Validations : 7 ans de travail et d'évolutions

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Claude Charlot

LLR

jeudi 28 septembre 2017 à 14:09
vendredi 21 novembre 2014 à 12:31

Introduction

Datas CERN tirées détecteurs

En parallèle, simulations avec Géant4
Elles sont lancées 6 a 9 mois à l'avance
pour comparer les données

Plusieurs étapes de traitements

Reconstruction à la fin
Pour les objets de l'analyse : e-, γ, μ, jet, …

Améliorations → Releases (2-3 par an) ⟶ On ne peut pas découvrir
de pbms au dernier moment
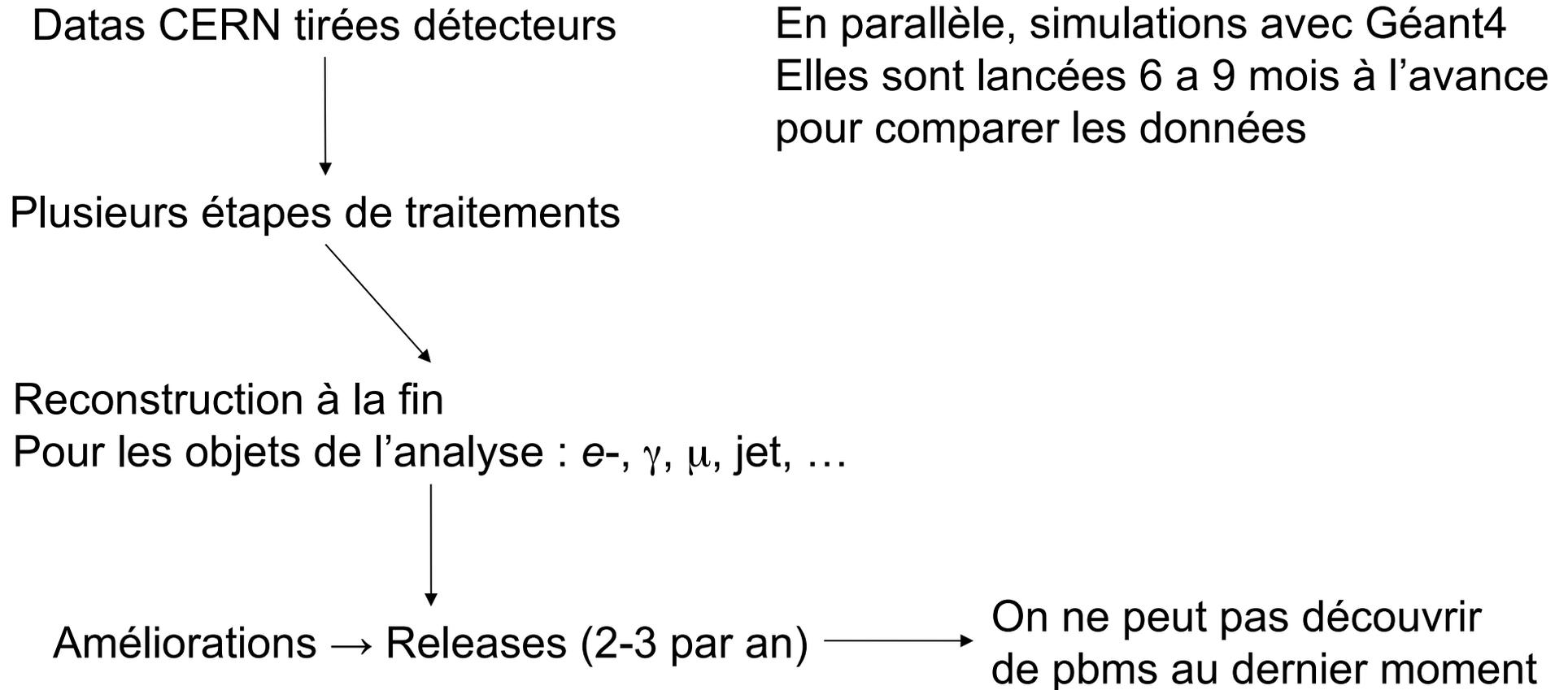
DQM Validation

On valide les changements (améliorations, modifications des databases, sur Géant4, ..) en comparant avec les observables, d'une version à l'autre.

Ces validations impliquent facilement 20 – 40 personnes pour valider les objets ou la physique

Validations

DQM Validation

Validations quels outils

En général

En ligne à partir de fichiers root

DQM_V0001_R000000001__RelValQCD_Pt_600_800_13__CMSSW_7_2_0_pre5-POSTLS172_V3-v1__DQMIO.root

Nous

e/γ validation page

La page web se présente sous la forme d'un tableau, ou chaque lien représente un plot directement accessible. Les plots sont groupés par categorie.

e/γ validation page

La page web se présente sous la forme d'un tableau, ou chaque lien représente un plot directement accessible. Les plots sont groupés par catégorie.

DQM Validation

En 2019, 55 validations faites

Plus de 4 releases
Nbx tests pour les futurs runs
(2021, 2023, 2024 et 2026!)

Exemple : mai 2019

10_6_0 (included pmx) : 3504
10_6_0 2017 (included pmx) : 3243
10_6_0 2016 (included pmx) : 2945
10_6_0 2021 (included pmx) : 1677
10_6_0 2021 14TeV (included pmx) : 1044
10_6_0 phase2 : 0

Total : 12413 histos to be validated

En 2020, 6 validations faites sur
1 release pour les futurs runs
(2021, 2023, 2024 et 2026!)

Pour les obtenir, on refait les calculs des histos.
Il y a plusieurs étapes : Ça prend un peu de temps

Un peu d'histoire

Validation de Release

Plusieurs étapes :

a) Mise en forme, configuration du fichier oval, vérifications
b) Analyze : on extrait les histos des fichiers root
c) Finalize : on ajoute des données supplémentaires aux histos
d) Store :on envoi les fichiers créés sur un site de stockage
e) Publish : on créé la page web des histos
f) On prévient les utilisateurs que le travail est fait
g) propagation des résultats sur https://cms-conddb.cern.ch/PdmV/valdb/

70% of the overall time (98% in the case of the FastSim) would thus be saved

Aux débuts

Oval file (perl inside)

A mes débuts

Lancement par différents scripts : analyze, finalize, store, publish.
Puis par un seul : relval_gedGsfE.tcsh

```bash
#!/bin/bash

if [ "$1" == "?" ]
then
    echo "methode : ./analyze_gedGsfE [i(nteractif),j(ob)] [r(eco),f(ast),p(ileup)]"
    echo "defaut = j r"
    exit
fi
if [ "$1" != "i" ]
then
    echo "pas d'interaction"
    echo "defaut = batch"
    CHOIX_INTERACTION='./electronBsub 8nh /afs/cern.ch/cms/utils/oval run analyze.Val'
else
    echo "interaction"
    CHOIX_INTERACTION='/afs/cern.ch/cms/utils/oval run analyze.Val'
fi
if [ "$2" != "r" ]
then
    if [ "$2" != "f" ]
    then
        if [ "$2" != "p" ]
        then
            echo "pas de choix calcul"
            echo "defaut = FULL"
            CHOIX_CALCUL='Full'
        else
            CHOIX_CALCUL='PileUp'
        fi
    else
        CHOIX_CALCUL='Fast'
    fi
else
    CHOIX_CALCUL='Full'
fi
case $CHOIX_CALCUL in
Full) echo "Full"
    for i in Pt10Startup_UP15 Pt1000Startup_UP15 Pt35Startup_UP15 TTbarStartup_13 ZEEStartup_13 QcdPt80Pt120Startup_13
    do
        echo " == ${CHOIX_INTERACTION}${CHOIX_CALCUL}${i}_gedGsfE"
        ${CHOIX_INTERACTION}${CHOIX_CALCUL}${i}_gedGsfE
    done
    ;;
PileUp) echo "PileUp"
    for i in TTbarStartup ZEEStartup
    do
        echo " == ${CHOIX_INTERACTION}${CHOIX_CALCUL}${i}_gedGsfE"
        ${CHOIX_INTERACTION}${CHOIX_CALCUL}${i}_gedGsfE
    done
    ;;
Fast) echo "Fast"
    for i in ZEEStartup
    do
        echo " == ${CHOIX_INTERACTION}${CHOIX_CALCUL}${i}_gedGsfE"
        ${CHOIX_INTERACTION}${CHOIX_CALCUL}${i}_gedGsfE
    done
    ;;
esac
```

Validation de Release

Plusieurs étapes :

a) Mise en forme, configuration du fichier oval, vérifications
b) Analyze : on extrait les histos des fichiers root
c) Finalize : on ajoute des données supplémentaires aux histos } Déjà fait
d) Store :on envoi les fichiers créés sur un site de stockage } Specific
e) Publish : on créé la page web des histos
f) On prévient les utilisateurs que le travail est fait
g) propagation des résultats sur https://cms-conddb.cern.ch/PdmV/valdb/

70% of the overall time (98% in the case of the FastSim) would thus be saved

Anciennement

Cette première version reprenait exactement l'ordonnancement des précédentes étapes (scripts).
Une version 2 de l'interface graphique a été développée.
Des aménagements pour travailler sur HGCal sont envisagés.

Validations : suite

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Comparison
- FULL vs FULL
- FAST vs FAST
- FAST vs FULL

Validation
- RECO
- PU25
- PUpmx25
- miniAOD

Spec/Ref
- RECO
- PU25
- PUpmx25
- miniAOD

All / None
- All
- None

DataSets
List
Reload

Web folder name customization :
Release :
Reference :

Location
List
Reload

release
Release
Reference

Options

Summary

Get list of operations

Middle

Release list

List
CMSSW_9_4_x
CMSSW_9_3_x
CMSSW_7_1_x
CMSSW_6_2_x
CMSSW_5_3_x
CMSSW_11_1_x
CMSSW_11_0_x
CMSSW_10_6_x
CMSSW_10_5_x
CMSSW_10_4_x
CMSSW_10_3_x
CMSSW_10_2_x
CMSSW_10_1_x

Release

Choice

Release list   Next   (0/1) Next : Reference list   About   Help   Exit ?

Bottom

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GUI

Bottom

Choice

Middle

Options

TODO.lst
authentication.py
Datasets_default.py
electronCompare.py
functionGui.py
functions.py
Gev.py
guiBottomGp.py
guiChoiceGp.py
guiMiddleGp.py
guiOptionsGp.py
main.py
networkFunctions.py
Paths_default.py
Variables.py

Graphical outputs

GeV class definition

GeV class call

GeV

TODO.lst

main.py ← GeV class call

Variables.py
Paths_default.py
Datasets_default.py
authentication.py
networkFunctions.py

GeV class definition

functions.py → Gev.py

Graphical outputs

electronCompare.py

GUI

Bottom → guiBottomGp.py

Choice → guiChoiceGp.py

Middle → guiMiddleGp.py ← functionGui.py

Options → guiOptionsGp.py

GeV

```
class Gev(QWidget):
    def __init__(self):
        QWidget.__init__(self)

        initVariables(self)
        self.wp.write("initVariables OK\n")
        self.textReport += "initVariables OK<br>"

        self.setWindowTitle(self.version) # add an option to use/not use a decision box in order to estimate if the histograms are correct.

        ## PART 1 : GroupBoxes for validation choice ##
        initGpOptions(self)

        ## PART 2 : Resume label for actions listing ##
        initGpMiddle(self)

        ## BOTTOM PART ##
        initGpBottom(self)

        ## PART 3 : GroupBoxes for Tag selection ##
        initGpChoice(self)

        ## FINAL PART : keeping all previous part into one ##
        #Layout principal : création et peuplement
        self.layout_general = QVBoxLayout()
        self.layout_general.addLayout(self.layoutH_radio)
        self.layout_general.addLayout(self.layoutH_resume)
        self.layout_general.addLayout(self.layout_Search)
        self.layout_general.addLayout(self.layout_Lists)
        self.layout_general.addLayout(self.layout_Selected)
        self.layout_general.addLayout(self.layoutH_boutons)
        self.setLayout(self.layout_general)

        initRoot(self)
```

Options

Middle

Bottom

Choice

Options

Middle

Bottom

Choice

GeV

GeV

GeV

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GUI Electron Validations v0.5.0.0

Comparison
- ● FULL vs FULL
- ○ FAST vs FAST
- ○ FAST vs FULL

Validation
- ● RECO
- ○ PU25
- ○ PUpmx25
- ○ miniAOD

Spec/Ref
- ● RECO
- ○ PU25
- ○ PUpmx25
- ○ miniAOD

All / None
- ● All
- ○ None

DataSets
- List ▼
- Reload

Web folder name customization :
- Release :
- Reference :

Location
- List ▼
- Reload

release
- Release : CMSSW_11_1_0_pre3
- Reference : CMSSW_11_1_0_pre2

Summary

Release : CMSSW_11_1_0_pre3
Reference : CMSSW_11_1_0_pre2
working dir release : /afs/cern.ch/user/a/archiron/public/CRAB3-tutorial/CMSSW_11_0_0_pre13/src/11_1_0_pre3
working dir reference : /afs/cern.ch/user/a/archiron/public/CRAB3-tutorial/CMSSW_11_0_0_pre13/src/11_1_0_pre3/11_1_0_pre2
resume folder :

Get list of operations

Lists

Release

	DataSets	GlobalTags
1	TTbar_14TeV, ZEE_14	110X_mcRun3_2021_realistic_v8-v1
2	TTbar_14TeV, ZEE_14	110X_mcRun4_realistic_v3_2026D49noPU-v1

Reference

	DataSets	GlobalTags
1	TTbar_14TeV, ZEE_14	110X_mcRun3_2021_realistic_v6-v1
2	TTbar_14TeV, ZEE_14	110X_mcRun4_realistic_v2_2026D49noPU-v1

Reference list   Next   (2/3) Next : Selected   About   Help   Exit ?

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GUI Electron Validations v0.5.0.0

Comparison
- ● FULL vs FULL
- ○ FAST vs FAST
- ○ FAST vs FULL

Validation
- ○ RECO
- ● PU25
- ○ PUpmx25
- ○ miniAOD

Spec/Ref
- ○ RECO
- ● PU25
- ○ PUpmx25
- ○ miniAOD

All / None
- ● All
- ○ None

DataSets
- List ▾
- Reload

Web folder name customization :
Release : 2021
Reference : test

Location
- List ▾
- Reload

release
Release : CMSSW_11_1_0_pre3
Reference : CMSSW_11_1_0_pre2

Summary

Release : CMSSW_11_1_0_pre3
Reference : CMSSW_11_1_0_pre2
working dir release : /afs/cern.ch/user/a/archiron/public/CRAB3-tutorial/CMSSW_11_0_0_pre13/src/11_1_0_pre3 **already created !**
working dir reference : /afs/cern.ch/user/a/archiron/public/CRAB3-tutorial/CMSSW_11_0_0_pre13/src/11_1_0_pre3/11_1_0_pre2 **already created !**
resume folder : /eos/project/c/cmsweb/www/egamma/validation/Electrons/Dev//11_1_0_pre3_2021_DQM_std/FullvsFull_11_1_0_pre2_test **already created !**

Get list of operations

Web page

begin files loading !
All files loaded
ZEE_14 : DONE ! http://cms-egamma.web.cern.ch/cms-egamma/validation/Electrons/Dev//11_1_0_pre3_2021_DQM_std/FullvsFull_11_1_0_pre2_test/PU25-PU25_ZEE_14
All DataSets are done.

Selected | Next | (4/4) Next : | About | Help | Exit ?

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Index of /cms-egamma/validation/Electrons/Dev/11_1_0_pre3_2021_DQM_std/FullvsFull_11_1_0_pre2_test

Name	Last modified	Size	Description
Parent Directory		-	
PU25-PU25_ZEE_14/	25-Feb-2020 15:05	-	

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TWiki > Main Web > ElectronValidationGUIHelpPage (2018-09-06, ArnaudChiron)

GUI Electron Validation (Gev) Help Page

In all the text below the sentences are classically in black, with some important words in **bold**. Some titles are in **bold blue** , while the warnings are in **bold red** .

Any important comment are in **bold green** .

Contents:
- GUI Electron Validation (Gev) Help Page
  - part 1 : the options
    - part 1 A
    - part 1 B
    - part 1 C
  - part 2 : the summary
  - part 3 : the selections
  - part 4 : the actions
  - Explanation - How to use it
    - Step 1
    - Step 2
    - Step 3
    - Step 4
    - Step 5
  - Additional notes

Release list | Next | (0/1) Next : Reference list

Bottom

About | Help

Exit ?

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GUI Electron Validations v0.5.1.2

All dev made by A. CHIRON
Laboratoire Leprince-Ringuet

N 3 CHIRONGUI

Special thanks to Emilia, Florian and Jean-Baptiste for their help

Release list   Next   (0/1) Next : Reference list   **Bottom**   About   Help   Exit ?
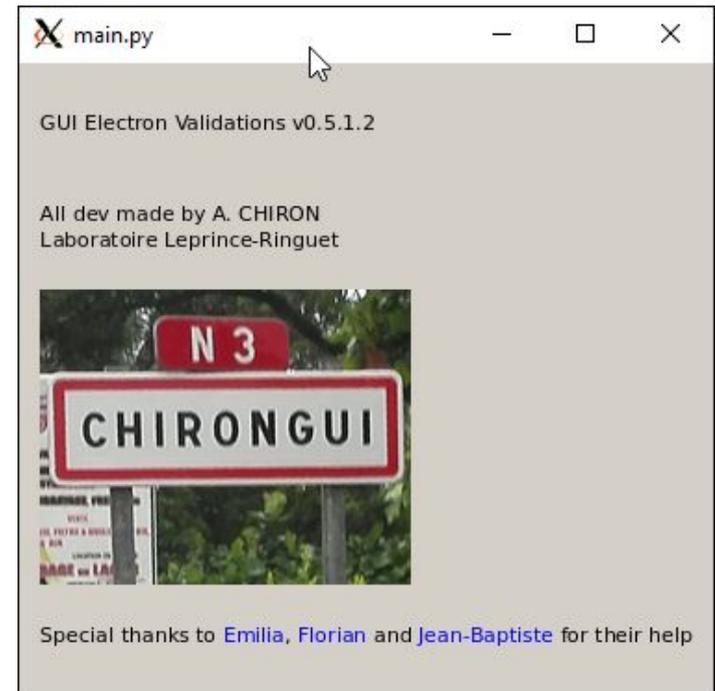
Un peu de technique

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Points à traiter

===========

Help qui dépend du navigateur
Idem pour lien vers page web dataset
Pbms maintenance 2 sites : CERN vs polui
Traitement des ajouts de DataSets
Simplification du code
Nouvelle architecture

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Fonctionnait avec slc6, pose souvent des pbms avec slc7

Points à traiter
===========
Help qui dépend du navigateur
Idem pour lien vers page web dataset
Pbms maintenance 2 sites : CERN vs polui

certificats

Traitement des ajouts de DataSets
Simplification du code
Nouvelle architecture

Navigateur par défaut : Konqueror

```
link = 'https://twiki.cern.ch/twiki/bin/view/Main/ElectronValidationGUIHelpPage#Step_' + str(self.tasks_counter + 1)
QDesktopServices.openUrl(QUrl(link))
```

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Points à traiter
===========
Help qui dépend du navigateur
Idem pour lien vers page web dataset
Pbms maintenance 2 sites : CERN vs polui
Traitement des ajouts de DataSets
Simplification du code
Nouvelle architecture   **ou des nvx chemins pour la page web**

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```python
def initGpDataSets(self):          # Création de la partie datasets du menu

    self.QGBoxDataSets = QGroupBox("DataSets")
    self.QGBoxDataSets.setMaximumHeight(120)
    self.QGBoxDataSets.setMinimumHeight(120)
    self.checkDataSets1 = QPushButton("List")
    self.checkDataSets2 = QPushButton("Reload")
    self.checkDataSets1.setEnabled(False)
    self.checkDataSets2.setEnabled(False)
    self.connect(self.checkDataSets2, SIGNAL("clicked()"), self.checkDataSets2Clicked)
    self.menu = QMenu()
    self.ag = QActionGroup(self, exclusive=False)
    self.DataSetTable = DataSetsFilter(self)          # DataSetsFilter pour sélectionner les datasets
    for item in self.DataSetTable:
        (item_name, item_checked) = item
        a = self.ag.addAction(QAction(item_name, self, checkable=True, checked=item_checked)) # checked=True
        self.menu.addAction(a)
        self.connect(a, SIGNAL('triggered()'), self.QGBoxListsUpdate)
    self.checkDataSets1.setMenu(self.menu)
    self.selectedDataSets = self.DataSetTable # default, all datasets selected
    vboxDataSets = QVBoxLayout()
    vboxDataSets.addWidget(self.checkDataSets1)
    vboxDataSets.addWidget(self.checkDataSets2)
    vboxDataSets.addStretch(1)
    self.QGBoxDataSets.setLayout(vboxDataSets)

    return
```

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```python
#! /usr/bin/env python
#-*-coding: utf-8 -*-

# A new presentation/use is made in order to use very precisely the DataSets.
# You can add a DataSet inside a given function and look what happened for only the considered Datatsets.
# This seems more efficient than use "hard coding" and complex search function for the separate cases.

# new way to load datasets items into the menu. datasets are presented as [name, True/False] with True/False the default choice to be checked or not.

import re
from Paths_default import *

def DataSetsFilter(self):            <--- DataSetsFilter
    import sys
    fieldname = self.validationType1
    if ( self.validationType3 == 'miniAOD' ):
        fieldname = fieldname + self.validationType3
    else:
        fieldname = fieldname + self.validationType2
    table=getattr(sys.modules[__name__], "DataSetsFilter_%s" % fieldname)(self)

    return table

def DataSetsFilter_FullRECO(self):
    table=[
    ["SingleElectronPt10", 1], # 1 : displayed
    ["SingleElectronPt10_UP15", 0],
    ["SingleElectronPt35", 1],
    ["SingleElectronPt35_UP15", 0], # 0 : not displayed
    ["SingleElectronPt1000", 1],
    ["QCD_Pt_80_120_13", 1],
    ["TTbar_13", 1],
    ["ZEE_13", 1],
    ["TTbar_14TeV", 1],
    ["ZEE_14", 1],
    ]
    return table

def DataSetsFilter_FastRECO(self):

def DataSetsFilter_FastFullRECO(self):

def DataSetsFilter_FullPU25(self):
    table=[
    ["TTbar_13", 0],
    ["ZEE_13", 0],
    ["TTbar_14TeV", 0],
    ["ZEE_14", 1],
    ]
    return table

def DataSetsFilter_FastPU25(self):

def DataSetsFilter_FastFullPU25(self):
```

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```python
def checkDataSets2Clicked(self):
    self.wp.write("checkDataSets2Clicked")
    self.textReport += "checkDataSets2Clicked" + "<br>"
    self.checkAllNone1.setChecked(True) # as all DataSets are checked, we need the radiobutton All to be checked
    from Datasets_default import DataSetsFilter        ← Réimport datasets (cf. Backup)
    self.DataSetTable = DataSetsFilter(self)
    reload(sys.modules['Datasets_default'])            ← Rechargement du module datasets
    self.menu.clear()
    self.ag = QActionGroup(self, exclusive=False)
    for item in self.DataSetTable:                     Réécriture menu
        (item_name, item_checked) = item
        self.wp.write(item_name + "\n")
        self.textReport += "checkLocation2Clicked" + item_name + "<br>"
        a = self.ag.addAction(QAction(item_name, self, checkable=True, checked=item_checked)) # checked=True
        self.menu.addAction(a)
        self.connect(a, SIGNAL('triggered()'), self.QGBoxListsUpdate)
    self.QGBoxListsUpdate()
    QtCore.QCoreApplication.processEvents()
```

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Points à traiter
===========
Help qui dépend du navigateur
Idem pour lien vers page web dataset
Pbms maintenance 2 sites : CERN vs polui
Traitement des ajouts de DataSets
Simplification du code
Nouvelle architecture

Sans doute plusieurs éléments redondants,
nettoyage,
verrouillage des options,
Simplification ?

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Points à traiter
============
Help qui dépend du navigateur
Idem pour lien vers page web dataset
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script python
Pratique,
Fonctionne sans réseau ou presque,
En mode parallèle,
Pas commode pour bcp de datasets.

QT5,
Jupyter,
script python,
...

with concurrent.futures.ProcessPoolExecutor() as executor:

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Points à traiter et futur
==================
Help qui dépend du navigateur
Idem pour lien vers page web dataset
Pbms maintenance 2 sites : CERN vs polui
Traitement des ajouts de DataSets
Simplification du code
Nouvelle architecture
Évaluation de la conformité des histos

Evaluation par ML, KS, ….
Pour chaque histo des tests sont inclus afin d'en mesurer la validité par rapport à la référence.
Différents tests sont utilisés (ML, KS, ...)
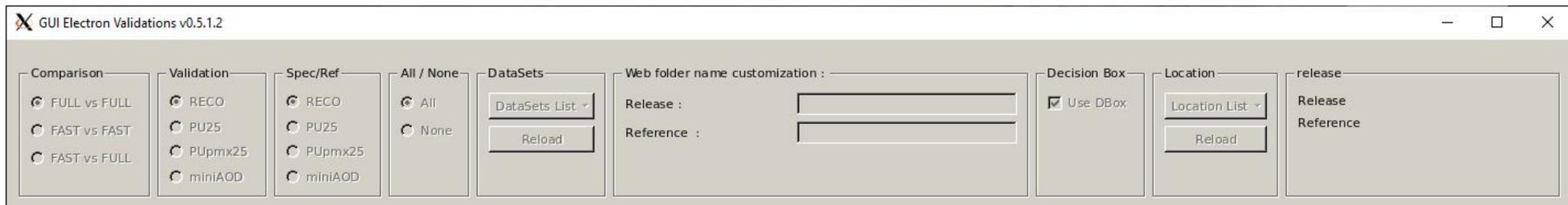
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KS diff.

normalized_pValue_ele_PoPtrue
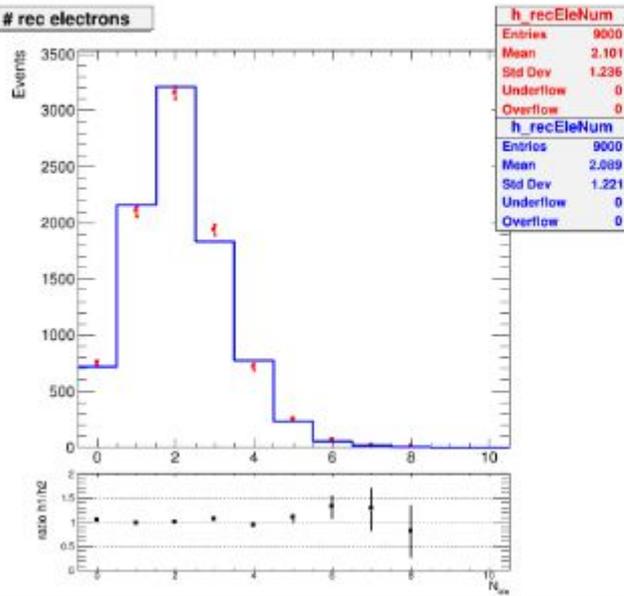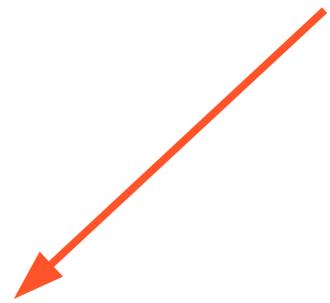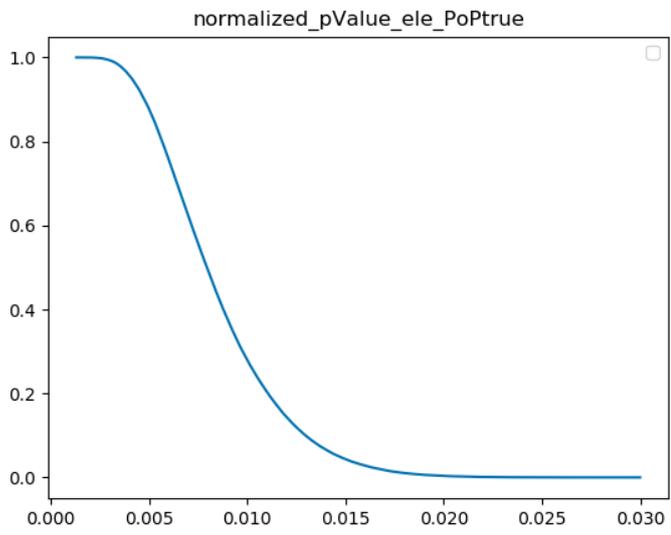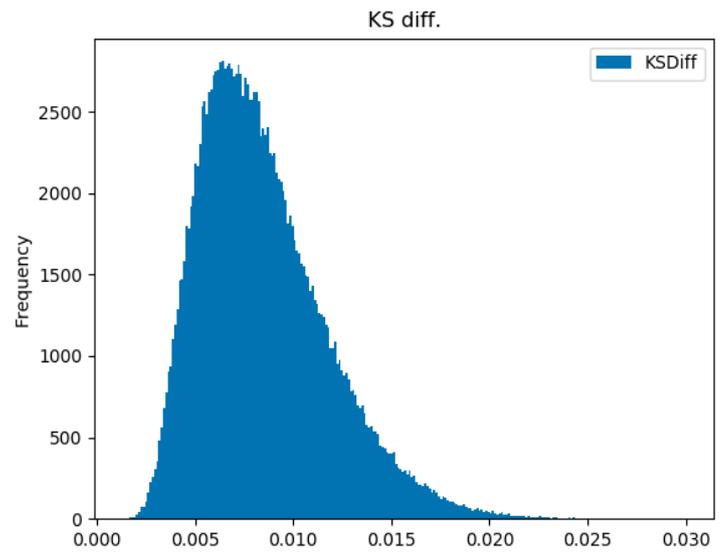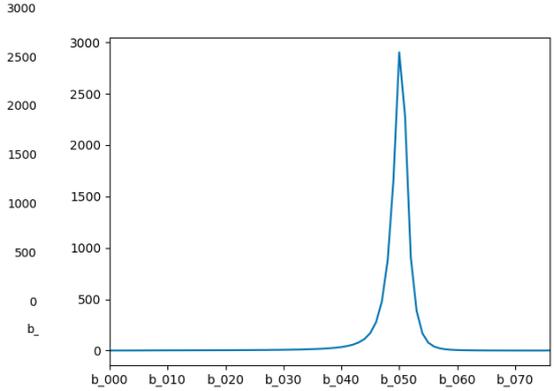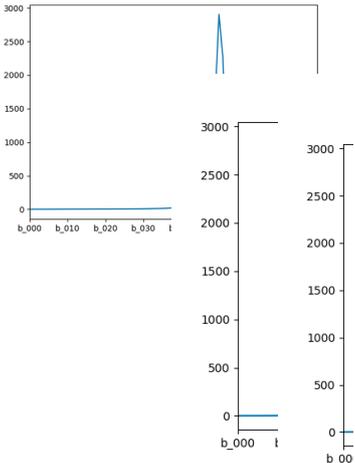
Merci !

Backup

Backup

Arnaud Chiron

LLR

Validations : 1 an de travail

Arnaud Chiron, Florian Beaudette
LLR
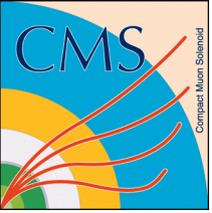
Validations : evolutions

Arnaud Chiron, Florian Beaudette,
Emilia Becheva, David Chamont,
Claude Charlot

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Définitions

CMSSW_11_1_0_pre3 Production Release : Release

SingleElectronPt35 : Collection, DataSet

CERN acquisitions → DATA Validation : DQMOffline

→ MC Validation : Validation

/DQMOffline : code pour la validation data

/Validation : code pour la validation MC

DQM : Data Quality Monitoring and Certification

Résumé

Data CERN → Electron MC validation

Validation : qu'est ce ?

Validation : pourquoi ?

Modèle → durée calculs

Historique (Oval, tcsh, Gui …)

Résumé

Data CERN → Electron MC validation

Validation : qu'est ce ?

Validation : pourquoi ?

Modèle → durée calculs

Actuellement, que fait on ? (Oval, tcsh, …)

Ou va-t-on → charger fichiers root & calcul automatique

→ démo avec chargement des fichiers root

Validation de Release

Oval file (perl inside)

```
1   <var name="TEST_COMMENT" value="">
2   <var name="TEST_NEW" value="7_3_0_pre2_OldPU_vs_New_std">
3   <var name="TEST_REF" value="7_3_0_pre2_std">
4
5   <var name="TAG_STARTUP" value="MCRUN2_73_V0_OldPU">
6   <var name="DATA_VERSION" value="v1">
7
8    TAG for the REFERENCE DATA, USED ONLY FOR INFORMATION ON WEB PAGE
9   <var name="DD_COND_REF" value="PU50ns_MCRUN2_73_V0-v1">
10
11  <var name="DD_RELEASE" value="${CMSSW_VERSION}">
12
13  <var name="STORE_DIR" value="/afs/cern.ch/cms/Physics/egamma/www/validation/Electrons/Store/${TEST_NEW}">
14  <var name="STORE_REF" value="/afs/cern.ch/cms/Physics/egamma/www/validation/Electrons/Store/${TEST_REF}">
15
16  <var name="WEB_DIR" value="/afs/cern.ch/cms/Physics/egamma/www/validation/Electrons/Releases">
17
18  <!--var name="WEB_DIR" value="/afs/cern.ch/user/c/chamont/www/validation"-->
19  <!--var name="WEB_URL" value="https://chamont.web.cern.ch/chamont/validation"-->
20
21  The value of OVAL_ENVNAME is automatically set by Oval to the name
22  of the current environment, before running any executable. Using it below,
23  we have an output file name which is unique for each execution.
24
25  <var name="TEST_HISTOS_FILE" value="electronHistos.PU50ns_${OVAL_ENVNAME}.root">
26  <var name="TEST_OUTPUT_LOGS" value="*.${OVAL_ENVNAME}.olog">
27  <!--var name="TEST_HISTOS_FILE" value="DQM_V0001_R000000001__${DD_SAMPLE}__${DD_RELEASE}-${DD_COND}__DQM.root"-->
28  <!--difffile name="electronHistos.root"-->
30  The DD_* variables are configuration variables for the script electronDataDiscovery.py,
31  which prepares and send a query to the Data Discovery web server,
32  and receive as a result the corresponding list of input data files.
33  <!--var name="DD_SOURCE" value="das"-->
34
35  The tags below are to be used when DAS seems not up-to-date,
36  as compared to what you see within castor directories.
37  These parameters have been added to each RelVal sample environment
38  <!--var name="DD_SOURCE" value="/eos/cms/store/relval/${DD_RELEASE}/${DD_SAMPLE}/${DD_TIER}/${DD_COND}"-->
39  <!--var name="DD_TIER" value="GEN-SIM-RECO"-->
40
41
42  The tags below are to be used when you want to process some files
43  made with a modified code, and generated locally, thanks to the
44  targets RedoFrom* defined later on.
45  <!--var name="DD_SOURCE" value="electronInputDataFiles.txt"-->
46  <!--var name="DD_COND" value="STARTUP"-->
47
48  Oval is able to check the output channel of an execution and compare it with a reference output.
49  The tags below are defining which are lines to be compared. The currently specification is a
50  first draft, and we do not yet check the differences that Oval could raise.
```

```
109      <var name="TAG_STARTUP" value="PU50ns_${TAG_STARTUP}">
110      <var name="TEST_GLOBAL_TAG" value="${TAG_STARTUP}">
111      <var name="TEST_GLOBAL_AUTOCOND" value="startup">
112      <var name="DD_COND" value="${TEST_GLOBAL_TAG}-${DATA_VERSION}">
113
114      <environment name="ValPileUpTTbarStartup">
115
116        <var name="DD_SAMPLE" value="RelValTTbar_13">
117        <!--var name="DD_SOURCE" value="/castor/cern.ch/cms/store/unmerged/dqm/${DD_SAMPLE}-${DD_RELEASE}-${DD_COND}-DQM-DQMHarvest-C
118        <var name="DD_SOURCE" value="/eos/cms/store/relval/${DD_RELEASE}/${DD_SAMPLE}/${DD_TIER}/${DD_COND}">
119
120        <var name="BLUE_FILE" value="electronHistos.ValPileUpTTbarStartup_pu40bx50.root">
121        <var name="RED_FILE" value="electronHistos.PU50ns_ValPileUpTTbarStartup.root">
122
123        <target name="dqm" cmd="electronDataDiscovery.py castor">
124        <target name="wget" cmd="electronWget.py castor">
125
126        <target name="dd" cmd="electronDataDiscovery.py">
127        <target name="analyze" cmd="cmsRun ${VAL_CONFIGURATION}.py">
128        <target name="finalize" cmd="cmsRun ${VAL_POST_CONFIGURATION}.py">
129
130        <target name="store" cmd='electronStore.py -r ${TEST_NEW} -m "${TEST_COMMENT}" -a ${VAL_ANALYZER}/${VAL_POST_ANALYZER} -c ${V
131        <target name="force" cmd='electronStore.py -f -r ${TEST_NEW} -m "${TEST_COMMENT}" -a ${VAL_ANALYZER}/${VAL_POST_ANALYZER} -c
132      <target name="publish" cmd='electronCompare.py -c ${VAL_HISTOS} -r ${RED_FILE} -b ${BLUE_FILE} -t "${TEST_NEW} / ${DD_SAMPLE} /
133
134      </environment>
135
136      <environment name="ValPileUpZEEStartup">
137
138        <var name="DD_SAMPLE" value="RelValZEE_13">
139        <!--var name="DD_SOURCE" value="/castor/cern.ch/cms/store/unmerged/dqm/${DD_SAMPLE}-${DD_RELEASE}-${DD_COND}-DQM-DQMHarvest-Off
140        <var name="DD_SOURCE" value="/eos/cms/store/relval/${DD_RELEASE}/${DD_SAMPLE}/${DD_TIER}/${DD_COND}">
141
142        <var name="BLUE_FILE" value="electronHistos.ValPileUpZEEStartup_pu40bx50.root">
143        <var name="RED_FILE" value="electronHistos.PU50ns_ValPileUpZEEStartup.root">
144
145        <target name="dqm" cmd="electronDataDiscovery.py castor">
146      <target name="wget" cmd="electronWget.py castor">
147
148      <target name="dd" cmd="electronDataDiscovery.py">
149      <target name="analyze" cmd="cmsRun ${VAL_CONFIGURATION}.py">
150      <target name="finalize" cmd="cmsRun ${VAL_POST_CONFIGURATION}.py">
151
152      <target name="store" cmd='electronStore.py -r ${TEST_NEW} -m "${TEST_COMMENT}" -a ${VAL_ANALYZER}/${VAL_POST_ANALYZER} -c ${VAL_CONFIGURATION}/${VAL_POST_CONFIGURATION} ${TEST_HISTOS_FILE} ${TES
153      <target name="force" cmd='electronStore.py -f -r ${TEST_NEW} -m "${TEST_COMMENT}" -a ${VAL_ANALYZER}/${VAL_POST_ANALYZER} -c ${VAL_CONFIGURATION}/${VAL_POST_CONFIGURATION} ${TEST_HISTOS_FILE} ${(
154      <target name="publish" cmd='electronCompare.py -c ${VAL_HISTOS} -r ${RED_FILE} -b ${BLUE_FILE} -t "${TEST_NEW} / ${DD_SAMPLE} / ${DD_COND} vs ${TEST_REF} / ${DD_SAMPLE} / ${DD_COND_REF}" ${STORE
155      <!--target name="publish" cmd='electronCompare.py -c ${VAL_HISTOS} -r ${RED_FILE} -b ${BLUE_FILE} -t "${TEST_NEW} / ${DD_SAMPLE} / ${DD_COND} vs ${TEST_REF} / ${DD_SAMPLE} / ${DD_COND_REF}" ${ST
156
157      </environment>
158
```

Usage of the various tools/webpages

↑ 7_2_0_pre6_dev / gedGsfElectrons / RelValSingleElectronPt1000_UP15 / PRE_LS172_V11-v1 vs 7_2_0_pre5_std / gedGsfElectrons / RelValSingleElectronPt1000_UP15 / POSTLS172_V3-v1

In all plots below, the 7_2_0_pre6_dev histograms are in red, and the 7_2_0_pre5_std histograms are in blue. The 7_2_0_pre6_dev histograms have been prepared with those analyzers and configurations: ElectronMcSignalValidator.h, ElectronMcSignalValidator.cc, ElectronMcSignalPostValidator.h, ElectronMcSignalPostValidator.cc, ElectronMcSignalValidation_cfg.py, ElectronMcSignalPostValidation_cfg.py. The 7_2_0_pre5_std histograms have been prepared with those analyzers and configurations: ElectronMcSignalValidator.h, ElectronMcSignalValidator.cc, ElectronMcSignalPostValidator.h, ElectronMcSignalPostValidator.cc, ElectronMcSignalValidation_cfg.py, ElectronMcSignalPostValidation_cfg.py. Some more details: script used to make the plots, specification of histograms, images of histograms.

Collections sizes	Basic electron quantities	Comparison with MC truth (residuals)	Track-cluster matching observables	Electron Cluster shapes
recEleNum	charge	ChargeMnChargeTrue	EoP | barrel | endcaps	HoE | barrel | endcaps
recCoreNum	vertexPt	PoPtrue | barrel | endcaps	EoPout | barrel | endcaps	HoE_bc | barrel | endcaps
recTrackNum	vertexEta	PoPtrue_golden | barrel | endcaps	EeleOPout | barrel | endcaps	hcalDepth1OverEcalBc | barrel | endcaps
recSeedNum	vertexPhi	PoPtrue_showering | barrel | endcaps	EseedOP | barrel | endcaps	hcalDepth2OverEcalBc | barrel | endcaps
	vertexP	PtoPtrue | barrel | endcaps	dEtaCl_propOut | barrel | endcaps	HoE_fiducial
	vertexX	scl_EoEtrue_barrel_new | etagap | phigap	dEtaEleCl_propOut | barrel | endcaps	scl_sigietaieta | barrel | endcaps
	vertexY	scl_EoEtrue_ebeegap_new	dEtaSc_propVtx | barrel | endcaps	scl_E1x5 | barrel | endcaps
	vertexZ	scl_EoEtrue_endcaps_new | deegap	dPhiCl_propOut | barrel | endcaps	scl_E2xOmax | barrel | endcaps
	vertexTIP	EtaMnEtaTrue | barrel | endcaps	dPhiEleCl_propOut | barrel | endcaps	scl_E5x5 | barrel | endcaps
	Et	PhiMnPhiTrue | barrel | endcaps	dPhiSc_propVtx | barrel | endcaps	HoEVsEta_pfx
	outerP_mode	PoPtrueVsEta_pfx	EoPVsEta_pfx	
	outerPt_mode	PoPtrueVsPhi_pfx	EoPoutVsEta_pfx	
	vertexPtVsEta_pfx	scl_EoEtruePfVsEg_pfx	EeleOPoutVsEta_pfx	
	ecalEnergyError | barrel | endcaps	EtaMnEtaTrueVsEta_pfx		
	combinedP4Error | barrel | endcaps	PhiMnPhiTrueVsEta_pfx		

Electron track variables	Electron seeds	Brem fraction and related distributions	Isolation sums	Difference with isolation from deposits
chi2 | barrel | endcaps	seedSubdet2	PinMinPout_mode	tkSumPt_dr03 | barrel | endcaps	dIso_tkSumPt | dr03 | dr04
foundHits | barrel | endcaps	seedMask | Bpix | Fpix | Tec	fbrem | barrel | endcaps	ecalRecHitSumEt_dr03 | barrel | endcaps	dIso_ecalFullRecHitSumEt | dr03 | dr04
lostHits | barrel | endcaps	seedDphi2 | VsEta_pfx | VsPt_pfx	classes	hcalTowerSumEt_dr03_depth1 | barrel | endcaps	dIso_ecalReducedRecHitSumEt | dr03 | dr04
ambiguousTracks	seedDphi2Pos | VsEta_pfx | VsPt_pfx	eta_goldenFrac	hcalTowerSumEt_dr03_depth2 | barrel | endcaps	dIso_hcalTowerSumEt | dr03 | dr04
chi2VsEta_pfx	seedDrz2 | VsEta_pfx | VsPt_pfx	eta_bbremFrac	tkSumPt_dr04 | barrel | endcaps	
foundHitsVsEta_pfx	seedDrz2Pos | VsEta_pfx | VsPt_pfx	eta_showerFrac	ecalRecHitSumEt_dr04 | barrel | endcaps	
ambiguousTracksVsEta_pfx		fbremvsEtamean	hcalTowerSumEt_dr04_depth1 | barrel | endcaps	
		fbremvsEtamode	hcalTowerSumEt_dr04_depth2 | barrel | endcaps	
			hcalTowerSumEtBc_dr03_depth1 | barrel | endcaps	
			hcalTowerSumEtBc_dr03_depth2 | barrel | endcaps	
			hcalTowerSumEtBc_dr04_depth1 | barrel | endcaps	
			hcalTowerSumEtBc_dr04_depth2 | barrel | endcaps	

Distributions for all reconstructed electrons (i.e. not requiring a match with mc truth)	Charge mis-ID	Provenance	pflow variables	Conversion rejection information
EoverP_all	absetaQmisid	provenance | barrel | endcaps	chargedHadronIso | barrel | endcaps	convFlags | all
EseedOP_all	etaQmisid	mva | barrel | endcaps	neutralHadronIso | barrel | endcaps	convDist | all
EoPout_all	ptQmisid	mva_isolated | barrel | endcaps	photonIso | barrel | endcaps	convDcot | all
EeleOPout_all	zQmisid		chargedHadronRelativeIso | barrel | endcaps	convRadius | all
TIP_all	chargeInfo		neutralHadronRelativeIso | barrel | endcaps	
dEtaSc_propVtx_all			photonRelativeIso | barrel | endcaps	
dPhiSc_propVtx_all				
dEtaCl_propOut_all				
dPhiCl_propOut_all				
HoE_all				
HoE_bc_all				
mee_all				
mee_os				

Reconstruction efficiency
absetaEff
etaEff
ptEff
phiEff
zEff
etaEff_all
ptEff_all

Usage of the various tools/webpages

Nos histos sont agencés par thèmes
Le partage est simple

Pour les obtenir, on refait tourner ???
à partir des fichiers RECO

Ça prend un peu de temps

Il y a plusieurs étapes
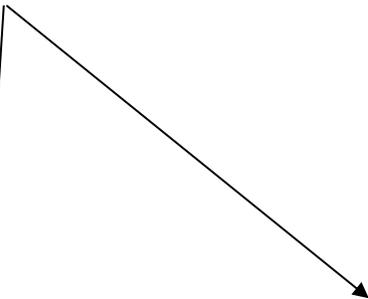
Validation de Release

Lancement par scripts :
analyze, finalize, store, publish

```bash
#!/bin/bash

if [ "$1" == "?" ]
then
    echo "methode : ./analyze_gedGsfE [i(interactif),j(ob)] [r(eco),f(ast),p(ileup)]"
    echo "defaut = j r"
    exit
fi
if [ "$1" != "i" ]
then
    echo "pas d'interaction"
    echo "defaut = batch"
    CHOIX_INTERACTION='./electronBsub 8nh /afs/cern.ch/cms/utils/oval run analyze.Val'
else
    echo "interaction"
    CHOIX_INTERACTION='/afs/cern.ch/cms/utils/oval run analyze.Val'
fi
if [ "$2" != "r" ]
then
    if [ "$2" != "f" ]
    then
        if [ "$2" != "p" ]
        then
            echo "pas de choix calcul"
            echo "defaut = FULL"
            CHOIX_CALCUL='Full'
        else
            CHOIX_CALCUL='PileUp'
        fi
    else
        CHOIX_CALCUL='Fast'
    fi
else
    CHOIX_CALCUL='Full'
fi
case $CHOIX_CALCUL in
Full) echo "Full"
    for i in Pt10Startup_UP15 Pt1000Startup_UP15 Pt35Startup_UP15 TTbarStartup_13 ZEEStartup_13 QcdPt80Pt120Startup_13
    do
        echo " == ${CHOIX_INTERACTION}${CHOIX_CALCUL}${i}_gedGsfE"
        ${CHOIX_INTERACTION}${CHOIX_CALCUL}${i}_gedGsfE
    done
    ;;
PileUp) echo "PileUp"
    for i in TTbarStartup ZEEStartup
    do
        echo " == ${CHOIX_INTERACTION}${CHOIX_CALCUL}${i}_gedGsfE"
        ${CHOIX_INTERACTION}${CHOIX_CALCUL}${i}_gedGsfE
    done
    ;;
Fast) echo "Fast"
    for i in ZEEStartup
    do
        echo " == ${CHOIX_INTERACTION}${CHOIX_CALCUL}${i}_gedGsfE"
        ${CHOIX_INTERACTION}${CHOIX_CALCUL}${i}_gedGsfE
    done
    ;;
esac
```

Workflow

Steps

| Producer cfg_py |

Produce root-tuples containing the histograms, from RECO files.

ElectronMcSignalValidator.cc
ElectronMcSignalValidation_gedGsfElectrons_cfg.py

"Post-processing" (ratios for efficiency plots, TH2 to TProfile)

ElectronMcSignalPostValidator.cc
ElectronMcSignalPostValidation_cfg.py

Copy of the output on central storage (afs)

Overlay of histograms, webpage generation

Analyze

Finalize

Store

Publish

Workflow

Steps

Same as DQM
(code, cfg_py)

```
Produce root-tuples containing the
histograms, from RECO files.
```

ElectronMcSignalValidator.cc
ElectronMcSignalValidation_gedGs
fElectrons_cfg.py

```
"Post-processing" (ratios for efficiency plots,
TH2 to TProfile)
```

ElectronMcSignalPostValidator.cc
ElectronMcSignalPostValidation_cfg.py

```
Copy of the output on central storage (afs)
```

Specific

```
Overlay of histograms, webpage generation
```

Déjà fait

Workflow

Steps

Produce root-tuples containing the histograms, from RECO files.

ElectronMcSignalValidator.cc
ElectronMcSignalValidation_gedGs
fElectrons_cfg.py

Get the roottuple with the histos from DQM

"Post-processing" (ratios for efficiency plots, TH2 to TProfile)

ElectronMcSignalPostValidator.cc
ElectronMcSignalPostValidation_cfg.py

Copy of the output on central storage (afs)

Maybe no longer needed

Specific

Overlay of histograms, webpage generation

70% of the overall time (98% in the case of the FastSim) would thus be saved

GUI V1 - 1

Première étape : automatisation de la recuperation des fichiers sur le site DQM.
On utilise un script "fetchall_from_DQM_v2.py" (*)

Seconde étape : on va utiliser un outil pour intégrer tous les scripts/configurations précédent(e)s.
Idée : garder la compatibilité avec les anciennes versions

(*) grace à l'aide de Federico's

GUI V1 - 2
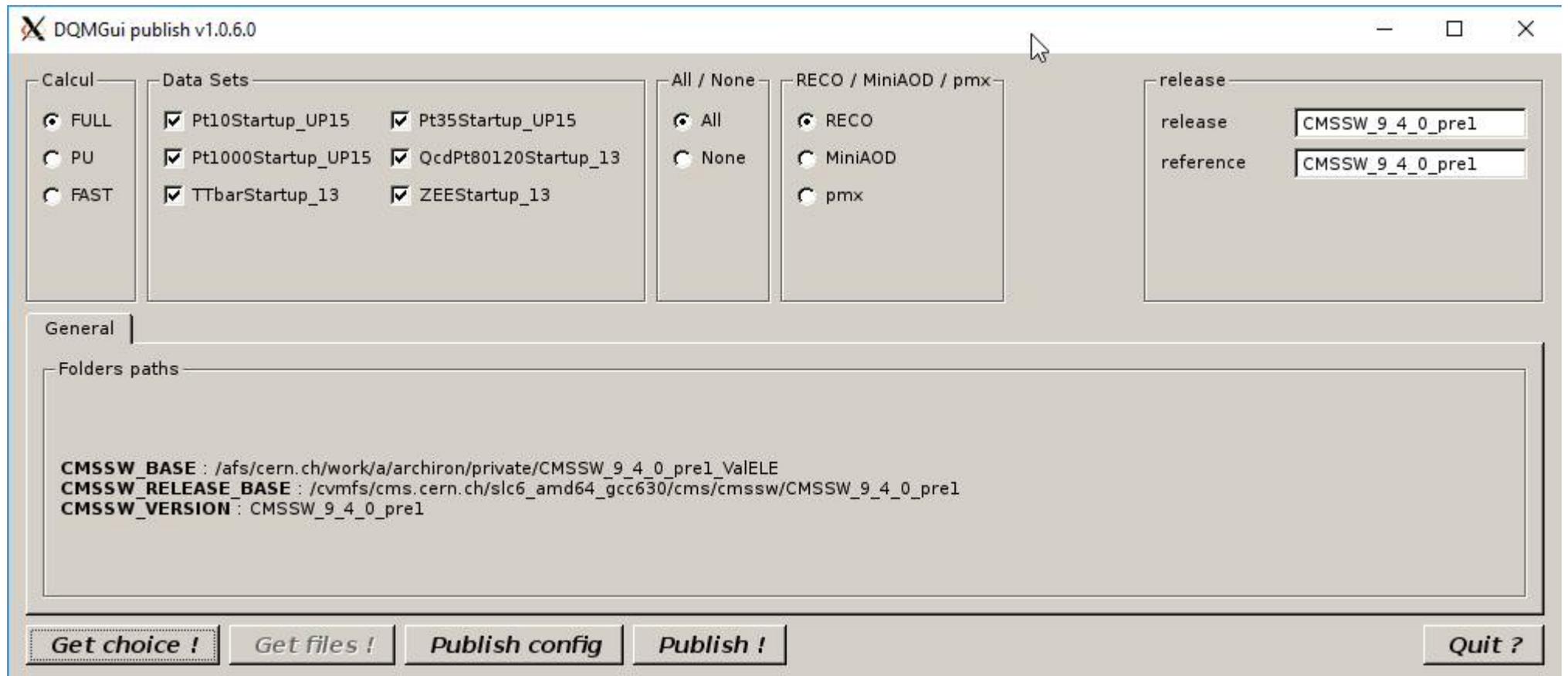
Python - QT4

L'utilisation de ces outils automatiques n'enlèvera pas le fait qu'il existera toujours des développements qui nécessiteront un travail « manuel ».

Ces outils permettront de gagner du temps

Regardons quelques résultats

Electron MC Validation in RelMon

The electron validation is also present in RelMon

Si on veut faire des modifications ce type de présentation n'est pas simple à utiliser, ne serait que par le fait qu'il faut valider la modification, puis attendre la release suivante (*) pour voir les effets et éventuellement corriger.

(*) https://hypernews.cern.ch/HyperNews/CMS/get/relval/2947/2/2/2/1/1.html

e/γ validation page

The e/γ group has been maintaining since 2007 webpages with the electron validation in
http://cmsdoc.cern.ch/cms/Physics/egamma/www/validation/Electrons/Releases/
(Claude Charlot, David Chamont, Emilia Becheva, Arnaud Chiron, Florian Beaudette)

↑ 7_1_0_pre6_oldG / gedGsfElectrons / RelValZEE_13 / PRE_LS171_V3-v1 vs 7_1_0_pre6_std / gedGsfElectrons / RelValZEE_13 PRE_LS171_V5-v1

In all plots below, the electronHistos.ValFullZEE_13_gedGsfE.root 7_1_0_pre6_oldG histograms are in red, and the electronHistos.ValFullZEEStartup_13_gedGsfE.root 7_1_0_pre6_std 7_1_0_pre6_oldG histograms are in blue. The 7_1_0_pre6_oldG histograms have been prepared with those analyzers and configurations: ElectronMcSignalValidator.h, ElectronMcSignalValidator.cc, ElectronMcSignalPostValidator.h, ElectronMcSignalPostValidator.cc, ElectronMcSignalValidation_cfg.py, ElectronMcSignalPostValidation_cfg.py. The 7_1_0_pre6_std histograms have been prepared with those analyzers and configurations: ElectronMcSignalValidator.h, ElectronMcSignalValidator.cc, ElectronMcSignalPostValidator.h, ElectronMcSignalPostValidator.cc, ElectronMcSignalValidation_cfg.py, ElectronMcSignalPostValidation_cfg.py. Some more details: script used to make the plots, specification of histograms, images of histograms.

Collections sizes
- recEleNum
- recCoreNum
- recTrackNum
- recSeedNum

Basic electron quantities
- charge
- vertexPt
- vertexEta
- vertexPhi
- vertexP
- vertexX
- vertexY
- vertexZ
- vertexTIP
- Et
- outerP_mode
- outerPt_mode
- vertexPtVsEta_pfx
- ecalEnergyError | barrel | endcaps
- combinedP4Error | barrel | endcaps

Comparison with MC truth (residuals)
- ChargeMnChargeTrue
- PoPtrue | barrel | endcaps
- PoPtrue_golden | barrel | endcaps
- PoPtrue_showering | barrel | endcaps
- PtoPttrue | barrel | endcaps
- scl_EoEtrue_barrel_new | etagap | phigap
- scl_EoEtrue_ebeegap_new
- scl_EoEtrue_endcaps_new | deegap
- EtaMnEtaTrue | barrel | endcaps
- PhiMnPhiTrue | barrel | endcaps
- PoPtrueVsEta_pfx
- PoPtrueVsPhi_pfx
- scl_EoEtruePfVsEg_pfy
- EtaMnEtaTrueVsEta_pfx
- PhiMnPhiTrueVsEta_pfx

Track-cluster matching observables
- EoP | barrel | endcaps
- EoPout | barrel | endcaps
- EeleOPout | barrel | endcaps
- EseedOP | barrel | endcaps
- dEtaCl_propOut | barrel | endcaps
- dEtaEleCl_propOut | barrel | endcaps
- dEtaSc_propVtx | barrel | endcaps
- dPhiCl_propOut | barrel | endcaps
- dPhiEleCl_propOut | barrel | endcaps
- dPhiSc_propVtx | barrel | endcaps
- EoPVsEta_pfx
- EoPoutVsEta_pfx
- EeleOPoutVsEta_pfx

Electron Cluster shapes
- HoE | barrel | endcaps
- HoE_bc | barrel | endcaps
- hcalDepth1OverEcalBc | barrel | endcaps
- hcalDepth2OverEcalBc | barrel | endcaps
- HoE_fiducial
- scl_sigietaieta | barrel | endcaps
- scl_E1x5 | barrel | endcaps
- scl_E2x5max | barrel | endcaps
- scl_E5x5 | barrel | endcaps
- HoEVsEta_pfx

Electron track variables
- chi2 | barrel | endcaps
- foundHits | barrel | endcaps
- lostHits | barrel | endcaps
- ambiguousTracks
- chi2VsEta_pfx
- foundHitsVsEta_pfx
- ambiguousTracksVsEta_pfx

Electron seeds
- seedSubdet2
- seedMask | Bpix | Fpix | Tec
- seedDphi2 | VsEta_pfx | VsPt_pfx
- seedDphi2Pos | VsEta_pfx | VsPt_pfx
- seedDrz2 | VsEta_pfx | VsPt_pfx
- seedDrz2Pos | VsEta_pfx | VsPt_pfx

Brem fraction and related distributions
- PinMnPout_mode
- fbrem | barrel | endcaps
- classes
- eta_goldenFrac
- eta_bbremFrac
- eta_showerFrac
- fbremvsEtamean
- fbremvsEtamode

Isolation sums
- tkSumPt_dr03 | barrel | endcaps
- ecalRecHitSumEt_dr03 | barrel | endcaps
- hcalTowerSumEt_dr03_depth1 | barrel | endcaps
- hcalTowerSumEt_dr03_depth2 | barrel | endcaps
- tkSumPt_dr04 | barrel | endcaps
- ecalRecHitSumEt_dr04 | barrel | endcaps
- hcalTowerSumEt_dr04_depth1 | barrel | endcaps
- hcalTowerSumEt_dr04_depth2 | barrel | endcaps
- hcalTowerSumEtBc_dr03_depth1 | barrel | endcaps
- hcalTowerSumEtBc_dr03_depth2 | barrel | endcaps
- hcalTowerSumEtBc_dr04_depth1 | barrel | endcaps
- hcalTowerSumEtBc_dr04_depth2 | barrel | endcaps

Difference with isolation from deposits
- dIso_tkSumPt | dr03 | dr04
- dIso_ecalFullRecHitSumEt | dr03 | dr04
- dIso_ecalReducedRecHitSumEt | dr03 | dr04
- dIso_hcalTowerSumEt | dr03 | dr04

Distributions for all reconstructed electrons (i.e. not requiring a match with mc truth)
- EoverP_all
- EseedOP_all
- EoPout_all
- EeleOPout_all
- TIP_all
- dEtaSc_propVtx_all
- dPhiSc_propVtx_all
- dEtaCl_propOut_all

Charge mis-ID
- absetaQmisid
- etaQmisid
- ptQmisid
- zQmisid
- chargeInfo

Provenance and pflow data
- provenance | barrel | endcaps
- mva | barrel | endcaps
- chargedHadronIso | barrel | endcaps
- neutralHadronIso | barrel | endcaps
- photonIso | barrel | endcaps
- chargedHadronRelativeIso | barrel | endcaps
- neutralHadronRelativeIso | barrel | endcaps
- photonRelativeIso | barrel | endcaps

Conversion rejection information
- convFlags | all
- convDist | all
- convDcot | all
- convRadius | all

Reconstruction efficiency
- absetaEff
- etaEff
- ptEff
- phiEff
- zEff
- etaEff_all
- ptEff_all

DQM-from-RECO vs DQM-from-website


identical: so far so good !
(about 80% of the plots are in this category)

DQM-from-RECO vs DQM-from-website
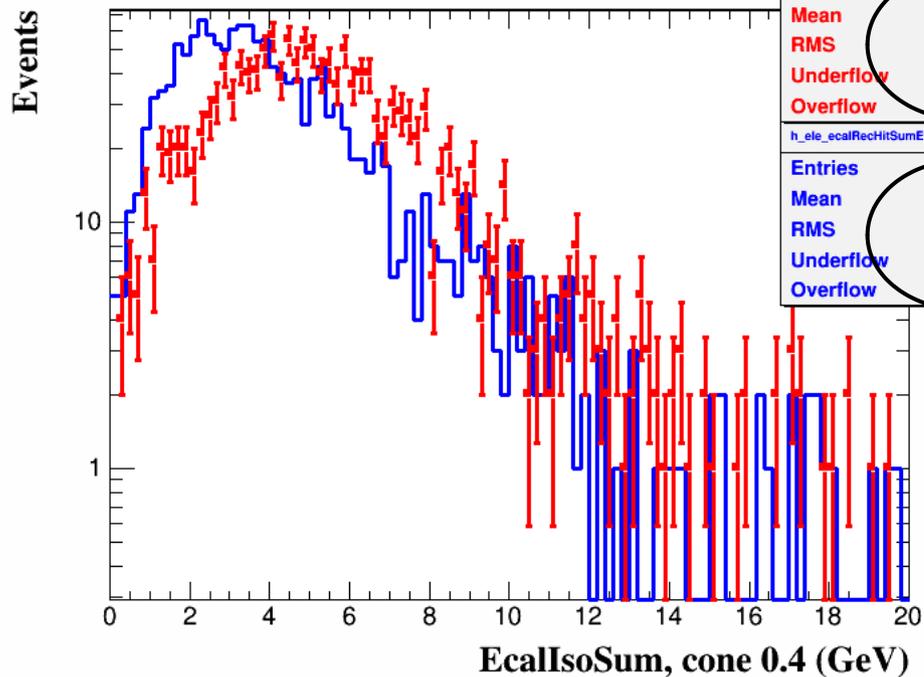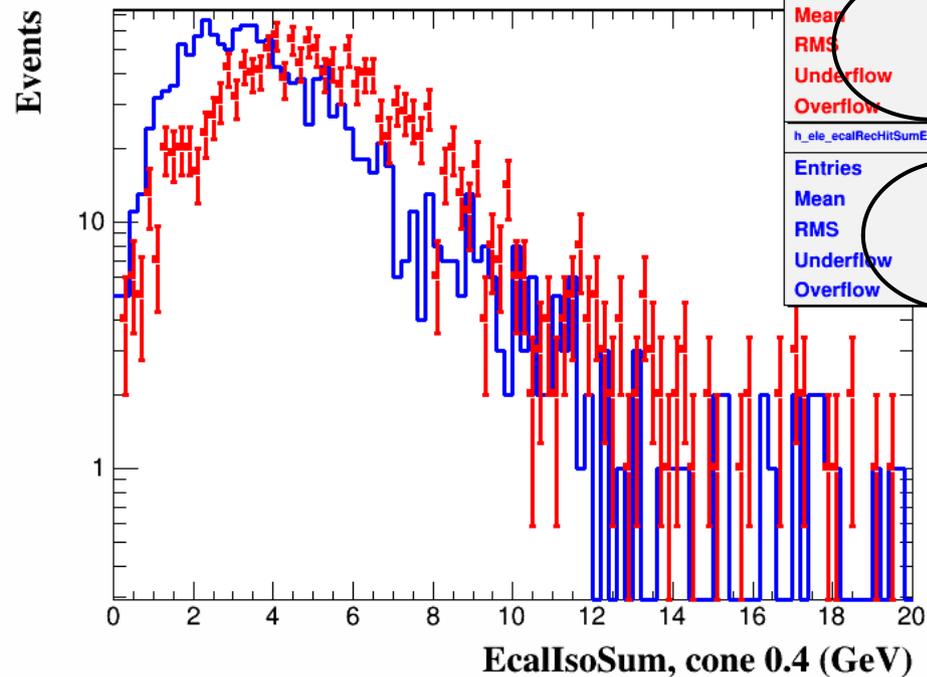
Same plot: different Mean & RMS !

Exemple 1

Work done

DQM fromRECO [5]
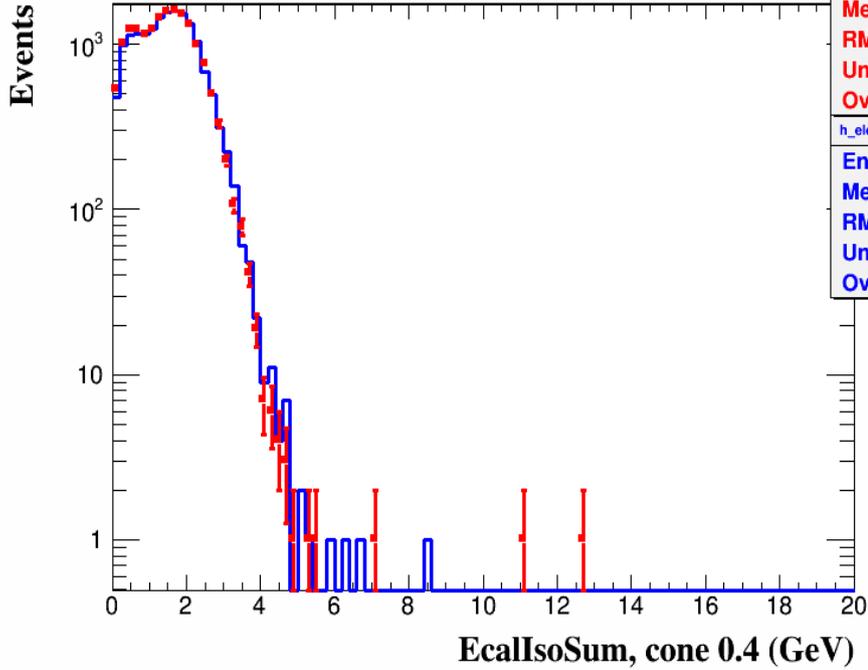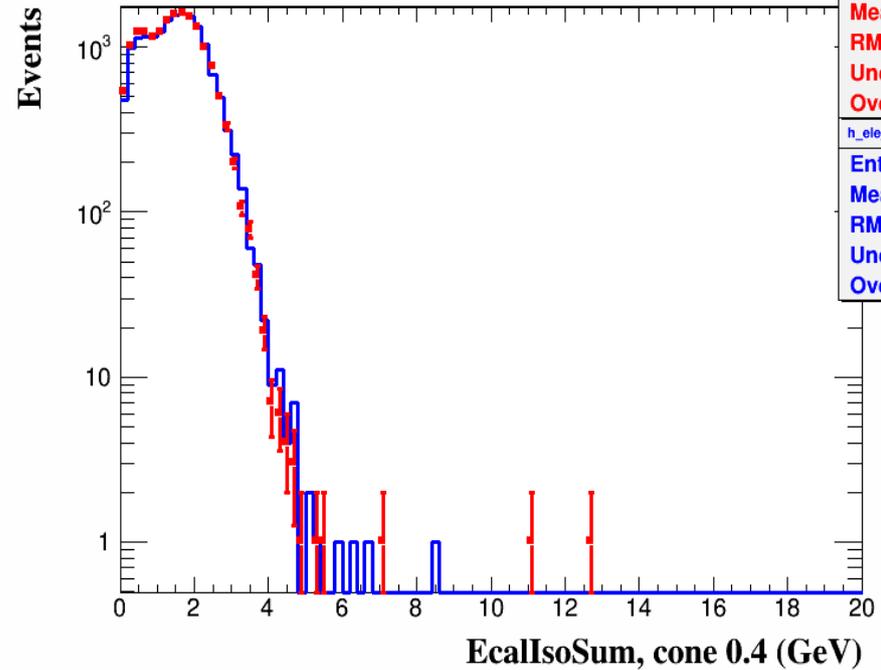
Work done

ecal isolation sum, dR=0.4
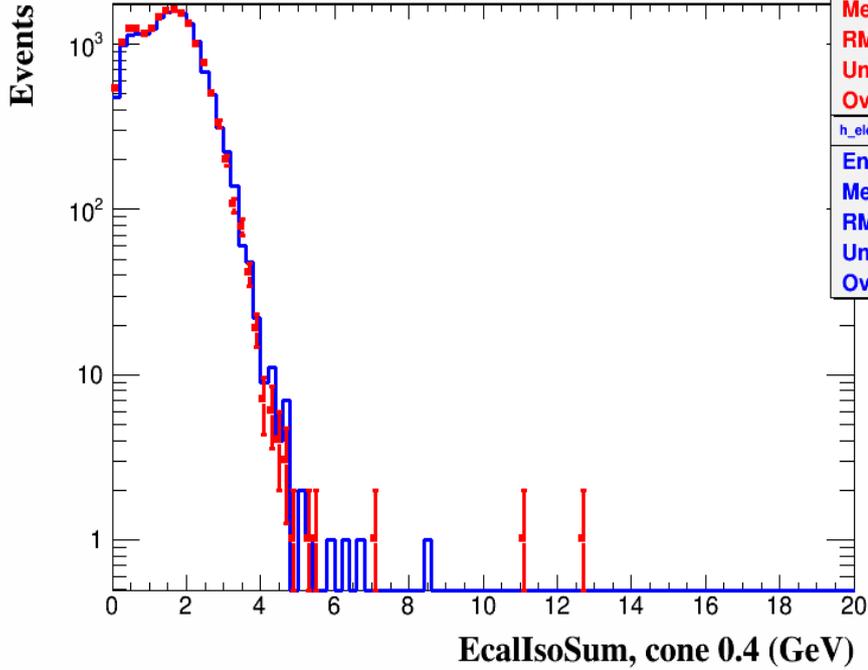
h_ele_ecalRecHitSumEt_dr04	
Entries	16681
Mean	1.478
RMS	0.8078
Underflow	0
Overflow	1

h_ele_ecalRecHitSumEt_dr04_ref	
Entries	16636
Mean	1.492
RMS	0.7885
Underflow	0
Overflow	0

EcalIsoSum, cone 0.4 (GeV)

SetStatOverflow off [4]

DQM fromRECO

ecal isolation sum, dR=0.4
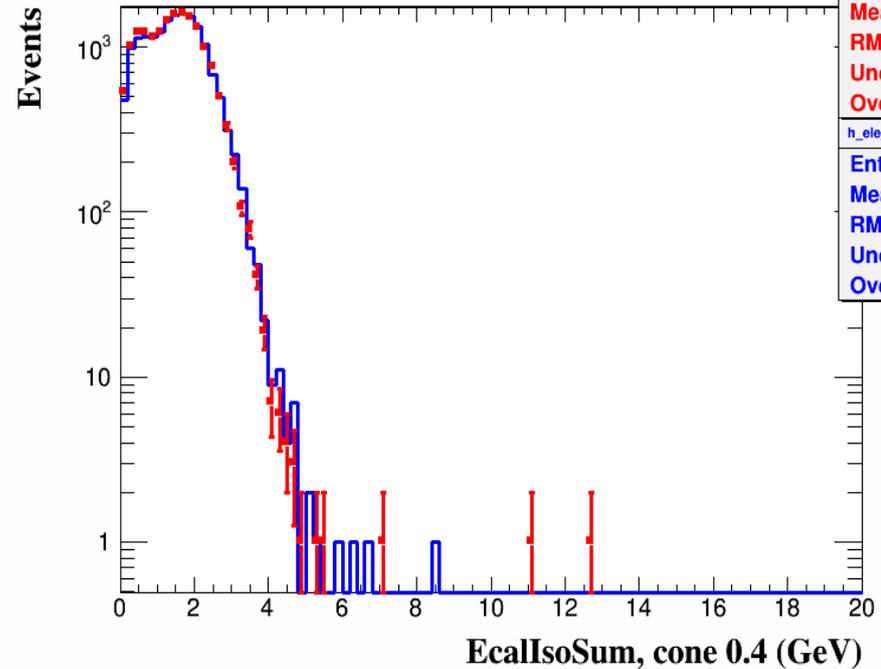
h_ele_ecalRecHitSumEt_dr04	
Entries	16681
Mean	1.477
RMS	0.7944
Underflow	0
Overflow	1

h_ele_ecalRecHitSumEt_dr04_ref	
Entries	16636
Mean	1.492
RMS	0.7885
Underflow	0
Overflow	0

EcalIsoSum, cone 0.4 (GeV)

DQM-from-RECO vs DQM-from-website

Our overlaying code is crashing when processing this plot, so the right plot is obtained from the TBrowser

Different plot, different stats, Mean = inf, RMS= nan

Exemple 2

Work done 1

ele seed dphi 2nd layer
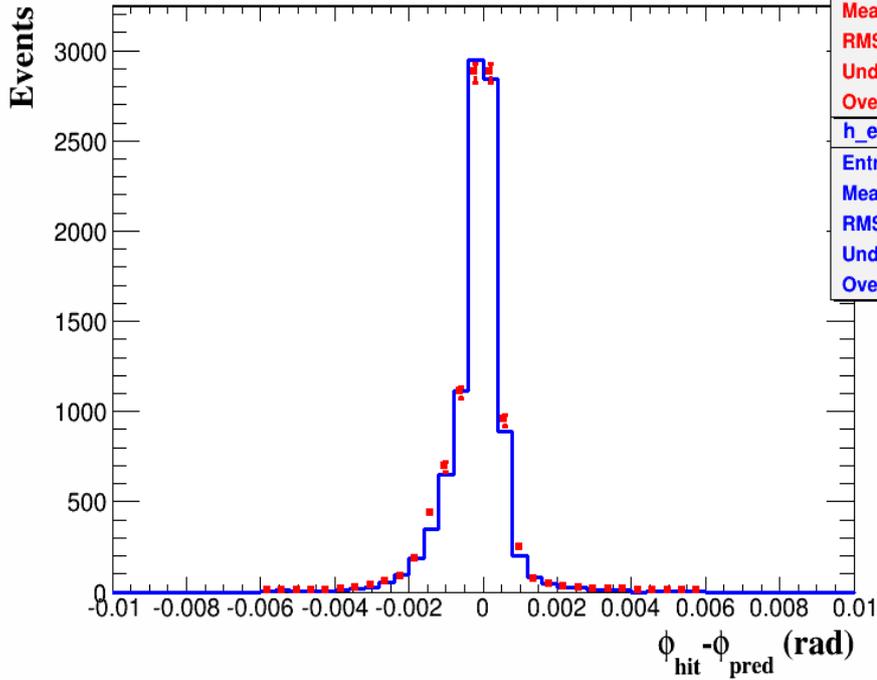
h_ele_seedDphi2	
Entries	16681
Mean	-0.0001607
RMS	0.0008011
Underflow	0
Overflow	6911
h_ele_seedDphi2_ref	
Entries	16636
Mean	-0.0001692
RMS	0.0007841
Underflow	0
Overflow	7003

DQM-fromRECO [6]

SetStatOverflow off [7]
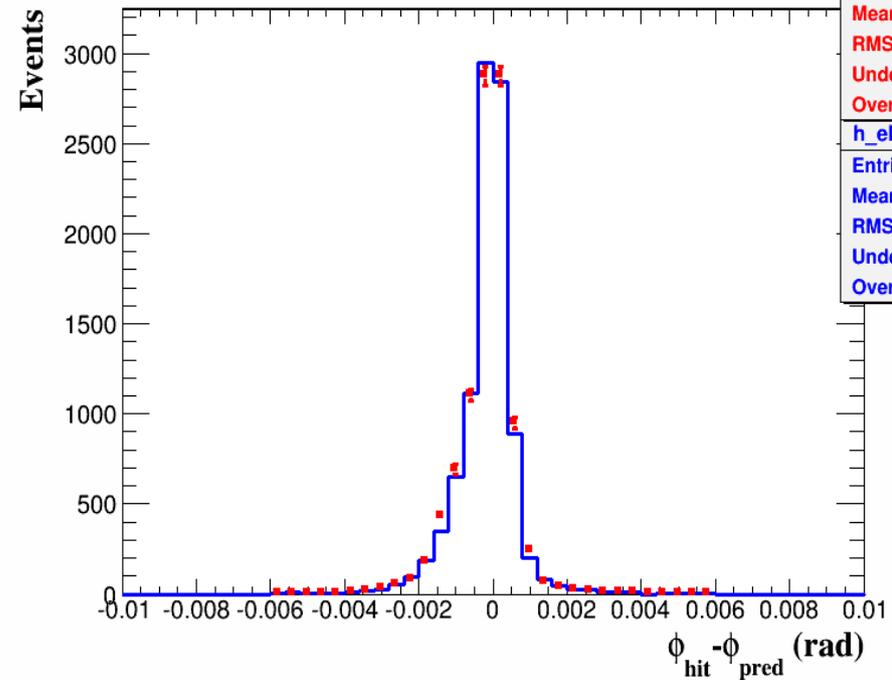
ele seed dphi 2nd layer

h_ele_seedDphi2	
Entries	16681
Mean	-0.0001607
RMS	0.0008011
Underflow	0
Overflow	6911
h_ele_seedDphi2_ref	
Entries	16636
Mean	-0.0001692
RMS	0.0007841
Underflow	0
Overflow	7003

Work done 2

ele seed dphi 2nd layer
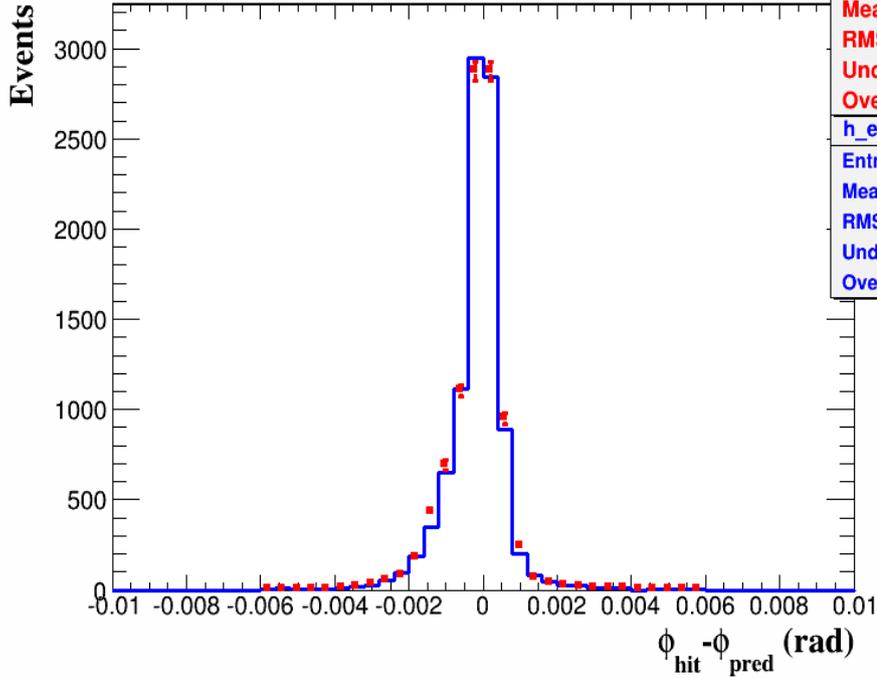
h_ele_seedDphi2	
Entries	16681
Mean	inf
RMS	nan
Underflow	0
Overflow	6911
h_ele_seedDphi2_ref	
Entries	16636
Mean	-0.0001692
RMS	0.0007841
Underflow	0
Overflow	7003

SetStatOverflow on [9]

DQM from web site [8]

ele seed dphi 2nd layer
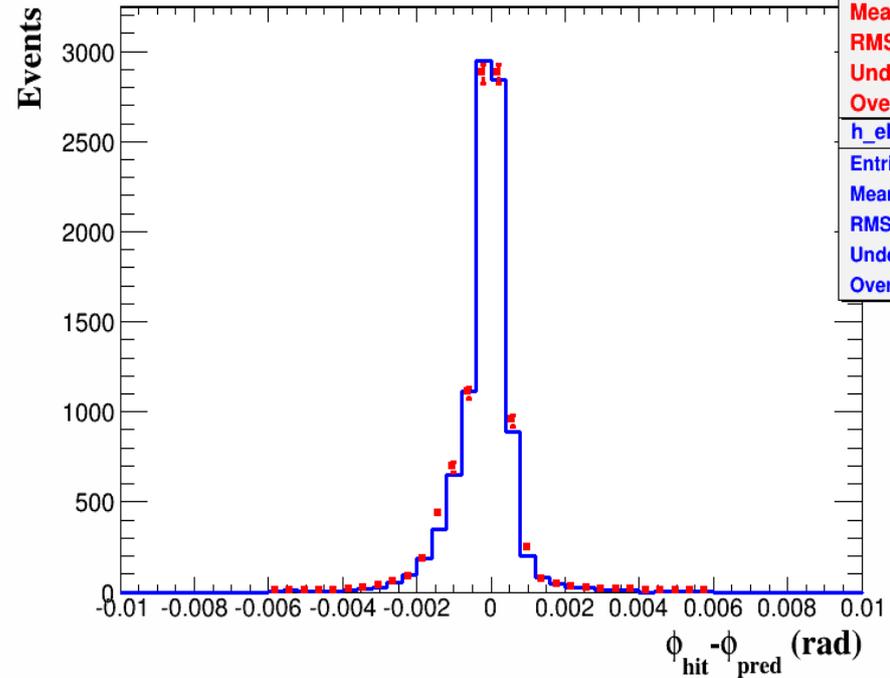
h_ele_seedDphi2	
Entries	16681
Mean	inf
RMS	nan
Underflow	0
Overflow	6911
h_ele_seedDphi2_ref	
Entries	16636
Mean	-0.0001692
RMS	0.0007841
Underflow	0
Overflow	7003

```
-rw-r--r--. 1 archiron zh  870 Feb 13 11:36 ElectronMcMiniAODSignalPostValidator.h
-rw-r--r--. 1 archiron zh 1.4K Feb 13 11:36 ElectronMcMiniAODSignalPostValidator.cc
-rw-r--r--. 1 archiron zh  780 Feb 13 11:36 ElectronMcFakePostValidator.h
-rw-r--r--. 1 archiron zh 9.5K Feb 13 11:36 ElectronMcFakePostValidator.cc
-rw-r--r--. 1 archiron zh 2.9K Feb 13 11:36 ElectronConversionRejectionValidator.h
-rw-r--r--. 1 archiron zh  11K Feb 13 11:36 ElectronConversionRejectionValidator.cc
-rw-r--r--. 1 archiron zh 5.1K Feb 13 11:36 EgammaObjects.h
-rw-r--r--. 1 archiron zh  62K Feb 13 11:36 EgammaObjects.cc
-rw-r--r--. 1 archiron zh 2.9K Feb 13 11:36 ConversionPostprocessing.h
-rw-r--r--. 1 archiron zh 9.0K Feb 13 11:36 ConversionPostprocessing.cc
-rw-r--r--. 1 archiron zh 1.4K Feb 13 11:36 BuildFile.xml
drwxr-xr-x. 6 archiron zh 2.0K Feb 13 11:36 ../
-rw-r--r--. 1 archiron zh  23K Feb 14 11:03 ElectronMcSignalValidator.h
-rw-r--r--. 1 archiron zh 241K Feb 14 11:03 ElectronMcSignalValidator.cc
-rw-r--r--. 1 archiron zh  18K Feb 14 11:11 ElectronMcFakeValidator.h
-rw-r--r--. 1 archiron zh 172K Feb 14 11:11 ElectronMcFakeValidator.cc
drwxr-xr-x. 2 archiron zh 4.0K Feb 14 11:11 ./
-rw-r--r--. 1 archiron zh 4.4K Feb 14 14:38 ElectronMcMiniAODSignalValidator.h
-rw-r--r--. 1 archiron zh  37K Feb 14 14:41 ElectronMcMiniAODSignalValidator.cc
[archiron@lxplus771 ~/public/CMSSW_11_1_0_pre2/src]$ cd ../../CRAB3-tutorial/
[archiron@lxplus771 ~/public/CRAB3-tutorial]$ ls
CMSSW_11_0_0_pre13/  CMSSW_11_0_0_pre2/
[archiron@lxplus771 ~/public/CRAB3-tutorial]$ cd CMSSW_11_0_0_pre13/src
[archiron@lxplus771 ~/public/CRAB3-tutorial/CMSSW_11_0_0_pre13/src]$ cmsenv
[archiron@lxplus771 ~/public/CRAB3-tutorial/CMSSW_11_0_0_pre13/src]$ la
total 18M
drwxr-xr-x. 17 archiron zh 2.0K Jan 28 11:35 ../
-rw-r--r--.  1 archiron zh 1.1K Jan 28 12:11 crabConfig_MC_generation.pyc
-rw-r--r--.  1 archiron zh  933 Jan 28 15:24 crabConfig_MC_generation.py
-rw-r--r--.  1 archiron zh 8.7M Jan 28 16:14 step2_inFEVTDEBUGHLT_0010.root
-rw-r--r--.  1 archiron zh 8.6M Jan 28 16:14 step2_0010.root
-rw-r--r--.  1 archiron zh 8.4K Jan 29 14:10 pset_MC_generation.py
-rw-r--r--.  1 archiron zh 1.1K Jan 29 14:18 crabConfigScript_MC_generation.pyc
-rw-r--r--.  1 archiron zh 6.5K Jan 29 14:18 pset_MC_generation.pyc
drwxr-xr-x.  3 archiron zh 2.0K Jan 29 14:18 ./
-rw-r--r--.  1 archiron zh 5.9K Jan 29 14:18 crab.log
drwxr-xr-x.  6 archiron zh 2.0K Jan 29 14:20 crab_projects/
-rw-r--r--.  1 archiron zh 1.1K Jan 29 14:27 crabConfigScript_MC_generation.py
[archiron@lxplus771 ~/public/CRAB3-tutorial/CMSSW_11_0_0_pre13/src]$ chigui
```

GeV

Décrire les deux fenêtres, peut être ne rapport avec la description précédente

GeV

Summary

Get list of operations

Middle

main.py

List of operations

self.tasks_counterMax = 4
self.tasks_counter = 0/4
release selection
initVariables OK

GeV

Décrire les zones de gauche à droite

GeV

GeV

GeV

GUI Electron Validations v0.5.0.0

Comparison
- ● FULL vs FULL
- ○ FAST vs FAST
- ○ FAST vs FULL

Validation
- ○ RECO
- ● PU25
- ○ PUpmx25
- ○ miniAOD

Spec/Ref
- ○ RECO
- ● PU25
- ○ PUpmx25
- ○ miniAOD

All / None
- ● All
- ○ None

DataSets
- List ▾
- Reload

Web folder name customization :
Release : 2021
Reference : test

Location
- List ▾
- Reload

release
Release : CMSSW_11_1_0_pre3
Reference : CMSSW_11_1_0_pre2

Summary

Release : CMSSW_11_1_0_pre3
Reference : CMSSW_11_1_0_pre2
working dir release : /afs/cern.ch/user/a/archiron/public/CRAB3-tutorial/CMSSW_11_0_0_pre13/src/11_1_0_pre3 **already created !**
working dir reference : /afs/cern.ch/user/a/archiron/public/CRAB3-tutorial/CMSSW_11_0_0_pre13/src/11_1_0_pre3/11_1_0_pre2 **already created !**
resume folder : /eos/project/c/cmsweb/www/egamma/validation/Electrons/Dev//11_1_0_pre3_2021_DQM_std/FullvsFull_11_1_0_pre2_test

Get list of operations

Web page

begin files loading !

Selected | Next | (4/4) Next :   About | Help   Exit ?

GeV

GUI Electron Validations v0.5.0.0

Comparison
- ⦿ FULL vs FULL
- ○ FAST vs FAST
- ○ FAST vs FULL

Validation
- ○ RECO
- ⦿ PU25
- ○ PUpmx25
- ○ miniAOD

Spec/Ref
- ○ RECO
- ⦿ PU25
- ○ PUpmx25
- ○ miniAOD

All / None
- ⦿ All
- ○ None

DataSets
- List ▾
- Reload

Web folder name customization :
Release :   2021
Reference :   test

Location
- List ▾
- Reload

release
Release : CMSSW_11_1_0_pre3
Reference : CMSSW_11_1_0_pre2

Summary

Release : CMSSW_11_1_0_pre3
Reference : CMSSW_11_1_0_pre2
working dir release : /afs/cern.ch/user/a/archiron/public/CRAB3-tutorial/CMSSW_11_0_0_pre13/src/11_1_0_pre3 **already created !**
working dir reference : /afs/cern.ch/user/a/archiron/public/CRAB3-tutorial/CMSSW_11_0_0_pre13/src/11_1_0_pre3/11_1_0_pre2 **already created !**
resume folder : /eos/project/c/cmsweb/www/egamma/validation/Electrons/Dev//11_1_0_pre3_2021_DQM_std/FullvsFull_11_1_0_pre2_test **already created !**

Get list of operations

Web page

begin files loading !
All files loaded
ZEE_14

Selected   Next   (4/4) Next :   About   Help   Exit ?

Collections sizes

GeV
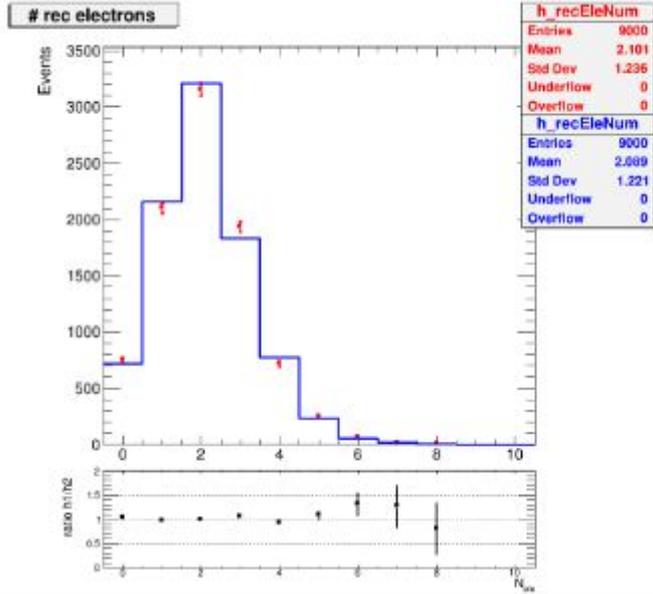
```python
def DataSetsFilter(self):
    import sys
    fieldname = self.validationType1
    if ( self.validationType3 == 'miniAOD' ):
        fieldname = fieldname + self.validationType3
    else:
        fieldname = fieldname + self.validationType2
    table=getattr(sys.modules[__name__], "DataSetsFilter_%s" % fieldname)(self)

    return table
```