

Phase I Failure Scenarios Follow-Up

Tamás Álmos VÁMI¹, János KARANCSI²

¹ Wigner RCP, Budapest

² ATOMKI, Debrecen

Pixel Offline meeting



Reminder

Validation presentation from me at the Pixel Offline meeting:
<https://indico.cern.ch/event/607513/#29-pixel-failure-scenarios>

<https://twiki.cern.ch/twiki/bin/view/CMS/SiPixelPhase1FailureScenarios>

<https://tvami.web.cern.ch/tvami/projects/Phase1FailureScenarios/>

Scenarios

Scenario 0: Perfect Detector (New cabling map validation)

Scenario 00: No Pixel Detector

Scenario 1: Random 5%

Scenario 2: 1 BPix + 1 FPix cooling loop out

Scenario 3: BmO SEC4 L1+L4 out,
BpI SEC6 L2+L3 out,
BmI Disk1 ROG3 HV2 out
BpO Disk2 ROG1 HV1 out

Scenario 4: 1 BPix + 1 FPix FED out

Scenario 5: 1 BPix Read-Out group is out

How to reach the payloads

```
from CondCore.CondDB.CondDB_cfi import *
process.SiPixelQualityDBReader = cms.ESSource("PoolDBESSource",
    BlobStreamerName = cms.untracked.string('TBufferBlobStreamingService'),
    DBParameters = cms.PSet(
        messageLevel = cms.untracked.int32(0),
        authenticationPath = cms.untracked.string("")
    ),
    connect = cms.string('frontier://FrontierProd/CMS_CONDITIONS'),
    toGet = cms.VPSet(
        cms.PSet(
            record = cms.string('SiPixelQualityFromDbRcd'),
            # uncomment the favored scenario
            #tag = cms.string('SiPixelQuality_Phase1FailureScenario_v00'), #NoPixelDet
            #tag = cms.string('SiPixelQuality_Phase1FailureScenario_v1'), #FS1: Random
            #tag = cms.string('SiPixelQuality_Phase1FailureScenario_v2'), #FS2: CoolingLoop
            #tag = cms.string('SiPixelQuality_Phase1FailureScenario_v3'), #FS3: HV_out
            #tag = cms.string('SiPixelQuality_Phase1FailureScenario_v4'), #FS4: FED_out
            #tag = cms.string('SiPixelQuality_Phase1FailureScenario_v5'), #FS5: ReadOut_out
        )
    )
)
process.es_prefer_Quality = cms.ESPrefer("PoolDBESSource","SiPixelQualityDBReader")
```

How to reach the payloads

For the subscenarios please use

...

```
#tag = cms.string('SiPixelQuality_Phase1FailureScenario_v2a'), #FS2: BPix CoolingLoop  
#tag = cms.string('SiPixelQuality_Phase1FailureScenario_v2b'), #FS2: FPix CoolingLoop  
#tag = cms.string('SiPixelQuality_Phase1FailureScenario_v3a'), #FS3: BmO SEC4 L1+L4 HV_out  
#tag = cms.string('SiPixelQuality_Phase1FailureScenario_v3b'), #FS3: BpI SEC6 L2+L3 HV_out  
#tag = cms.string('SiPixelQuality_Phase1FailureScenario_v3c'), #FS3: BmI Disk1 ROG3 HV2 HV_out  
#tag = cms.string('SiPixelQuality_Phase1FailureScenario_v3d'), #FS3: BpO Disk2 ROG1 HV1 HV_out  
#tag = cms.string('SiPixelQuality_Phase1FailureScenario_v4a'), #FS4: BPix FED_out  
#tag = cms.string('SiPixelQuality_Phase1FailureScenario_v4b'), #FS4: FPix FED_out
```

...