July checkpoint Jet validation

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Intro

- Jira Ticket
- Three main comparisons:
  1. r22 with default cuts versus r21
  2. r22 with default cuts versus r22 cutLevel=16
  3. r22 versus 21, both with preExec for switching off the thresholds applied to the calibrated jet pt
- Red plots detected in all samples and comparisons
- For all plots and additional ttbar comparisons see: WEBPAGE (naming convention on next slide)

Webpage naming convetion

<div align="center">

taskx_yz_tag

</div>

- 1: without preExec for switching off the thresholds applied to the calibrated jet pt, both for r22 and r21
- 2: with preExec for switching off the thresholds applied to the calibrated jet pt, both for r22 and r21
- 1: without pile-up
- 2: with pile-up
- 1: r21
- 2: r22 cutLevel=16
- none: 361023
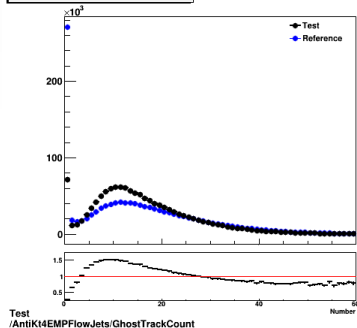- _ttbar: 410000, _ratio: using a ratiorange of 0.25

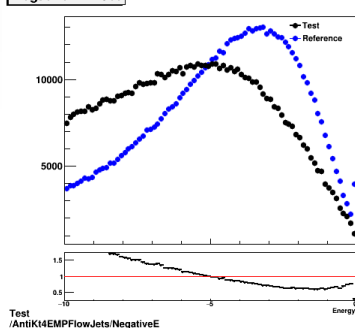# Task1_11 r22 default vs r21 w/o pile-up
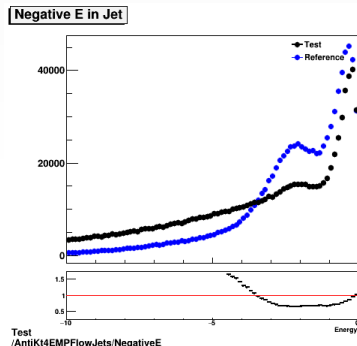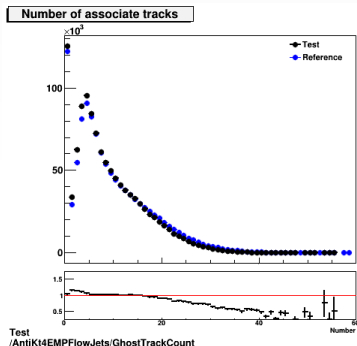
- Red plots in all samples, mostly tracking related
- EMPFlow: tracking related, NegativeE, track width
- EMTopo: tracking related, NegativeE
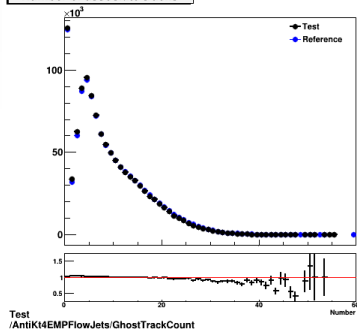- LCTopo: tracking related, NegativeE

4

Task1_21 r22 default vs r21 with pile-up
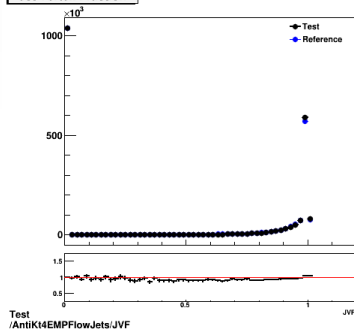

- More than 50% red plots in all samples
- better agreement can be seen at high pT

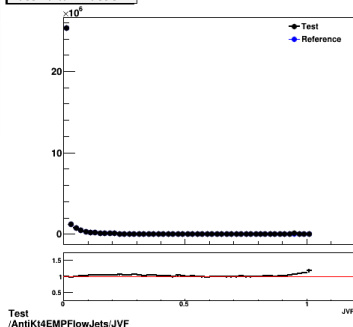# Task1_12 r22 default vs r22 cutLevel=16 w/o pile-up

- 3 red plots for all samples
- Red plots: JVF, JVF at index 0, number of associated tracks

Task1_22 r22 default vs r22 cutLevel=16 with pile-up
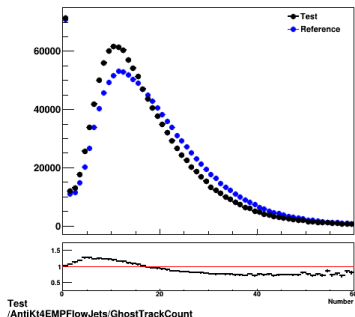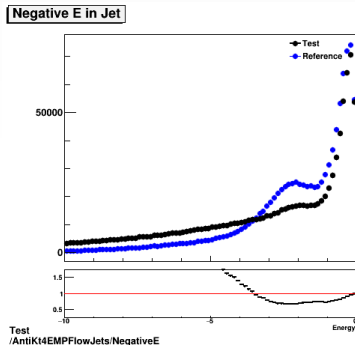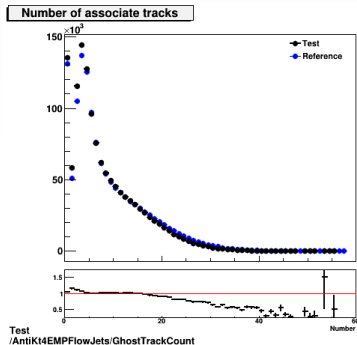

- 3 red plots in all samples: JVF, JVF at index 0, number of associated tracks
- Other than in task1_12 several plots are yellow, patially overlaping with task1_21 yellow plots
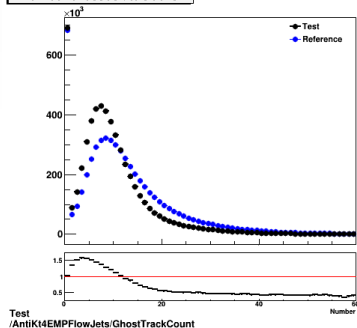
Task2_11 r22 vs r21 w/o pile-up, both with preExec

- Red plots in tracking variables as for task1_11
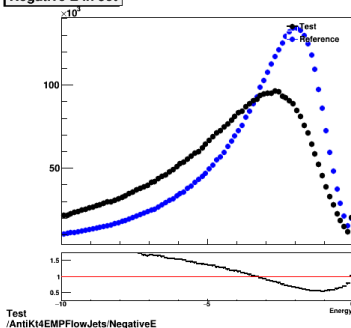- Additional/different yellow plots compared to task1_11, for example LArQuality

8

Task2_21 r22 vs r21 with pile-up, both with preExec

- Generally less red plots than for task1_21 without preExec
- Color summary on next slide

Color summary for Task2_21 r22 vs r21

		2_21			1_21	
Sample	PFlow	EMTopo	LCTopo	PFlow	EMTopo	LCTopo
Red	32	28	33	53	47	52
Yellow	22	24	19	13	18	14
Green	32	37	37	20	21	20

- Plots that are yellow (instead of red) in task2_21 are mainly: jet η (constit and EMScale), energy in EMB2/EME2/EME3/FCAL1/FCAL0/HEC2/HEC3, HEC fraction, high pT variables, number of associated muon fragments

10

Conclusion

- Red plots for all samples and comparisons still.
- If you want to see more plots in detail or any other specific comparisons please message me!