

Electronic deadtime

=

$$60/50 * (hPRE100 - hPRE150) / hPRE100$$

- hPRE100/150 from trees

CPU LT = HMSTRIG/HMSPRE

$$\begin{aligned} & \text{HMS Computer Live Time} \\ & = \\ & \{(hTRIG1_ROC1.npassed / \\ & H.hTRIG1.scaler)*100.0:\%3.4f\} \% \end{aligned}$$

- In the file coin_production.template (located here: `/$HOME/Analysis/hallc_replay/TEMPLATES/COIN/PRODUCTION`)

hTRIG1_ROC1.npassed -> accepted HMS triggers
H.hTRIG1.scaler -> $\frac{3}{4}$ trigger (in trees)

- Both found in report file
- Very low values for CPU LT

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=

{HMSScinDide.npassed/(HMSScin
Shoulde.npassed+0.0001):%8.4f}

HMSScinDide.npassed & HMSScinShoulde.npassed

- Incrementally increased by one if all conditions below are true...
 - Hit only desired region of x & y but not outside
 - The slope of track along x & y is not too high
 - All 3 planes (for $\frac{3}{4}$ trigger) are hit
 - At least two photoelectrons in Cerenkov
 - Ratio of energy deposit in calorimeter to central moment is > 0.7
- Additional condition on HMSScinDide is that there must be at least one track
- http://hallaweb.jlab.org/data_reduc/AnaWork2015/Zafar_hcana_update.pdf

Integrated over W then took the following cuts to obtain first layer scintillator events...

- Cherenkov sum ($H.cer.npeSum$) > 0.5
- Shower tracked ($H.cal.etracknorm$) > 0.7
- $abs(H.tr.tg_dp) < 8.5$
- **Not applied yet:** $abs(hsxptar) < 0.09$, $abs(hsyptar) < 0.055$,
 $abs(hsytar) < 3.5$