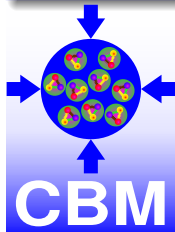# Results of DC 30.04.2025 and TODOs (discussion)

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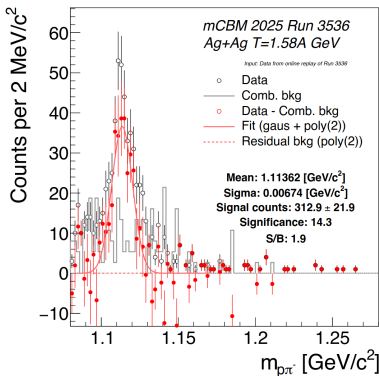17.2.2025

Outline

- mCBM AgAg@1.58AGeV replay
- Event reconstruction validation
- Developments

mCBM AgAg@1.58AGeV replay

- Reference run 3536
- Replay of online data processing "as it were in the beamtime"
- Reasonable alignment and calibrations from Norbert
- Simplified V0-trigger used for event building
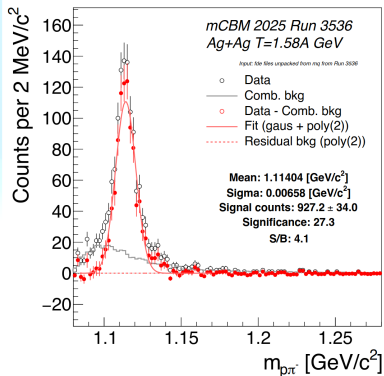- Stored ROOT-files (ready for analysis): /lustre/cbm/users/szharko/data/mcbm2025/offline_events

- No evident Λ signal online ⇒ validation of reconstruction algorithms and `V0Finder` is needed
- Yue Hang managed to see the Λ-peak on triggered events [presentation]:

- Clear signal from online replay
  - Log files: /lustre/cbm/users/yleung/git/cbmroot/macro/beamtime/mcbm2025/slurm_on

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Event reconstruction validation

Validation scenario:

- repeating the reconstruction/analysis of Yue Hang step-by-step from the triggered events till V0Finder
- (1): using the event 'cbm::algo::EventReconstruction' class [!2094] in FairRoot environment
- (2): using event reconstruction in the cbmreco
- (3): full timeslice reconstruction on TSA files

Goals:

- understanding of TOF/BMON calibration
- understanding of tracking parameters (iterations and misalignment tolerances)
- understanding of event triggering with KFParticleFinder

Resent and upcoming developments

MERGED A common online/offline runID-database [!2088]
- automatic selection of alignment matrix and TOF/BMON calibrations by a runID
- also in the cbm-online-par-dump binary for online parameters generation
- **needs to be updated with information**

WIP Offline running of cbmreco on SLURM using user installation of CbmRoot [!2092]

WIP Event reconstruction class [!2094]:
- common event reconstruction approach in cbmreco and FairRoot
- separate hit-finding algorithm instances (flexibility for specific configuration)

WIP QA histogram storage without the histogram server [!2091]

WIP New reco-data classes [!1983] **NOTE: postponed after summer**

TODO Multi-threaded event reconstruction (help of experts and discussion is needed)

TODO Digi-event selection based on Λ-finder

TODO Event reconstruction monitoring

TODO QA configuration

TODO ???