# Weekly Meeting

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# Task1

- Task 1: 20.1.4.7 MC15 validation

  "Final" validation of MC15 start up with 50 ns.
  This is going in parallel with to the MC15 production.

  Ref 1(valid3): s2578_r6595_p1878 (19.2.3.3, 20.1.4.5)
  This is Task2, Test 5 with AthenaMP from ATLPHYSVAL-307
  Ref 2(valid1): s2578_r6632_p1878 (19.2.3.3, 20.1.4.5)
  As ref 1 but with updated digi-window (--pileupFinalBunch = 6), we expect similar diffs to last time - it is just to have an updated reference

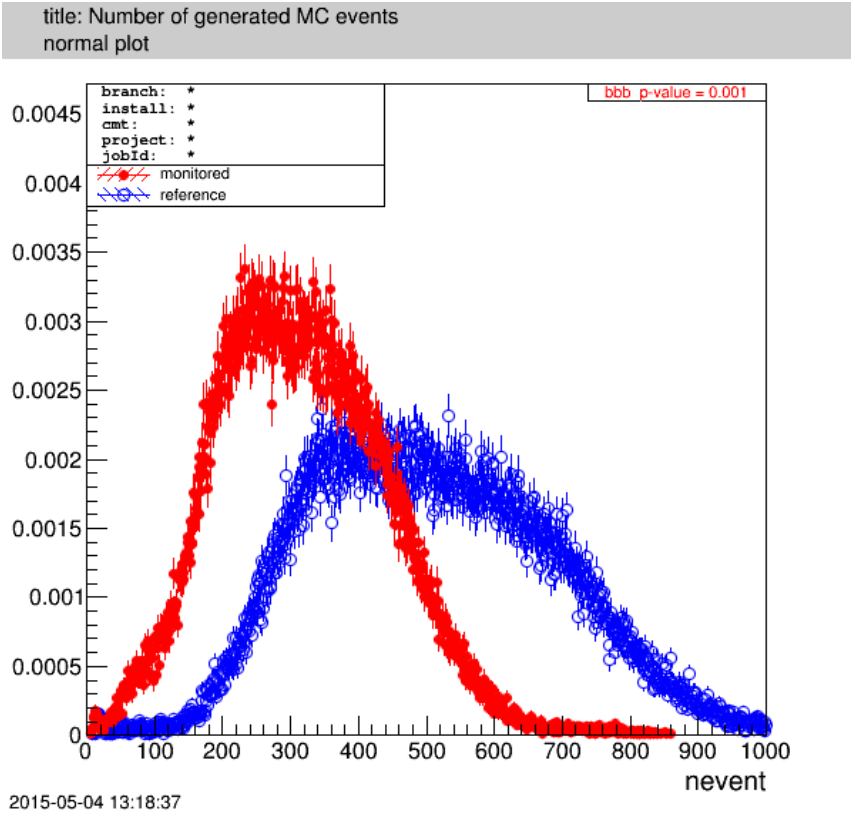
  Test 1(valid1): s2578_r6628_p1884 (19.2.3.3, 20.1.4.7)
  Full MC15 setup (with AthenaMP) in 20.1.4.7 including updated digi window, SDR-30 for updated b-tagging
  Test 2(valid1): s2578_r6630_p1884 (19.2.3.3, 20.1.4.7)
  Full MC15 setup (with AthenaMP) in 20.1.4.7 including updated digi window, SDR-30 for updated b-tagging and slightly updated pileup distribution

  We expect no diffs for refs other than changes that went into 20.1.4.7, specifically b-tagging and pileup

- Ref1->valid3.110401.PowhegPythia_P2012_ttbar_nonallhad.recon.ESD.e3099_s2578_r6595/
- Ref2->valid1.110401.PowhegPythia_P2012_ttbar_nonallhad.recon.ESD.e3099_s2578_r6632/
- Test1->valid1.110401.PowhegPythia_P2012_ttbar_nonallhad.recon.ESD.e3099_s2578_r6628/
- Test2->valid1.110401.PowhegPythia_P2012_ttbar_nonallhad.recon.ESD.e3099_s2578_r6630/

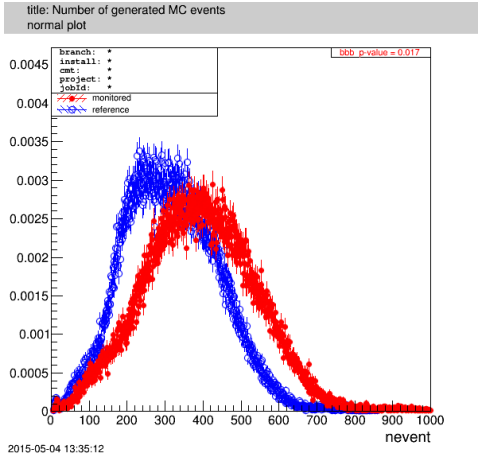
# Task1

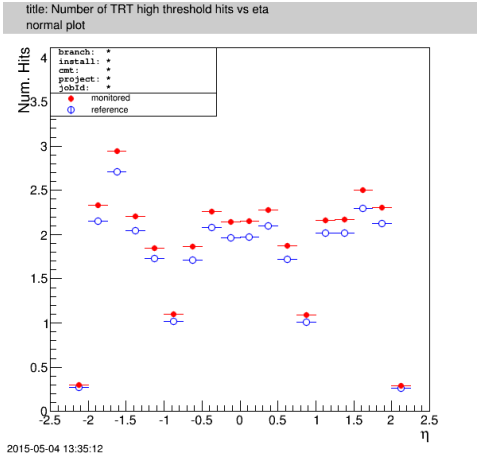
- Task1：
  - http://atlas-computing.web.cern.ch/atlas-computing/links/PhysValDir/disk2/Tracking/08052015/
- Task1_ref1_test1
  - One plot is different
    - http://atlas-computing.web.cern.ch/atlas-computing/links/PhysValDir/disk2/Tracking/08052015/0508_task1_ref1_test1/plots/h1r_38023376-8372-4df0-ab5f-99f53fbf8100.png
- Task1_ref2_test1
  - The curves are quiet close between ref and test.

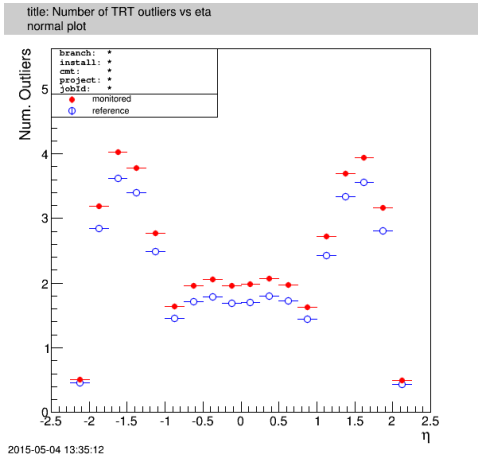


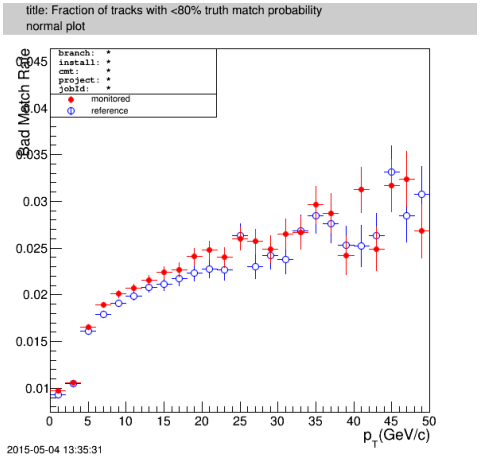
# Task1

- Task1_ref1_test2
  - Number of generated MC events
    - http://atlas-computing.web.cern.ch/atlas-computing/links/PhysValDir/disk2/Tracking/08052015/0508_task1_ref1_test2/plots/h1r_106da221-b561-4cd4-9633-2c4edd370599.png
  - Outlier fraction : test is bigger than ref obviously, i.e.
    - http://atlas-computing.web.cern.ch/atlas-computing/links/PhysValDir/disk2/Tracking/08052015/0508_task1_ref2_test2/plots/p1r_18419ee4-ce3f-4780-8660-34d042af4894.png
  - Hole fraction: test is bigger than ref slightly, i.e.
    - http://atlas-computing.web.cern.ch/atlas-computing/links/PhysValDir/disk2/Tracking/08052015/0508_task1_ref1_test2/plots/p1r_80cacb5c-1b50-4a9b-9063-b6cfd73b5959.png
- Task1_ref2_test2
  - Is extremely similar with Task1_ref1_test2



# Task2 and task3

- Task2 would be finished soon.
- There are still problems at task3

# H Combination

- Update the new workspaces of all mass points
- Limit setting-toys for low mass and non-res
- Limit setting-asymptotic for high mass

# Upper Limits for Low Mass

| mass point | observed | median | p2s | p1s | m1s | m2s |
|---|---|---|---|---|---|---|
| 500 | 0.17677 | 0.15488 | 0.347488 | 0.229794 | 0.1116 | 0.083128 |
| 520 | 0.200145 | 0.132949 | 0.285182 | 0.194606 | 0.095797 | 0.071357 |
| 540 | 0.137715 | 0.112221 | 0.24018 | 0.163969 | 0.080861 | 0.060232 |
| 560 | 0.105746 | 0.0951 | 0.201938 | 0.138626 | 0.068525 | 0.051043 |
| 580 | 0.094621 | 0.078347 | 0.167796 | 0.11461 | 0.056454 | 0.042051 |
| 600 | 0.077873 | 0.066112 | 0.143518 | 0.097154 | 0.047637 | 0.035484 |
| 620 | 0.064114 | 0.060702 | 0.130675 | 0.089025 | 0.043739 | 0.03258 |
| 640 | 0.047523 | 0.054044 | 0.117448 | 0.079514 | 0.038942 | 0.029007 |
| 660 | 0.041936 | 0.049135 | 0.107342 | 0.072495 | 0.035404 | 0.026372 |
| 680 | 0.041833 | 0.044781 | 0.098764 | 0.066289 | 0.032267 | 0.024035 |
| 700 | 0.039814 | 0.039807 | 0.089117 | 0.059224 | 0.028683 | 0.021365 |
| 720 | 0.037757 | 0.036878 | 0.083267 | 0.055043 | 0.026572 | 0.019793 |
| 740 | 0.03513 | 0.034267 | 0.078007 | 0.051299 | 0.024691 | 0.018392 |
| 760 | 0.035391 | 0.031706 | 0.072891 | 0.047615 | 0.022846 | 0.017017 |
| 780 | 0.042758 | 0.029637 | 0.068764 | 0.044646 | 0.021355 | 0.015907 |
| 800 | 0.048393 | 0.02783 | 0.065083 | 0.042043 | 0.020053 | 0.014937 |
| 820 | 0.049715 | 0.026471 | 0.062377 | 0.040092 | 0.019074 | 0.014208 |
| 840 | 0.045159 | 0.02509 | 0.059614 | 0.038145 | 0.018079 | 0.013467 |
| 860 | 0.034425 | 0.024052 | 0.057632 | 0.036653 | 0.017331 | 0.01291 |
| 880 | 0.022097 | 0.022859 | 0.055333 | 0.034979 | 0.016472 | 0.012269 |
| 900 | 0.015401 | 0.021415 | 0.052491 | 0.032905 | 0.015431 | 0.011494 |
| 920 | 0.013846 | 0.020979 | 0.051717 | 0.032303 | 0.015117 | 0.01126 |
| 940 | 0.01226 | 0.019739 | 0.049533 | 0.030565 | 0.014223 | 0.010594 |
| 960 | 0.011546 | 0.019139 | 0.048378 | 0.029701 | 0.013791 | 0.010272 |
| 980 | 0.011369 | 0.018723 | 0.047631 | 0.029114 | 0.013491 | 0.010049 |
| 1000 | 0.011297 | 0.018079 | 0.046078 | 0.028124 | 0.013027 | 0.009703 |

# Upper Limits for High Mass

| mass point | observed | median | p2s | p1s | m1s | m2s |
|---|---|---|---|---|---|---|
| 125 | | | | | | |
| 260 | | | | | | |
| 270 | 1.75 +/- 0.0255604 | 1.52976 | 2.75 | 1.88866 | 1.26064 | 1.125 |
| 280 | 1.99993 +/- 0.0298628 | 1.37614 | 2.56582 | 1.85378 | 1.26691 | 1.12652 |
| 285 | 2.38567 +/- 0.0922138 | 1.42907 | 2.58054 | 1.84226 | 1.23782 | 1.07908 |
| 290 | 2.29972 +/- 0.0377823 | 1.40016 | 2.57733 | 1.83827 | 1.22353 | 1.04403 |
| 295 | 2.12861 +/- 0.0396961 | 1.41333 | 2.57655 | 1.83944 | 1.20285 | 1.0411 |
| 300 | 2.31781 +/- 0.0869728 | 1.37646 | 2.53951 | 1.79488 | 1.10736 | 0.95409 |
| 305 | 1.24673 +/- 0.0255256 | 1.30389 | 2.37349 | 1.6925 | 1.14039 | 0.975 |
| 310 | 1.27623 +/- 0.0204665 | 1.2396 | 2.28988 | 1.69229 | 1.07565 | 0.981384 |
| 315 | 1.75283 +/- 0.0340015 | 1.27372 | 2.27829 | 1.6264 | 1.07725 | 0.890445 |
| 320 | 1.72098 +/- 0.0298662 | 1.21249 | 2.25345 | 1.56272 | 1.01113 | 0.820433 |
| 325 | 2.18975 +/- 0.182026 | 1.2125 | 2.23566 | 1.56939 | 0.962642 | 0.890206 |
| 330 | 1.84872 +/- 0.0217169 | 1.16797 | 2.17712 | 1.51561 | 1.04986 | 0.976711 |
| 340 | 1.8091 +/- 0.0265305 | 1.11776 | 2.01673 | 1.37495 | 1.00927 | 0.829232 |
| 350 | 1.64897 +/- 0.0252053 | 0.976714 | 1.81233 | 1.28141 | 0.854511 | 0.672446 |
| 360 | 1.21059 +/- 0.0207717 | 0.920817 | 1.70364 | 1.21839 | 0.797324 | 0.707431 |
| 380 | 1.23247 +/- 0.0166268 | 0.821054 | 1.5101 | 1.04191 | 0.766036 | 0.65 |
| 400 | 0.929059 +/- 0.0126991 | 0.629123 | 1.19 | 0.825639 | 0.519121 | 0.398045 |
| 420 | 0.804347 +/- 0.0116151 | 0.566026 | 1.04 | 0.734595 | 0.442765 | 0.41196 |
| 440 | 0.754286 +/- 0.011612 | 0.515538 | 0.985666 | 0.670012 | 0.434893 | 0.343993 |
| 460 | 0.706685 +/- 0.0103387 | 0.481086 | 0.89455 | 0.625532 | 0.40718 | 0.33906 |
| 480 | 0.69011 +/- 0.0114217 | 0.441111 | 0.824276 | 0.589677 | 0.372489 | 0.323476 |
| 500 | 0.64028 +/- 0.0110354 | 0.425312 | 0.780411 | 0.549043 | 0.342429 | 0.315 |