# <u>Status</u>  Weekly $\Xi^0_c$ analysis meeting, Aug. 27, 2020

- **Current status**

  - My job assignment status cleaned up:

    now I can solely focus on this analysis

  - Playing w/ Jinjoo's code

    a. Currently reading/checking macros after analysis task code

    b. I'll try to produce minBias separated by multiplicity two percentiles asap

  - AOD info in DPG webpage

    \* https://twiki.cern.ch/twiki/bin/view/ALICE/AODsets#AOD_production_info

    a. I <u>cannot find specific AODs</u> produced for high multiplicity triggers

    b. The version of AODs of interest for data (RUN2 p-p @ 13 TeV) is always the same: AOD208

    c. It looks I should <u>gather HM triggered events from same AODs</u> Jinjoo used so far

    d. Did basic crosscheck by using:

    d-1. Info in DPG webpage

    d-2. Run info in analysis note

    d-3. Run info in analysis code ( from arrays in Jinjoo's *run.C* )

# Run info crosscheck    2016

| 2016 | | | | |
|---|---|---|---|---|
| **LHC16t** (5 runs) | p-Pb@5TeV | pass1_FAST<br>pass1_CENT_wSDD<br>pass1_CENT_woSDD | ~~AOD/AOD190~~<br>AOD191(muon_pass2) | (267161 – 267166) |
| **LHC16s** (25 runs) | Pb-p@8.16TeV | pass1_FAST<br>pass1_CENT_wSDD<br>pass1_CENT_woSDD | ~~AOD/AOD190~~<br>AOD191(muon_pass2/3) | (266405 – 267110) |
| **LHC16r** (53 runs) | p-Pb@8.16TeV | pass1_FAST<br>pass1_CENT_wSDD<br>pass1_CENT_woSDD | ~~AOD/AOD190~~<br>AOD191(muon_pass2) | (265589 – 266318) |
| **LHC16q** (34 runs) | p-Pb@5TeV | pass1_FAST<br>pass1_CENT_wSDD<br>pass1_CENT_woSDD | ~~AOD/AOD190~~<br>AOD191(muon_pass2) | (265305 – 265525) |
| **LHC16p** (42 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (264076 – 264347) |
| **LHC16o** (117 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (262395 – 264035) |
| **LHC16l** (89/87 runs) | pp@13TeV | pass1/pass2 | AOD(pass1), AOD208*(pass2) | (258883 – 260014) |
| **LHC16k** (213/212 runs) | pp@13TeV | pass1/pass2 | AOD(pass1), AOD208*(pass2) | (256504 – 258537) |
| **LHC16j** (57 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (256146 – 256420) |
| **LHC16i** (21 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (254378 – 255469) |
| **LHC16h** (91 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (254378 – 255469) |
| **LHC16g** (20 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (254124 – 254332) |
| **LHC16f** (24 runs) | pp@13TeV (full / low-B) | pass1 | ~~AOD, AOD208*, AOD212*~~ | (253659 – 253978) |
| **LHC16e** (22 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (252603 – 253591) |
| **LHC16d** (26 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (252235 – 252375) |

– Concerns:

   a.  <u>LHC16f, LHC16i</u>: AODs exist but not used in the analysis, result of run QA?

   b.  <u>LHC16k</u>: runs 257892, 257028, 257026, 257021 exists in the note, but missing in the code

# Run info crosscheck  2018

| Period | Collision System | Pass | AOD Version | Run No. Range |
|---|---|---|---|---|
| **2018** | | | | |
| **LHC18r** (100 runs) | ~~Pb-Pb@5.02TeV~~ | pass1 | ~~AOD, AOD216/225(muon pass3)~~ | ~~(296690 – 297624)~~ |
| **LHC18q** (144 runs) | ~~Pb-Pb@5.02TeV~~ | pass1 | ~~AOD, AOD225(muon pass3)~~ | ~~(295581 – 296623)~~ |
| **LHC18p** (84 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (294009 – 294925) |
| **LHC18o** (48 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (293368 – 293898) |
| **LHC18n** (2 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (293357 – 293359) |
| **LHC18m** (277 runs) | pp@13TeV | pass1_withTRDtracking | ~~AOD~~, AOD208* | (290222 – 292839) |
| **LHC18l** (92 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (289240 – 289971) |
| **LHC18k** (12 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (289165 – 289201) |
| **LHC18j** (1 run) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (288943 – 288943) |
| **LHC18i** (10 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (288861 – 288909) |
| **LHC18h** (2 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (288804 – 288806) |
| **LHC18g** (11 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (288619 – 288750) |
| **LHC18f** (78 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (287000 – 287977) |
| **LHC18e** (46 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (286380 – 286937) |
| **LHC18d** (48 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (285978 – 286350) |
| **LHC18c** (53 runs) | ~~pp@13TeV (low field)~~ | ~~pass1_FAST~~ ~~pass1_CENT~~ ~~pass1_CENT_woSDD~~ | ~~AOD~~, AOD212* | ~~(285466 – 285958)~~ |
| **LHC18b** (28 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (285008 – 285447) |

– Concerns: <u>LHC18m</u>

    a. Entire # of runs in LHC18m is <u>239 in note</u>, but only <u>134 runs are being used in code</u>, why?

    b. LHC18m1 [292839, 291624] (115), LHC18m2 [290467, 290323] (19)

      * in code, array contains 242 runs but only partially invoked

**LAST SLIDE**

# **Backup**   2017

| 2017 | | | | |
|---|---|---|---|---|
| **LHC17r** (30 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (282528 – 282704) |
| **LHC17q** (15 runs) | pp@5.02TeV | pass1_FAST<br>pass1_CENT_wSDD<br>pass1_CENT_woSDD | ~~AOD~~, AOD208* | (282365 – 282441) |
| **LHC17p** (42 runs) | pp@5.02TeV | pass1_FAST<br>pass1_CENT_wSDD<br>pass1_CENT_woSDD | ~~AOD~~ AOD208* | (282008 – 282343) |
| **LHC17o** (177 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (280282 – 281961) |
| ~~**LHC17n** (2 runs)~~ | ~~Xe-Xe@5.44TeV~~ | ~~pass1~~ | ~~AOD/AOD227~~ | ~~(280234 – 280235)~~ |
| **LHC17m** (109 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (278914 – 280140) |
| **LHC17l** (133 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (276551 – 278216) |
| **LHC17k** (135 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (274690 – 276508) |
| **LHC17j** (13 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (274593 – 274671) |
| **LHC17i** (65 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (273591 – 274442) |
| **LHC17h** (123 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (271868 – 273103) |
| ~~**LHC17g** (37 runs)~~ | ~~pp@13TeV (low B field)~~ | ~~pass1~~ | ~~AOD, AOD212*~~ | ~~(270882 – 271777)~~ |
| **LHC17f** (5 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (270854 – 270865) |
| **LHC17e** (6 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (270822 – 270830) |
| **LHC17c** (12 runs) | pp@13TeV | pass1 | ~~AOD~~, AOD208* | (270531 – 270667) |

# **Backup**    Calling LHC18m in the code

```cpp
if (foption.Contains("LHC18m1")){
    plugin->SetGridDataDir("/alice/data/2018/LHC18m");
    for (int i=0; i<115; i++) plugin->AddRunNumber(LHC18mRuns[i]);
    plugin->SetDataPattern("/pass1_withTRDtracking/AOD208/*/AliAOD.root");
}
 if (foption.Contains("LHC18m2")){
            plugin->SetGridDataDir("/alice/data/2018/LHC18m");
            for (int i=223; i<242; i++) plugin->AddRunNumber(LHC18mRuns[i]);
            plugin->SetDataPattern("/pass1_withTRDtracking/AOD208/*/AliAOD.root");
    }
```

**Backup**   Quote from V0M percentile studies (by B. Volkel, D2H, June 26)
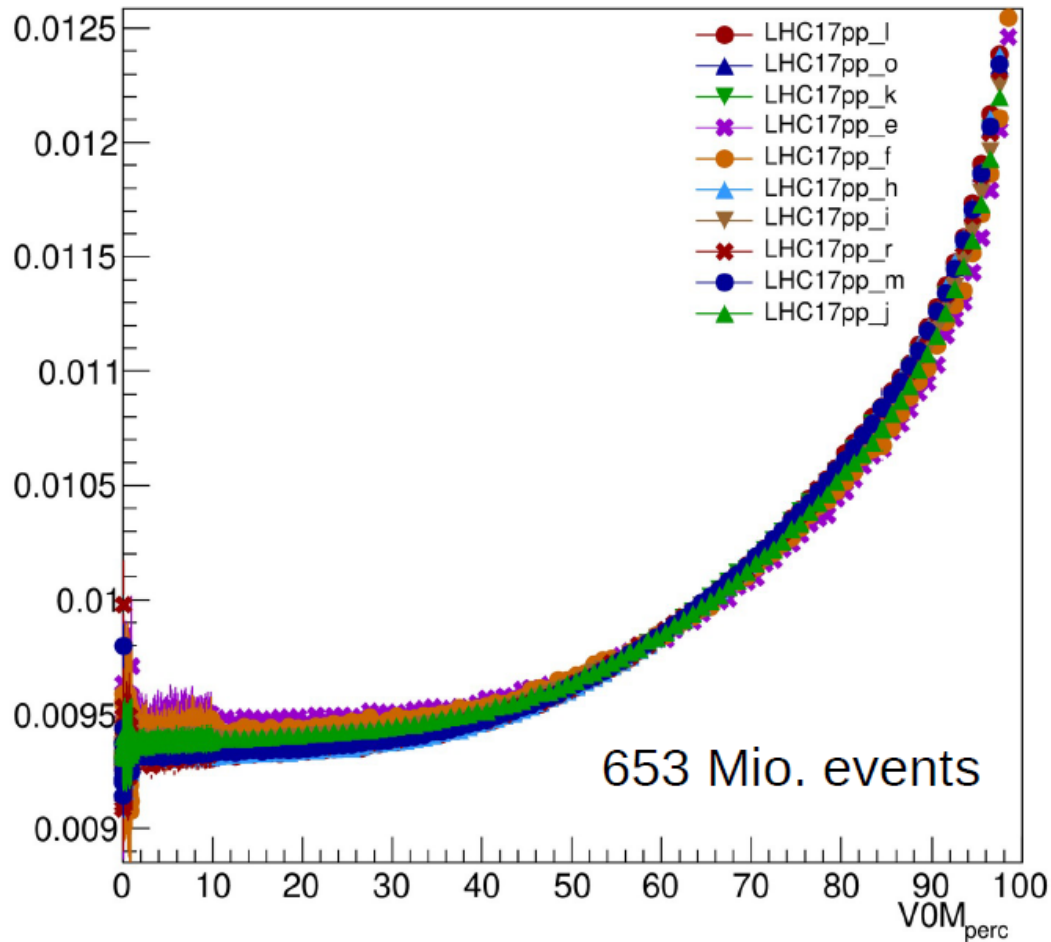
# **Backup** Message from Cristina

Dear MinJung,

we have just started to have a look at the HMV0 triggers data for the Lc and D0 analyses vs multiplicity.
In the multiplicity range 0-0.1%, that should be the one suggested for the V0 High multiplicity events, we have 500 M of events.
If we use the SPD HM triggered data, the number of events is 100 M, so we suggest to use the HMV0 data, in case.

As Fabrizio said, you could start to have a look to the MB samples, and perform the analysis vs multiplicity using that sample:
for the Lc and D0 analysis, we are currently investigating 0.1-30% and 30-100% with MB triggered data, using the V0M percentiles.

In the multiplicity class 30-100% we have ~700M of events, while I don't have the information relative to the range 0.1-30%.

cheers,
Cristina