

EEMC Critical Plots

p + p



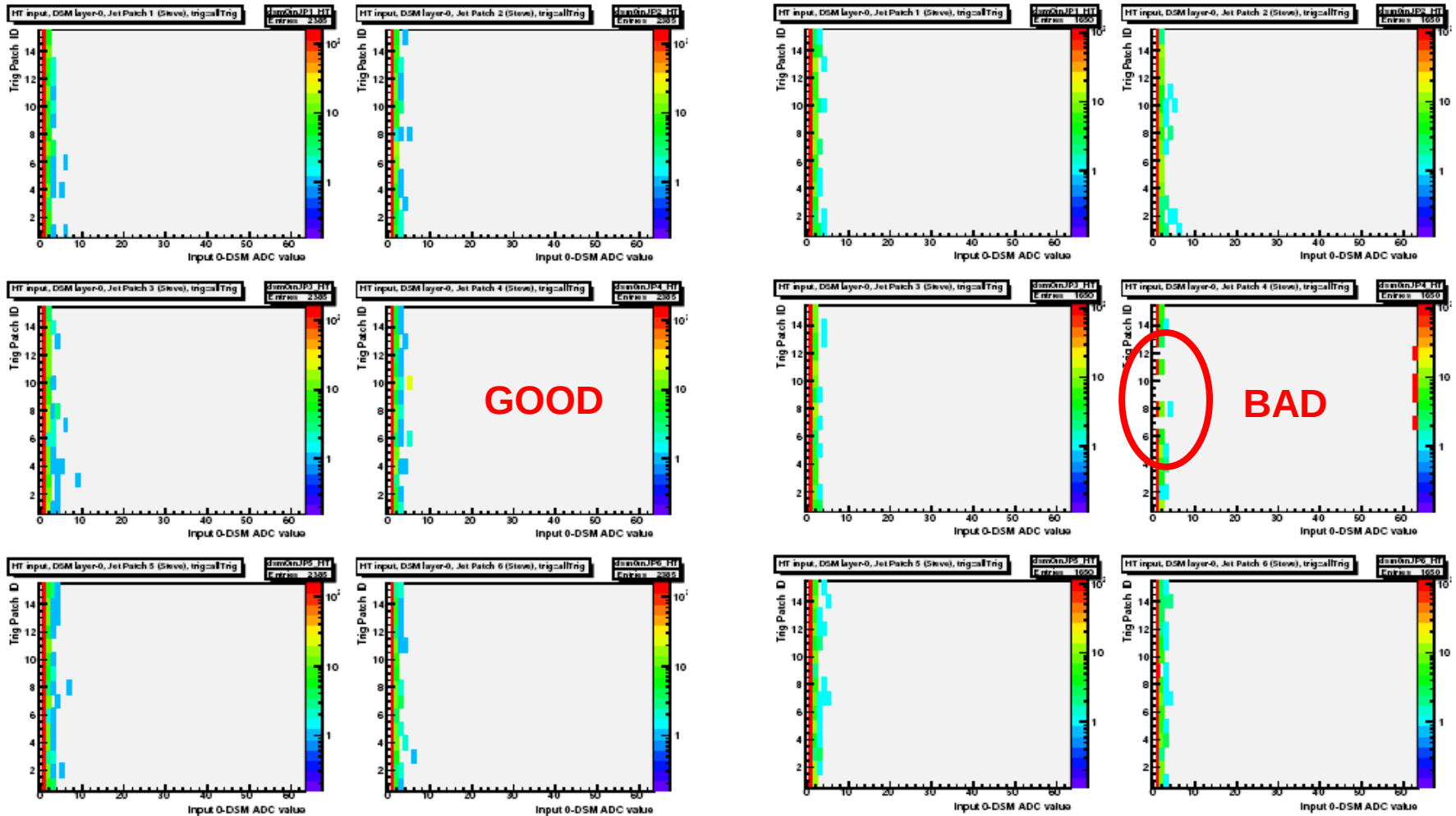
Run 11

- ***“Basic Trigger Performance” plots (page 2) should be checked for problems during the emc-check run at the beginning of each fill (see DRC).***
- ***All plots should be monitored during regular production runs***
- ***Histograms shown illustrate normal behavior--report deviations to experts***

Last update 2/22/11 – WWJ/JRS

Basic Trigger Performance

- Check plots during **emc-check** run and **production** runs
- Under tab “EEMC trig” -> “DSM-0 HT” and “DSM-0 TP”: High Tower + Trig Patch DSM spectra



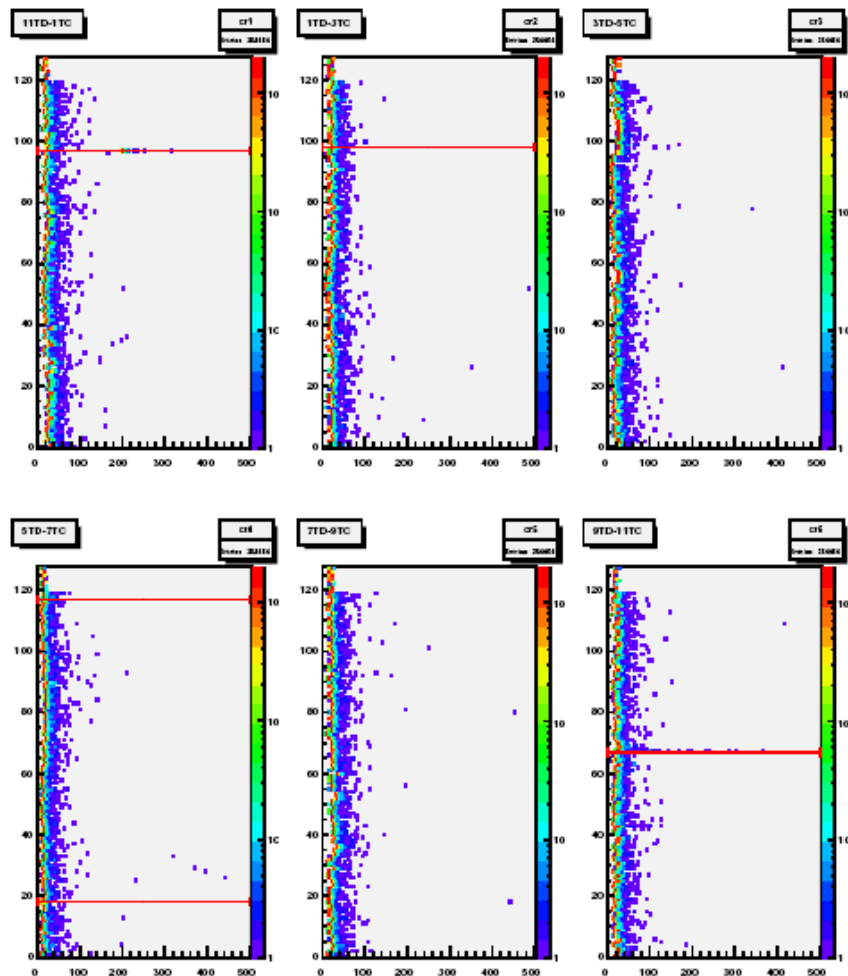
Look for:

- 1) ped align -- red bands in DSM chan ~1 for all HT & TP. If peds aren't all aligned at ~1 determine the tower FEE crate w/ the problem (JP # in the histogram title is the same as tower FEE crate #) and power cycle it, then do “Master Reload” for Tower FEE

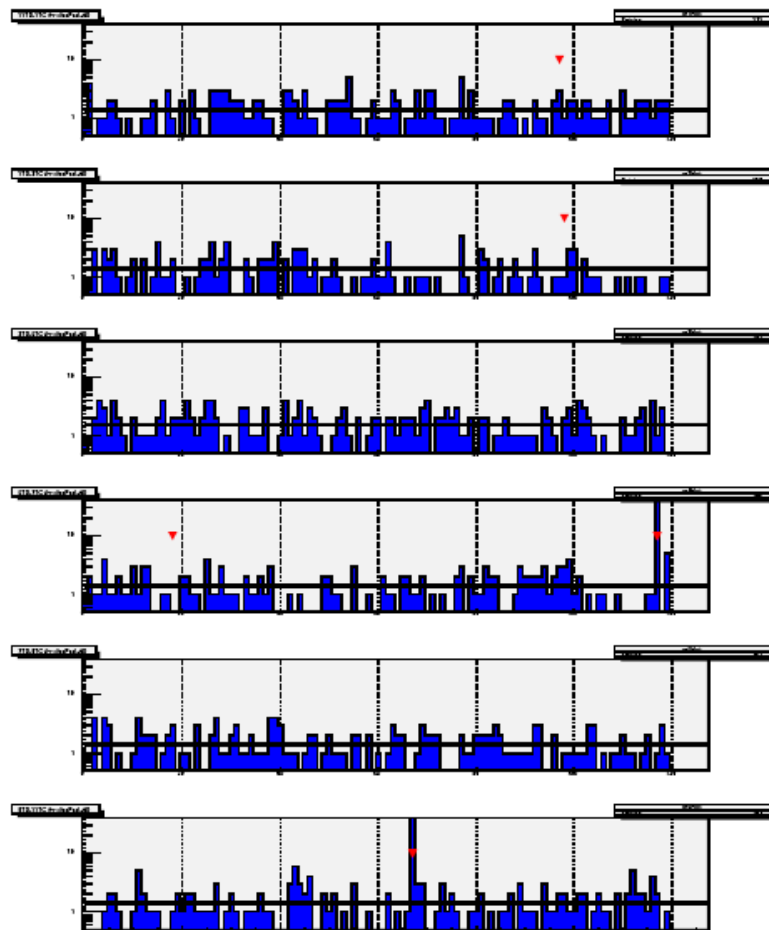
ex: In the “BAD” plot above tower FEE crate #4 needs to be power cycled

ETOW PMT/FEE Performance

Under tab “EEMC shift” -> “Tower ADC”: ADC value (x) vs. FEE channel (y) for 6 tower FEE crates



Under tab “ETOW” -> “Hot Tw”: Tower hit frequency vs. FEE channel (x) for 6 tower FEE crates

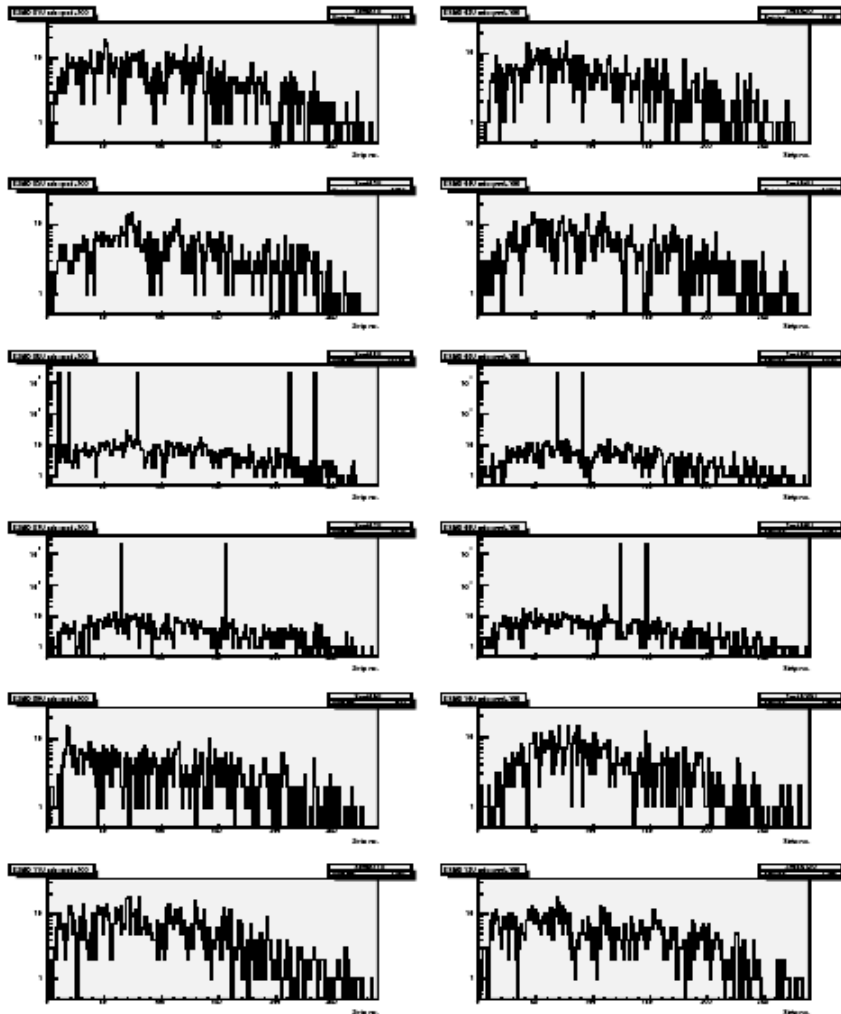


Look for:

- (1) ~ uniform ADC spectra channels 0-119 in each (6) tower FEE crates (left plot);
- (2) no crates missing ADC values for all or many channels (both plots);
- (3) no “copycat” patches with identical ADC spectra for successive FEE channels (left plot);
- (4) no “hot” towers in right plot, other than those already masked (marked by red triangles);

SMD / MAPMT Performance

Under tab “ESMD “-> “U freq” and “V freq”:
Hit frequency vs. SMD strip # (x) for 12 sectors



Look for:

- (1) ~ smooth spectra in left plots, except for individual noisy or low-response strips;
- (2) ~ uniform filling of right-hand plots vs. phi (x)
- (3) no missing sections in either set of plots

Under tab “EEMC Shift” -> “ADC Eta Vs Phi”: Hit frequency (z) vs. eta bin (y) and phi bin (x) for EEMC towers, pre layers 1 & 2, post layer (top to bottom)

