PWG4 Status

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Outline

- Code list
- PWG4, wagon
- Coverity
- News:
  - JetTasks
  - PartCorr
  - CaloCalib
- Users experience, requests

PWG4 analysis modules

- Jet Tasks: Christian Klein-Bösing et al.
- Photon conversions, GammaConv : From Ana Marin et al.
- JCORRAN: 2 particle correlations from Jan Rak et al.
- PartCorr: Particle identification (γ, π^0, η, e, ω, …) and correlation (with jets, hadrons …) package.
  - Calorimeter QA
- Omega3pi: Boris Polichtchouk
- Et: Christine Nattrass, Oystein Djuvsland, David Silvermyr,…
- CaloCalib: Calorimeters calibration module.

PWG4 Train

- Under discussion the implementation of the PWG4 train in the centralized analysis train
- Driver: Christian Klein-Bösing (?, ;-))
- Currently under test to check for leaks, memory allocations etc.
- Wagons:
  - Jet Tasks
  - PartCorr
- Please let us know if your analysis has to be added to the train or if we have to remove anything from the existing wagons.

Coverity

As of this morning:

- CaloCalib: 2 defects in recently committed class
- GammaConv: 8 defects in 4 classes
- JCORRAN: 4 moderate defects in one class
- PartCorr: 0 defects
- Jet Tasks: 10 classes with many defects but mainly "FORWARD_NULL" that could be declared as intentional
- Omega3Pi: 0 defects
- Et: 5 classes with defects, mainly a couple of "FORWARD_NULL" that could be declared as intentional.

- In general, from coverity perspective code is in rather good shape, except for few moderate and easily fixable defects.

Jet Tasks news

- Jet Tasks train runs regularly producing jet AODs in PbPb
  - Filtering full events with 40 GeV jets
  - Or just writing jets
- 100 coverity reports fixed in PWG4/JetTasks and JETAN
- Neutral part for the jet reconstruction redesigned in order to follow the last developments in the analysis frame
  - Until now only concentrated in jets with charged particles
- New, EMCAL alignment matrices in AODB:
  - Access to EMCAL alignment matrices needed to connect the calorimeter cell and it position in global coordinates
  - OADB populated with the 4 (6 more to come) SuperModule matrices
  - $ALICE_ROOT/OADB/PWG4/JetReconstruction
  - Under discussion if we have to put the matrices used in reconstruction, stored in ESDs in AODs when filtering and not use AODB.

PartCorr, news

- Main developments in current analysis for pi0 measurement.
  - All TH3 (but one) transformed in array of configurable size of TH2
  - Different multiplicity bins for mixing studies in p+p defined
    - Mixed event does not reproduce combinatorial background in pp collisions and these new bins where not very successful.
  - Photon conversion pairs identification and recombination cuts
    - We have a rather strong conversion peak at low mass, we try to select and recombine them but not very successful, very large background.
  - Added method to trace back the common ancestor of 2 clusters (pi0, eta, …, parton), in order to understand the combinatorial background.
  - And many new histograms for mixing and acceptance/efficiency studies.

- As a consequence of the calorimeter virtual classes introduction (reported last time) some clean up still needed in the code during the last months, (among them one well known in the analysis list thanks to cmake ;))
  - Some methods need rename since now the code works with virtual clusters/cells and not necessarily AODs
  - Before we copied ESDs into AODs and put them in an array, now the array contains only Vclusters or Vtracks
    - GetAODCTS to GetCTSTracks
    - GetAODEMCAL to GetEMCALClusters
    - GetAODPHOS to GetPHOSClusters

PartCorr, news

- Now PartCorr works in LAF/CAF (thanks to Renaud)
- Leaks corrected in AliIsolationCuts and AliAnaOmegaToPi0Gamma
- PartCorr Train wagon
  - It contains now the following seats:
    - AliAnaPhoton
    - AliAnaPi0
    - AliAnaPi0EbE
    - AliAnaParticleIsolation : Isolates output of AliAnaPhoton and AliAnaPi0EbE
  - Before it contained ParticleHadron correlation tasks, but the size, amount of histograms (TH3) made analysis difficult to handle. We will work on improving it so that it goes to the train.

- Centrality information produced by the centrality framework can be accessed from AODs and ESDs, analysis can be executed selecting a given centrality class.
  - AliAnaCalorimeterQA configuration macro to be updated to consider different centralities, now it only fills histograms for Min Bias.

CaloCalib, news

- New EMCAL task for cluster reclusterization: AliAnalysisTaskEMCALClusterize
  - We have different clusterizers under investigation, this task takes the CaloCells and reclusterize them or unfolds existing clusters.
  - Output: AOD branch with new AliAODCaloClusters
  - This new list of AODs can be accessed by (for the moment) any analysis included in PartCorr.
  - Problems under investigation:
    - It does not work with the plugin (branch not created), it works in local analysis and direct jdl job submission.
    - Cell map of clusters does not seem to correspond to the real map of cells.
- AliAnalysisTaskEMCALPi0CalibSelection
  - Task for EMCAL calibration with Pi0
  - Updated to include the new supermodule channels.
  - Ready to be used as soon as we have the EMCAL triggered calibration run.

User experience, requests

- Very nice util to check the status of the jobs
  - https://alimonitor.cern.ch/users/jobs.jsp
  - http://alimonitor.cern.ch/job_stats.jsp (last minute addition)
  - Many many many thanks
  - But "resubmit": Since the update of the number of running/waiting jobs is not automatically updated and users sometimes do not pay all the needed attention to the quota, resubmitting just kills the jobs without recovery …
    - could it be possible to move the jobs to a intermediate state or not to kill them at all until the check on the number of running jobs is done?
- Very difficult to debug in the grid since the spy/registerOutput commands do not seem to work anymore …
- Cmake does not have many friends …
- Request to PWG2?
  - Would it be possible to have a v2/flow common frame (like physics selection, centrality) soon?
- Request from Photon Conversion group:
  - In new simulations please leave the option SetDecaysOff(3);