
Report on Releases and Validation
David Strom
(with help from Simon, Ricardo)

- Release Status
- Validation

Status of 13.0.40.Y

- This is the release that will be used for FDR phase I
- Individual Trigger tests are not available in ATN
- Can follow the changes in the release with RTT

Packages added in last week:

Trigger/TrigAlgorithms/TrigMoore	TrigMoore-00-01-46
Trigger/TrigEvent/TrigCosmicEvent	TrigCosmicEvent-00-00-23
Reconstruction/RecJobTransforms	RecJobTransforms-00-06-00
Trigger/TrigValidation/TriggerTest	TriggerTest-00-01-63
Trigger/TriggerCommon/TriggerMenuPython	TriggerMenuPython-00-00-47-22
InnerDetector/InDetEventCnv/InDetRawDataByteStreamCnv	InDetRawDataByteStreamCnv-00-00-99
Trigger/TrigHypothesis/TrigEgammaHypo	TrigEgammaHypo-00-06-84-02
Trigger/TrigTools/TrigOnlineSpacePointTool	TrigOnlineSpacePointTool-00-00-47-02
Generators/CavernBkgGenerator	CavernBkgGenerator-00-01-01
Generators/EvgenJobOptions	EvgenJobOptions-00-00-19
Generators/CavernBkgGenerator	CavernBkgGenerator-00-01-00
InnerDetector/InDetExample/InDetRecExample	InDetRecExample-01-05-42-08
MuonSpectrometer/MuonCablings/TGCCabling	TGCCabling-00-00-44
MuonSpectrometer/Muonboy/MboySvc	MboySvc-07-76-07
MuonSpectrometer/Muonboy/MuonboyCore	MuonboyCore-07-76-07-02
Trigger/TrigHypothesis/TrigBjetHypo	TrigBjetHypo-00-02-45-01
Trigger/TrigT1/TrigT1TGC	TrigT1TGC-00-01-48-01

- Most important change for trigger is TrigT1TGC-00-01-48-01 that fixed some memory leaks.

Decreased muon triggers in RTT top events by about 2%

- Memory leaks also fixed in Bjets and in Photon slice

Developers helped keep this running smoothly checking their tags with Simon's recipe on:

https://twiki.cern.ch/twiki/bin/view/Atlas/TriggerValidationHOWTO#How_to_test_new_tags_before_they

- This procedure compares trigger counts before and after change. In total it takes about 1 hour of clock time. Can be run on scratch disk on lxplus.

Two last issues for trigger 13.0.40.Y should now be solved

13.20.0

- Needed for M6.
- Will decide whether or not to have 13.20.0.Y beyond rel_4 DEV at Thursday release coordination meeting
- Ricardo is doing release coordination for this (which is why I'm giving the talk)
- 13.20.0 has been unstable during most of last week

(last good nightly is rel_1 with

```
cmt co -r TriggerJobOpts-00-00-37 Trigger/TriggerCommon/TriggerJobOpts
```

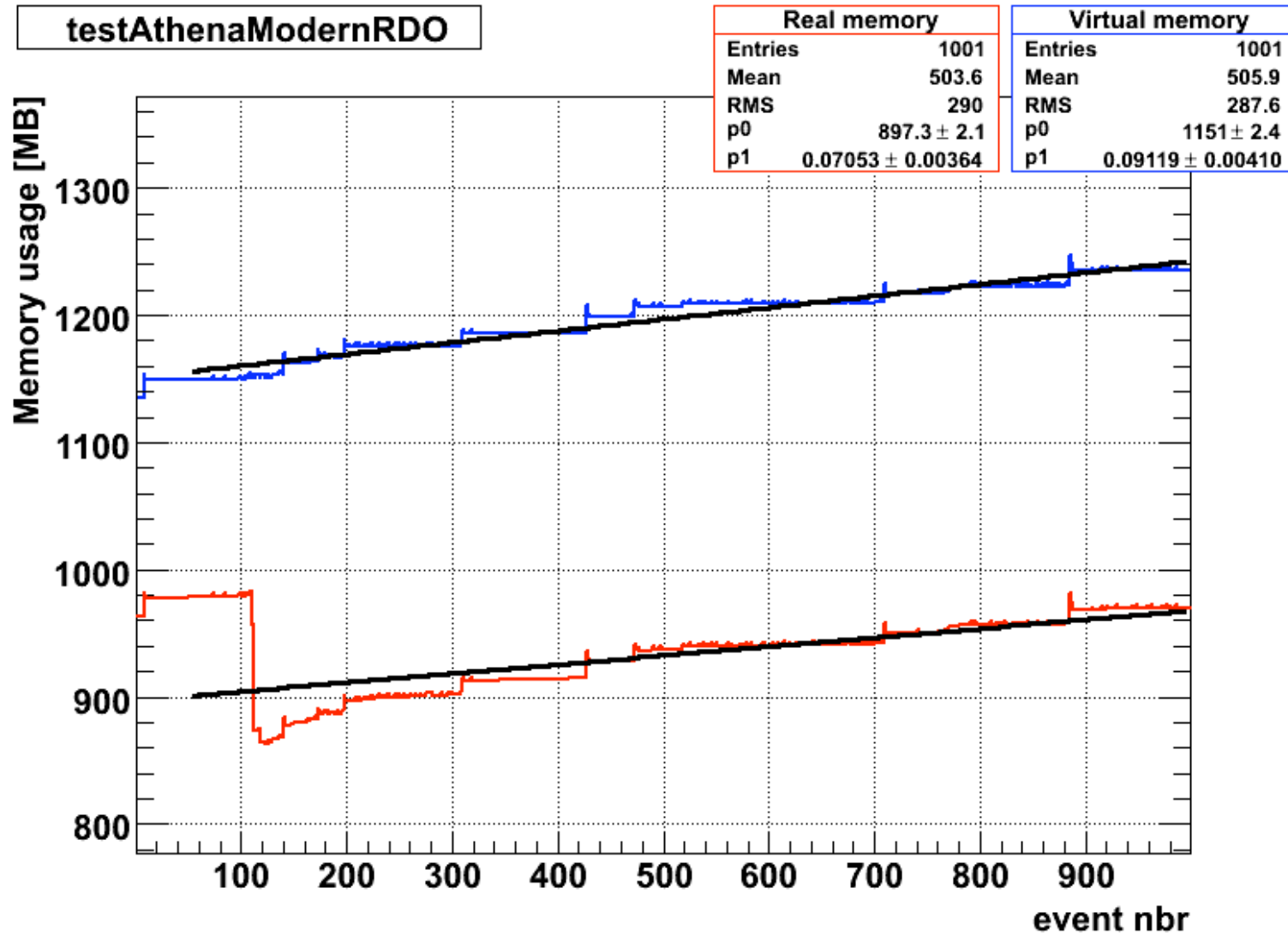
```
cmt co -r RecExCond-00-00-90 Reconstruction/RecExample/RecExCond/
```

```
)
```

Pending Trigger Packages for Dev:

TrigT1TGC-00-01-48	fixes memory leak (too many dependences ?)
TrigEFIDCosmic-00-00-23 TrigL2CosmicMuonHypo-00-01-47 TrigL2CosmicMuon-00-03-40 TriggerMenuPython-00-00-57 TrigT2CaloCosmic-00-00-05 TrigTRTxK-00-00-89	improves cosmics in M6
TrigEventARA-00-00-04	needed for root access
TrigT2CaloCommon-00-00-70 TrigNtCalo-00-00-75	needed MET development
InDetTrigRecExample-00-06-68 TriggerRelease-00-05-98	standalone triggers
TrigRingerTools-03-06-03 TrigCaloRinger-02-08-01 TrigNtCalo-00-00-75	Byte Stream issues
TrigConfigSvc-00-01-15	enable configuration with DBproxy
TrigHLTResultByteStream-00-00-05 TrigMuonHypo-00-00-64-01 TriggerJobOpts-00-00-38	RDO → BS fixes monitoring fixes for muons
TrigMoore-00-01-46	checks on hit masking

Remaining Memory Leaks (rel_2 29 Jan 2007) about 100K /event from perfmon (see trigger validation how-tos)



Memory Leak Summary

bug	frequency	algo	assign.	sub.	obs.	size	status	
31777	per roi	MergedPixelsTool	Jiri	Frank	29/11	98kB	FIXED	
		20/1 by InDetTrigPrepRawDataFormat-00-04-25-01						
32214	per event	LVL1TGCTrigger::TGCStr (Frank)	Hisaya	Ketevi	14/12	528bytes	FIXED	
32215	per roi	TrigBjetFex	Andrea	Ketevi	14/12	500B	FIXED	
		21/1 by TrigBjetHypo-00-02-45-01 in 13.0.40.2						
32216	per roi	TrigL2PhotonFex	Valeria	Ketevi	14/12	20B	FIXED	
		18/1						
32217	per roi	TrigL2BMuMuFex	Sergey	Ketevi	14/12	60bytes	FIXED	
		29/1 by TrigBphysHypo-00-01-02-01						
32218	per event	LVL1TGCTrigger::TGCSlav	Hisaya	Ketevi	14/12	384B	Prob.	
		fixed when 32214 fixed (Frank)						
32219	per event?	LVL1TGCTrigger:slavebrd	Hisaya	Ketevi	14/12	1.2kB	Prob.	
		fixed once 32222 fixed (Frank)						
32220	per event?	TGCRDO_Decoder	Zvi Tarem	Ketevi	14/12	1kB	fixed b	
32221	per event?	TGCHitPattern	Hisaya	Ketevi	14/12	540B	fixed	
		by TGC tags?						
32222	per event?	LVL1TGCTrigger::coinc.	Hisaya	Ketevi	14/12	7kB	Prob.	
		fix (delete slaveBoardOut in TGCDoubletSB destructor)						
32223	per roi?	TrigTauRec	Stefania	Ketevi	14/12	84B		
		should disappear in 1p3p/tauRec merge						
32224	per event?	TGCSectorLogic	Hisaya	Ketevi	14/12	1.8kB	FIXED	
		in TrigT1TGC-00-01-41 (compiles in 13.0.40.Y-Hisaya confirmed)						
32225	per event?	LVL1CTP::EventInfo	Wolfgang	Ketevi	14/12	28 B	small..	
32228	per algo	HLT::CreateAlgo	Tomasz	Ketevi	14/12	240 B	fix	
		probably lost in migration from 13.0.10						
32478	per roi?	TRT_DriftCircleTool	Jiri	Ketevi	7/1		FIXED	
		c.f. 31776						
32479	per roi?	MergedPixelsTool	Jiri	Ketevi	7/1		FIXED	
		19/1 by InDetTrigPrepRawDataFormat-00-04-28 c.f. 32458						
32481	per roi?	SCT_ClusteringTool	Jiri	Ketevi	7/1	10kB/roi?	FIXED	
		11/1 (duplicate of 31779) InDetTrigPrepRawDataFormat-00-04-25						
32932	per event	TrigInDetTrackFitParCnv	Andrew	Ricardo	23/1	8MB		
		went away? huge memory leak in T/P conversion						
32935	per event	TrigTauClusterCnv_p1	Andrew	Ricardo	23/1			
		reason found - limits in for loops addressing arrays (invalid write)						

Validation

- 13.20.0 will close soon. This is will be a good opportunity to update reference histograms and regtest files
- Much CPU resource has been added to RTT, results based on 1000 events (top events for most slices) are sometimes available within 24 hours. Automatic histogram comparison of these events is now available via the AID package.
- Need to identify a smaller number of quantities for daily monitoring of each slice
- We need to strengthen the validation efforts in the run up to data taking