



Emulator status

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*L1 Calo Stage1 Upgrade Meeting
(April 2, 2014)*



From the last week

Goals for the next milestone

- Make sure everything runs and gives sensible results
- Define validation metric/ benchmarks
 - Validate against UCT2015 results (using common samples etc.)
 - Develop machinery to compute rates & efficiencies in factory mode

In the following slides some 4-vector plots of hardware and physical quantities using the new emulator

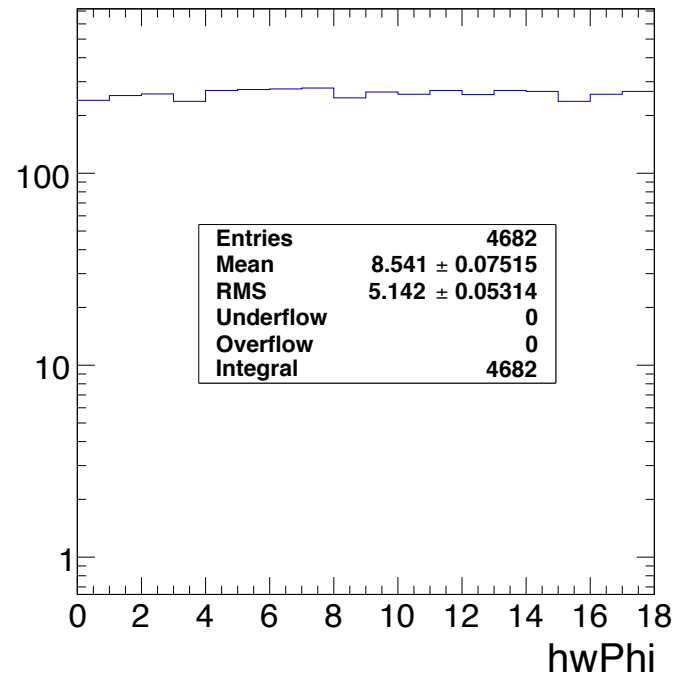
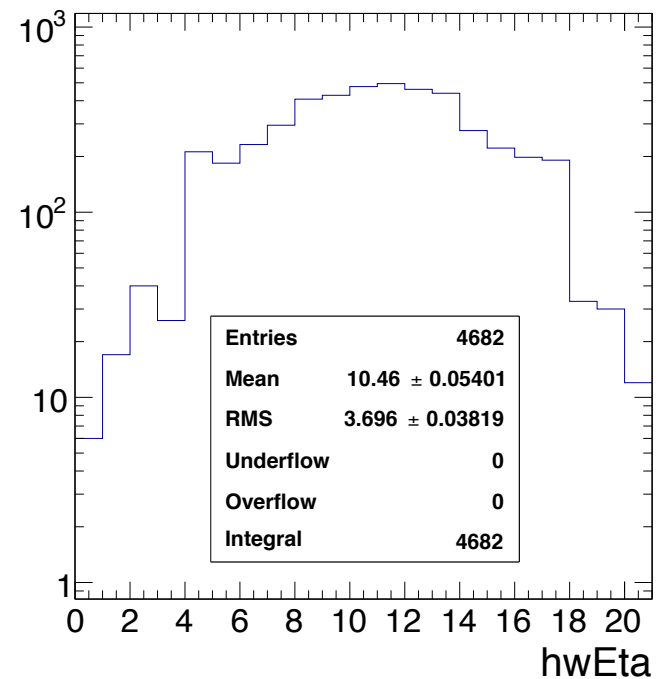
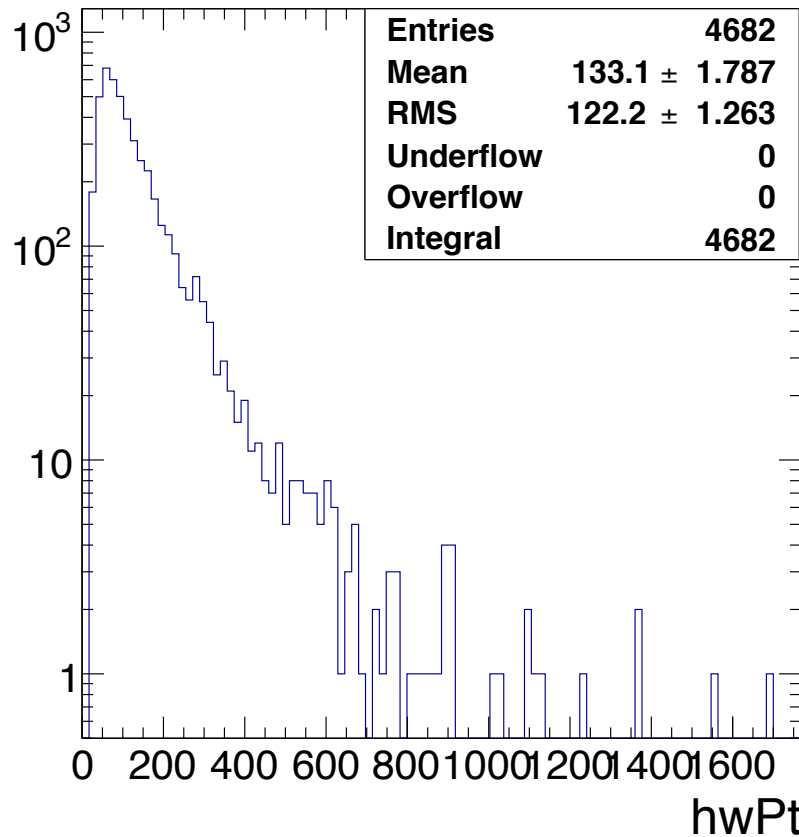
ReVal ttbar sample, CMSSW 7.1.0.preX

1100 events

file:/uscms1b_scratch/lpc1/lpctrig/apana/L1Upgrade/262AA156-744A-E311-9829-002618943945.root

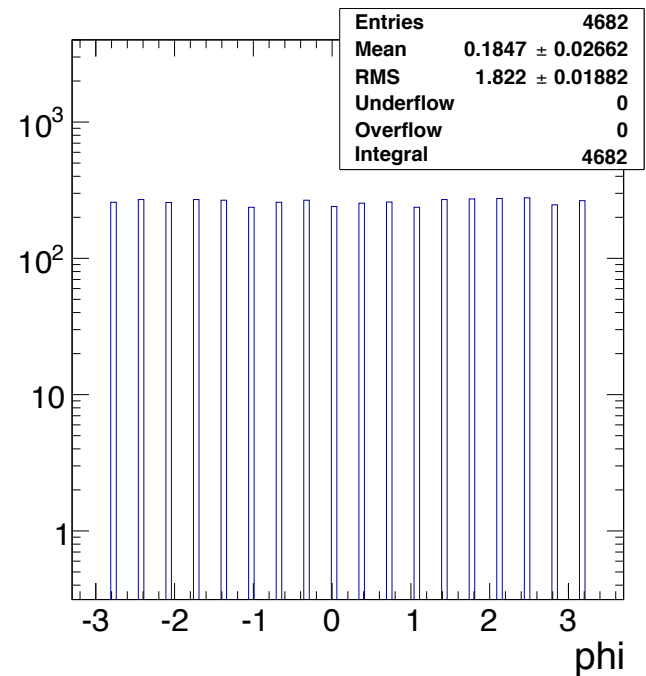
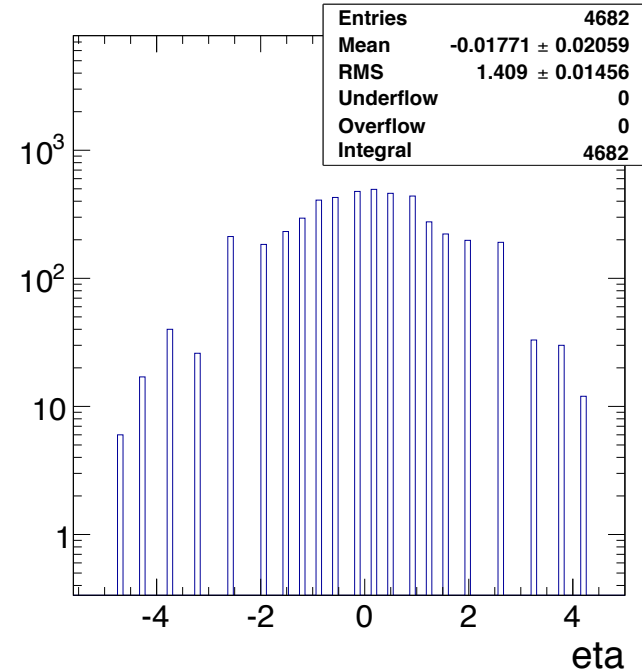
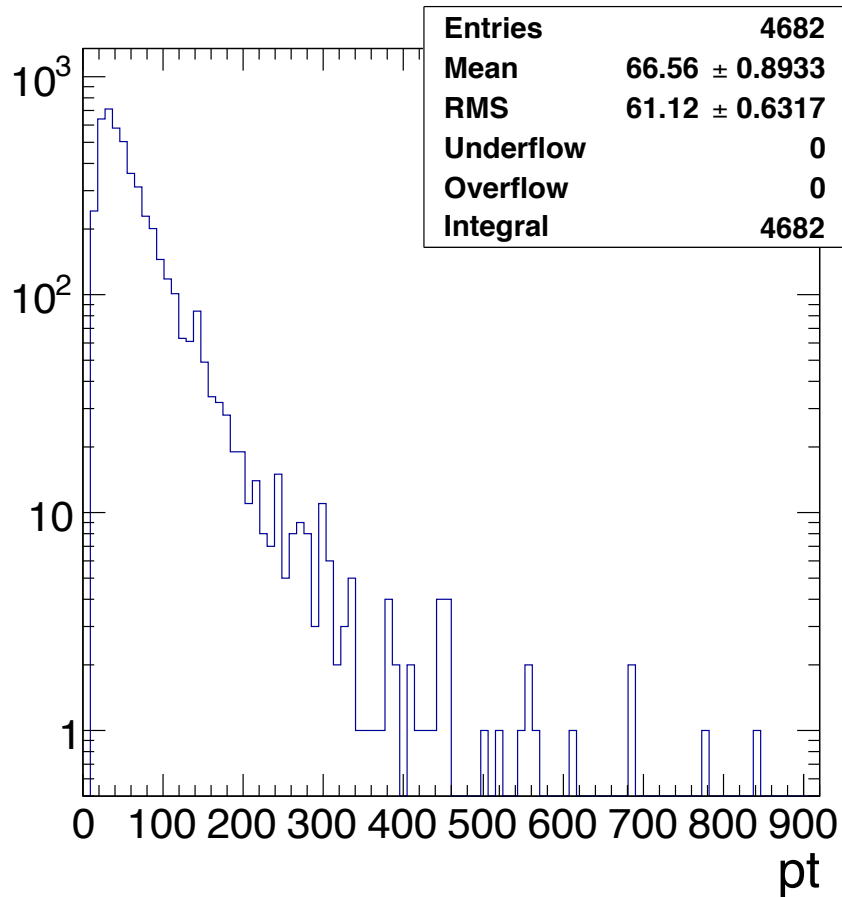
[GitHub:cms-l1t-offline/cmssw/L1Trigger/L1TCalorimeter](https://github.com/cms-l1t-offline/cmssw/L1Trigger/L1TCalorimeter)

Jets: hardware quantities

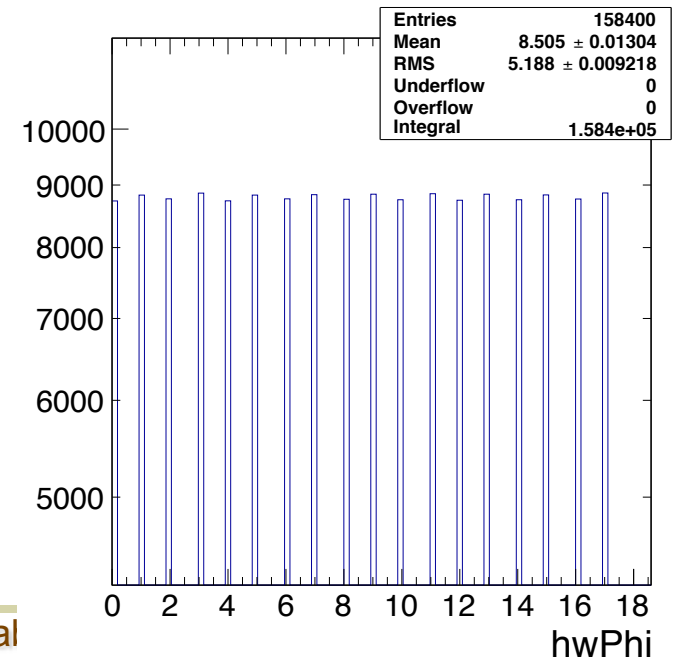
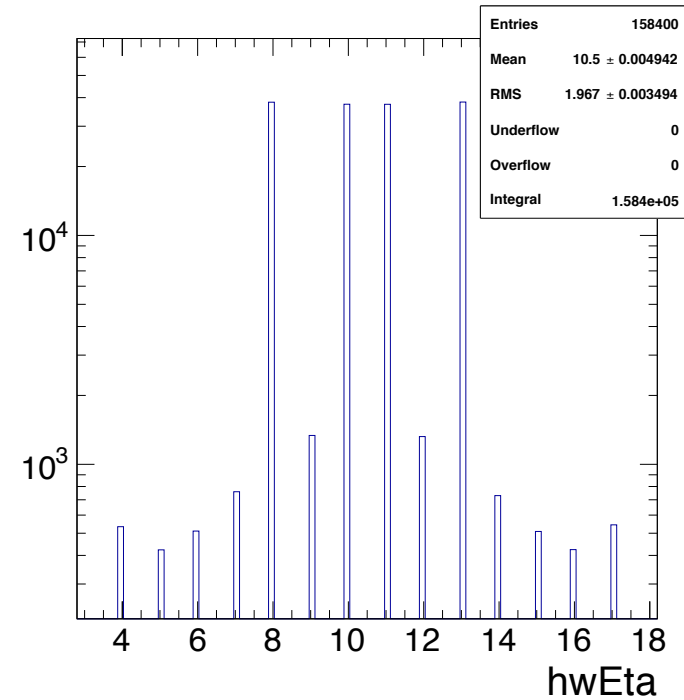
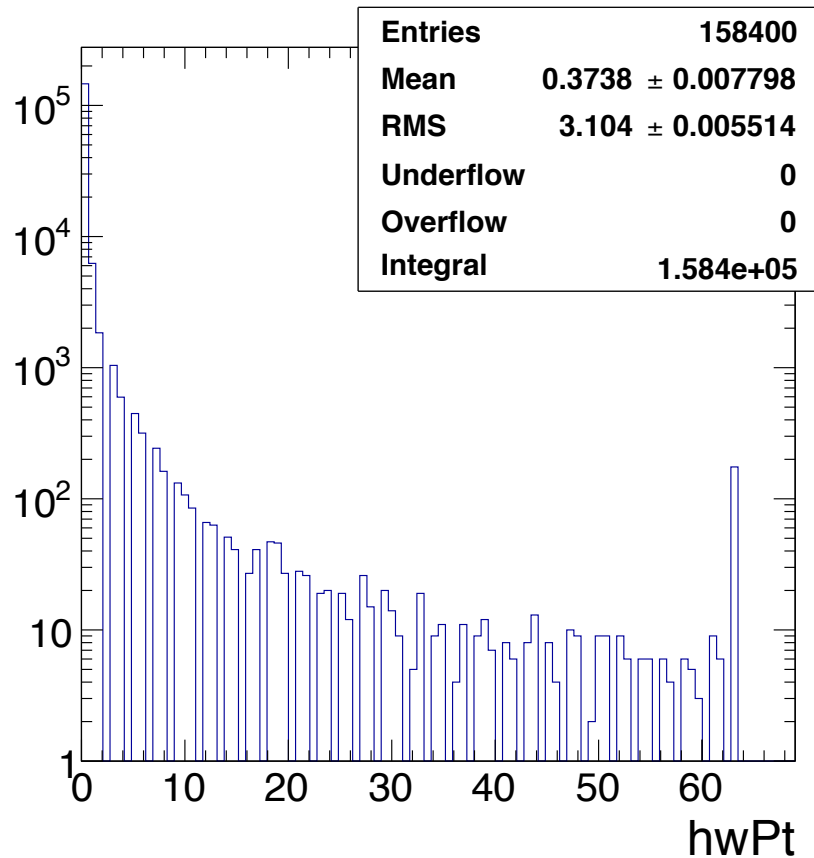


NB: We use GCT coordinates: eta range 0–20 (HF: 0–3, 18–20), phi range 0–17

Jets: physical quantities

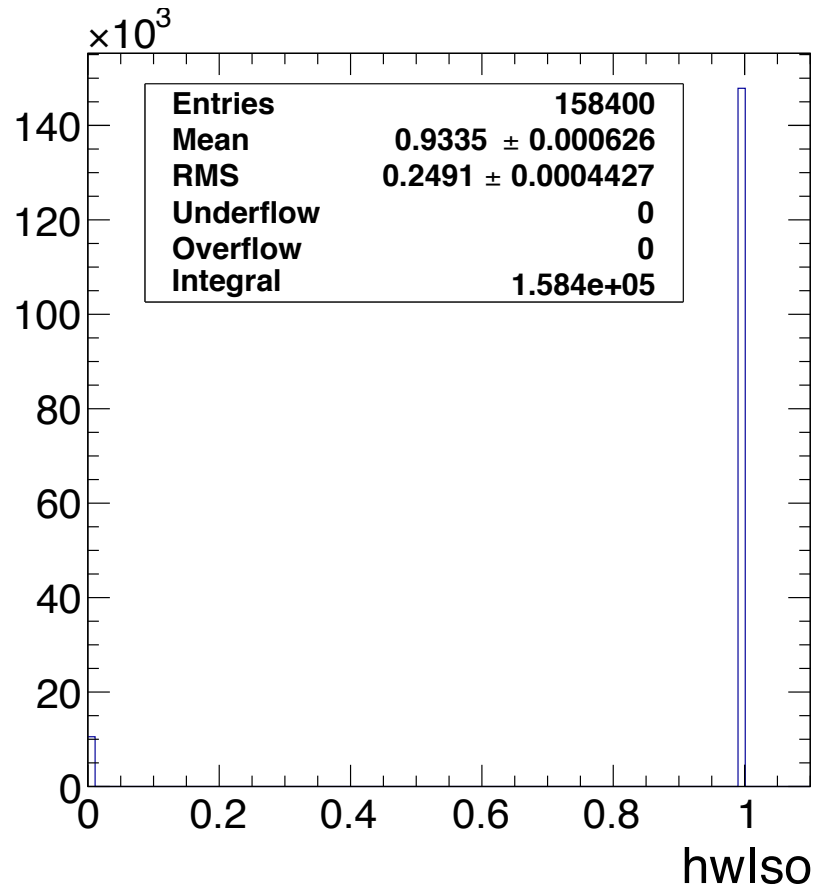


Egamma: hardware quantities

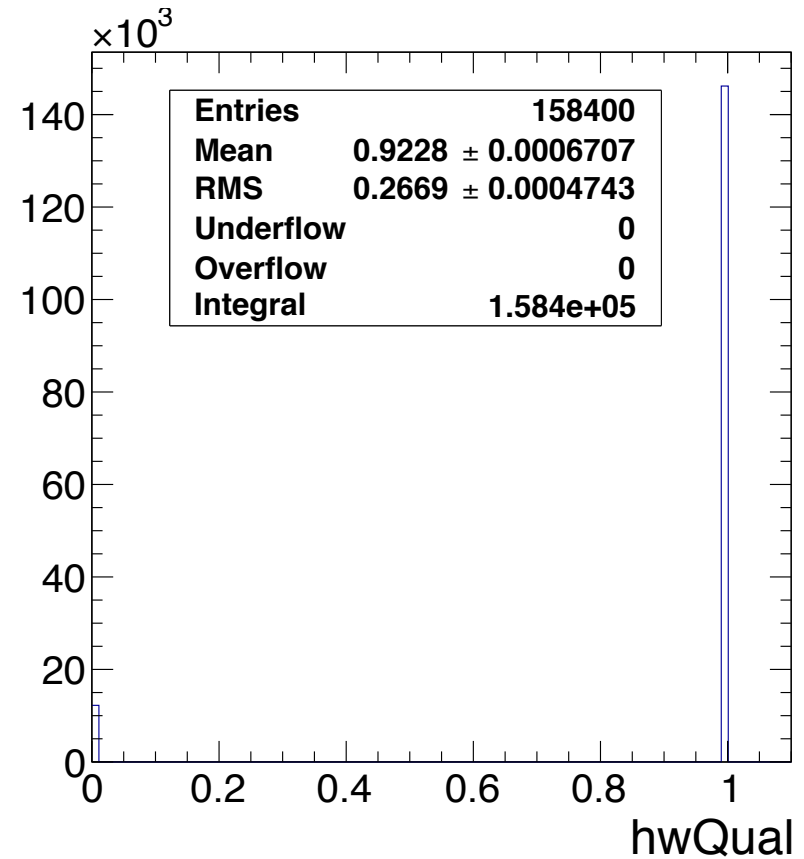


Egamma: quality flags at hardware level

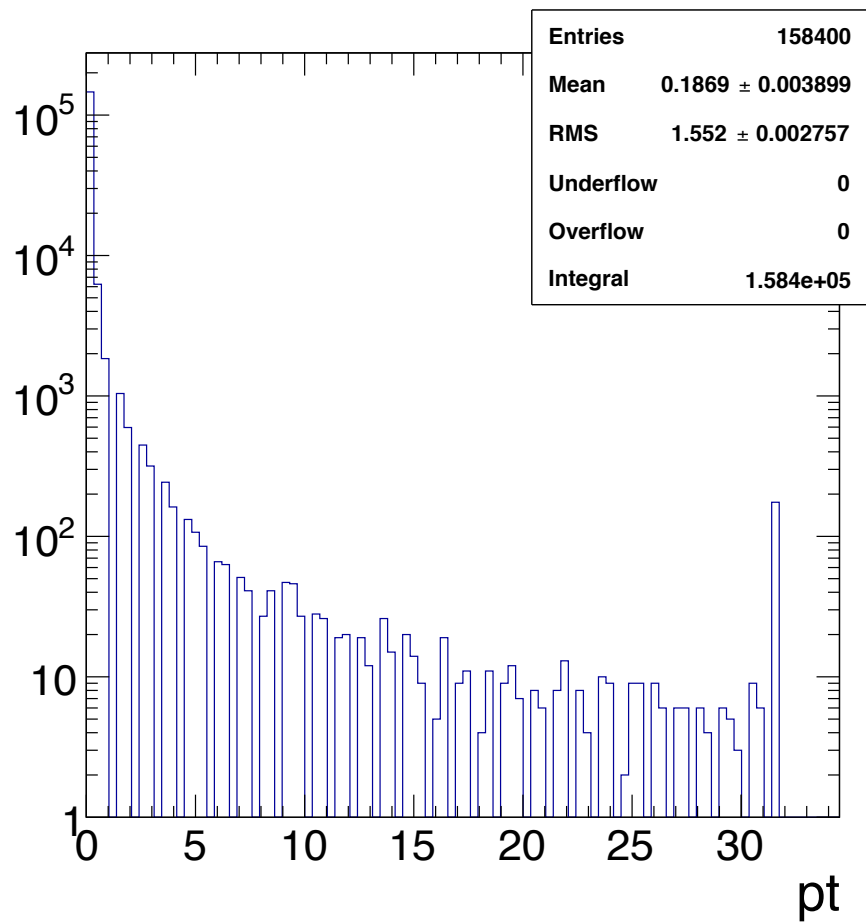
isolation < 0.2 ?



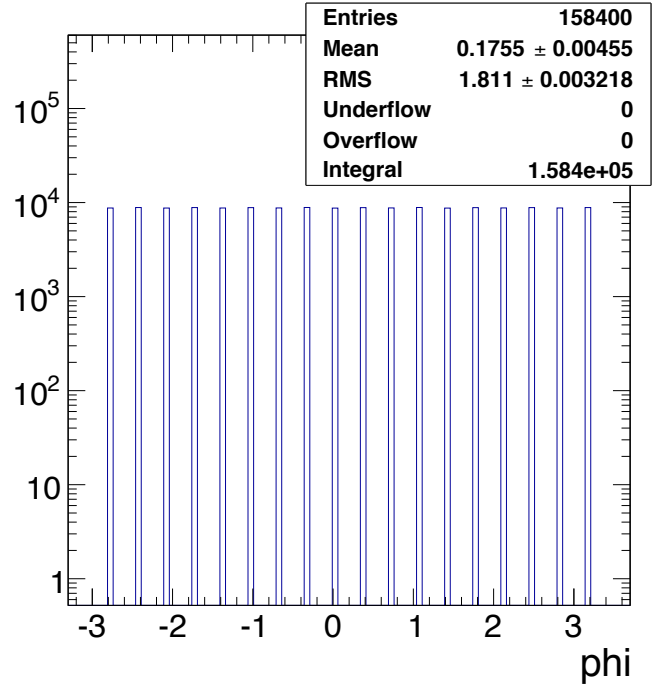
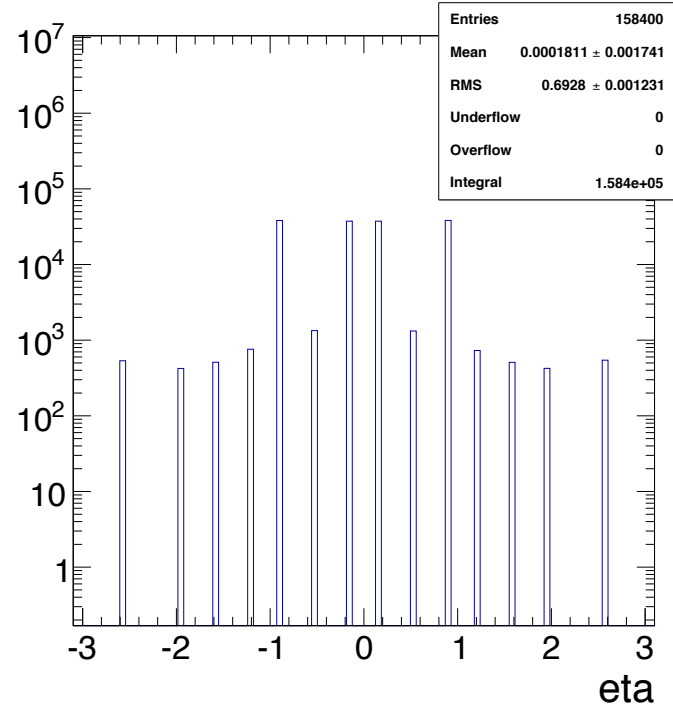
H/E < 0.3 ?



Egamma: physical quantities

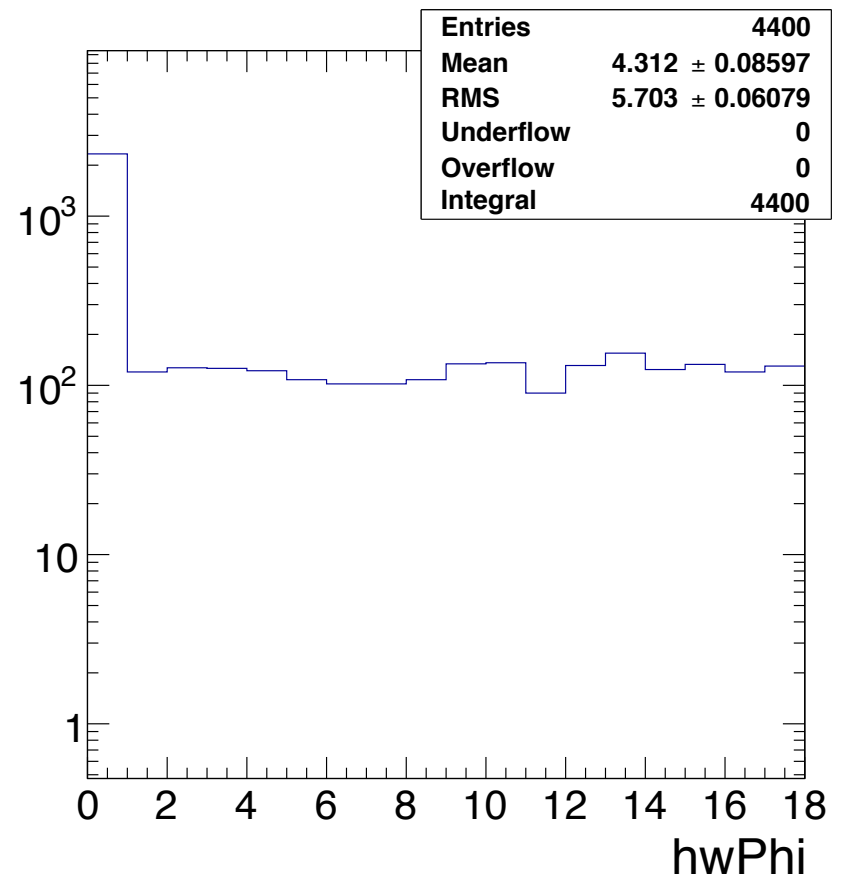
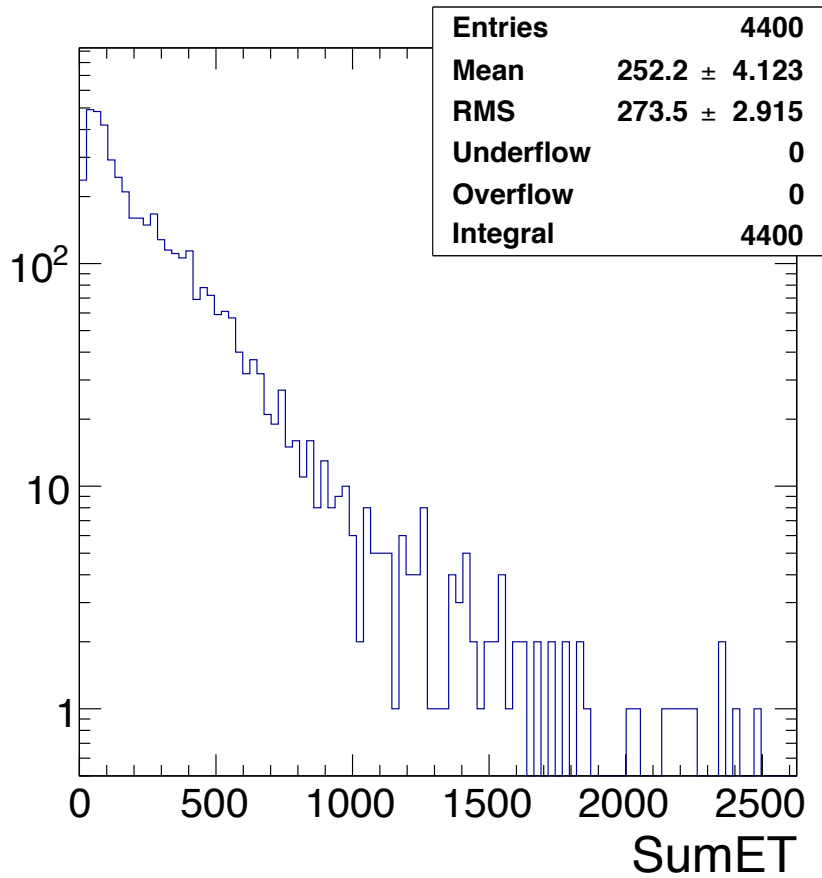


Mostly low pt pi0's



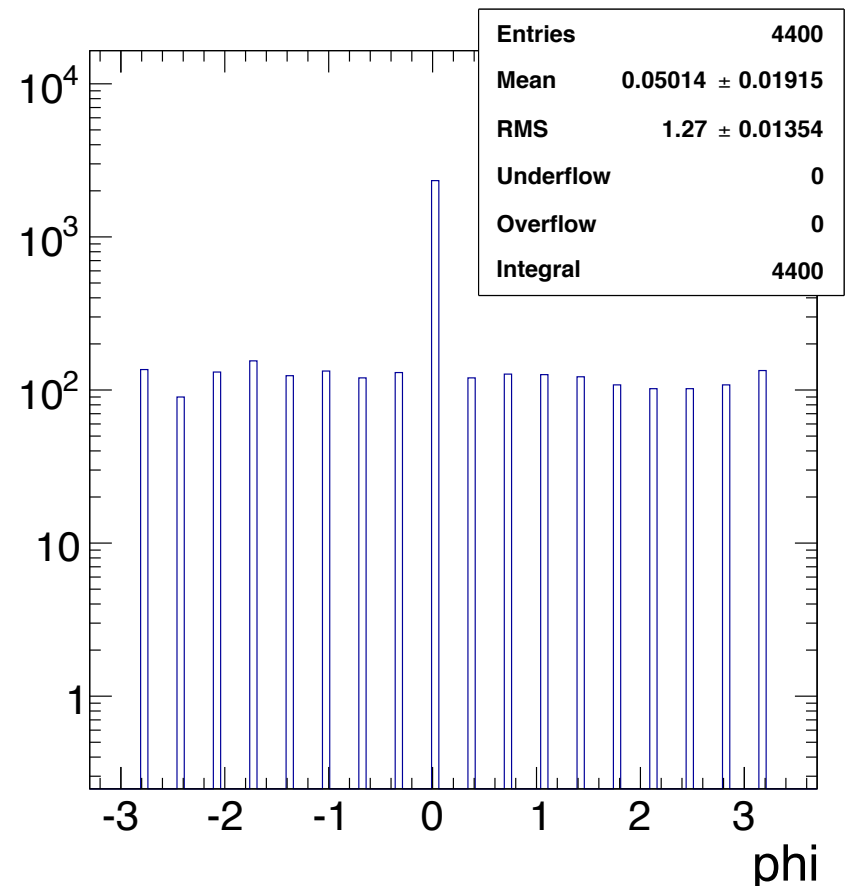
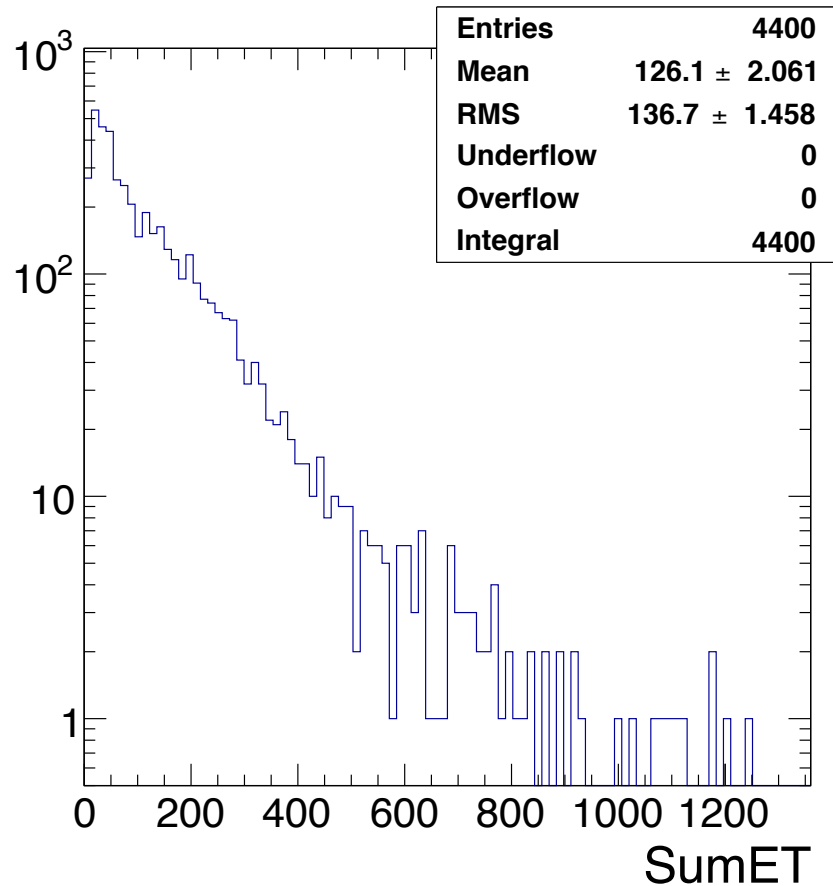


SumET: hardware quantities

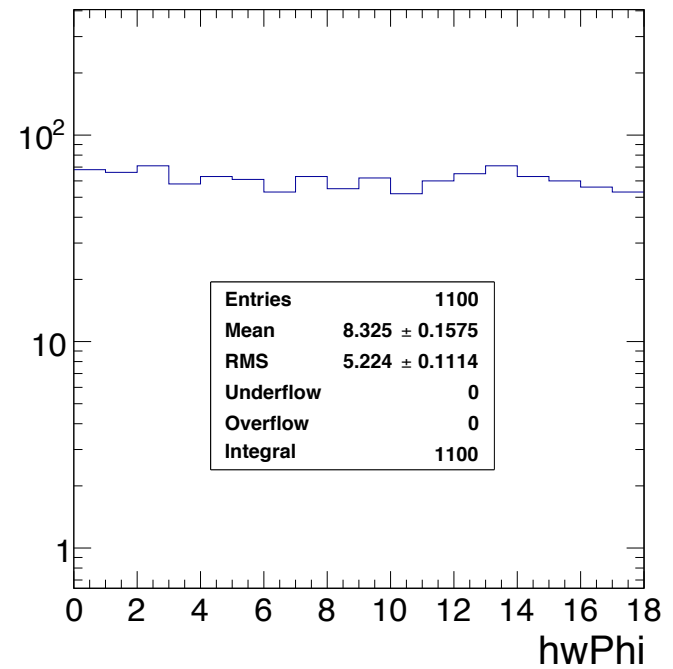
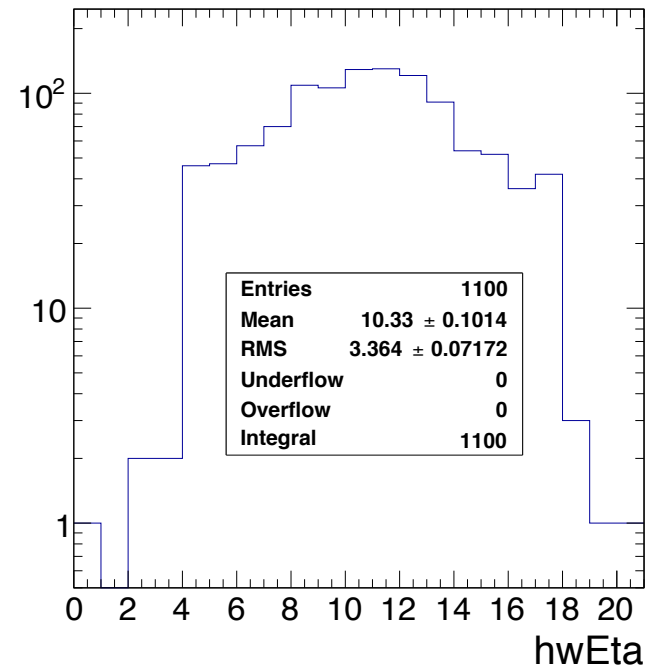
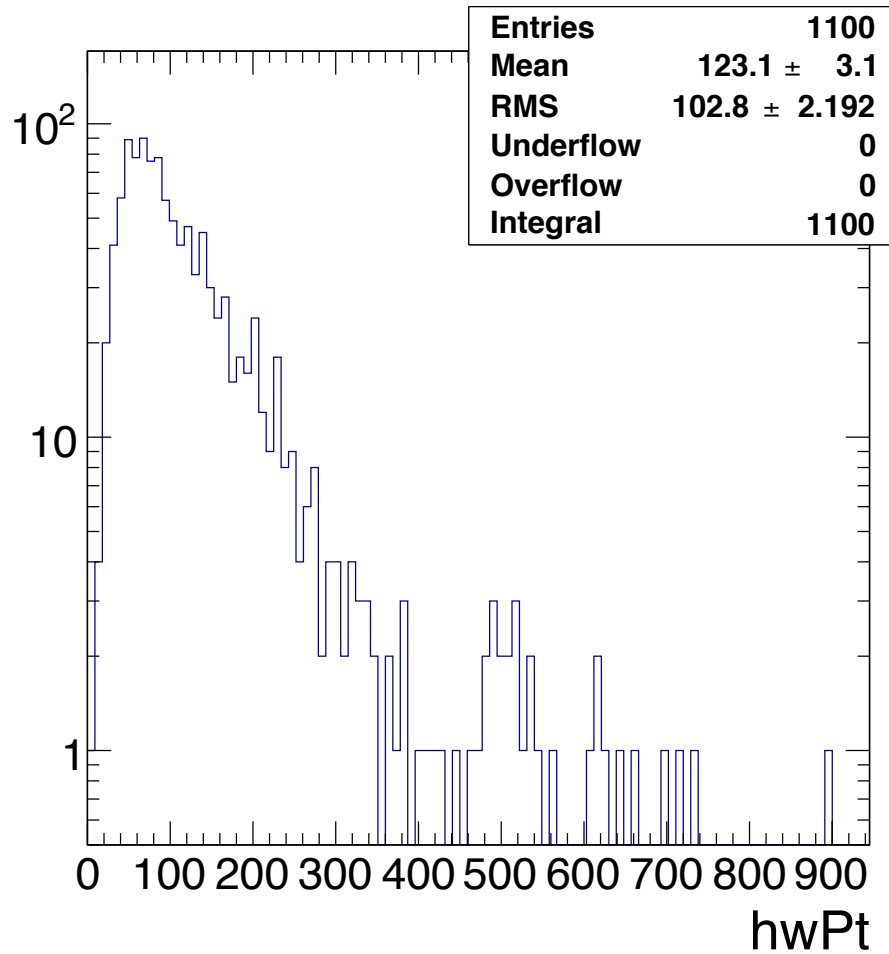




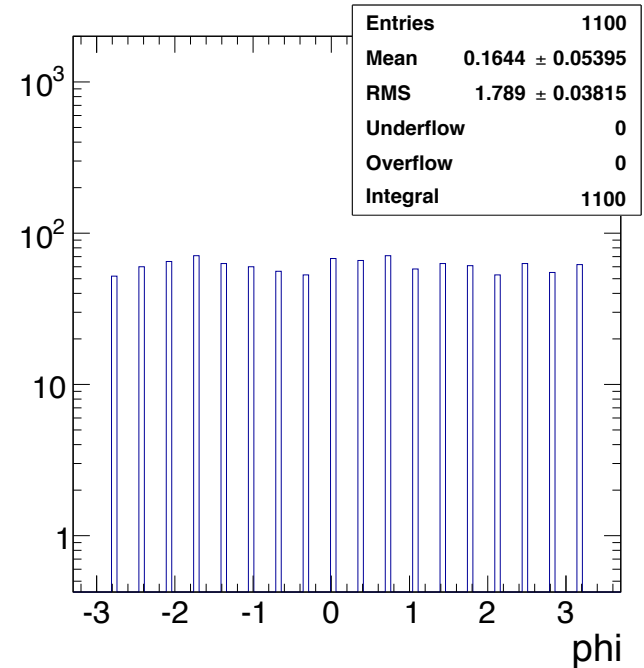
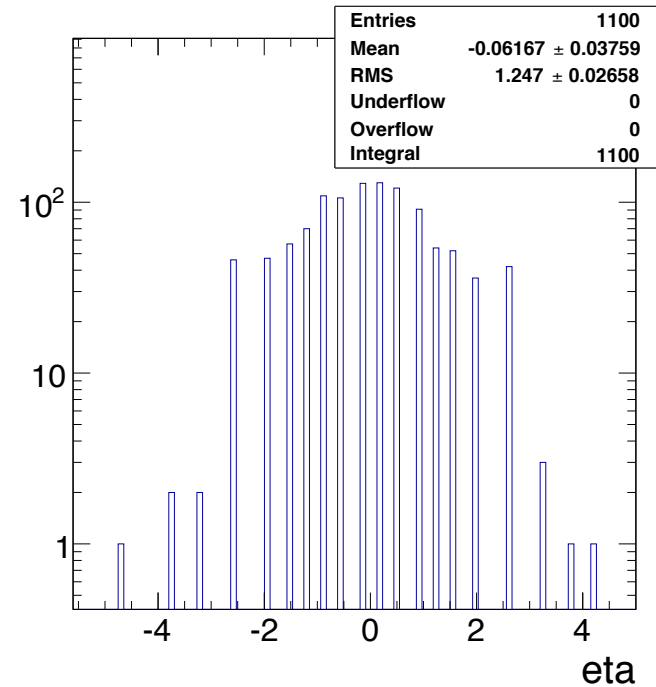
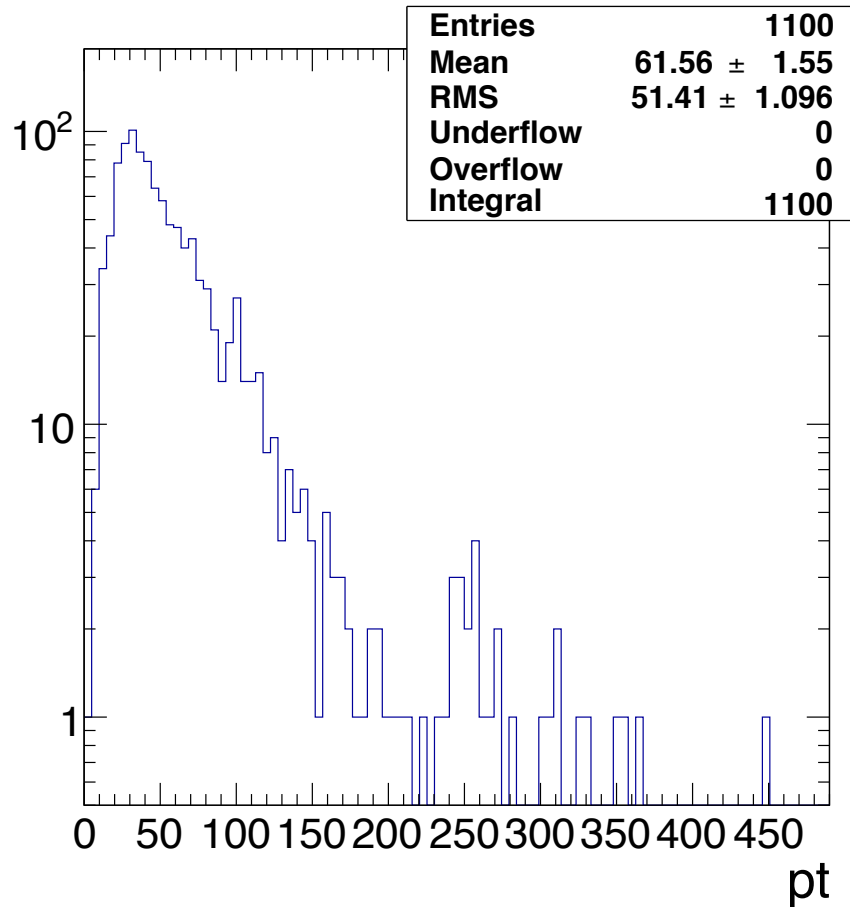
SumET: physical quantities



Tau: hardware quantities



Tau: physical quantities



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- Define validation metric/ benchmarks

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