

# v4-20-Release

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07/03/2011

# Changes: v4-20-Rev-16

- #78829 port to Release T0Physda.cxx. From rev. 47597,47864,47897
- #78828 Pb+Pb reco - output files and sizes
- #78823 Changes from rev. 47891 to be ported to the release. From rev. 47110,47183,47891,47916
- #78822 CTP message creating very large log files - LHC11a, 2
- #78752 TRD request for porting to release.
- #78632 TPC commit and port changes to v4-20-Release. From rev. 45234,45242,47803,47918, 47948, 46699
- #78608 Please port technical fix of AMPT to release. From rev. 47560,47717,47720,47722,47742,47747,47774,47775,47799,47800,47816
- #78844 Request to port TRD DCS calibration code to Release. From rev. 46180,46650,46103,47785
- **Memory consumption!**

# Changes: v4-20-Rev-16

- #78378 Pass0 calib train - too frequent segmentation faults
- #78863 port to Release AliT0Reconstructor for LHC10h reconstruction. From rev. 47833,47858,47860,47932
- #78857 Request: porting updates in TRD calibration code for pass0. From rev. 47787,47840
- #78851 Pass0 macros changes
- #78838 request to port to release - needed for EMCAL preprocessor. From rev. 47911
- #78883: Request to port r46782 to v4.20 release: fix in AliMultiplicity storing some params of reconstruction
- #78748 port to Release AliT0Parameters. From rev. 47802
- #78890: Request to port r47954 to v4-20: change in default value of tracklet cuts

# Changes: OCDB

- #78825 Updated ZDC/Calib/EnergyCalib object for SIM OCDBs
- #78768 Request to upload of HLT/Calib/StreamerInfo to Grid
- #78591 LHC10h production: ITS-SSD OCDB update
- #78672 Request for porting reco param (TRD)
- #78846 Request to upload OCDB/ITS/Align/Data file

# Requests

- #79118 Request to port Rev. 48118 to the release branch
- #79113 Request for porting to release PWG1/TRD
- #79108 Request: Port change in AliTRDrawStream to release
- #79100 LHC10h reconstruction macro: alignment data and "friends"
- #79095 Request to port rev48128 (TOF code) into release
- #79091 Request to update TOF visualization code
- #79081 request to port to release - needed for EMCAL DQM
- #79058 Request to port r.48082 to v4.20: AliITStrackerMI query fakes flagging settings for each event
- #78944 Request to port change in AliGenPythia for PWG3 MC
- #78926 Change in ZDC code for Pb-Pb pass2 reconstruction

# Requests: OCDB

- #79037 EMCAL: 2011 calibration file
- #78851 Pass0 macros changes
- #78839 125 MB OCDB object - TPC/Calib/Correction

# Other reports

- #79096 Problem in visualization in one reconstructed event

# Old slides



# Other reports (28/02/11)

- #78800 Rule check gives false positive on const'ness of virtual functions
- #78716 Change from AliRoot v4-21-09-AN to v4-21-16-AN causes crash of my task

# Other reports

- #78453 Request for reconstructing LHC10g TPC runs
- #78521 Cmake - recompiling AliRoot when switching to a new ROOT tag
- #78413 Feature request : QA merging

# Other reports (18/02/2011)

- #78386 Partial corruption of the ESDs staged on CAF
- #78378 Pass0 calib train - too frequent segmentation faults
- #78369 Request to fix (coverity) AliTOFPIDResponse class
- #78353 AliSimulation::ConvertRaw2SDigits: vertex from esd filled in next event header
- #78029 Primary MC track has TrackReferences from secondaries
- #78247 Request to reconstruct TPC cosmic runs for
- #78073 AliRoot version + tag name to evn. variables

# Software development

- LHC10h pass 1 is done (~73%) using v4-19-Release
  - v4-19-Release was created on 16/06/2010
  - 29 revisions
  - 262 changes were made on request (~37 after it was “frozen”)
  - Main problem in the PbPb reconstruction: memory consumption
- LHC10h pass 2 will be done using v4-20-Release
  - v4-20-Release was created on 20/10/2010
  - 13 revisions so far
  - 165 changes were made on request
  - Tests with selected runs: 137366 (golden run), 138200, 138666, 139172

# Detector readiness

- HMPID: Residuals in local Y of negative and positive tracks are shifted (bug #74683, None): depends on the TPC calibration
- Special reconstruction for PMD to prepare reco of LHC10h (task #18491, Done)
- Special reconstruction for PHOS to prepare reco of LHC10h (task #18493, Need Info)
- VZERO saturation of signal in PbPb (bug #76356, Duplicate)
- Improving EMCAL calibration for PASS2 of LHC10e-h (bug #76357, Need Info)
- Improve ITS tracking efficiency in preparation of pass2 of LHC10h (bug #76361, Fixed)
- New TPC calibration algorithm in preparation pf pass2 of LHC10h (bug #76364, Need Info)

# Detector readines

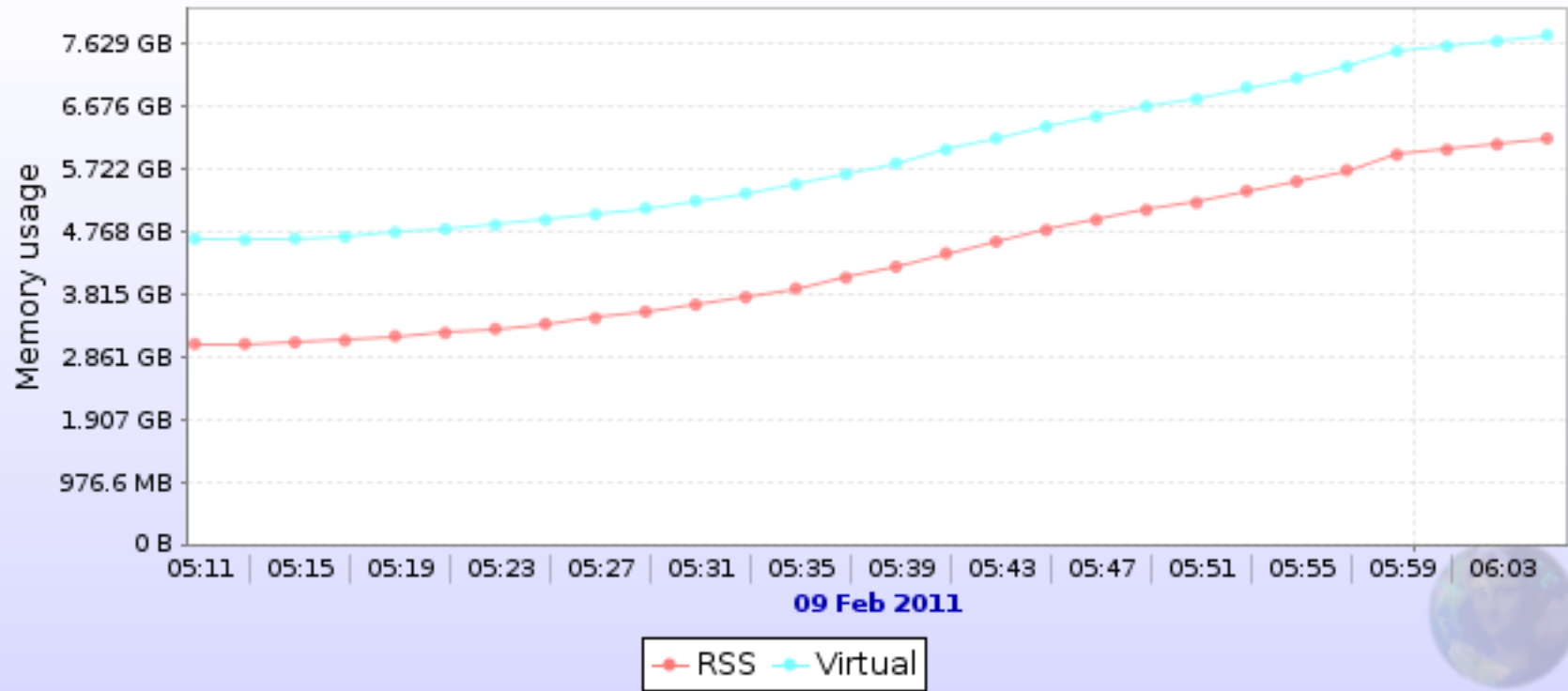
- MUON code update for pass2 of LHC10h (bug #76368, Need Info)
- TOF calibration in preparation of pass2 of LHC10h (bug #76386, Need Info): promised on 19/02/2011
- VZERO: changes in the reco of Pb-Pb data (bug #77478, Fixed)
- TPC: Increase tracking eta acceptance in pass2 of LHC10h (bug #77495, Assigned)
- ITS: Update GRP/Calib/MeanVertex for LHC10h pass2 (bug #78060, Assigned)
- Request to add TOF calibration parameters for LHC10h in the OCDB (bug #78072, Assigned)

# Detector readines

- Please put new PHOS calibration parameters to OCDB (bug #78091, Fixed)
- Please port codifications of PHOSRawDigiProducer to release (bug #78124, Fixed)
- For LHC10h pass1: Update OCDB to remove TPC OROCs with lower voltage (bug #78147, Assigned)
- Missing settings for V0 and cascade reconstruction in PbPb (bug #76291, Assigned): needs tuning on MC, important for the memory consumption

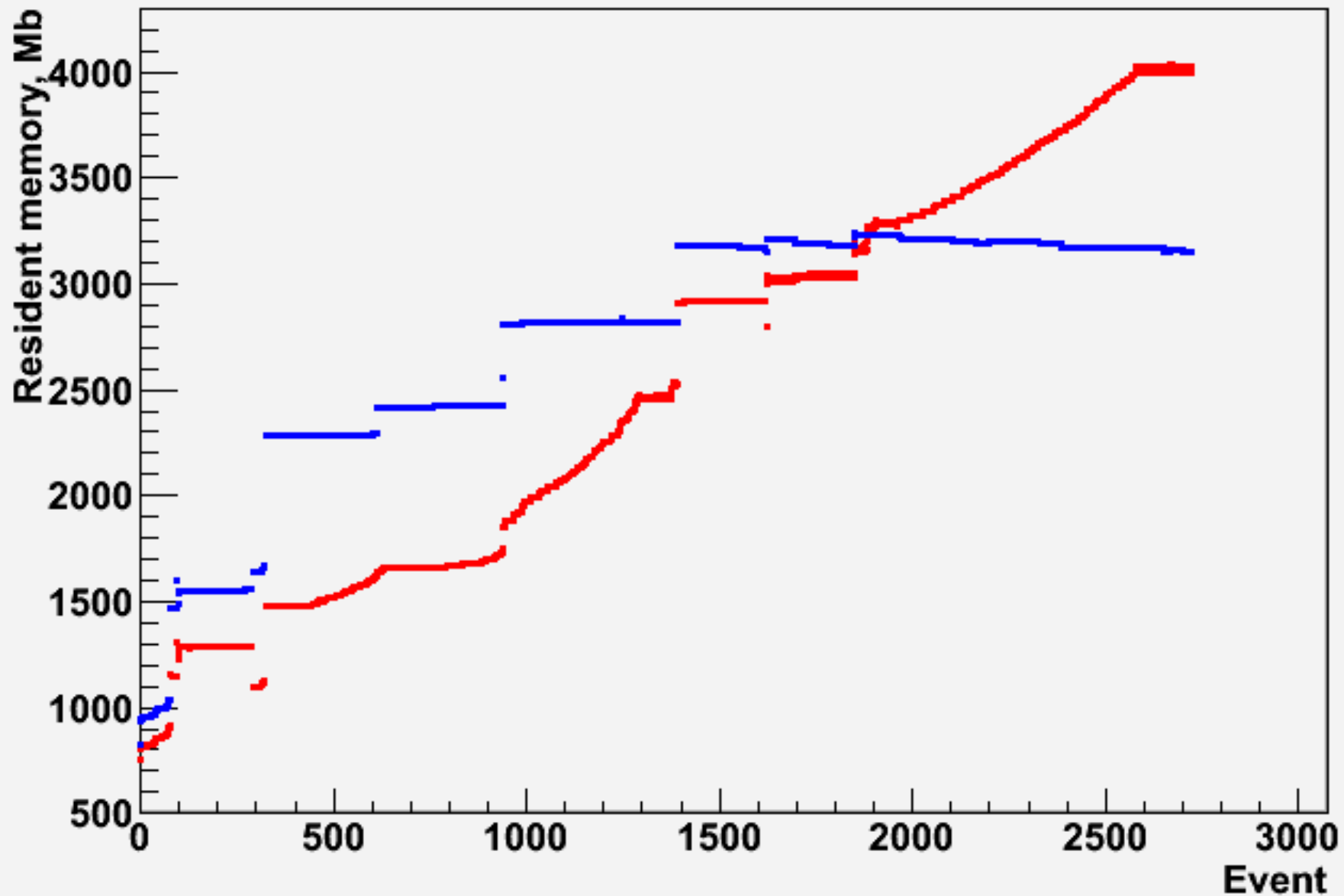
# Memory profile: v4-19-Rev-29

Masterjob 75929995, subjob 76168975

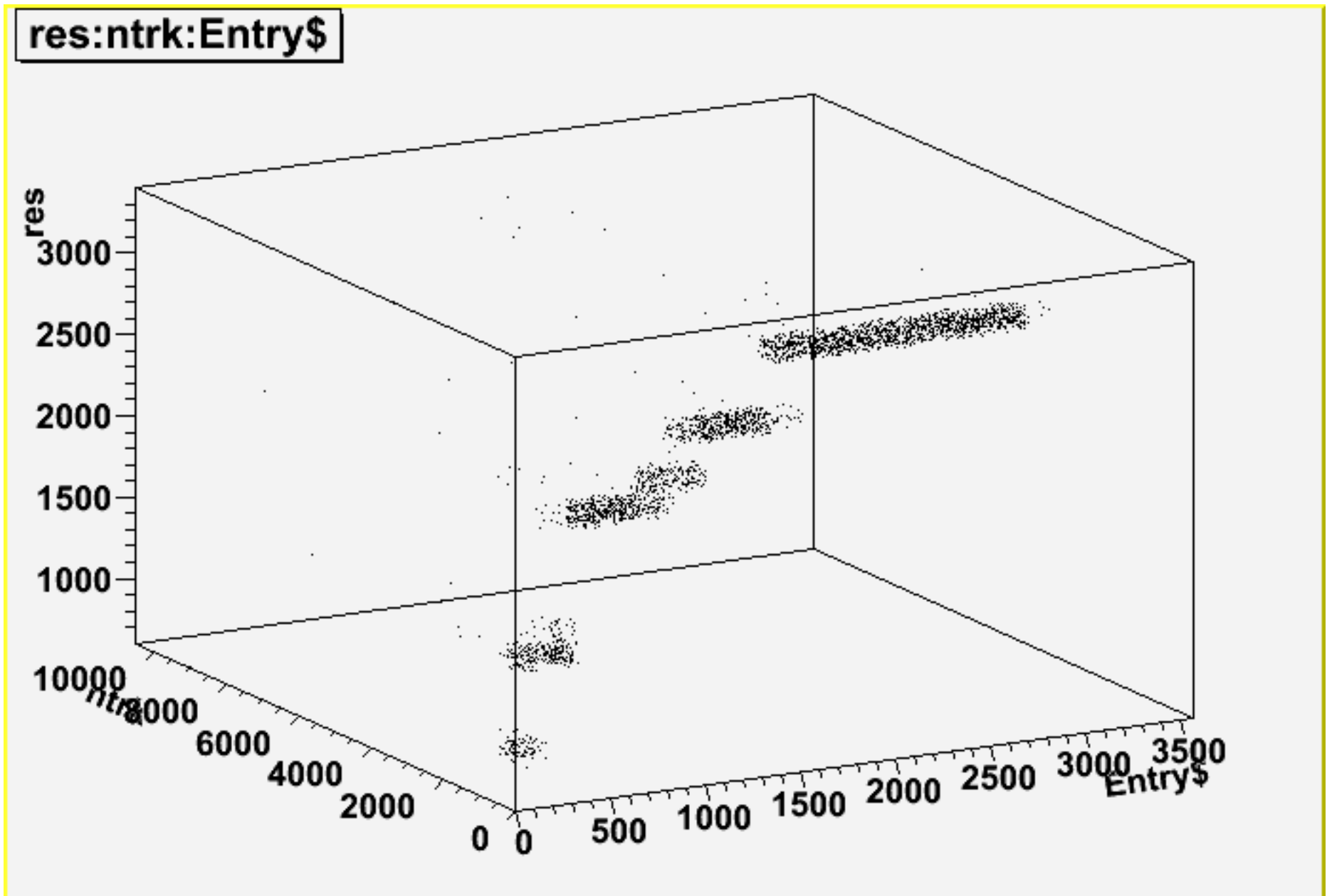




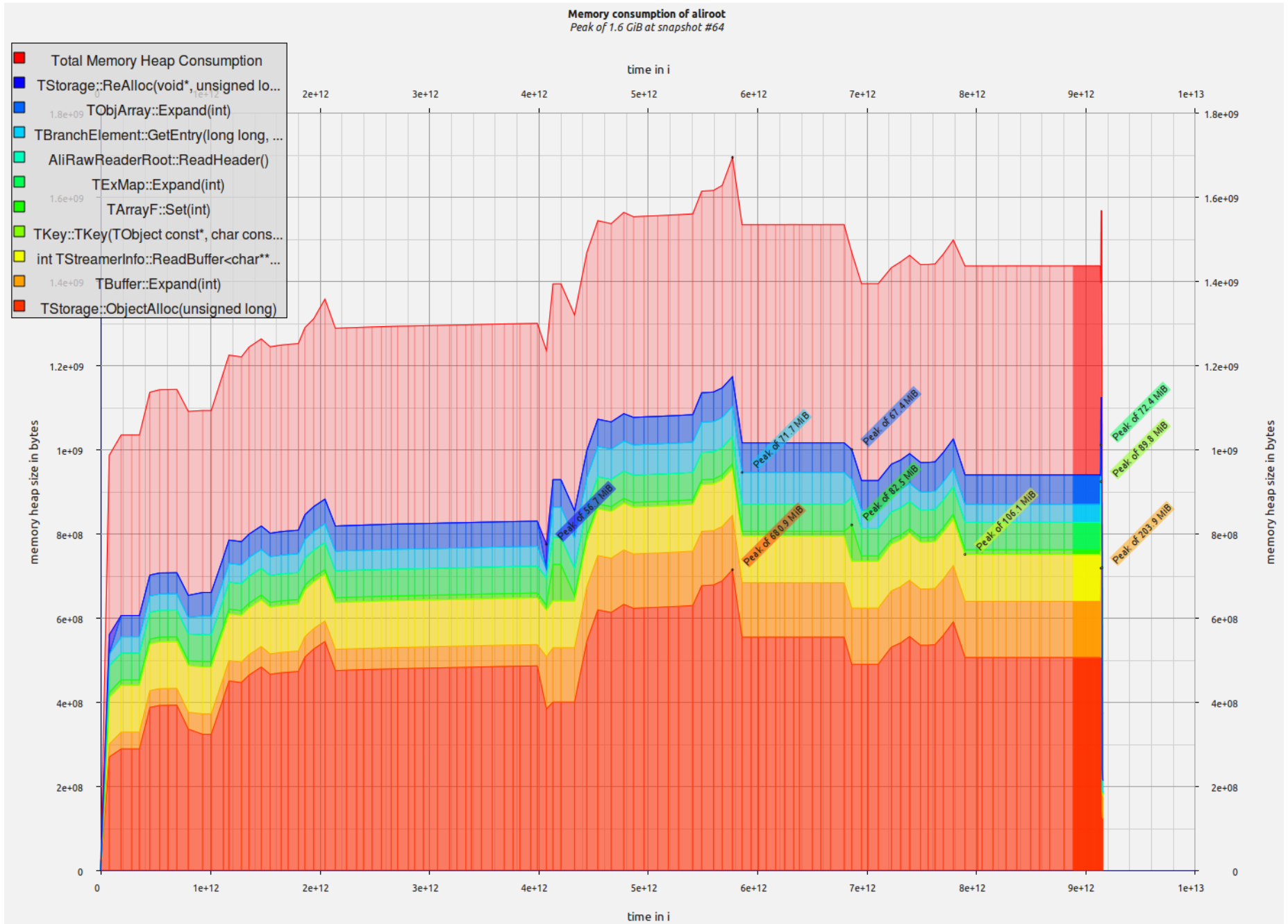
Resident memory: red v4-19, blue v4-20



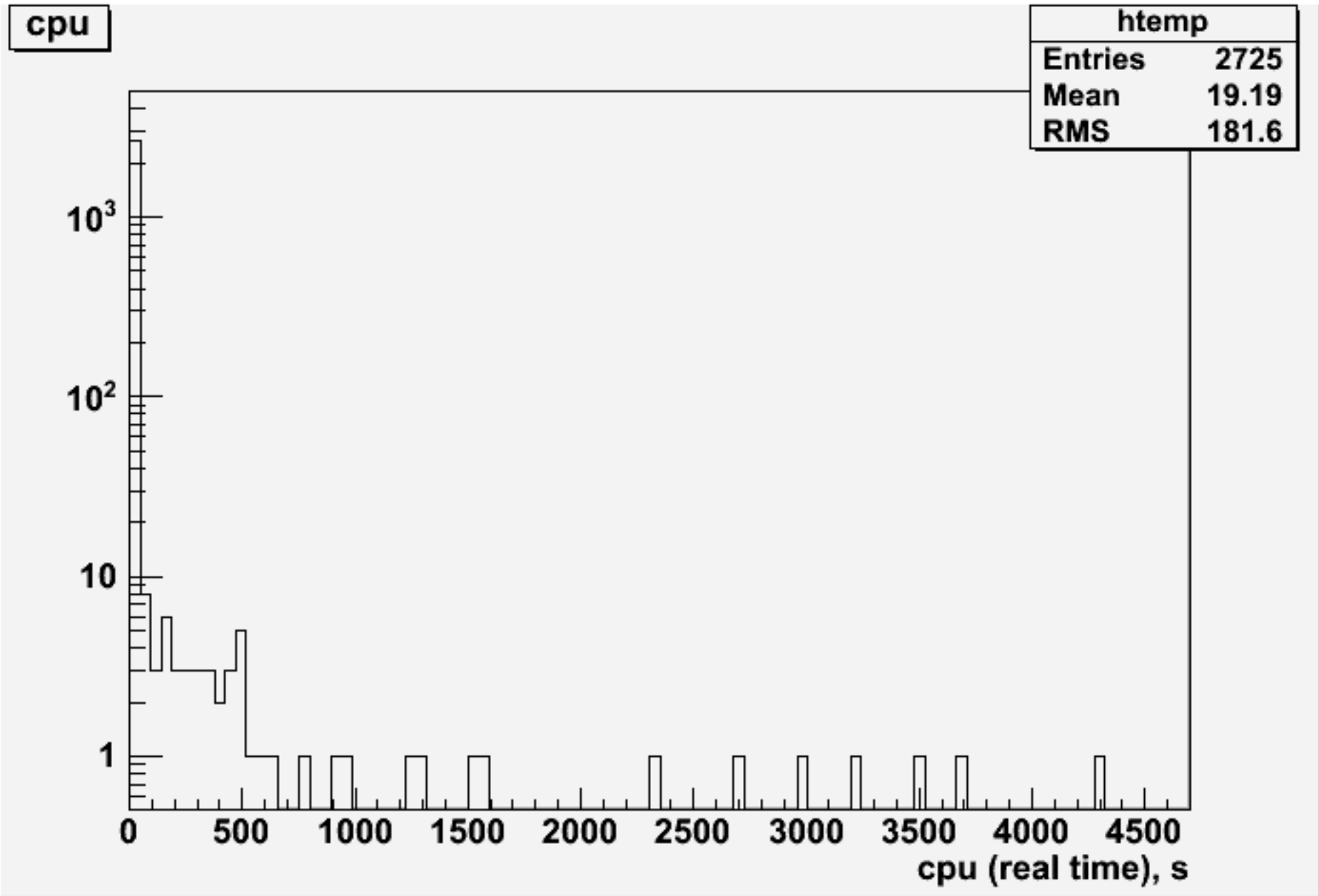
# Resident memory vs # global tracks vs event number



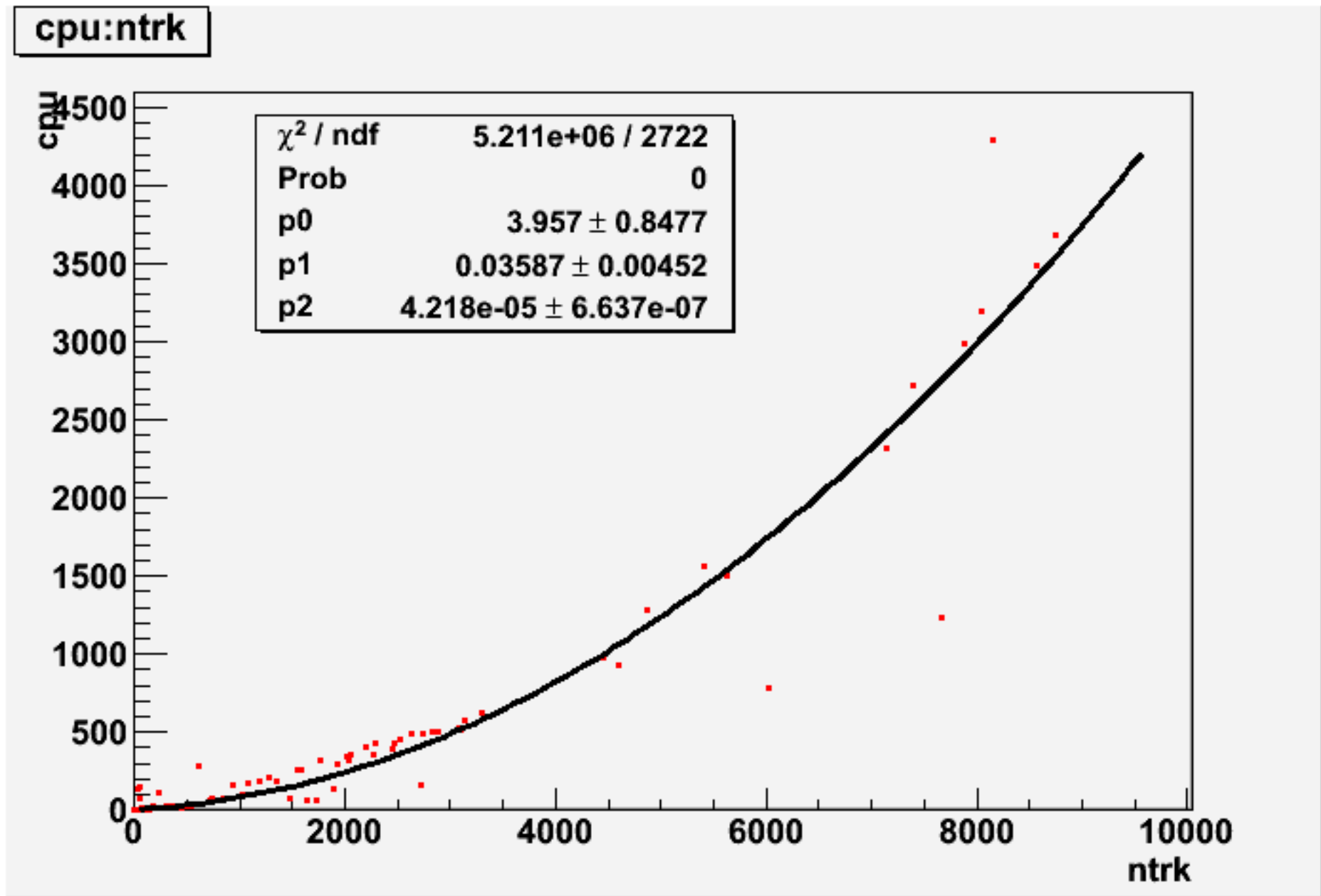
# Detailed investigation: v4-20-Rev-12



# CPU, v4-20-Release



# CPU vs number of global tracks







# Conclusions on the LHC10h pass2 readiness

- Most of the detectors are ready for LHC10h pass 2

At the same time

- Significant amount of changes (code, calibration & reconstruction parameters) is coming this week and needs testing
- The memory consumption has improved, but we still have to gain ~1Gb resident memory to work in “safe” conditions
- The CPU consumption is very volatile and needs additional studies
- The quality of the production has to be monitored very strictly. The evolution of v4-20-Release will depend on the QA results.

# CMake issues

- [Suppression of warnings with `-isystem` \(Mac\): CMake bug?](#)
- [Make install on Mac \(problem with `@rpath`\): #77590 cmake is linking directly the libraries instead of using `-l...`](#)
- Missing clean targets: clean check-all, etc.
- Development of “make install” to produce directly the tarballs
- Sub/directory structure
- [#77591 Need a single factfile for cmake \(code checker\)](#)
- [#77589 Setting optimisation with cmake \(debug mode\)](#)
- [#77757 Issues with CMake and detector algorithms](#)
- [#77629 PACKLDFLAGS of last package of a module overrides all previous](#)
- [#77628 Project internal library dependencies not correctly propagated<sup>24</sup> from ELIBS](#)



# Other reports (31/01/10)

- #77549 Update of AliKFParticle constructor
- #77497 Provide svn post commit action running root macros
- #77401 AliESDCentrality must be reinstated - older PbPb data unreadable. Non persistent, only warnings
- #77400 Bad change in AliESDCaloTrigger. Affects also v4-20

# Other reports (24/01/11)

- #77326 different definition of primary particles (gammas from  $\pi^0$  decays) in pp and PbPb
- #77321 request to store friends for TRD-triggered events
- #77288 SIGFPE with hijing fastgen
- #77281 Update of AliESDpid::NumberOfSigmasTOF method
- #77230 PWG3 par files
- #77166 Consider installing scripts, data, etc.
- #77082 What to do with scripts loading other scripts
- #77078 Make SVN ignore generated CMakeLists.txt

# Other reports 14/01/11

- #76976 Change in the dimensions of the TPC mother volume
- #76962 Herwig does not work. String size issue in init
- #76954 Add lhapdf5.5.1/src/binreloc.c to CSRCS
- #76933 Fix access operator
- #76930 Disable print of 'Creating histos: ...'
- #76700 Circular dependency STEER and CDB caused by AliMathBase

# Other reports (20/12/10)

- #76531 Segmentation fault from VZERO reconstruction
  - Again extra entries in the digits tree, “fixed” after an update
- #76462 Addition of the V0 track parameters to AOD
- #76430 Integrated time information stored in ESD

# Preparation for pass 2

- #76368 MUON code update for pass2 of LHC10h
- #76367 MUON QA assessment in preparation f pass2 of LHC10g
- #76364 New TPC calibration algorithm in preparation pf pass2 of LHC10h
- #76363 Test updated TPC algorithm in preparation of pass2 of LHC10g-h
- #76361 Improve ITS tracking efficiency in preparation of pass2 of LHC10h
- #76360 Update calibration for primary vertex reconstruction in preparation of pass2 of LHC10e-g

# Preparation for pass 2

- #76359 Update SPD noisy channels map before pass 2 reco of LHC10f-g
- #76357 Improving EMCAL calibration for PASS2 of LHC10e-h
- #76356 VZERO saturation of signal in PbPb
- #76279 Correct treatment of HighFlux in PMD for HI reconstruction

# Bugs from the productions/tests

- #75809 ~7% job failure (seg fault/killed by batch) in RAW reconstruction
  - Reproduced on the new test server running 3 jobs of pass0 + 1 job pass1
  - The memory problems are caused by the proton-proton settings used in the V0 and cascade reconstruction
  - #76291 Missing settings for V0 and cascade reconstruction in PbPb

Cyclic PbPb: v4-20-Rev-04

- #75857 Memory corruption in the reconstruction
- #75856 Floating point exception in gthadr.F:418

# Other reports (13/12/10)

- #76352 Memory leak when reading ESD/ESD friends in the analysis
- #76291 Missing settings for V0 and cascade reconstruction in PbPb
- #76193 Invalid write/read for  
AliEMCALGeoUtils/AliEMCALTriggerRawDigitMaker



# Other reports (06/12/10)

- #76061 AliLog::SetClassDebugLevel("AliMyClass, AliMyClass2", AliLog::kDebug) handled by AliAnalysis Manager

# Other reports (30/11/10)

- #75835 AliAODInputHandler::Notify triggers a staging request on (A)AF
- #75742 AliTRDrawStreamOld:fpPos - Invalid read
- #75726 Fix for AliAnalysisManager for use in PROOF-Lite environment
- #75681 Patch for EVE/EveDet/AliEveITSScaledModule.cxx and EVE/EveBase/AliEveTrackCounterEditor.cxx
- #75649 Bug in V0 preprocessor
- #75588 AliSimulation crash when using AliGenCocktailAfterBurner

# Other reports (22/11/10)

- #75422 Unreproducible crashes at FZK
  - Caused insufficient resources (memory) => a thread (xrootd) is killed and we have a “random” SV in AliRoot
- #75412 Wrong material definition in EMCAL
- #75401 Problem in TOF matching in TRD sector
- #75399 Check TRD overlaps with full/residual misalignment