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# Non-Prompt J/psi Analysis

## PbPb @ 5.02 TeV



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Himanshu Sharma



**ALICE**

Feb 10, 2020

IFJ-ALICE Meetings

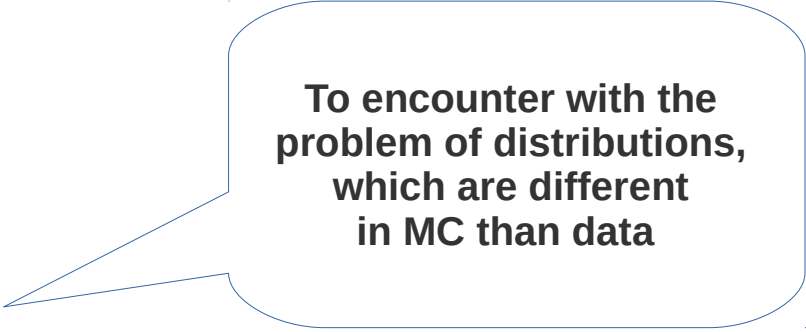
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## Activities -

- Use of Improver class
- Plan with MC-trees (NN)

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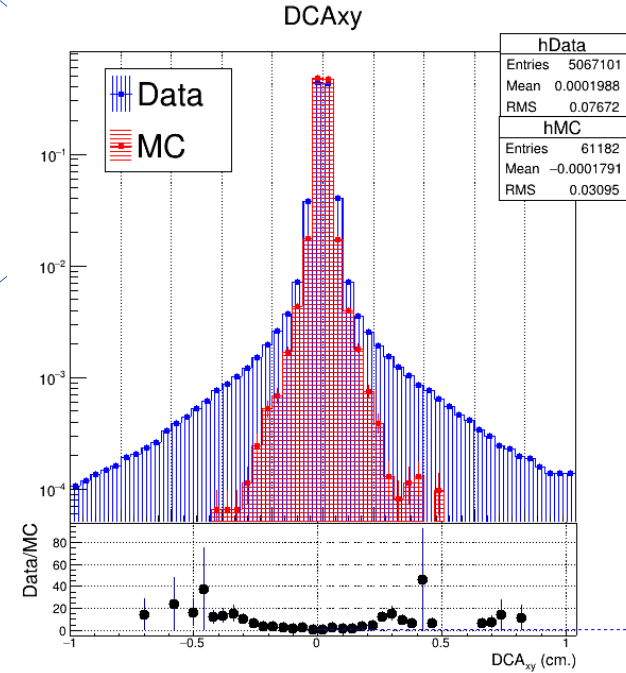


**To encounter with the  
problem of distributions,  
which are different  
in MC than data**

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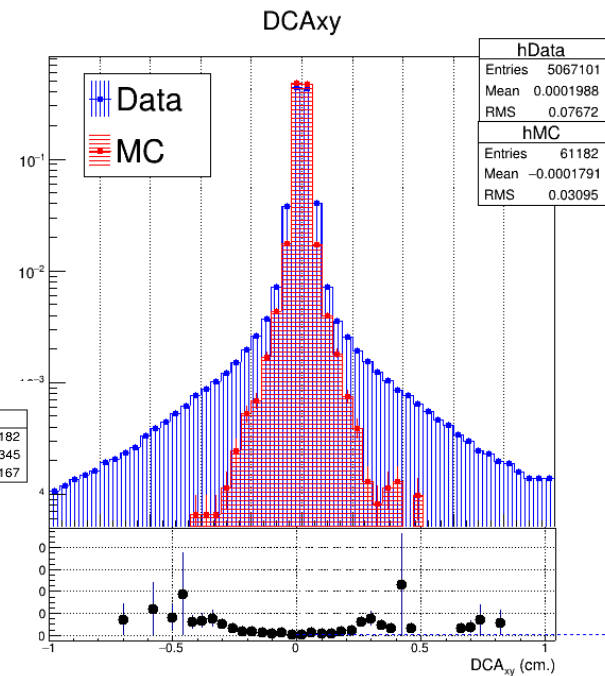
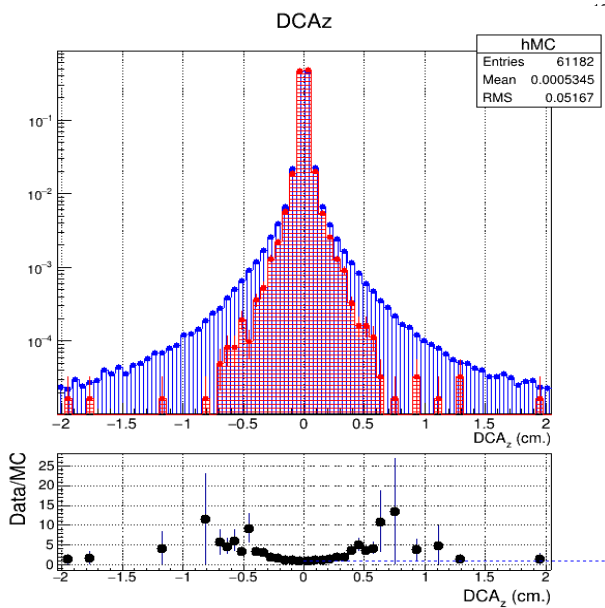
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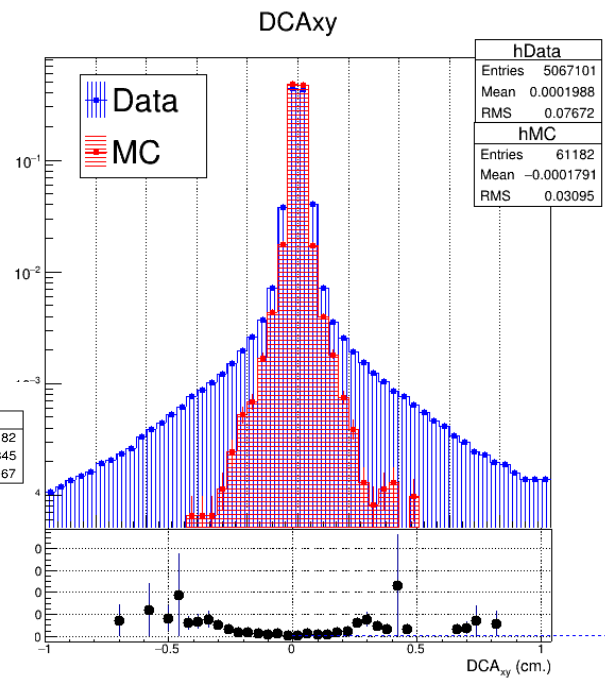
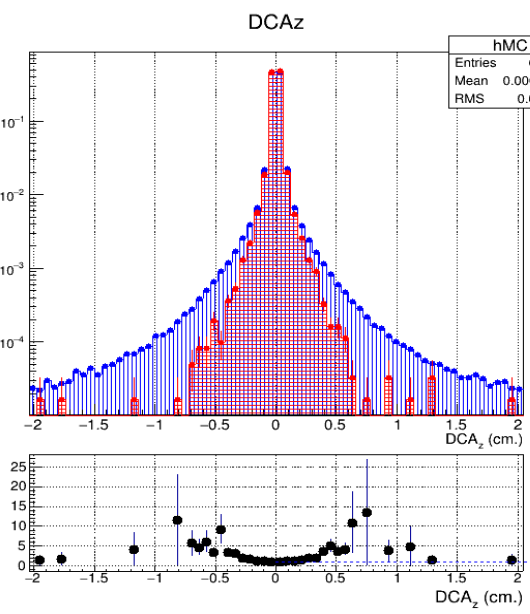
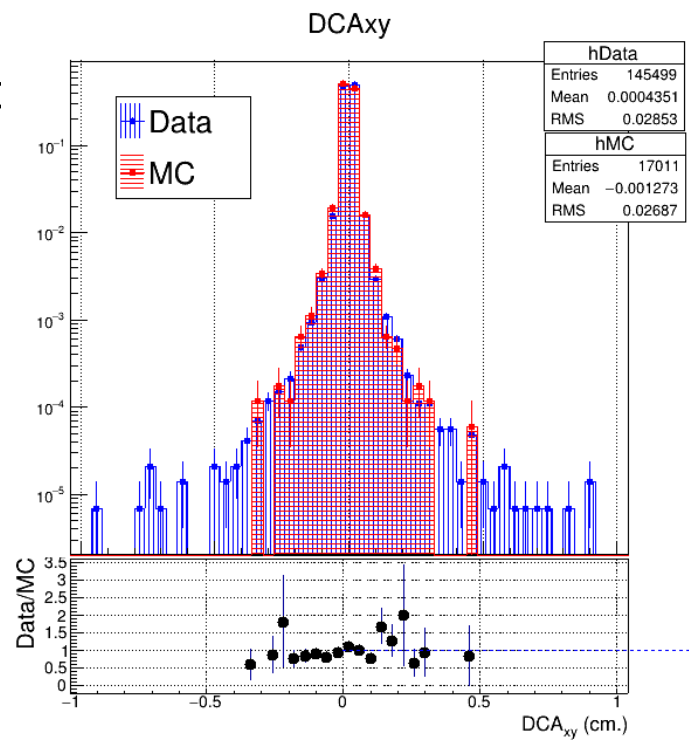
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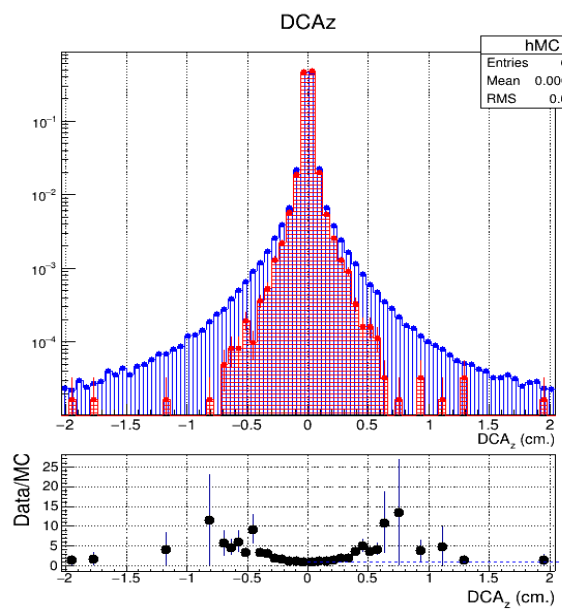
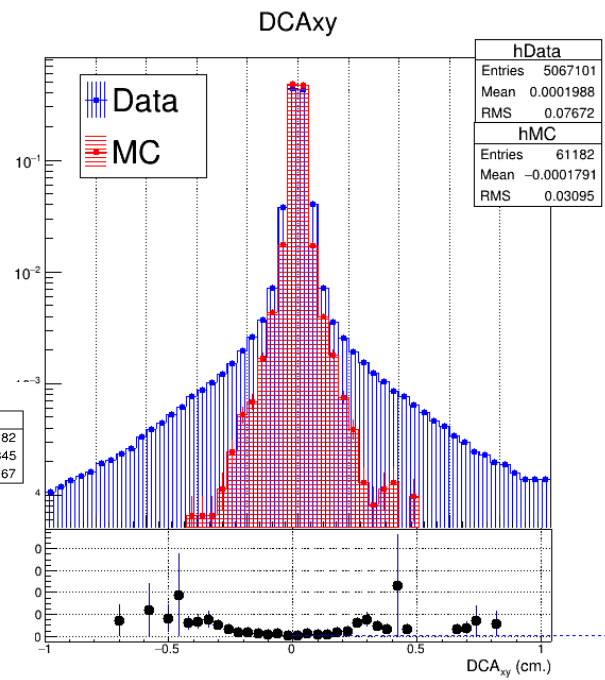
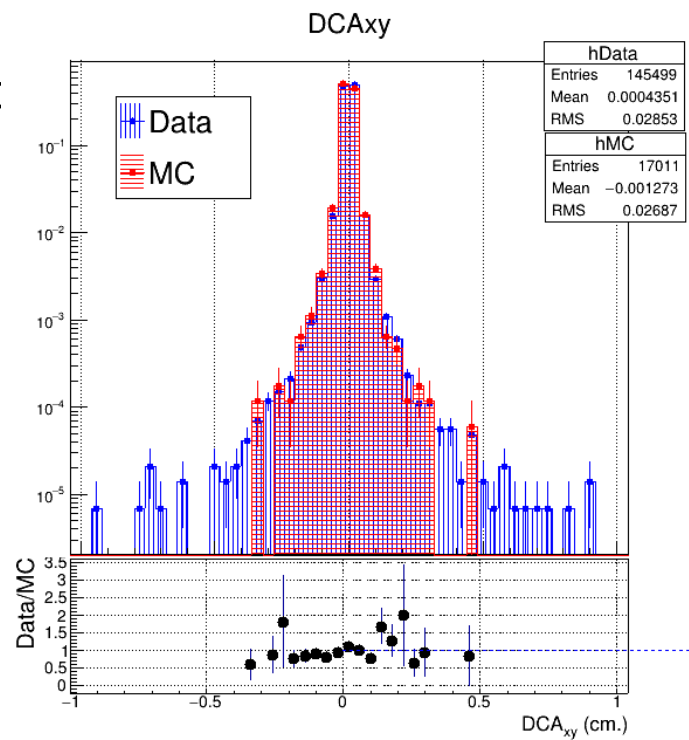
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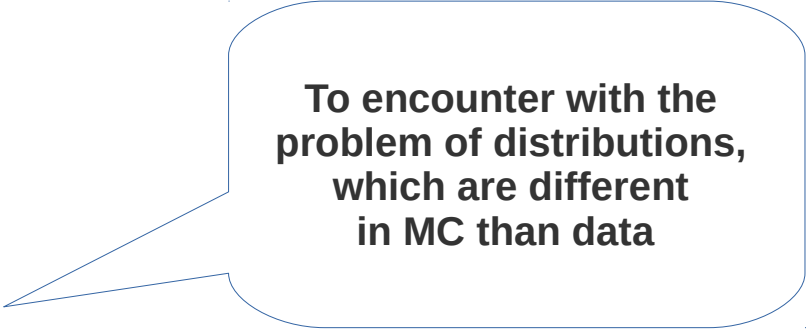
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And so on...

Activities -

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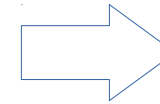
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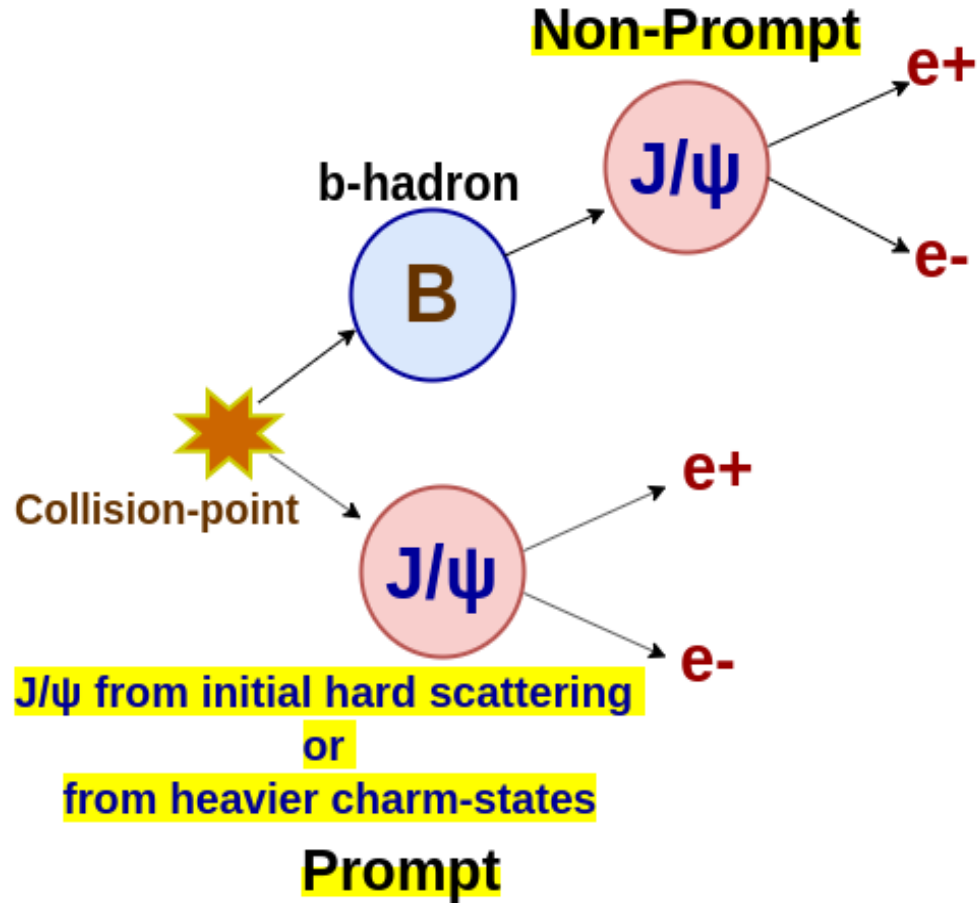
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**NN classifies J/psi's from b-hadrons  
And from charmonium.**

Activities -

- Use of Improv
- Plan with MC-1



⇒ NN classifies J/psi's  
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# Improver Task for this analysis

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-

- **Improver is a class, which makes changes in the track-level information in MC-trees to mimic the data.**
- **Used in non-prompt J/psi analysis in p-Pb**
- **Developed by PWGHF-group.**
- **For info : [DPG-Twiki page](#)**

## Improver Task for this analysis

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- Set the Improver task before Tree\_maker task.
  - Copied ESD-files for 1 full run and analysed locally ( to have the same dataset).

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  - Copied ESD-files for 1 full run and analysed locally (Run – 297414 : LHC18r)  
( to have the same dataset).
- Status : Improver task runs without errors ( working well! )
- In the results, No difference after Improver (in the trees).

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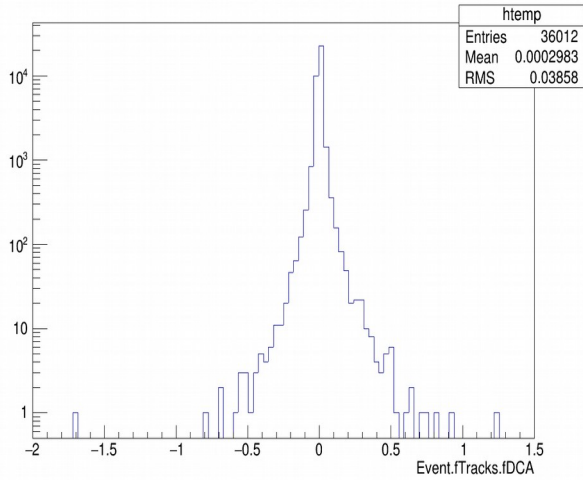
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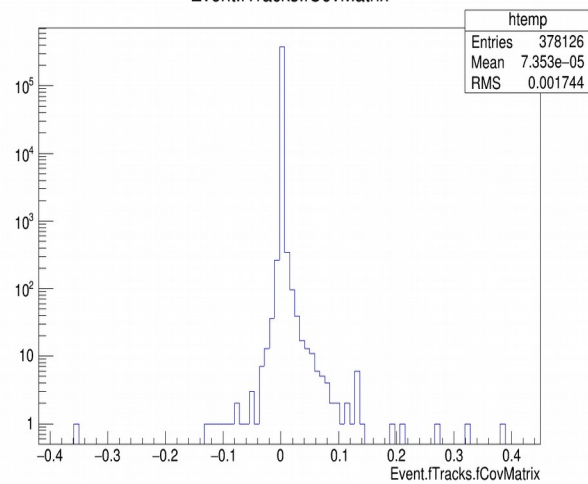
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- Status : Improver task runs without errors ( working well! )
- In the results, No difference after Improver (in the trees).
  - DCAs are same.
  - Track parameters are same
  - Cov. Matrices are sameafter improver.

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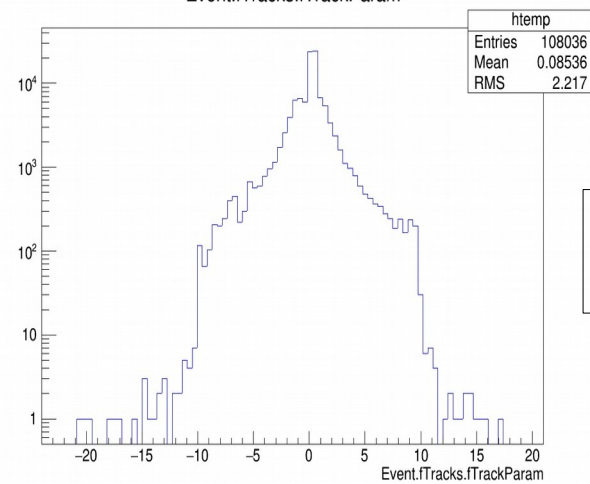
Event.fTracks.fDCA



Event.fTracks.fCovMatrix

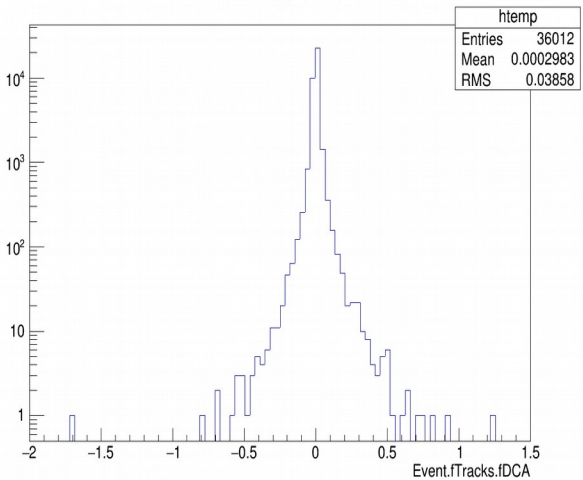


Event.fTracks.fTrackParam

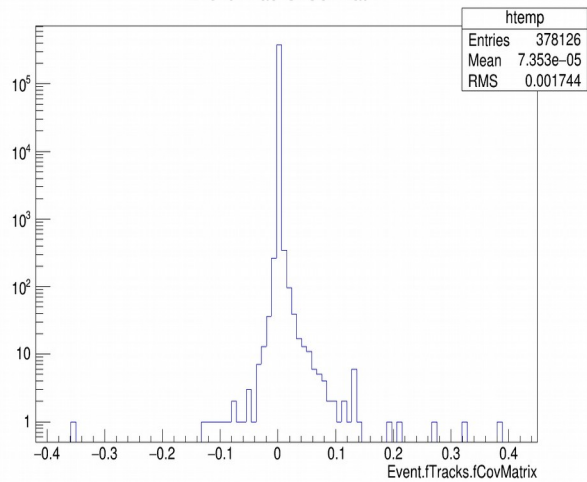


Before

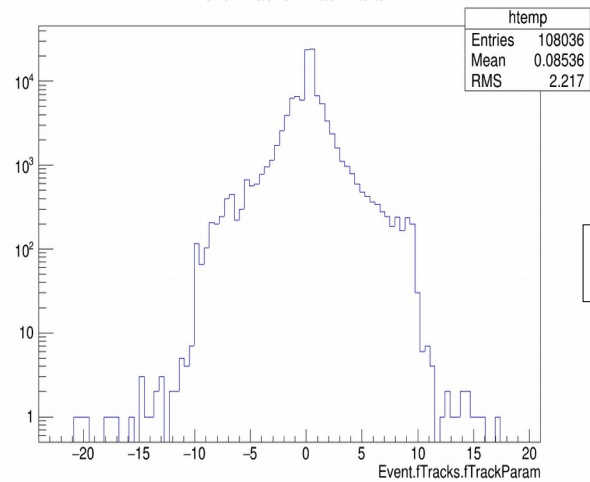
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After

The output tree in Improver.root file is still empty

Contact Fiorella, again !!

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## MC-sample for testing NN

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## MC-sample for testing NN

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- Total Runs : **235** (LHC18 - period) – **Good runs**

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By DPG

RunList\_LHC18q\_pass1\_CentralBarrelTracking

LHC18q – 136 runs

LHC18r – 99 runs

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- It can be done on **Lego-train**, in efficient way.
  - It will take 3-4 days to collect all the statistics (235 runs).
  - Sent a mail to train-operator.

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**Possible for  
MC as well**

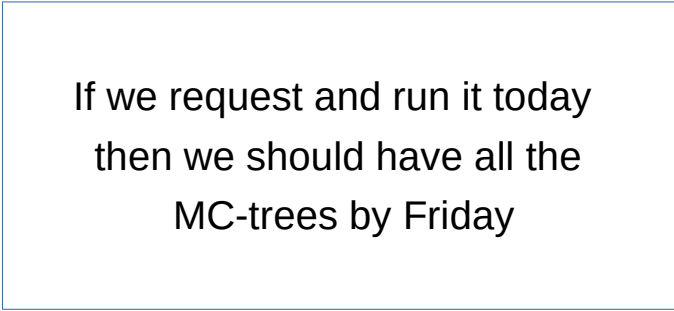
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If we request and run it today  
then we should have all the  
MC-trees by Friday

# Questions

- When should we start the tree production for the whole LHC18 data?
  - As we know we do not have all the information in our trees now.
  - Not enough storage on the workstation.

**Thank you!**

# Backup

- $L_{xy}$  for unlike pairs in same event.
- It is just to see whether anything changes after the Improver or not.

