

Status Report on Pixel DB Conditions for 80X MC conditions for DIGI-RECO

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Conditions

- ▶ **Bad Module list**

- ▶ Twiki: <https://twiki.cern.ch/twiki/bin/viewauth/CMS/SiPixelQualityHistory>

- ▶ **Lorentz Angle**

- ▶ Twiki: <https://twiki.cern.ch/twiki/bin/view/CMS/SiPixelLorentzAngleHistory>

- ▶ **Templates, GenErrors**

- ▶ Twiki: <https://twiki.cern.ch/twiki/bin/view/CMS/SiPixelTemplateHistory>
 - ▶ Twiki: <https://twiki.cern.ch/twiki/bin/viewauth/CMS/SiPixelGenErrorHistory>

- ▶ **Gain calibration**

- ▶ Twiki: <https://twiki.cern.ch/twiki/bin/view/CMS/SiPixelGainHistory>

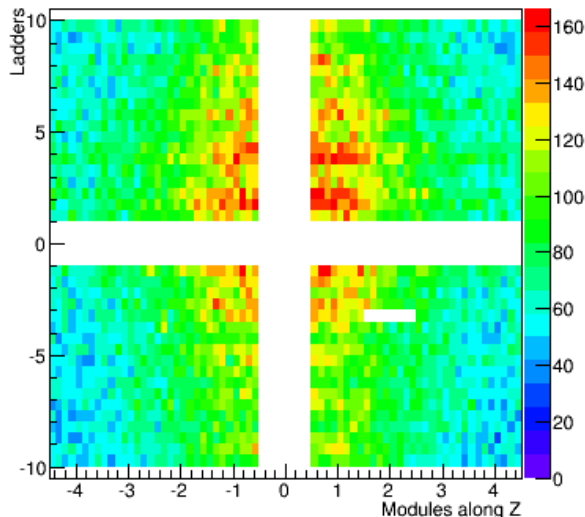
- ▶ **Pixel Dynamic Inefficiency**

- ▶ Twiki: <https://twiki.cern.ch/twiki/bin/view/CMS/SiPixelDynamicInefficiencyHistory>

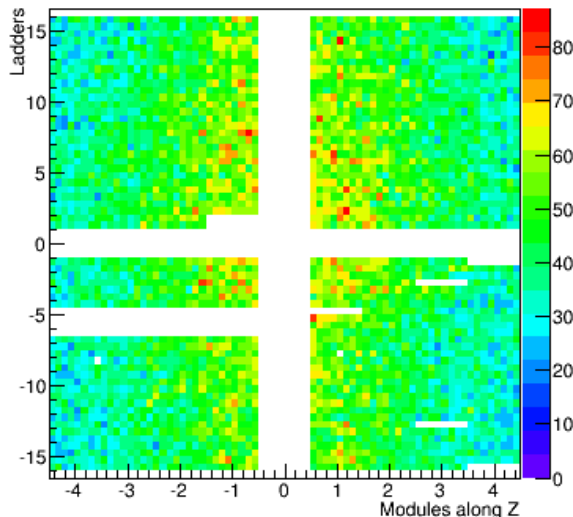
SiPixelQuality – MC tags

- ▶ Record: `SiPixelQualityFromDbRcd`
- ▶ Tag: `SiPixelQuality_v28_mc`
 - ▶ (in all scenarios)
- ▶ Detector status as of 2015-09-04

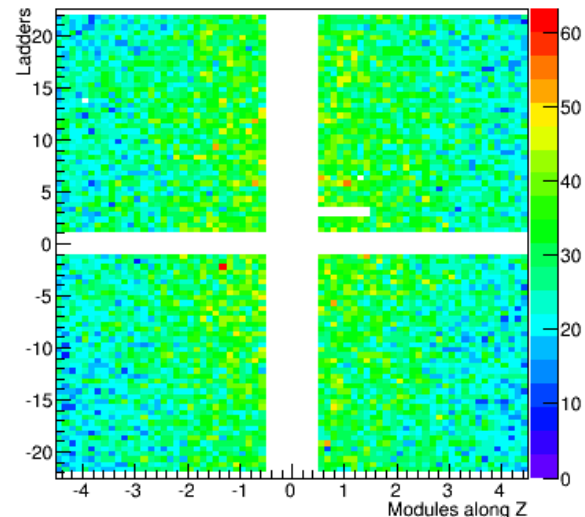
Layer 1



Layer 2



Layer 3



SiPixelLorentzAngle – MC tags

- ▶ Record: `SiPixelLorentzAngleSimRcd`
 - ▶ Tag: `SiPixelLorentzAngleSim_v02_mc`
 - ▶ Tag: `SiPixelLorentzAngle_v02_mc`
 - ▶ Tag: `SiPixelLorentzAngle_fromAlignment_v1_mc*`
 - ▶ Tag: `SiPixelLorentzAngle_forWidth_v1_mc*`
 - ▶ (in all scenarios)
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- ▶ * = `[cms_orcon_prod/CMS_COND_31X_PIXEL]`

SiPixelGenError – MC tags

- ▶ Record: `SiPixelGenErrorDBObjectRcd`
- ▶ Tag: `SiPixelGenErrorDBObject_38T_vl_mc**`
- ▶ Tag: there is no `0T_mc` tag in the GT
 - ▶ (in all scenarios)
- ▶ ** = `[cms_orcon_prod/CMS_COND_PIXEL_000]`

SiPixelTemplate – MC tags

- ▶ Record: **SiPixelTemplateDBObjectRcd**
- ▶ Tag: **SiPixelTemplates38T_2010_2011_mc**
- ▶ Tag: **SiPixelTemplateDBObject_0T_v3_mc**
 - ▶ (in all scenarios)

SiPixelGainCalibration – MC tags

- ▶ Record:

SiPixelGainCalibrationOfflineSimRcd

SiPixelGainCalibrationForHLTSimRcd

- ▶ Description:

- ▶ ...HLT... - gains/pedestals are per column,
- ▶ ...Offline... - gains are per column, pedestals are per pixel

SiPixelGainCalibration – MC tags

Tag name	_design	_asymptotic	_startup	cosmics
SiPixelGainCalibrationForHLT _split_smeared_mc		X	X	X
SiPixelGainCalibration _split_smeared_mc		X	X	X
SiPixelGainCalibration _split_mc	X			
SiPixelGainCalibrationForHLT _split_mc	X			
SiPixelGainCalibrationSim _split_mc	X	X	X	X
SiPixelGainCalibrationSimForHLT _split_mc	X	X	X	X

SiPixelFedCabling– MC tags

- ▶ Record: **SiPixelFedCablingMapRcd**
- ▶ Tag: **SiPixelFedCablingMap_mc**
 - ▶ (in all scenarios)
- ▶ The MC tag is used to do the digi-2-raw and the raw-2-digi, so its content basically is not important.

SiPixelDynamicInefficiency – MC tags

- ▶ Record: **SiPixelDynamicInefficiencyRcd**
- ▶ Tag: **SiPixelDynamicInefficiency_13TeV_50ns_v2_mc**
 - ▶ Contains 0.999 efficiency loss for 50ns runs at 13TeV
 - ▶ (in all scenarios)
- ▶ Tag:
 - ▶ Updated version:
SiPixelDynamicInefficiency_13TeV_v2_mc
 - ▶ https://indico.cern.ch/event/501479/session/4/contribution/27/attachments/1233977/1810728/2016_02_24_PixelOfflineMeeting_HitEfficiency.pdf
 - ▶ Based on 2015 measurements

Backup

Backup slides



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Tamas Almos Vami

