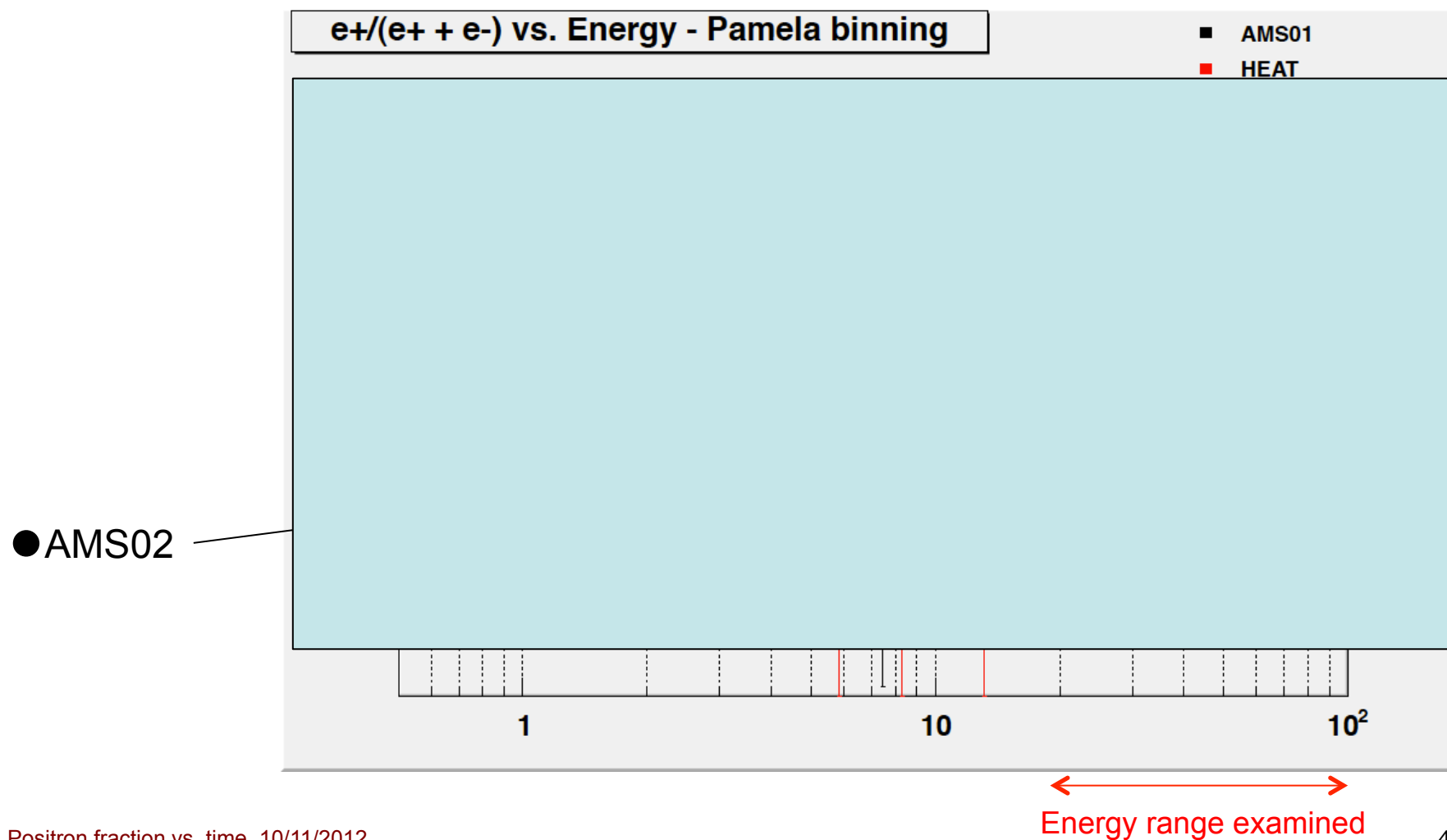
1 - AMSEventR  
2 - HeaderR existing  
3 - Level1R  
4 - DaqEventR  
5 - Not Status(30)  
6 - Science Run  
7 - Not h/w error  
8 - Not SAA  
9 - ACC<5  
10 - NTrTrack(>0  
11 - NTrTrack(<=4

11+(n-1)\*20+1 – TrTrack n Existing  
11+(n-1)\*20+2 – TrTrack n Good  
11+(n-1)\*20+3 – TrTrack n Match with TOF  
11+(n-1)\*20+4 – TrTrack n At least one BetaH  
11+(n-1)\*20+5 – TrTrack n Good BetaH match  
11+(n-1)\*20+6 – TrTrack n  $0.8 < \text{Beta} < 1.25$   
11+(n-1)\*20+7 – TrTrack n At least one TrdTrack  
11+(n-1)\*20+8 – TrTrack n At least one good TRD track  
11+(n-1)\*20+9 – TrTrack n Match with good TRD track  
11+(n-1)\*20+10 – TrTrack n likelihood (S) existing  
11+(n-1)\*20+11 – TrTrack n likelihood (K) existing  
11+(n-1)\*20+12 – TrTrack n Track in ECAL acceptance  
11+(n-1)\*20+13 – TrTrack n At least one ECAL shower  
11+(n-1)\*20+14 – TrTrack n Match with ECAL  
11+(n-1)\*20+15 – TrTrack n Proton  
11+(n-1)\*20+16 – TrTrack n Q=negative Match with ECAL  
11+(n-1)\*20+17 – TrTrack n Electron/Positron  
11+(n-1)\*20+18 – TrTrack n At least one Particle  
11+(n-1)\*20+19 – TrTrack n Match with Particle  
11+(n-1)\*20+20 – TrTrack n Not in Solar Arrays

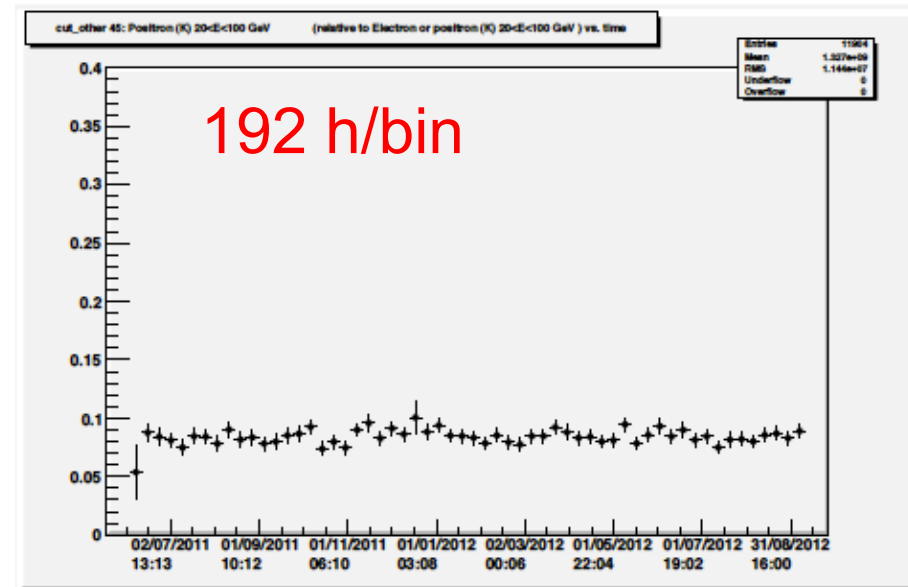
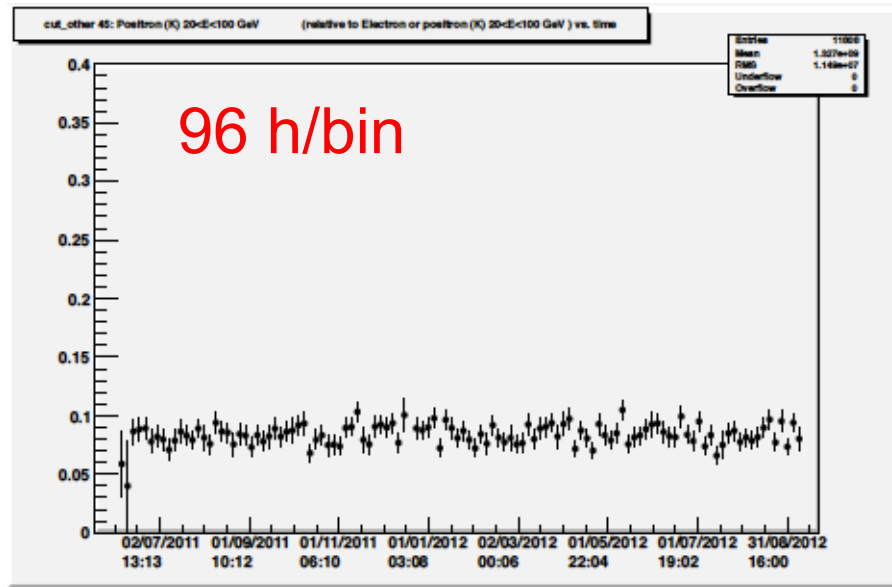
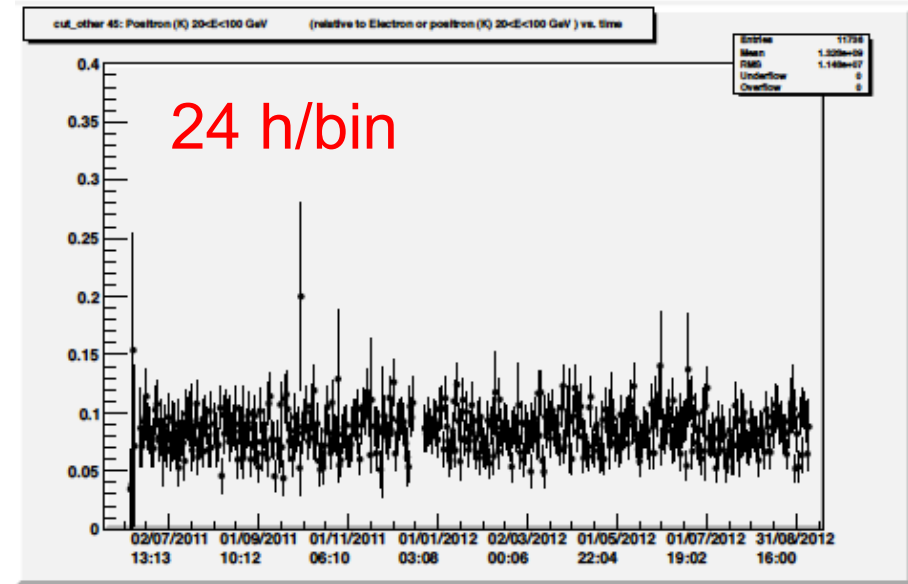
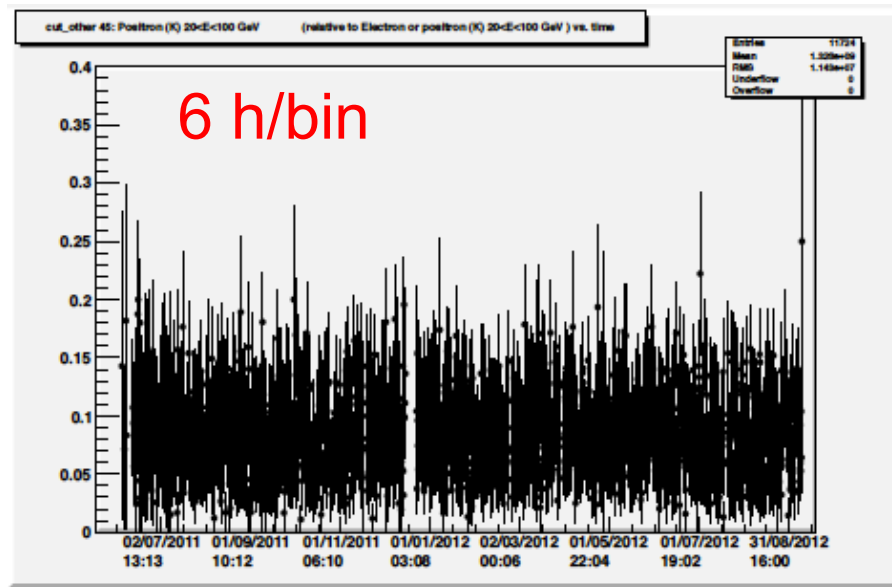
Tracks in the event:  $n = 1$  to 4

# Positron/electron definition

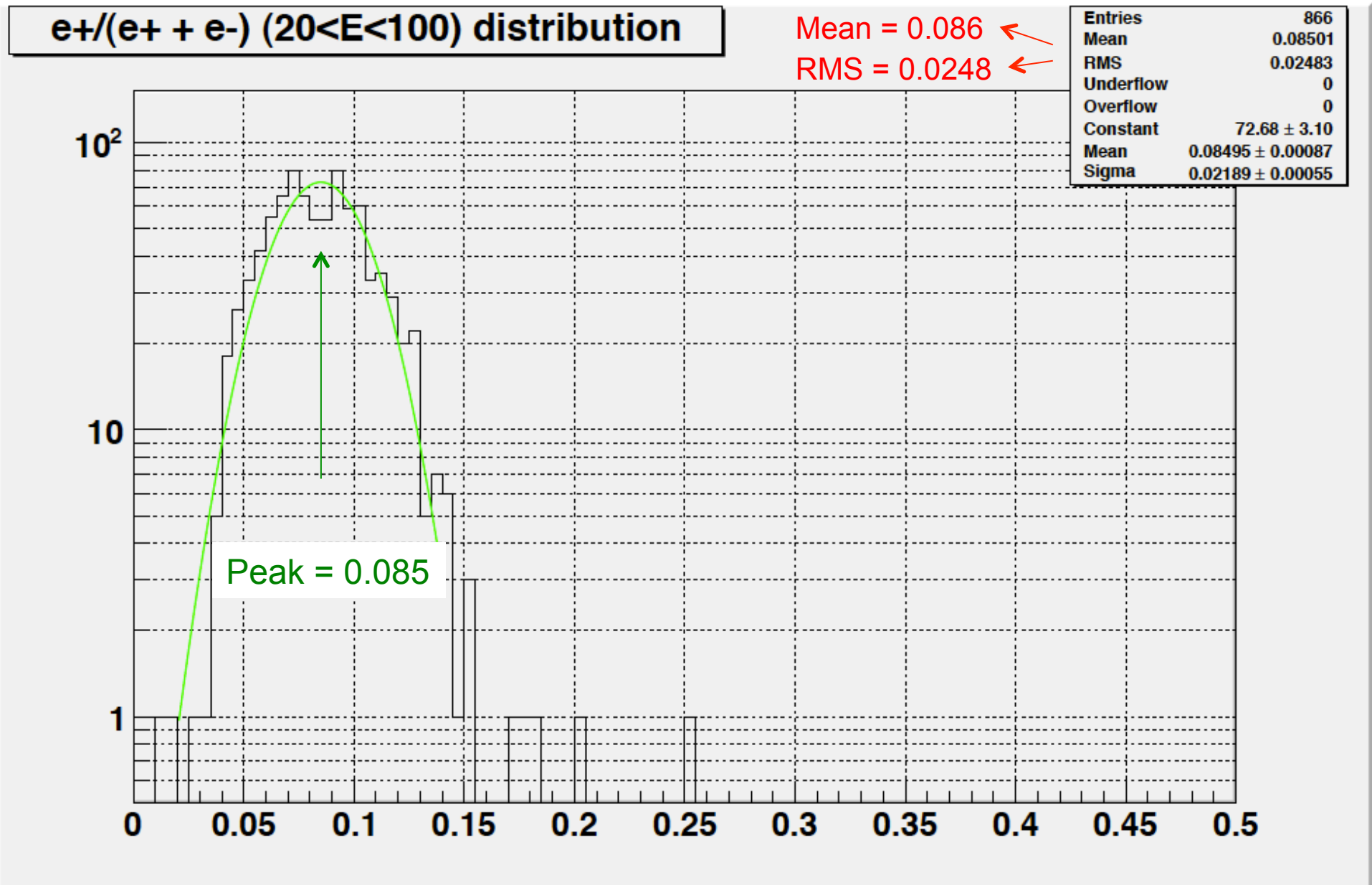
- 1 -  $R > \text{cutoff} * 1.3$
- 2 -  $\text{like\_ep-K} < \text{cut}(E)$
- 3 -  $\text{BDT} > \text{cut}(E)$
- 4 -  $|Q|=1$  (Tracker & TOF)



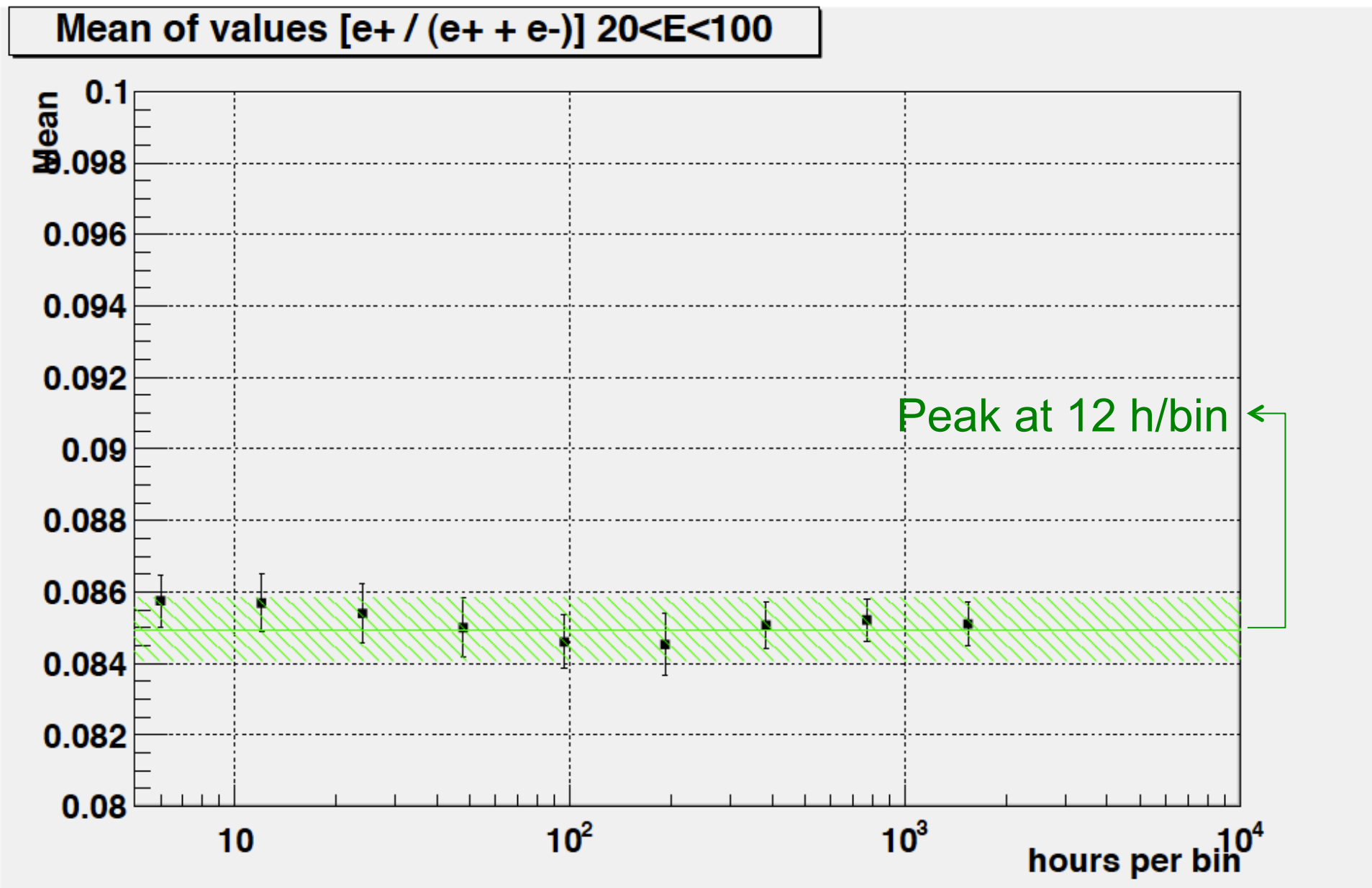
# Positron fraction vs. time (20<E<100 GeV)



# Distribution of values for 12 h/bin



# Mean of values as a function of hours/bin



# RMS of values as a function of hours/bin

