



**Update IBL Geo Validation:**  
***Looking at ATLAS-R2-2015-03-15-00***

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09/12/15



- Updated Geo Tag: - ATLAS-R2-2015-03-**15**-00\_VALIDATION

- Grey line in plots, also shown as stack of flavour fractions.

- ttbar events

- pileupFinalBunch = 0

*“valid1.110401.PowhegPythia\_P2012\_ttbar\_nonallhad.recon.AOD.e3099\_s2781\_r7295\_tid07101871\_00”*

Production here:

=> Panda: <http://bigpanda.cern.ch/jobs/?jeditaskid=7156911>

=> Dataset: [valid1.110401.PowhegPythia\\_P2012\\_ttbar\\_nonallhad.merge.e3099\\_s2781\\_r7295\\_p2431](https://bigpanda.cern.ch/datasets/valid1.110401.PowhegPythia_P2012_ttbar_nonallhad.merge.e3099_s2781_r7295_p2431)

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- Validated Geo Tag: ATLAS-R2-2015-03-**01**-00\_VALIDATION

- Black markers in plots

- ttbar events

- pileupFinalBunch = 6

*“valid1.110401.PowhegPythia\_P2012\_ttbar\_nonallhad.recon.AOD.e3099\_s2578\_r7058\_tid06432679\_00”*

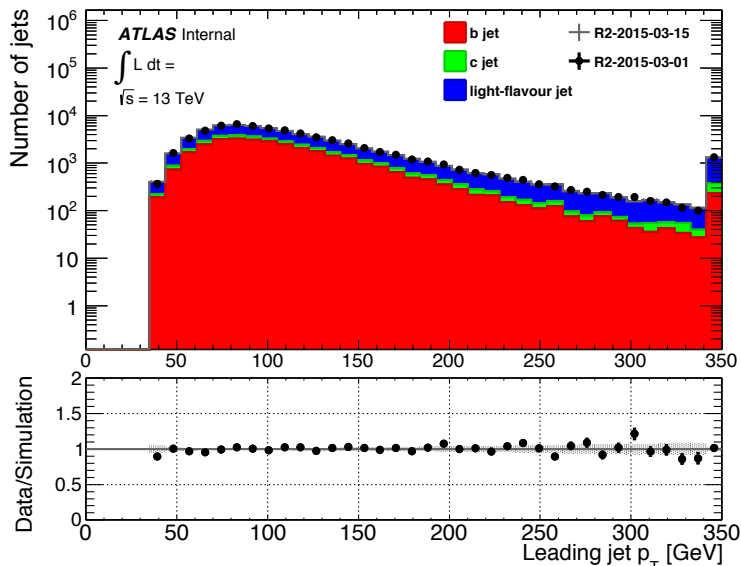
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- We are using NTuples created using Run2BTagOptimisationFramework

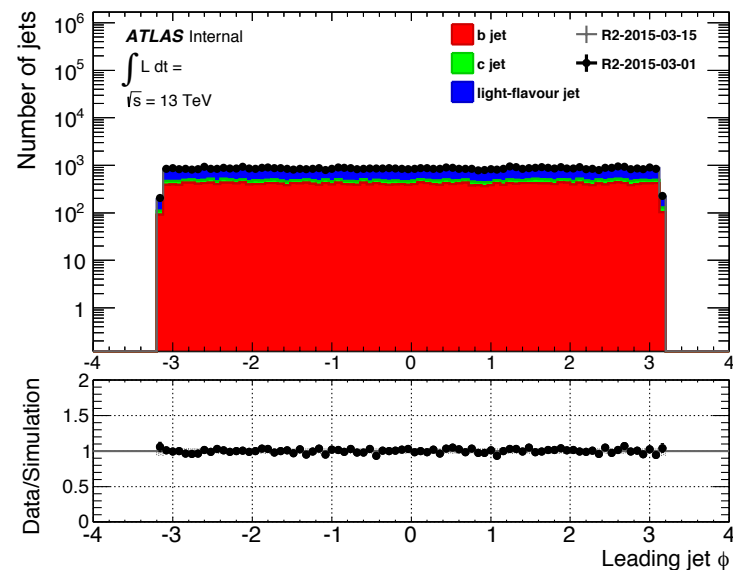
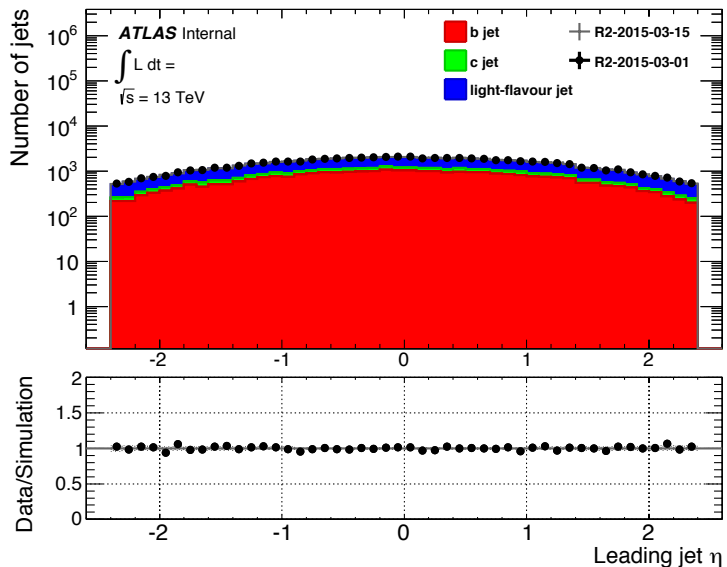
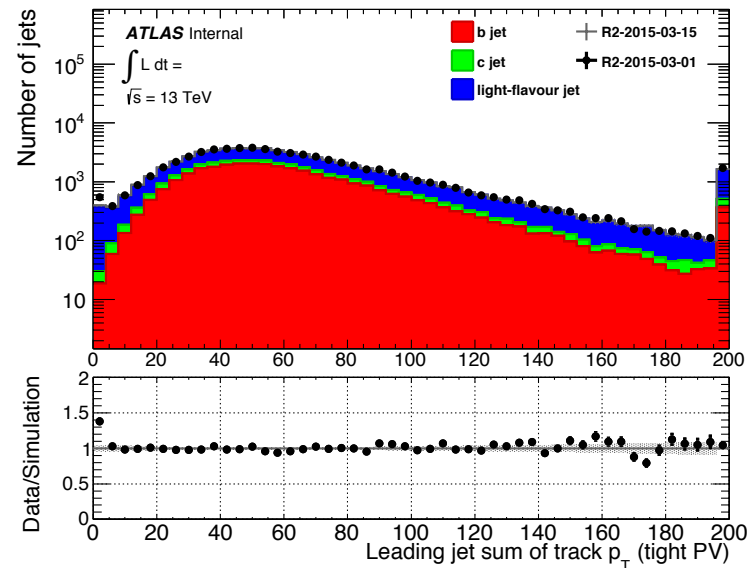


### 3 Couple of Jet Kinematics = All Ok

#### Jet pT



#### JVT

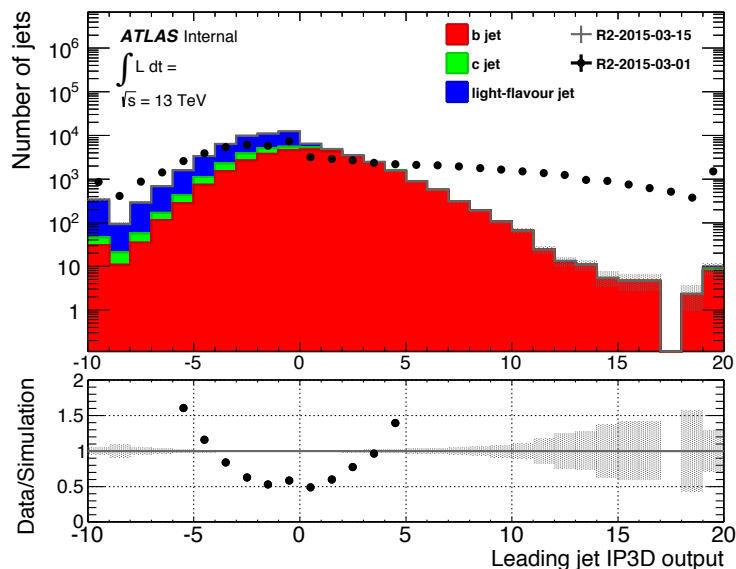


#### Eta

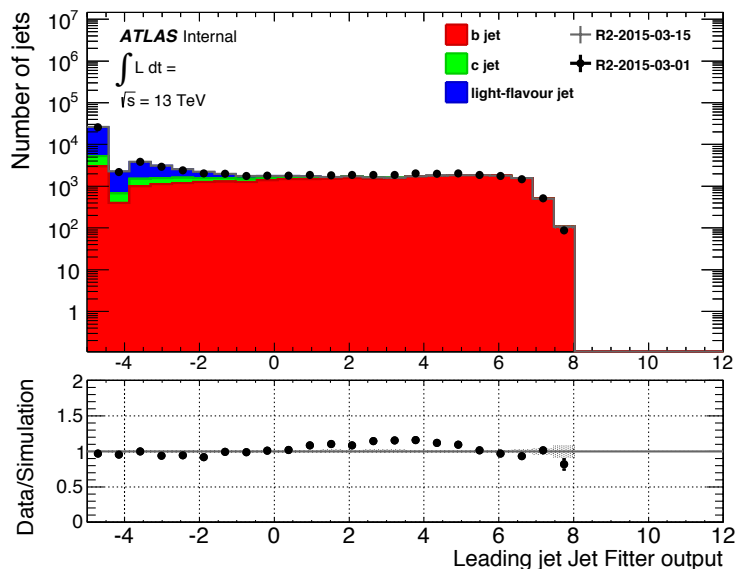
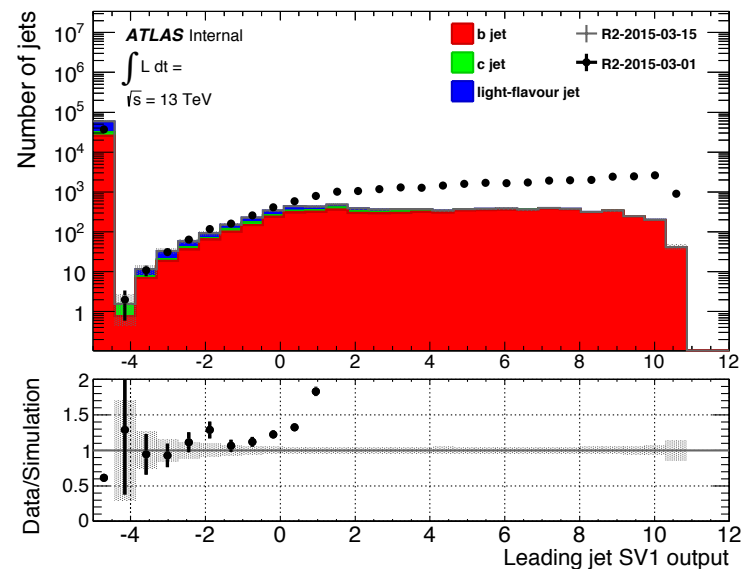
#### Phi



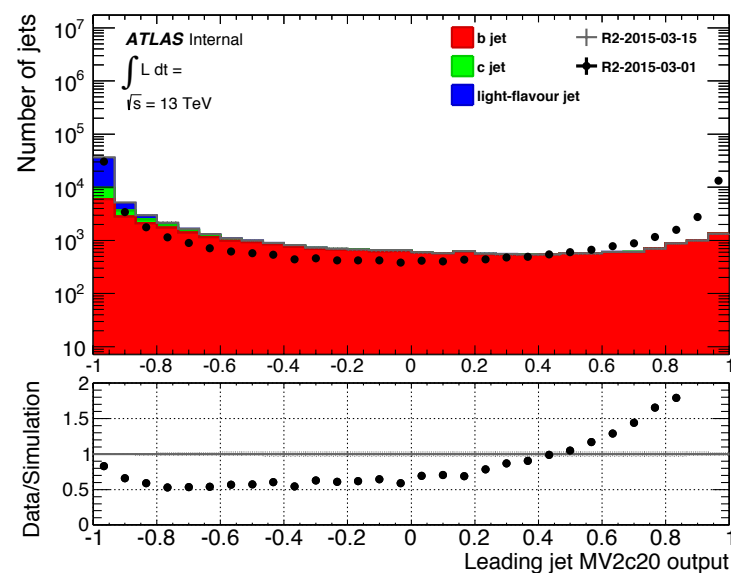
## IP3D - Distribution still wrong



## SV1



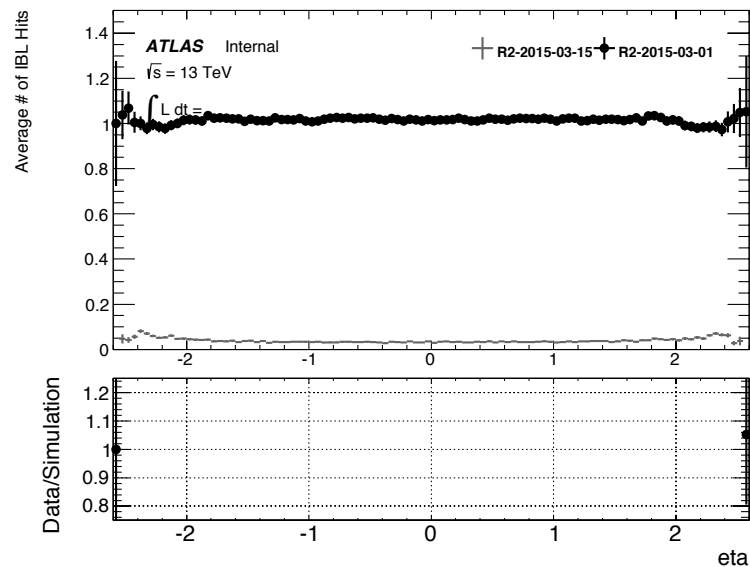
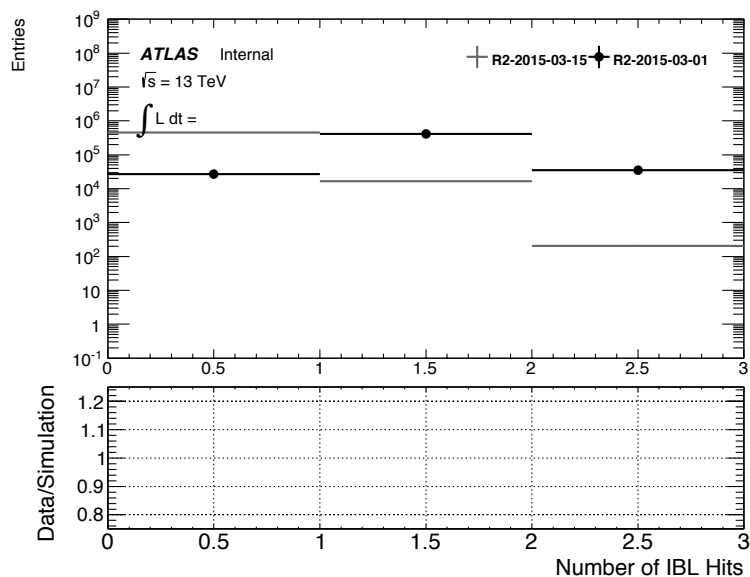
## Jet fitter



## MV2c20

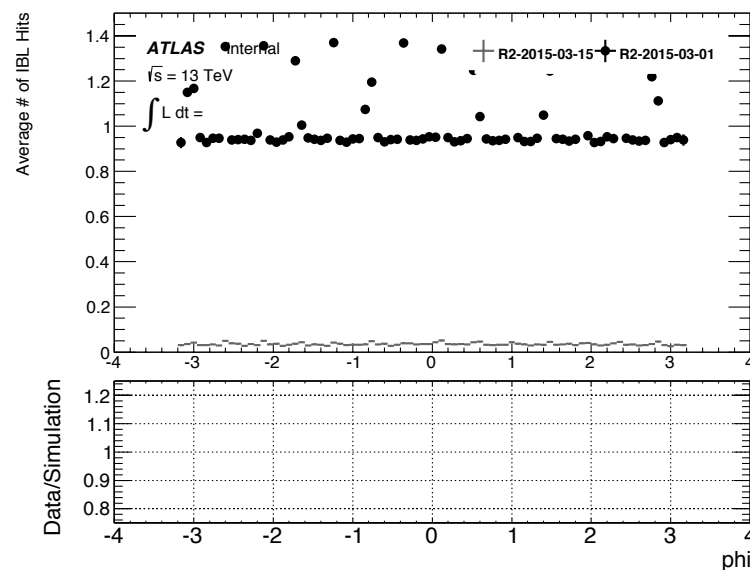
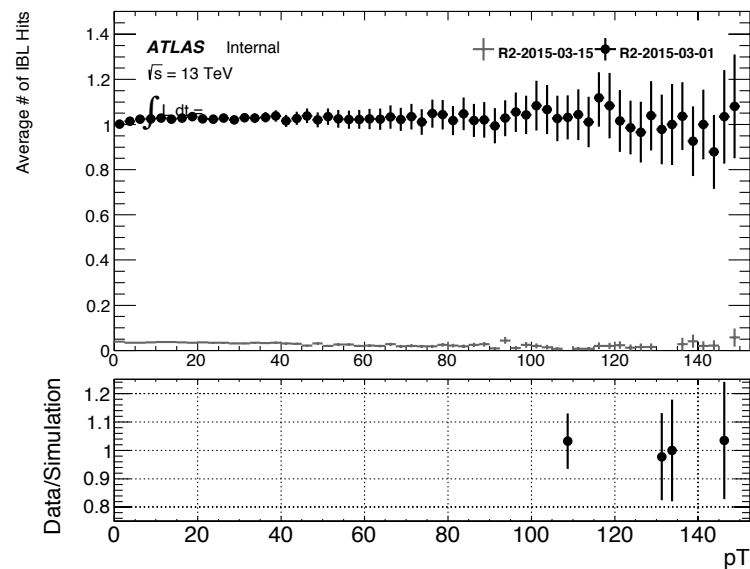


## # IBL Hits



## IBL Hits vs. $\eta$

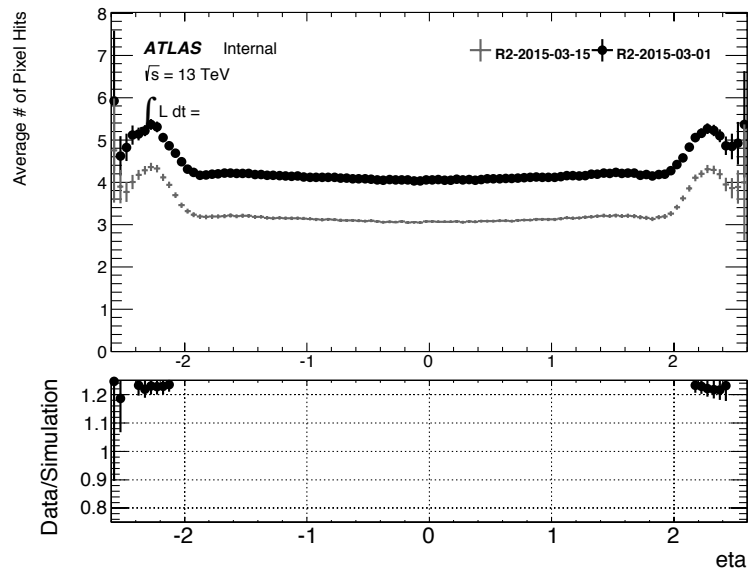
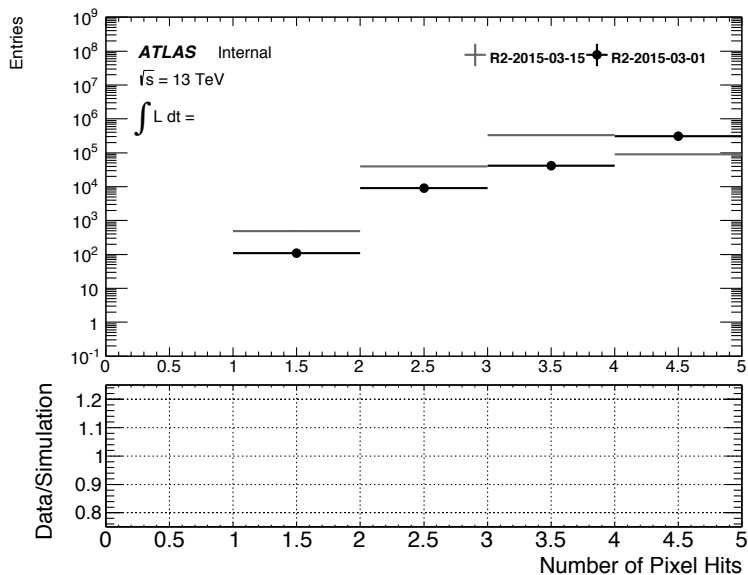
## IBL Hits vs. track $p_T$



## IBL Hits vs. $\Phi$

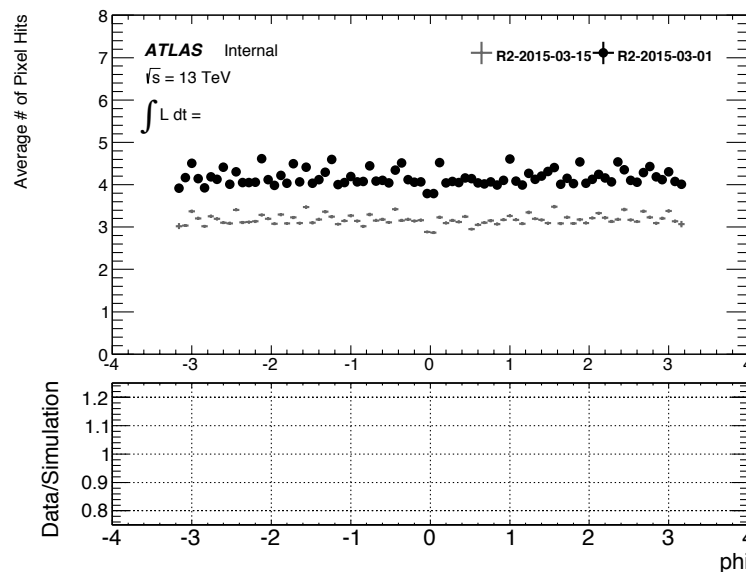
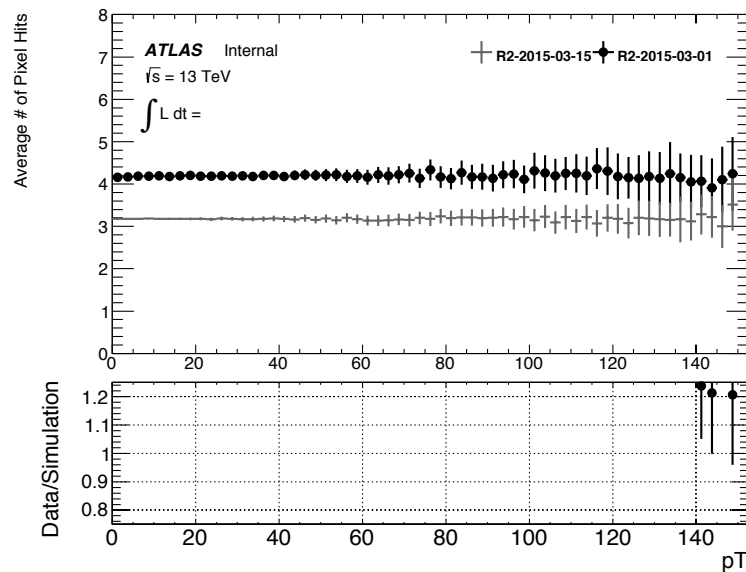


## # Pixel hits vs. $\eta$

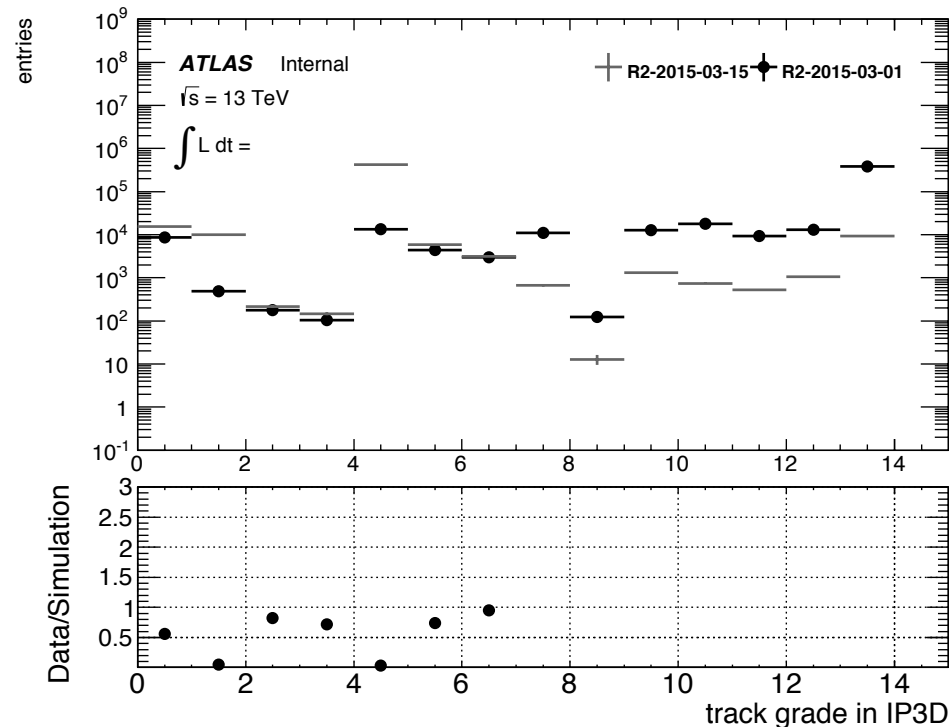


## # Pixel hits vs. $\eta$

## # Pixel hits vs. track $p_T$



## # Pixel hits vs. $\Phi$



## IP3D Grades:

Tracks split into 14 categories  
- shown on right

**Conclusion: We don't understand why there are so few IBL hits in ATLAS-R2-2015-03-15**

## ATLAS-R2-2015-03-01

- Most hits in both samples in Cat 14
- Good, so no problem

## ATLAS-R2-2015-03-15

- Most hits in both samples in Cat 4
- No hit in IBL, hit expected

- 0 - 0In0NIn\_EInENIn: no hit in first 2 layer and both expected
- 1 - 0In0NIn\_EIn: no hit in first 2 layer and expected in the first
- 2 - 0In0NIn\_ENIn: no hit in first 2 layer and expected in the second
- 3 - 0In0NIn: no hit in first 2 layer and not expected
- 4 - 0In1NIn\_EIn: no hit in first layer and expected
- 5 - 0In1NIn: no hit in first layer and not expected
- 6 - 1In0NIn\_ENIn: no hit in second layer and expected
- 7 - 1In0NIn\_ENIn: no hit in second layer and expected
- 8 - First2LayerShared: shared in both first and second layer
- 9 - PixelShared: at least 1 share in first 2 layers or shared in other layers
- 10 - SCTShared: >1 shared in SCT (noPixShared)
- 11 - First2LayerSplit: at least a split hit in one of the first 2 layer
- 12 - PixelSplit: split hits in other pixel layers
- 13 - Good: split hits in other pixel layers



# Backup