

Status Ξ_c^0 analysis, Nov. 14, CKim

- **xCheck between old vs. new**

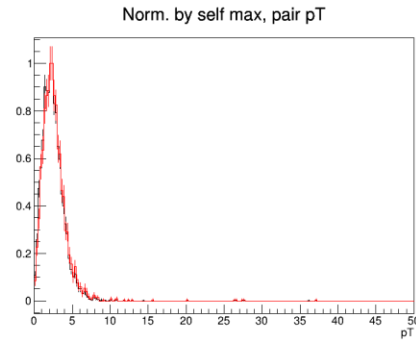
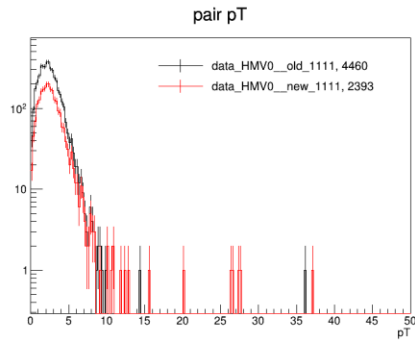
- **Details for comparison**

- a. Online selection: Grid running by using each framework, for data samples (statistics: 5 runs in LHC18p)
 - * WRT the old code, some conditions are either loose (*FilterCascade*) or tight (*FilterElectron*)
- b. Offline selection:
 - b-1. Compared e-Xi pairs before applying cut levels (e.g., stand, etc)
 - b-2. Items compares: pT, mass, and cos(opening angle) after pairing

- **Crosschecks**

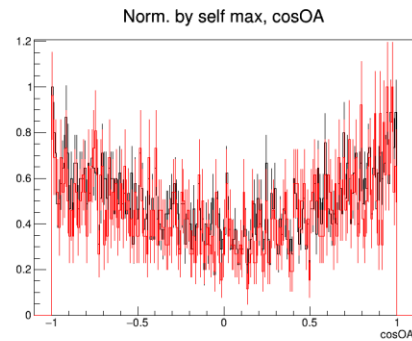
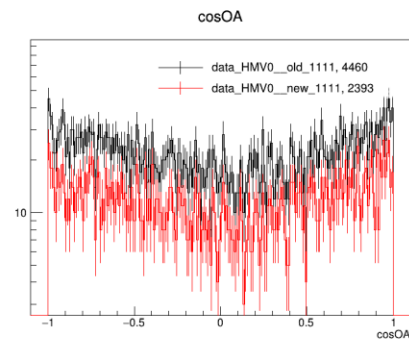
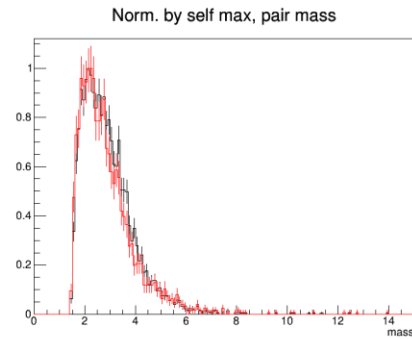
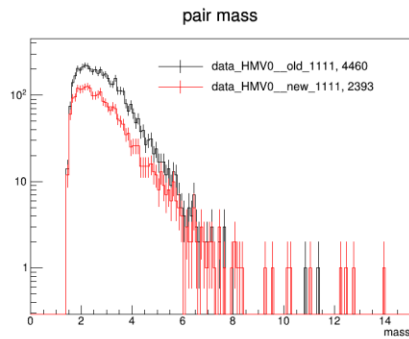
- a. For some unknown reason the pair yields were continually inconsistent
- b. Strange thing is, they exactly match when compared by a sample AOD at KIAF
 - b-1. Tested by an AOD, then by 5 AODS later
 - b-2. To track down the source, intentionally matched new code's conditions to the old –
the difference lingers
 - b-3. Finally found the source after multiple try

Comparison 1/3

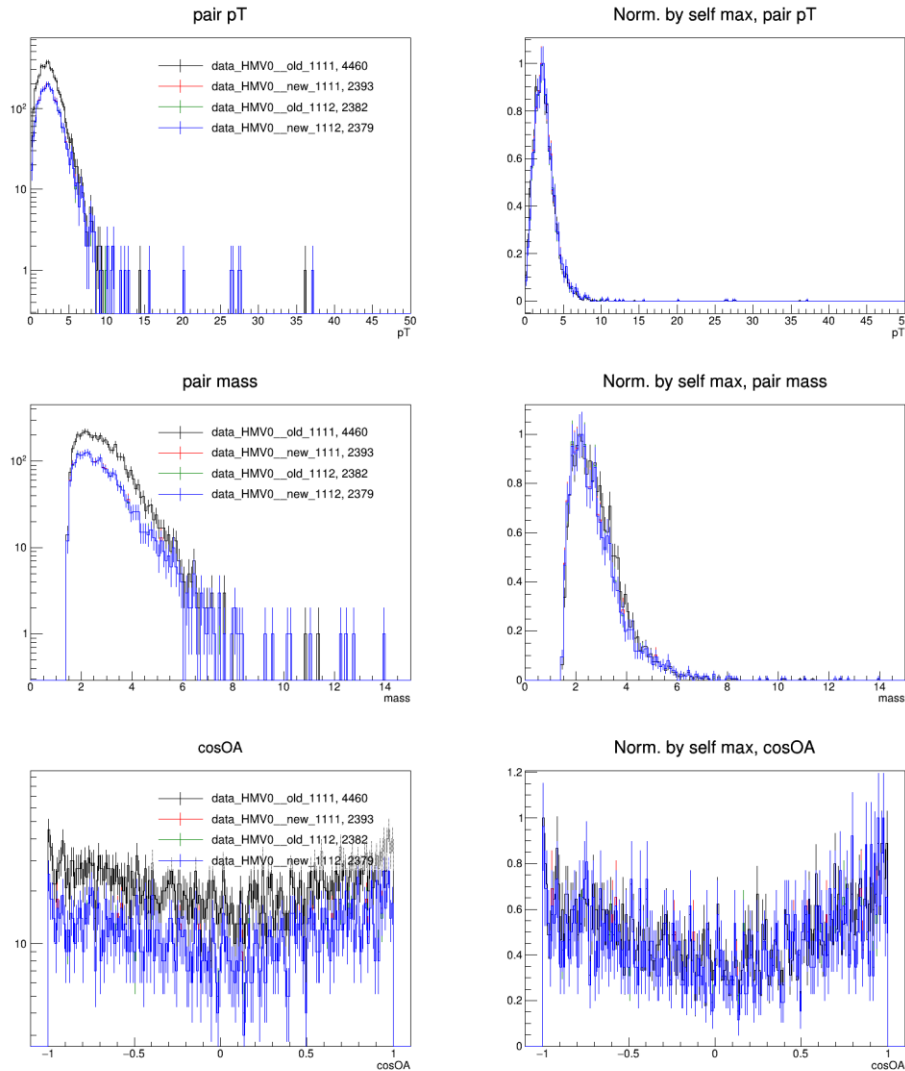


— e-Xi pair yields

- After online + offline selection
- Matched conditions to old code
(* Changes for new code are NOT applied)
- Notable yields difference



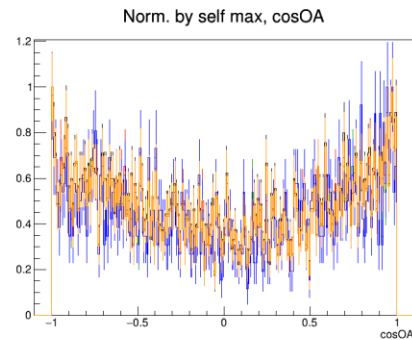
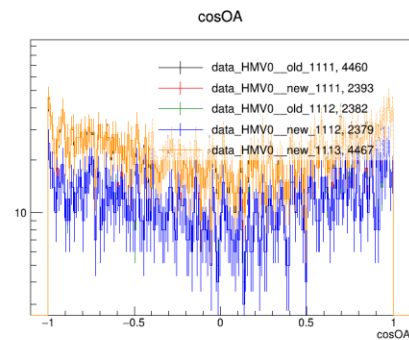
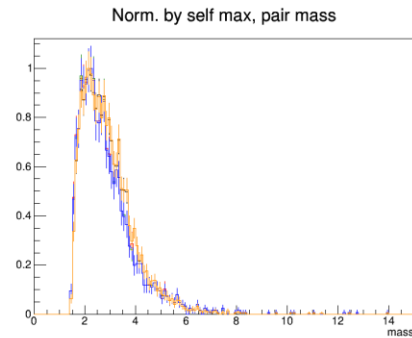
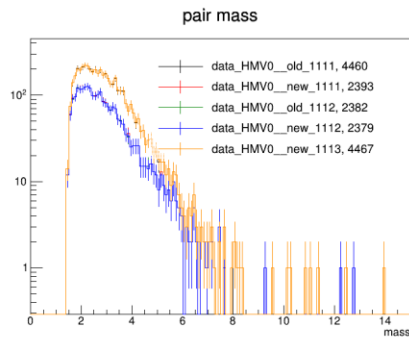
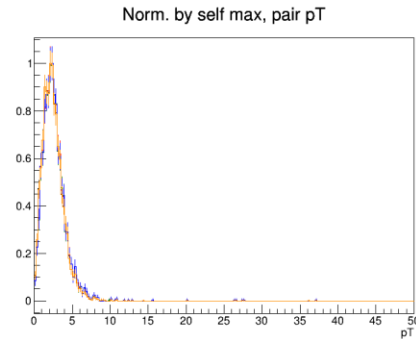
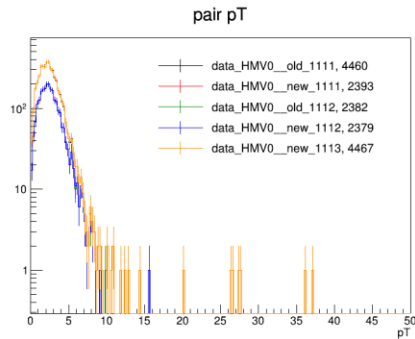
Comparison 2/3



e-Xi pair yields

- a. The difference looks arise at Grid runing
- b. Found AliPhysics version difference:
 - b-1. Old: “vAN-20210701_ROOT6-1”
 - b-2. New: “vAN-20220701_ROOT6-1”
- c. Ran another Grid jobs:
 - c-1. Old: “vAN-20210701_ROOT6-1”
 - c-2. New: “vAN-20220701_ROOT6-1”
- d. Results look consistent when same AliPhysics version applied

Comparison 3/3

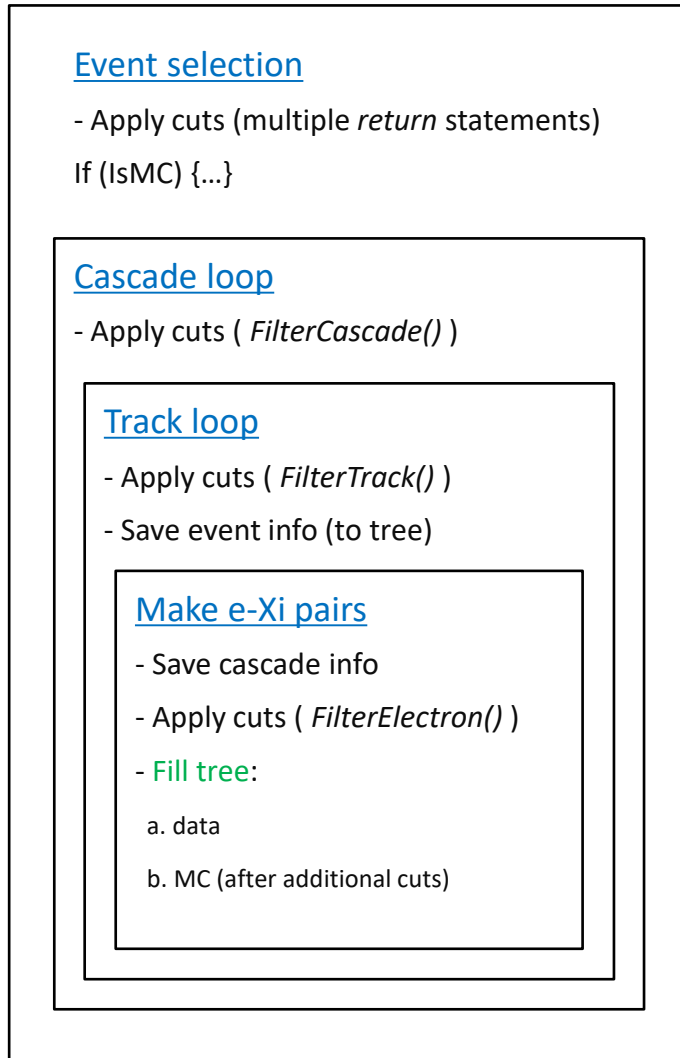


e-Xi pair yields

- The difference looks arise at Grid runing
- Found AliPhysics version difference:
 - Old: "vAN-20210701_ROOT6-1"
 - New: "vAN-20220701_ROOT6-1"
- Ran another Grid jobs:
 - Old: "vAN-20210701_ROOT6-1"
 - New: "vAN-20220701_ROOT6-1"
- Results look consistent when same AliPhysics version applied
- Final xCheck: applied 20210701 for new code
i.e., New: "vAN-20220701_ROOT6-1"

Backup Structure change for online selection code (AliAnalysisTask...)

Old



New

