

TOF QC Coordination meeting 28/04/2024

General news

QC sincrono

- Expendable tasks



Robert Helmut Munzer

To: Manuel Colocci; Sofia Strazzi

Cc: Silvia Pisano; Barthelemy Von Haller; Filippo Costa; Francesca Ercolessi;
Francesco Noferini; Sofia Tomassini



Thu 03/04/2025 14:39

Dear Manuel,

the general strategy would be to mark as many tasks as possible as expendable.

In case an expendable task is crashing, it just means, that the run continues until the OnCall has time to check the quality and decide, what need to be done. A restart of the run can be requested if needed.

After the restart, the task should work fine again.

The basic idea would be, that only task should be critical, if the run need to stop immediately, when the task crashed.

Best regards
Robert

- Plans per YETS
 - luminometro (Nhits/readout efficiency in funzione del tempo) --> modificare Post Processing Lost Orbits con fattore di scala arbitrario e possiamo correggere per accettazione usando la HitMap
 - Diagnostics calib task
 - task was tested locally and crossed checked with Francesco's macros + we are ready to test with staging (runned a standalone last week)

QC asincrono

Our sheet:

<https://docs.google.com/spreadsheets/d/1z0no8X0s9R5mOGfR3BeNnx4RgYIBkyf9aVxJElQFIjE/edit?gid=0#gid=0>

To be updated form latest Elena emails:

1. Data
 - apass4 of 2023 pp periods with low B (O2-5897 <https://its.cern.ch/jira/browse/O2-5897>) --> reported in the Jira all GOOD
 - apass5 of 2023 PbPb periods (O2-5917 <https://its.cern.ch/jira/browse/O2-5917>) --> to be reprocessed, automatic process is ready when QC objects will come (thanks Francesco for renaming the "old" folders!)
 - cpass0 for apass5 of LHC22e (O2-5866) <https://its.cern.ch/jira/browse/O2-5866> --> to complete report on Jira (missing few runs fixed in automatic reports requests)

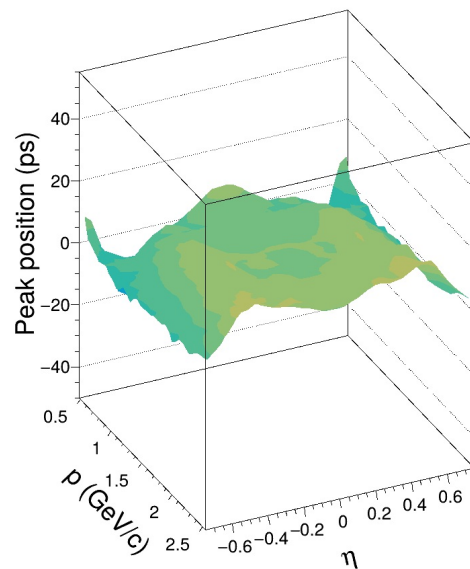
- cpass0 for apass2 of 2024 PbPb periods (24ar, 24as) (O2-5865)
--> reported in the Jira

2. MC

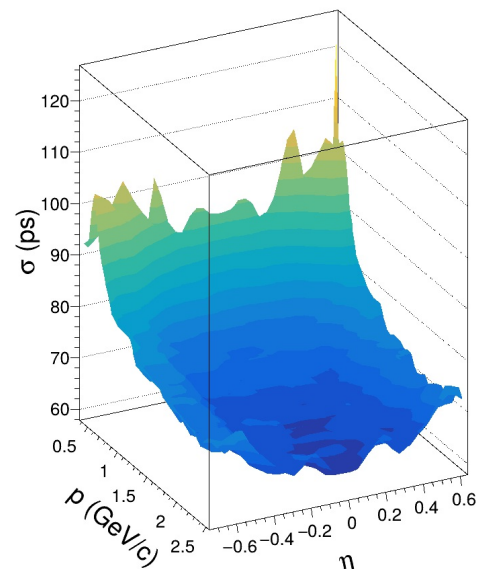
- LHC25b4a, LHC25b4b (O2-5888 <https://its.cern.ch/jira/browse/O2-5888>) GP MC anchored to apass1 of 24aq, 24ar ppref
--> reported in the Jira all GOOD very good data-MC agreement

Calibration

- Parametrizzazione della risoluzione sugli expected times in analisi
 - definita una procedura per estrarla dalle TPC timeseries (vedi [PR-TOFCommissioning \(https://github.com/aliceof/Commissioning/pull/107\)](https://github.com/aliceof/Commissioning/pull/107))



Esempio per pioni (da vecchio apass5)



Simulation/reconstruction

- FT0 fix in digitization -> **DONE**
- nuovo apass5 **running** con migliori calibrazioni TPC e fix per il TOF (vedi PID)
 - Issue: different shape of eta distributions wrt apass4, less flat and with dips for $|\eta| \geq 0.8$ → affected: TPC, TPC-ITS eff., χ^2 → fixed by new derivative maps

TOF AO2D

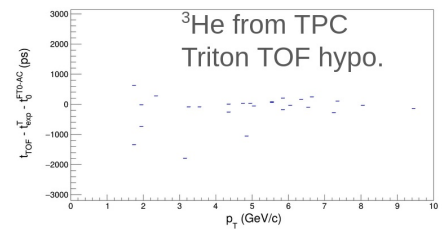
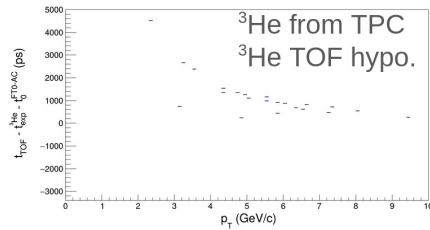
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PID

- Scoperto problema sugli expected times per tracce di carica due (He). Fix di Ruben dentro il nuovo apass5 che sta girando
 - il problema era dovuto al fatto che nel calcolo degli expected time veniva usato p invece di p/z a seguito di un update del metodo (ovvero ad un certo punto il metodo ha iniziato a ritornare p/z x la carica misurato dalla TPC). Soluzione: Ruben ha definto

- o un nuovo metodo che ritornasse solo p/z per usarlo nel calcolo degli expected time.
- o conseguenza: apass4 2023 Pb-Pb e apass1 2024 Pb-Pb: no matching per He4 (no impatto per He3 a patto di non usare gli expected times)

Issue with He in Pb-Pb reco



When selecting ^3He with TPC we see a bad behaviour of t_{exp} .
 ^3He instead matches perfectly triton expect times.

This is due to an inconsistency in the t_{exp} calculation when track charge is updated by TPC to 2 since p_T is used in addStep instead of $p_T/Z \rightarrow$ Ruben prepared a fix

<https://github.com/AliceO2Group/AliceO2/pull/14220>

Consequence: since triton is the slower hypothesis accepted (higher m/Z) in TOF matching, indirectly we are cutting out all ^4He .

- o Da timeseries di ultimo apass5 con fix di Ruben $\rightarrow$ He3 allineati a zero

