

hcal cells in clustering?

I'm looking at hcal info with Tova and Larry for pion gun (DataMuC_MuColl10_v0A)

Observe no hcal cells when looking at getCalorimeterHits() of a cluster

HcalBarrelCollectionRec
HcalBarrelsCollectionRec

Are hcal cells included in clustering? Mismatch in hcal collection name?

Clustering

```
430 DDMarlinPandora = MarlinProcessorWrapper("DDMarlinPandora")
431 DDMarlinPandora.OutputLevel = INFO
432 DDMarlinPandora.ProcessorType = "DDPandoraPFANewProcessor"
433 DDMarlinPandora.Parameters = {
434     "ClusterCollectionName": ["PandoraClusters"],
435     "CreateGaps": ["false"],
436     "ECalCaloHitCollections": ["EcalBarrelCollectionRec", "EcalEndcapCollectionRec"],
437     "ECalMipThreshold": ["0.5"],
438     "ECalScMipThreshold": ["0"],
439     "FinalEnergyDensityBin": ["110."],
440     "HCalBarrelNormalVector": ["0", "0", "1"],
441     "HCalCaloHitCollections": ["HcalBarrelCollectionRec", "HcalEndcapCollectionRec"],
442     "HCalMipThreshold": ["0.3"],
443     "HCalToEMGeVCalibration": ["1.0"],
```

Digi/Rec

```
326 MyHcalBarrelReco = MarlinProcessorWrapper("MyHcalBarrelReco")
327 MyHcalBarrelReco.OutputLevel = INFO
328 MyHcalBarrelReco.ProcessorType = "RealisticCaloRecoScinPpd"
329 MyHcalBarrelReco.Parameters = {
330     "CellIDLayerString": ["layer"],
331     "calibration_factorsMipGev": ["0.0287783798145"],
332     "calibration_layergroups": ["100"],
333     "inputHitCollections": ["HcalBarrelsCollectionDigi"],
334     "inputRelationCollections": ["HcalBarrelsRelationsSimDigi"],
335     "outputHitCollections": ["HcalBarrelsCollectionRec"],
336     "outputRelationCollections": ["HcalBarrelsRelationsSimRec"],
```

Backup

```
import pyLCIO
filepath = '/data/fmeloni/DataMuC_MuColl10_v0A/reco/pionGun_pT_250_1000/'
filepath += 'pionGun_pT_250_1000_reco_4280.slcio'
reader = pyLCIO.IOIMPL.LCFactory.getInstance().createLCReader()
reader.open(filepath)
event = reader.readNextEvent()
event = reader.readNextEvent()
```

```
tags = 'cal', 'col', 'rec'
for name in event.getCollectionNames():
    if all(ss in str(name).lower() for ss in tags):
        print(name)
```

```
Loading LCIO ROOT dictionaries ...
EcalBarrelCollectionRec
EcalEndcapCollectionRec
HcalBarrelsCollectionRec
HcalEndcapsCollectionRec
```