



SPRACE

STARLight Production

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SPRACE - UNESP

Codes

CMSSW_11_1_0_pre5

- ❑ Official genproductions
 - <https://github.com/cms-sw/genproductions>
- ❑ STARLight
 - <https://starlight.hepforge.org>
- ❑ Details about the generation and samples in the twiki
 - <https://twiki.cern.ch/twiki/bin/view/CMS/STARlightINFO>
- ❑ Code to make histograms
 - https://github.com/denerslemos/STARLight_cross_check_analyzer

MC test samples

STARLight samples generated for two configuration

- ❑ Single Diffraction (prodType==5)
- ❑ Double Diffraction (prodType==6)

Test STARLight MC samples with 10k events are available:

- ❑ AOD for Single Diffraction (prodType==5)
 - /eos/cms/store/group/phys_heavyions/ddesouza/STARLight/prodType5/step3_RAW2DIGI_L1Reco_RECO.root
- ❑ AOD for Double Diffraction (prodType==6)
 - /eos/cms/store/group/phys_heavyions/ddesouza/STARLight/prodType6/step3_RAW2DIGI_L1Reco_RECO.root
- ❑ LHE, GEN-SIM, DIGI and miniAOD can be found on the twiki page:
 - <https://twiki.cern.ch/twiki/bin/view/CMS/STARlightINFO>

STARLight Private Sample

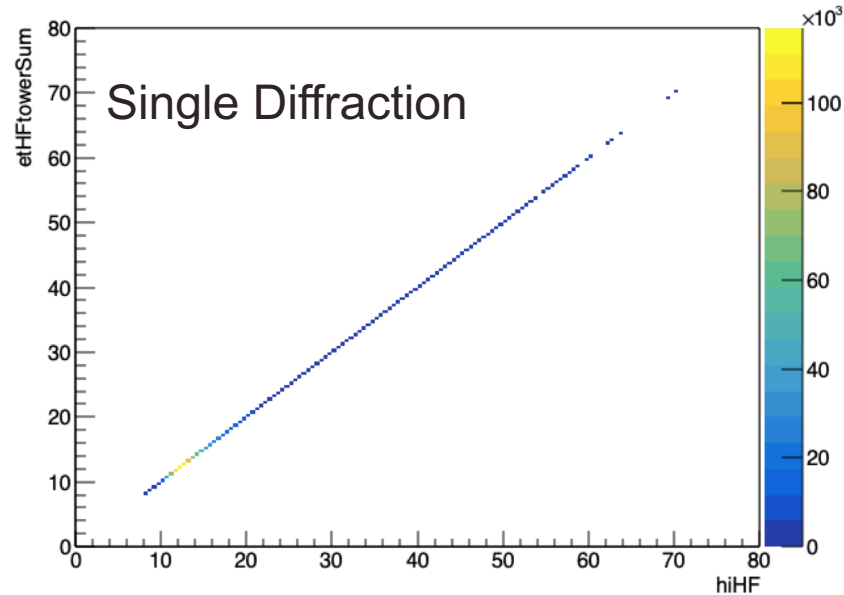
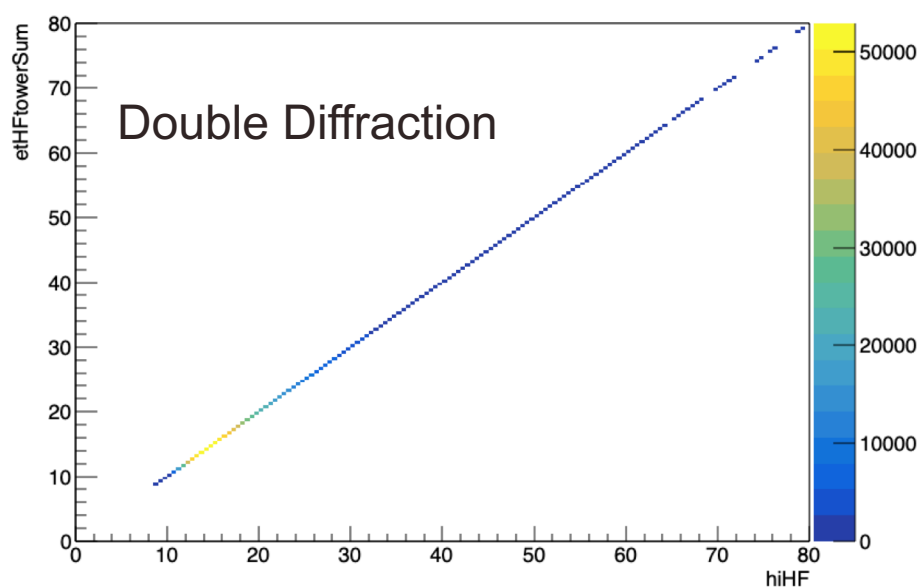
Sample with ~ 1 million events were produced:

- ❑ LHE: [Single Diffraction](#) and [Double Diffraction](#)
- ❑ GEN-SIM: [Single Diffraction](#) and [Double Diffraction](#)
- ❑ DIGI: [Single Diffraction](#) and [Double Diffraction](#)
- ❑ AOD: [Single Diffraction](#) and [Double Diffraction](#)
- ❑ miniAOD: [Single Diffraction](#) and [Double Diffraction](#)

Also, this samples can be found at the twiki

- ❑ <https://twiki.cern.ch/twiki/bin/view/CMS/STARlightINFO>

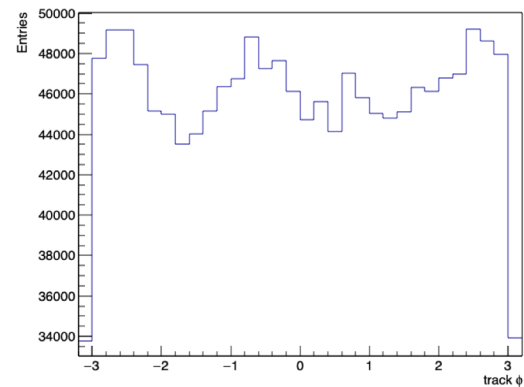
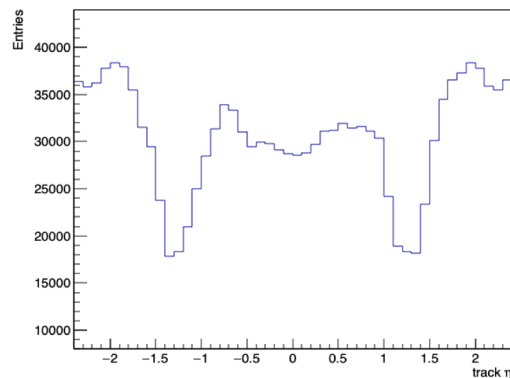
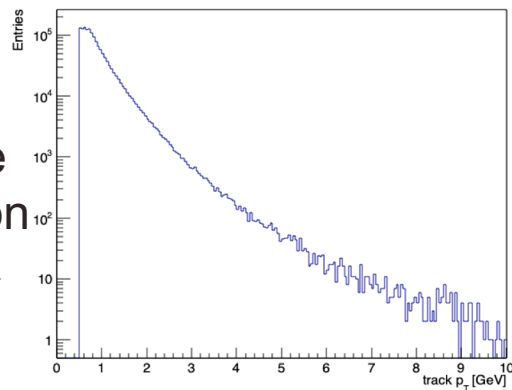
Cross-check: hiHF vs etHFtowerSum



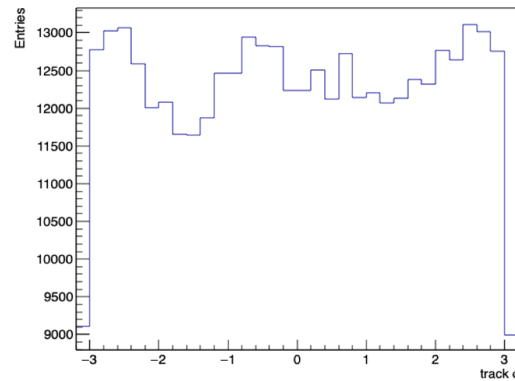
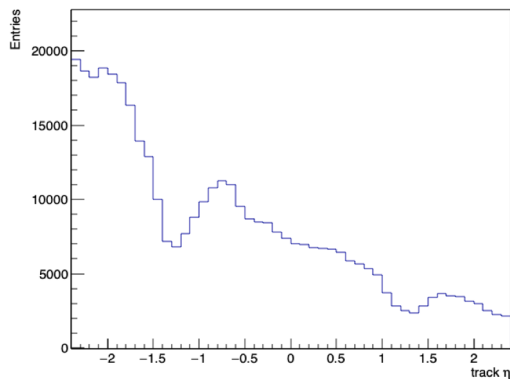
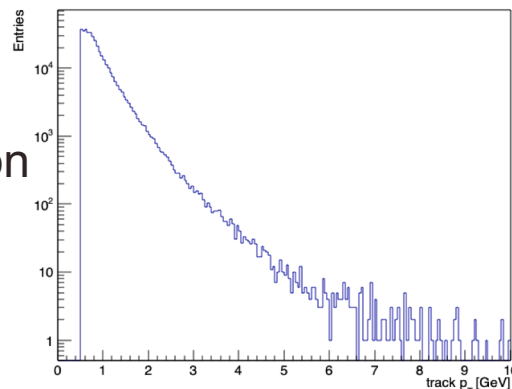
hiHF using centrality collection
etHFtowerSum using towerMaker collection

Tracking control plots

Double
Diffraction

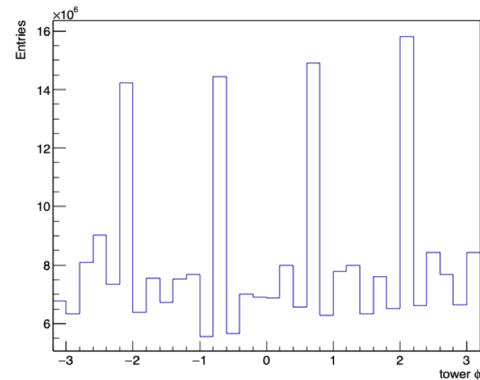
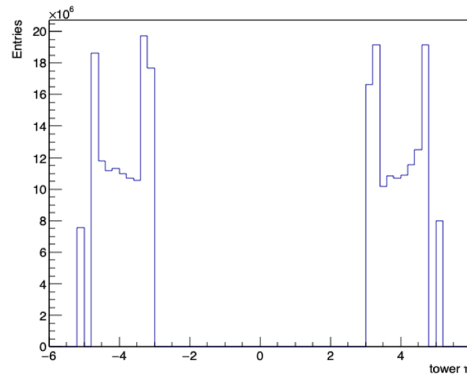
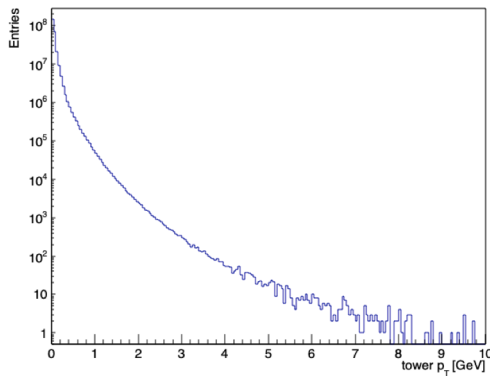


Single
Diffraction

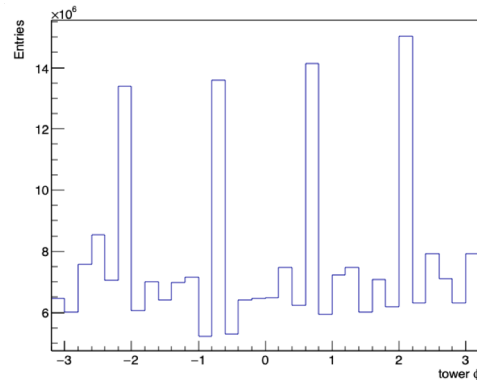
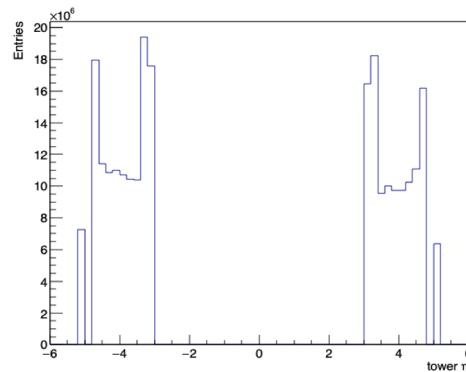
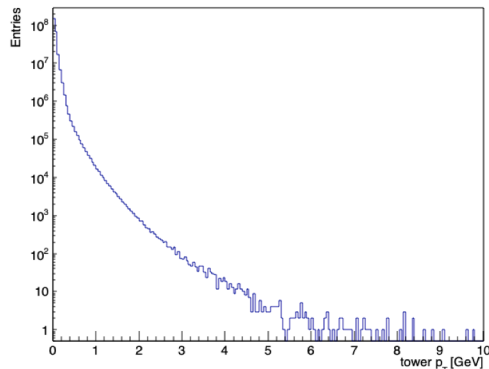


Tower (HF) control plots

Double
Diffraction

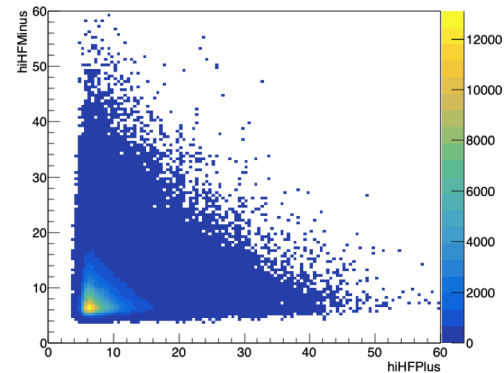
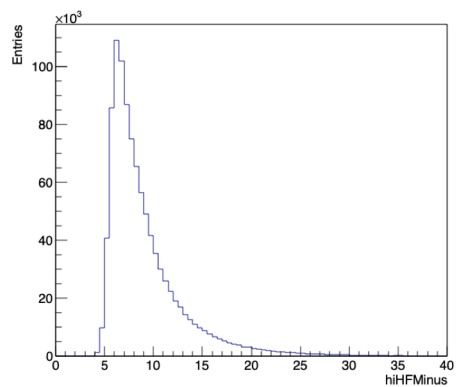
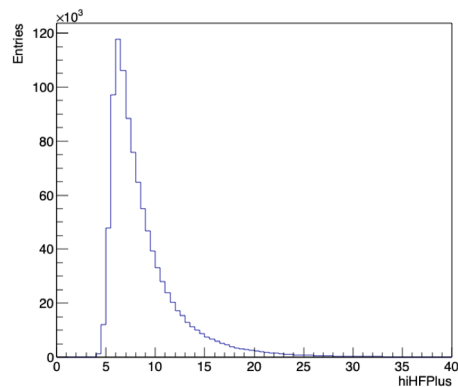


Single
Diffraction

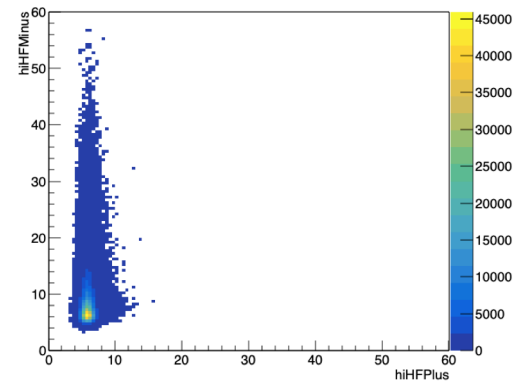
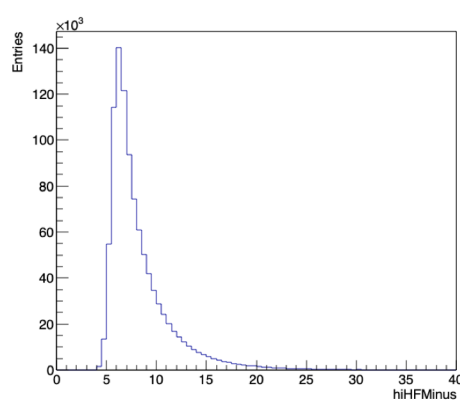
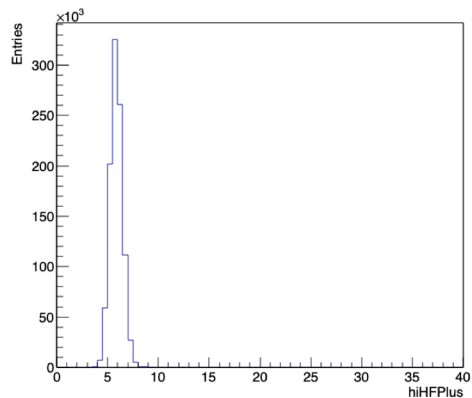


hiHF + and -

Double
Diffraction

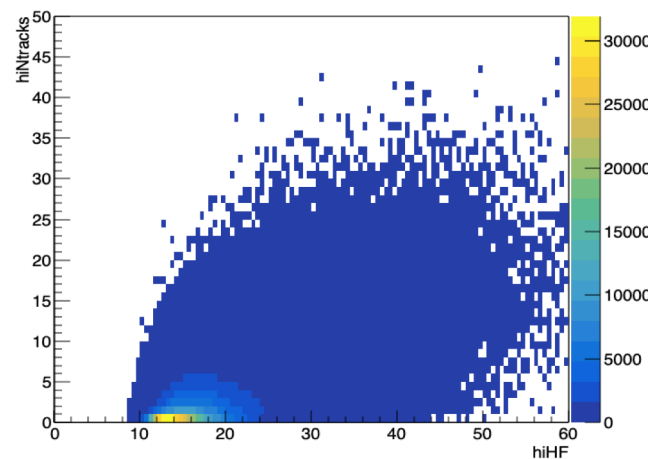
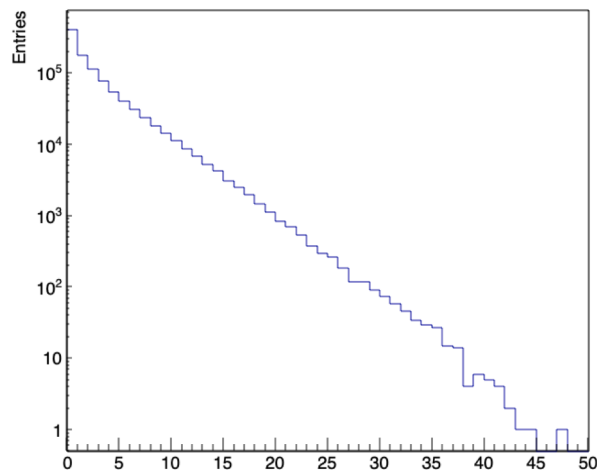


Single
Diffraction

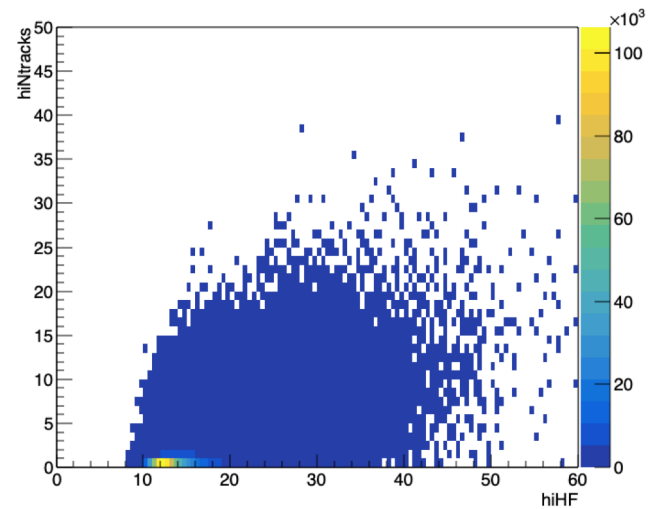
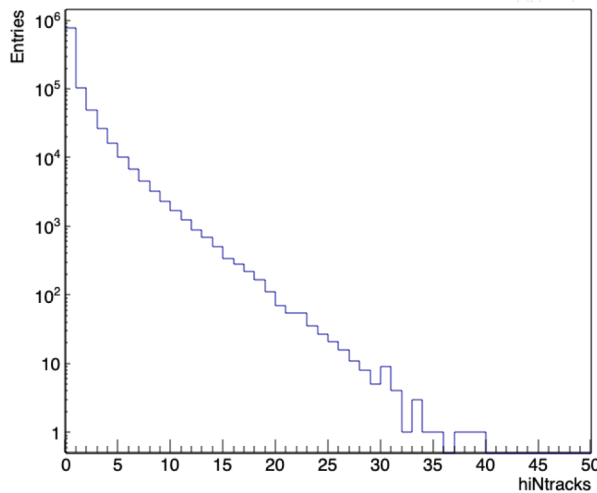


hiHF vs hiNtracks

Double
Diffraction

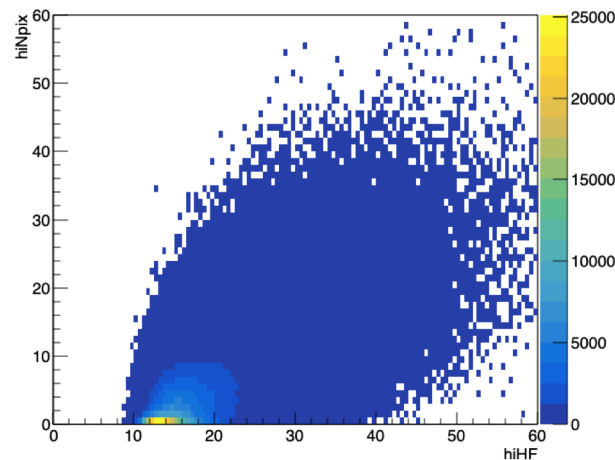
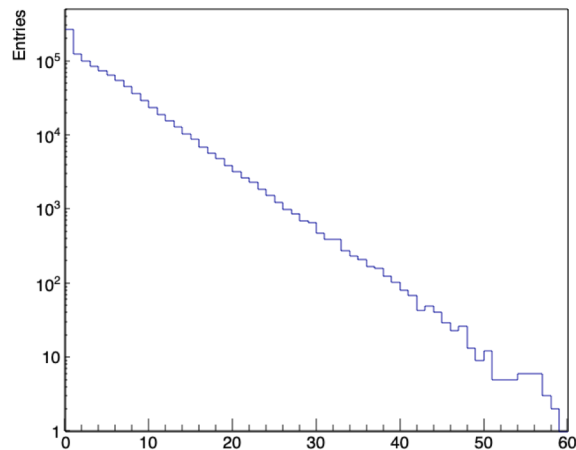


Single
Diffraction

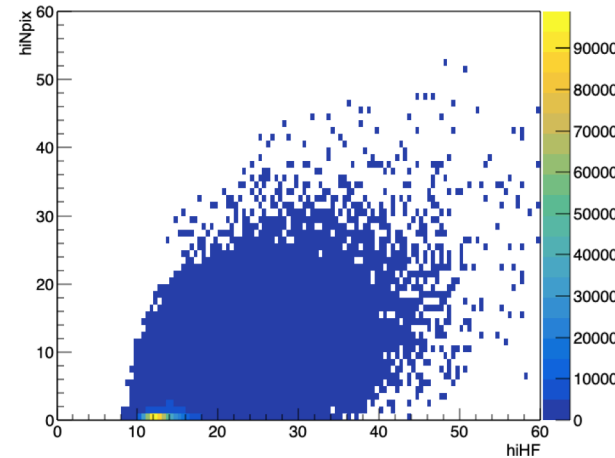
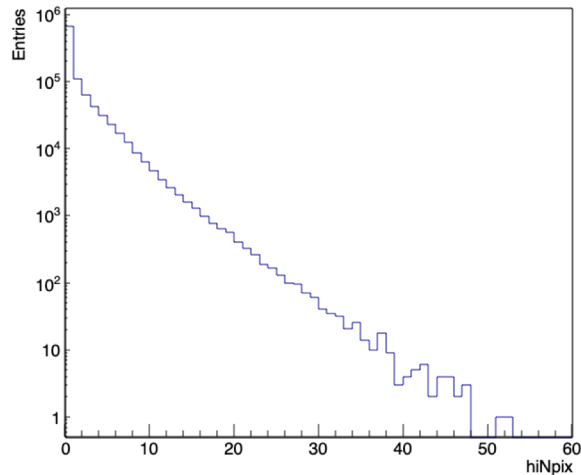


hiHF vs hiNpix

Double
Diffraction

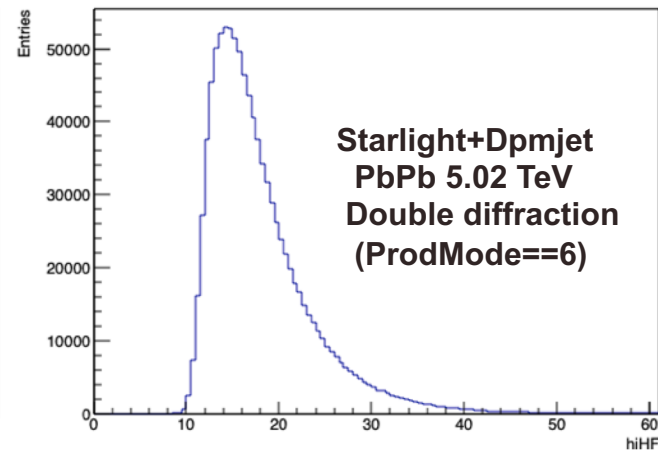
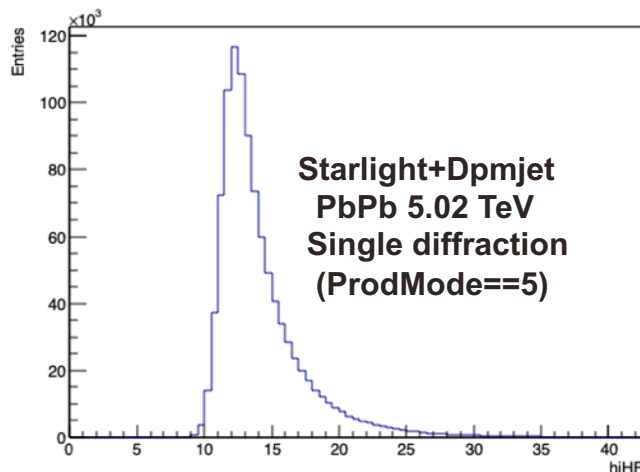


Single
Diffraction



hiHF comparison with 2018 PbPb MC

2021
→



2018
→

