Table of Contents

Analysis pp 7 TeV :

xE Distribution

April 29, 2015 Decide to re-use the Twiki after a long break. The analysis is moving on. All the code is done. We are in check period.

For the moment we check if all the gamma decay contributions are compatible --> TRUE

Check if UE is negligible --> TRUE

Check if efficiency in away side and UE is compatible --> FALSE

Purity

The method has completely changed since Nicolas's thesis. Now we take into account the contamination coming from gamma decays (neutral meson) in the signal region.

MC

Documents

Group Meetings :

May 27, 2015

- 27_mai_2015_ReunionGroupe.pdf: Reunion de groupe 27 mai 2015

April 29, 2015

- GroupeMeetingApril29_2015.pdf: Meeting group April 29, 2015. Update on Efficiency for xE analysis

31 oct 2014

- Presentation_31_oct_2014.pdf:

27 oct 2014

- Presentation_27_oct_2014.pdf: Presentation_27_oct_2014.pdf

Meetings :

Old Stuffs (Internship) :

PRESENTATION GROUPE

28/07/2014

- presentation28Juillet.pdf: presentation28Juillet.pdf

23/07/2014

- presentation23Juillet.pdf: presentation23Juillet.pdf

17/07/2014

- presentation_17Juillet.pdf: presentation_17Juillet.pdf

04/07/2014

- update sur alpha_corr: presentation_4Juillet2014.pdf

18/06/2014 : Soutenance de stage

- Prsentation_Soutenance.pdf: Prsentation_Soutenance.pdf

02/06/2014

- Presentation_2juin2014.pdf: Presentation_2juin2014.pdf

23/05/2014

- Presentation_23mai2014.pdf: Presentation_23mai2014.pdf

15/05/2014

- Presentation_15mai2014.pdf: Presentation_15mai2014.pdf

06/05/2014

- Presentation_6mai2014.pdf: Presentation_6mai2014.pdf

15/04/2014

- Presentation_15avril2014.pdf: Présentation réunion de groupe du 15 avril 2014

31/03/2014

- Presentation.pdf: Présentation Réunion de groupe 31 mars 2014

13/03/2014

- presentation_14mars2014.pdf: Présentation réunion de groupe 14 mars 2014

QA

Periods QA

14/04/2014

- IssuesInQAPeriods: Final recap document for QA ---> To access notes about the QA download the document
- QAPeriodsMB.pdf: QA for Min Bias data set. Less plot due to less statistic
- IssuesInQAPeriods.pdf: Recap document for the issues in the period per period QA for MB and triggered data sets. The explanations about the issues and what we understand are available in the notes of the PDF document

02/04/2014

- QAPeriodsGood.pdf: Analyse de qualité des données période par période pour données triggées de niveau 1

3 periodes : LHC13d (p-Pb), LHC13e (p-Pb), LHC13f (Pb-p). LHC13f choisie comme période de référence

=> Tendance en eta

Runs QA

30/04/2014

- IssuesInQARuns.pdf: Recap document for the issues in the run by run Quality Analysis

24/04/2014

- Classeur1.xlsx: EXCEL file with fit of all the runs

14/04/2014

- QARuns.pdf: QA run per run for 13d, e, f periods. Data triggered level 1 QA perform just for TH1F because of the statistic
- QARunsMB.pdf: QA run per run for 13d, e, f periods. Data Min bias

04/04/2014

- fichOutputQARunsLHC13d24Graphs.ps: QA Run par Run Période LHC13d !!!!PRELIMINAIRE!!!!!

ANALYSE p-Pb et pp

x_E distribution

24/06/2014

Weird distribution for UE => I check wether we obtain the same distribution of all types of trigger particle. I don't observe that in pp but I do in pPb for isolated particles.

- comparisonUEAllTypeTiggParticle_pPb.pdf: xE distribution for UE for different type of trigger particle (isolated and non isolated pi0 or cluster) for pPb data
- comparisonUEAllTypeTiggParticle.pdf: xE distribution for UE for different type of trigger particle (isolated and non isolated pi0 or cluster) for pp data : not the same with repeat to the trigger particle

23/06/2014

Run the pp data on my code to crosscheck pp results : I don't have the same distributions => I do the x_E distribution for non isolated pi0 and compare to the UE distribution to see if we obtain the same shape and ratio as obtained in pp. It seems different, I have to check my code.

- 3xE.pdf: 3xE.pdf
- 4xE.pdf: 4xE.pdf
- fxEIsolatedPhoton.pdf: fxEIsolatedPhoton.pdf
- fxEPi0AndUENonIsolated.pdf: fxEPi0AndUENonIsolated.pdf

09/06/2014

Version finale du rapport de stage

- Rapport_de_stage.pdf: Rapport_de_stage.pdf

04/06/2014

errors assessment

- RelativeErrors30AlphaCorr.pdf: RelativeErrors30AlphaCorr.pdf
- RelativeErrorsNo30AlphaCorr.pdf: RelativeErrorsNo30AlphaCorr.pdf
- ErrorsAssessmentGoodFormula_AlphaCorrNo30_RelativeErrors.pdf: ErrorsAssessmentGoodFormula _AlphaCorrNo30_RelativeErrors.pdf
- ErrorsAssessmentGoodFormula_AlphaCorr30_RelativeErrors.pdf: ErrorsAssessmentGoodFormula _AlphaCorr30_RelativeErrors.pdf
- ErrorsAssessmentGoodFormula_AlphaCorr30_AbsolutErrors_NoLogY.pdf: ErrorsAssessmentGoodFormula _AlphaCorr30_AbsolutErrors_NoLogY.pdf
- ErrorsAssessmentGoodFormula_AlphaCorrNo30_AbsolutErrors_NoLogY.pdf: ErrorsAssessmentGoodFormula _AlphaCorrNo30_AbsolutErrors_NoLogY.pdf

03/06/2014

Bad formula for photons x_E distribution -----> we have to re-implement the correct formula and obtain all the plot again Stop the comparison with LHC11cd for now (report)

- 3xE.pdf: 3xE.pdf
- 4xEFit_12_15.pdf: 4xEFit_12_15.pdf
- compareXE12_15_25.pdf: compareXE12_15_25.pdf
- compareGoodBadAllDeviation.pdf: compareGoodBadAllDeviation.pdf
- compareGoodBadClusterDeviation.pdf: compareGoodBadClusterDeviation.pdf
- compareGoodBadPhotonDeviation.pdf: compareGoodBadPhotonDeviation.pdf
- compareGoodBadPi0Deviation.pdf: compareGoodBadPi0Deviation.pdf
- compareGoodBadUEDeviation.pdf: compareGoodBadUEDeviation.pdf

30/05/2014

errors assessment

- ErrorsAssessment_xE_12_25.pdf: ErrorsAssessment _xE_12_25.pdf

23/05/2014

Comportement chaotique en fonction des données LHC11 que j'utilise --> le facteur 2 que l'on trouve entre pp et pPb n'est certainement pas du à la physique ! Les données sont celles données par Gustavo du 29 avril 2013 et du 18 mars 2014.

- Compare_xE_ClusterIso_11vs13_13_Apr_29_All.pdf: Compare_xE_ClusterIso_11vs13_13_Apr_29_All.pdf
- Compare_xE_ClusterIso_11vs13_14_Mar_18.pdf: Compare_xE_ClusterIso_11vs13_14_Mar_18.pdf
- Compare_xE_PhotonIso_11vs13_13_Apr_29_All.pdf: Compare_xE_PhotonIso_11vs13_13_Apr_29_All.pdf
- Compare_xE_PhotonIso_11vs13_14_Mar_18.pdf: Compare_xE_PhotonIso_11vs13_14_Mar_18.pdf
- Compare_xE_Pi0Iso_11vs13_Runs13_Apr_29_All.pdf: Compare_xE_Pi0Iso_11vs13_Runs13_Apr_29_All.pdf
- Compare_xE_Pi0Iso_11vs13_Runs14_Mar_18s.pdf: Compare_xE_Pi0Iso_11vs13_Runs14_Mar_18s.pdf
- Compare_xE_UE_11vs13_Runs13_Apr_29_All.pdf: Compare_xE_UE_11vs13_Runs13_Apr_29_All.pdf
- Compare_xE_UE_11vs13_Runs14_Mar_18.pdf: Compare_xE_UE_11vs13_Runs14_Mar_18.pdf

19/05/2014

A cause des niveaux de trigger il faut faire attention lorsqu'on utilise les données des niveau L1 et L2

ensemble. On choisit de faire l'analyse avec les données L1(seuil de 12 GeV /c) pour le domaine en p_T^trigg de 12 à 25 GeV /c et avec les données L2 (seuil à 7 GeV /c) pour le range 10-11 GeV /c. La stat disponible dans L2 pour 10-11 GeV /c est 10 fois plus faible que pour L1 de 12 à 25 GeV /c ----> Barre d'erreur plus importante. Les valeurs de la pureté ont été calculées par Catherine.

- 3xEFitL2_10_12.pdf: the three part of xE isolated photon formula
- 3xEL2_10_12.pdf: 3xEL2_10_12.pdf
- xEPhotonL2_10_12.pdf: xE for isolated photon : the fit does not converged because of the small error bars at high x_E where the distribution is negative.

Les barres d'erreurs semblent très grandes (pas trop de stat 10 fois moins pour L2 10-12 que pour L1 12-25) mais lorsqu'on fait la propagation d'une soustraction on somme en quadrature les erreurs.

Erreur dans la propagation pour les ratios GoodRuns /AllRuns et GoodRuns /BadRuns --> problème réglé, nouveaux plots ici :

- ratioGoodBad.pdf: ratioGoodBad.pdf
- ratioGoodAll.pdf: ratioGoodAll.pdf

15/05/2014

Update of x_E distribution : I did a non weighted average of each bin in [12,25] GeV /c --> it's not the proper way to do the analysis. One must scale the total distribution with the number of particles in 12-25 and not scale each bin distribution with number of particle in the bin. It doesn't change a lot but it could be interesting to do the comparison between the two methods. ---> !!!!!!!!!!!!!! To do !!!!!!!!!!!!!!

09/05/2014

Check if the values for left and right side UE \Delta\Phi are OK -----> There is no hole for left side as confirmed by the fit

- DeltaPhiLeftRightInitial.pdf: Plot the value taken by \Delta\Phi for left and right UE.
- DeltaPhiLeftRightPositif.pdf: Same plot as before but add 2*Pi() if negative values of \Delta\Phi
- compareUEFitFree.pdf: Fit of the ratio between left and right side UE with one free parameter
- compareUEFit09.pdf: Fit of the ratio between left and right side UE with one fixed parameter = 0.9

Comparison between AllRuns data and AllGoodRuns data -----> slight difference between the two datasets -> see if we choose to remove others bad runs when we go back to QA

- compareGoodAllrunsFitxE.pdf: compareGoodAllrunsFitxE.pdf

Comparison between L1 data and L1+L2 data : L2 has 50% of L1 statistic but for the xE histograms the biggest part of the stat is below 12 GeV /c so we don't use it for the analysis.

- CompareL1_L1L2Fit.pdf

Comparison between the analysis for \p_{T}^{trigg} \in [10,25] GeV /c and \in [12,25] GeV /c : the purity is very low for low \p_{T}^{trig} not sure this is the best option

- compareFit10_12_25xE.pdf

30/04/2014

Do the plots with merged data <=> LHC13d, e, f without identified bad runs from QA there is 14 bins in p_T^trigg [12,25]

- 3xE.pdf: three part of the equation for x_E distribution for isolated photon ----> Check if our x_E distribution has sense and do the ratio over f(x_E^UE) to be sure that the UE is negligible for high x_E where we don't have information on it
- CompareUELeftRight.pdf: UE right and left comparison du to weird value in analysis code ----> we want to be sure we can use this for now
- FitxE.pdf: fit the cluster and pi0 x_E distribution to compare with the value obtained by Nicolas ---> same order of magnitude
- xEPhoton.pdf: x_E distribution for isolated photon with 12 bins in p_T^trigg (means still fake errors for two bins) ----> Maybe it will be interesting to search for a good binning (i.e minimise the error bars)

When we look carefully at the x_E distribution (i.e TH2F in the plots analysis) we see that it would be great to perform the analysis from 10 Gev/c to 25 Gev/c ------> we need L2 data PRELIMINARY plots

- 3xE1_25.pdf: the three part of the isolated photon x_E distribution formula p_T^trigg in [10,25] GeV /c ----> fake value of the purity for the 2 first bins
- xEPhoton10_25.pdf: we clearly see that we reach the high x_E region with more statistic here ! See if always true with good values of the purity

For both we have negative values for certain bins -> What do we do ? TMath::Abs() ?

23/04/2014

Compare the three data periods ----> we want to merge data Two different plots : one with 14 bins in p_T^trigg (still a fake error on two bins for purity), and one with 1 bin in p_T^trigg

- Compared_e_f_Bin.pdf: Compare the three period in order to be sure that we can merge the data
- Compare_d_e_f_NoBin.pdf: compare the three period in order to be sure that we can merge the data with no bin in p_T^trigg

10/03/2014

!!!!PRELIMINARY!!!!

do the plot with LHC13f L1 trigg data only

- xEPhoton.pdf: first plot of the x_E distribution for isolated photon
- xEdistributionsameplot.pdf: three x_E distribution i.e the cluster, pi0 and UE distribution
- UEComparison.pdf: pi0 UE and photon UE comparison

Purity

We try to understand how the purity estimation will affect the isolated photon x_E distribution

30/04/2014

- xE12BinsComparePurityMethod.pdf: Comparison of x_E for isolated photon for different purity estimation method -----> all the method are consistent => for now we can choose one method and choose further

23/04/2014

- ComparePurity.pdf: compare the value of the purity for different value of p_T^trigg bins
- binOverConstantPurity.pdf: comparison of x_E for isolated photon for bin purity vs contant purity ----> better to bin but still coherent if we choose a mean value for purity

DOCUMENTS RECAPITULATIFS

- NoteForJulien.pdf: NoteForJulien.pdf

DOCUMENTS FINAUX STAGE

- slides soutenance: Soutenance de stage du 18 juin 2014 / Strasbourg
- rapport de stage: Version finale du rapport de stage

BIBLIOGRAPHY

CALENDAR FOR GROUP :

- calendar september
- calendar october

This topic: Main > AstridLogbook
Topic revision: r44 - 2015-09-17 - AstridVauthier