

2015 Heavy Ion Reprocessing

Latest Status

<https://twiki.cern.ch/twiki/bin/view/Atlas/March2016HeavyIonReprocessing>

<https://its.cern.ch/jira/browse/DATREP-46>

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ADC

April 19th, 2016

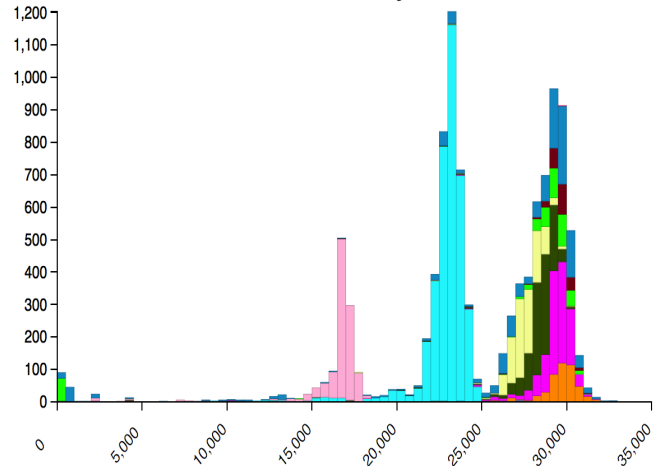


Status

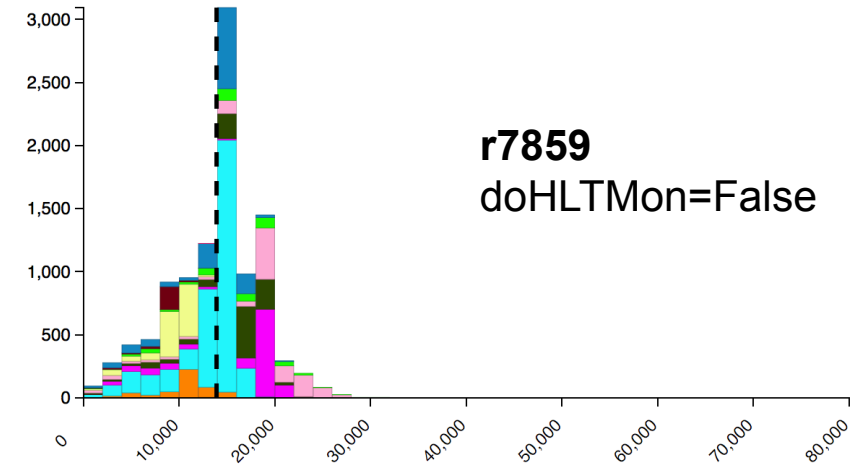
- > Eight runs now completed for both HardProbes and MinBias with original **cutLevel1** configuration: 286748, 287281, 287321, 287330, 287334, 287380, 287560, 287594
 - Total (HardProbes) luminosity: **115.78 ub⁻¹**
 - HardProbes datasets (4 runs r7827, 4 runs r7859):
`data15_hi.*.physics_HardProbes.recon.AOD.r78*/`
`data15_hi.*.physics_HardProbes.merge.HIST.r78*_p2574_p2574_p2574/`
 - MinBias datasets (1 run r7827, 7 runs r7865):
`data15_hi.*.physics_MinBias.recon.AOD.r78*/`
 - > CosmicCalo: **all 35 runs now done**
`data15_hi.*.physics_CosmicCalo.recon.AOD.r7860/`
`data15_hi.*.physics_CosmicCalo.merge.HIST.r7860_p2574_p2574/`
 - > ESDs also ready for all three streams, as requested for run 287594
`data15_hi.00287594.physics_HardProbes.recon.ESD.r7859/`
`data15_hi.00287594.physics_MinBias.recon.ESD.r7865/`
`data15_hi.00287594.physics_CosmicCalo.recon.ESD.r7860/`
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- > New strategy, cutLevel=2 tasks submitted Friday, done in 3 days
 - Three HardProbes runs submitted
`data15_hi.00287281.physics_HardProbes.recon.AOD.r7874/`
`data15_hi.00287330.physics_HardProbes.recon.AOD.r7874/`
`data15_hi.00287380.physics_HardProbes.recon.AOD.r7874/`
 - > Additional test with attempt at autoflush postExec, juts completed now
`data15_hi.00287281.physics_HardProbes.recon.AOD.r7888/`
 - > **Five more HardProbes runs and eight MinBias runs submitted last night with r7874, some runs almost done**

Comparison of run 287281 histograms

Maximum PSS histogram



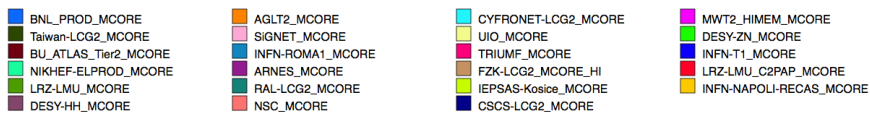
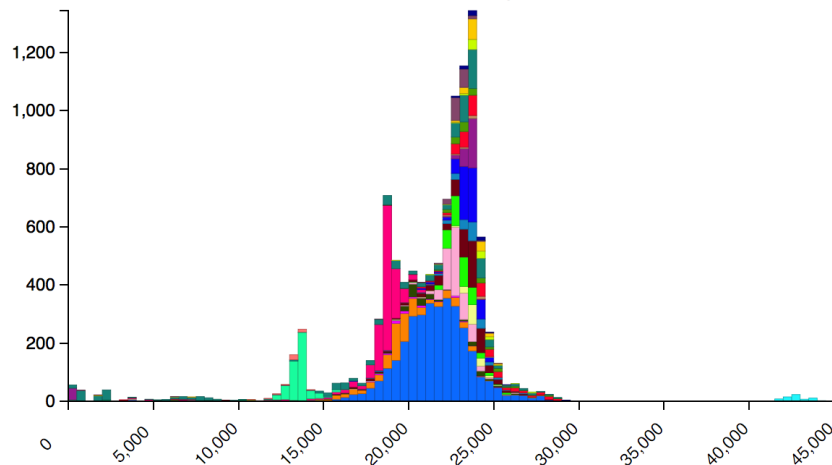
Walltime histogram



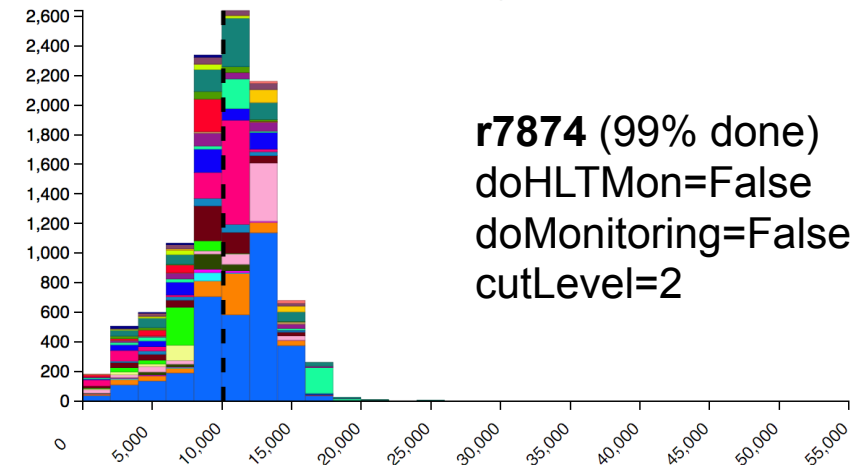
r7859
doHLTMon=False



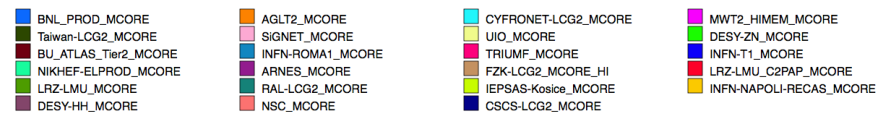
Maximum PSS histogram



Walltime histogram



r7874 (99% done)
doHLTMon=False
doMonitoring=False
cutLevel=2



Configuration and tags

- > Release: 20.7.5.2, conditions CONDBR2-BLKPA-2016-07
- > The following AMI tags are used:
- > **r7827**: First reco tag, used for original submission HardProbes
- > **r7859**: Next reco tag for HardProbes stream, includes **doHLTMon=False**
- > **r7865**: Reco tag for MinBias stream with **doMonitoring=False** (tag for running without HIST)
- > **r7860**: Reco tag for CosmicCalo streams (**doHIP** rather than **doHeavyIon**)
- > **r7861**: Reco tag for debugrec_hlt stream, clone of **r7859** but in release 20.7.5.4 (includes the TrigConfigSvc-01-01-61 fix)
- > **r7874**: clone of **r7865** with **InDetFlags.cutLevel.set_Value_and_Lock(2)**
- > **r7888**: clone of **r7874** with (complicated) **autoflush** postExec
- > **p2574**: HIST merge tag
- > Default PS2 config: **corecount=8; ramcount=2750; baseramcount=2000; ramUnit=MBPerCore;**

Table from Toni

Here are results from processing the whole file. In brief the settings of "No mon"+"cut-level2" are robust, they reduce the memory footprint by 5 GB (20%). The addition of autoflush=1 for RAWtoESD, would reduce it by a further 1 GB. Removing TRT extensions in tracking reduces the memory footprint by 5 GB (20%) alone.

Tag	Description	n(events)	nprocessors	max PSS	mean PSS	ESD autoflush	cpu time (sec per event)
r7827	full mon	991	8	28.0	25.1	10	52.0
r7865	No mon	991	8	26.4	23.4	10	47.8
r9999	No mon + autoFlush + evtFork	991	8	24.3	21.5	1	48.2
r9995 run1	No mon + cut level 2	991	8	22.9	20.2	10	36.2 r7874
r9995 run2	No mon + cut level 2	991	8	23.1	20.5	10	35.4 r7874
r9993	No mon + cut level 2 + autoFlush	991	8	21.8	19.4	1	35.5 r7888
r1000	full mon + TRTExtension off	991	8	23.0	20.2	10	40.2

Next steps are to

- test event forking