COMMENTS from GPC:

Note: We are still working on 1-2 comments related to the citations

======================= Saskia comments ===========================

On the physics, I think you should address why the single-particle measurement shows dependence of suppression with respect to the reaction plane, for example in https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fjournals.aps.org%2Fprc%2Fpdf%2F10.1103%2FPhysRevC.76.034904&data=05%7C01%7Cjam977%40physics.rutgers.edu%7C17cb0b5f9ab44afbdb7108dad960cb6e%7Cb92d2b234d35447093ff69aca6632ffe%7C1%7C0%7C638061307532838116%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=4g2f68BMndZB8xi1Ma7H3dBZyTzZ8BvWT0AvBbdFE4Y%3D&reserved=0

("Detailed study of high-pT neutral pion suppression and azimuthal anisotropy in Au+Au collisions at √sNN =200GeV").

I understand it's a different measurement, but here the expectation that you refer to in the paper is actually observed.

Perhaps this can be discussed in the section where you address biases of different measurements. Also, the paper above should probably be cited in the motivation.

Everywhere:

path-length -> path length (unless a modifier, such as path-length dependence) - FIXED

Line 11: The probability for partonic interactions is dependent on the path length traversed through the medium, which should be revealed as path-length dependent medium modifications to jet production. - FIXED

Line 14: The event plane (EP) - DONE

Then on Line 18: EP bins - DONE

Line 41: underlying-event backgrounds - DONE

Line 49: jet-particle correlations - DONE

Line 52: constrains -> constraints - DONE

Line 54: second-order event plane - DONE

Line 61: neutral- and charged-particle constituents - DONE

Line 65: N_t and N_a are not the symbols used in the equation - DONE

Line 86: similar measurements at the LHC. - DONE

Line 94: maximum hits possible - DONE

Tracks with a distance of closest approach (DCA) to the primary vertex larger than 3 cm …. - DONE

No lower pT cut on tracks? - Added a sentence in here to mention the cut. We require tracks > 2.0 GeV/c for jets, > 1.0 GeV/c for correlation functions, and 0.2 <= pt < 1.0 GeV/c for EP reconstruction.

Line 107: Here you mention a lower ET cut on the towers. I would assume there is a similar threshold on tracks, but it wasn't mentioned. - FIXED, see comment for L94 and change to text.

Line 113: tow -> tower - DONE

Line 114: The tower energy is corrected by assigning a new energy Enew = Etow − ΔEcorr to the tower. - DONE

Line 120: center-of-mass energy - DONE

Line 123: how is minimum-bias defined?

Line 124: MinBias -> MB - DONE

Line 128-129: The second order event plane, which is the experimentally reconstructed second order symmetry plane will be referred to as the "event plane" in this text for simplicity.   ->   The second-order event plane, which is the experimentally reconstructed second-order symmetry plane, will be referred to as the "event plane" in this text, for simplicity. - DONE

Line 135: where the event plane resolution -> where the event-plane resolution   Please check this everywhere in text: "the event plane", but "the event-plane resolution" - FIXED

Lines 140-143: Some of this is repetition from the text starting on line 61. - Removed the earlier sentence from the introduction that contained the repetitive text.

Line 154: Here you mention the lower pT cut on both towers and tracks, which is sine, but I think it should come up earlier when you discuss track cuts as well. - Added sentence mentioning track cut in the collection of data track paragraph.

Line 160: miss-reconstructed -> mis-reconstructed - DONE

Lines 166-168: Do gen-level jets include particles with pT<2 GeV/c. In other words, do correct for the loss of those contributions to your rico-level jets? We dont correct jet pt, the resolution plots are for Theorists to appropriately smear their distributions.

Line 173: within r=0.4 — does this depend on R. Are all of your results for jets with R=0.4? Do you state that somewhere in your discussion of the jet reconstruction? - All results are for jets with R=0.4. We added the sentence "All jets measured in this work are of resolution R=0.4." to

the end of the first paragraph on jet reconstruction Sect 3.1 to denote this right after mentioning the fiducial acceptance range.

Figure 1 discussion or figure caption: Are these R=0.4 jets? - Yes they are – added "R=0.4 full" to caption an description of the figure. All jets used in this work are R=0.4.

Line 188: event-plane bins - DONE, changed to EP bins

Line 195: that of gen-level jets -> to those of the gem-level jets - DONE

Line 211: pt-hard bins — do you mean \hat{p_T} bins? Perhaps define what these are. - We dropped this sentence now.

Line 213: A 20-40 GeV/c jet from the embedding sample is expected to be the best representative of valid comparison for a successful closure between reco- and gen-level samples. — Why? We have removed this sentence responding to another GPC member's comment. Please refer to the closure discussion in the analysis note for more information on this.

Section 3.2 - This section is much more clear than the previous version that I read.

Line 221: per-jet correlation functions - DONE

Line 224: an associated yield difference (jet peak width difference) -> an associated-yield difference (jet-peak width difference) - DONE

Line 227: Which original calculations? - This was referring to the prior paragraph description of the initial approach. Now added "mentioned above" to the sentence in question.

Line 228: used -> using - DONE

Line 236: random-cone study …. jet-peak width - DONE

Line 266: Modified Reaction Plane method (MRP) -> Modified Reaction Plane (MRP) method- DONE

Line 267: event-plane orientation - DONE

Lines 267-269: How does removing a fixed pseudorapidity range remove the away-side jet? The away-side jet does not have to be at the same \eta as the trigger jet. Typo, Fixed

Line 269: The reconstructed event-plane angle is dependent on the momentum range of the tracks used for calculation, so to avoid auto-correlations or having to use multiple event-plane definitions, an upper limit of 1.0 GeV/c is used.

This sentence is somewhat confusing. Perhaps reformulate:

"To avoid auto-correlations, an upper limit of 1.0 GeV/c is used in the calculation of the event plane." - DONE

Line 281: The recentering approach, which drastically improves the event plane, is however, unable to remove higher harmonics from the….   What do you mean, it drastically improves

the event plane? Do you mean to say, it drastically improves the uniformity of the event plane? - yes, FIXED

Line 305: event-plane resolution - DONE

Line 309: The second- (fourth-) order TPC event-plane resolutions - DONE

Line 310: Peaks are seen in the 20-30% and 30-40% centrality bin,….   —> The resolution is peaked around 20-30% centrality, …. - DONE

Lines 311, 315: event-plane resolution - DONE

Line 322: same-event pairs - DONE

Line 323: single-track acceptance - DONE

End of line 324: Don't start a sentence with a symbol.   Perhaps end the previous sentence at "refer to it simply as the efficiency. It is not to be confused with the pair acceptance, a(\Delta\phi,\Delta\eta), which is calculated from the raw pairs that we measure…." - DONE

Figure 2 caption: Event-plane resolution: Second-order (left panel) and fourth-order (right) harmonic relative to the event planes R2(Ψ2) and R4(Ψ2), respectively. The approach follows the Modified Reaction Plane (MRP) method [55] utilizing the charged tracks of the TPC for event-plane reconstruction and resolution calculation for tracks ranging from 0.2-1.0 GeV/c. - FIXED, not sure which version of paper draft you had, but I dropped the left/right panel as we combined the 2 resolutions into a single plot.

Line 328: trigger-jet transverse momentum - DONE

Line 333: The correction for the pair acceptance, a($\Delta\varphi$, $\Delta\eta$), accounts….   (I think a is the acceptance, while 1/a is the correction.) - FIXED, changed to 1 / a

Line 334: minimum bias event -> minimum-bias events or MB events - DONE

Line 335: mixed-event procedure - DONE

Line 337: single-event pairs by the mixed-event pairs - DONE

Line 346: event mixing procedure -> event-mixing procedure - DONE

Line 349: High momentum tracks -> High-momentum tracks - DONE

Line 353: Again, don't start a sentence with a symbol. Perhaps, "The acceptance a($\Delta\varphi$, $\Delta\eta$) is normalized to be 1 at its maximum…." - DONE

Line 356: mixed-event normalization - DONE

Line 362: The variations about 1.0 are smaller than the statistical errors associated with the points. -> The variations about 1.0 are smaller than the statistical fluctuations associated with the points.   This distinction is meant to address that much of the statistical uncertainty will cancel in the ratio (depending on the subset of the same data going into numerator vs.

denominator). I assume you mean here that after removing the common statistical uncertainty, the ratio is within the remaining statical error. - DONE

Line 374: This uncertainty is quite negligible -> This uncertainty is negligible - DONE

Line 385: underlying event background -> underlying-event background - DONE

Line 389: bulk-particle production - DONE

Line 390: and this dominates at low momenta -> and dominates at low momenta - DONE

Line 397: To utilize the robustness of RPF, the jet is restricted relative to the event….

Do you mean, "To test the robustness of the RPF"? If you mean "utilize", it's not clear to me how those cuts utilize the robustness. Perhaps that can be made clear. Changed to Jets are restricted relative to the event plane into three equal sized slices

Line 403: Where \phi_s is -> Here, \phi_s is - DONE

Lines 414-419: add the appropriate hyphens - DONE

Line 427: is background-dominated -> is background dominated (no hyphen here) - DONE

Line 430: a ratio of the difference between the data and the fit to the fit, showing that the data is well-described by the fit.   — Do you mean a fit to the fit? - No we meant the difference between data and the fit = (data – fit), over the fit: (data – fit) / fit. "(data – fit)" has been added to that sentence now for clarity, though the figure caption and y-axis label are already explicit.

Line 439: An example of event plane dependent correlation function ->   An example of an event-plane dependent correlation function - DONE

Lines 451,454: single track reconstruction efficiency -> single-track reconstruction efficiency - DONE

Line 452: event-plane resolution - DONE

Line 454: This uncertainty is uncorrelated in associated-particle momentum. - DONE

Line 463: The acceptance-correction uncertainty - DONE

Table 2 caption: background-fit uncertainty, and the uncertainty associated with the JES correction, each varying with event-plane orientation bins - DONE

Line 492: If jets in-plane traverse shorter path-length than out-of-plane jets, the expectation   -> If in-plane jets traverse shorter path lengths than out-of-plane jets, the expectation is they - DONE

Line 495, 498: event-plane angle - DONE

Line 507: pT-dependent scale factor - DONE

Line 509: This is expected from collisional energy loss or gluon bremsstrahlung -> This is expected from both collisional energy loss and gluon bremsstrahlung - DONE, does this happen for BOTH?

Lines 528-543: add appropriate hyphens - DONE

Line 554, 556: associated-yield ratios - DONE

Line 564: Why do you conclude that? Elaborated in the text

Figure 7 caption: Near-side (left) and away-side (right) associated yield ratios vs pTassoc for 15-20 (top) and 20-40 (bottom) GeV/c full jets in 20-50% centrality collisions.   -> Near-side (left) and away-side (right) associated-yield ratios (of out-of-plane and mid-plane to in-plane) vs pTassoc for 15-20 (top) and 20-40 (bottom) GeV/c full jets in 20-50% centrality collisions. - DONE

Line 583: more easily then gluon jets -> more easily than gluon jets - DONE

Line 584: triggering on a quark translates into the away-side parton being a gluon [65]

— is this the right reference for this statement. It may have been mentioned in this paper, but it must have a better reference.

Line 586: This effects the trigger jet -> This affects the trigger jet - DONE

Citation 46 is missing the page numbers.

%======================= Chunjian comments ============================

1) Eq. 7 only lists the \Psi_{2,EP}, it's better to also label \Psi_{4,EP}. It means you need the label \Psi_{m,EP} and \Psi_{m} in the equation here. - This is specifically referring to the calculation of the second order event plane, and the sequential corrections needed to reach an isotropic distribution in the lab. We do not calculate the fourth order event plane, but do however calculate the 4th order correction to the second order plane (and show the corresponding resolution for it)

2) It will be helpful to zoom in on the y-axis, especially Fig.7.

3) General comments below:

Line 46: "…are studied at RHIC energies" -->" have been studied at RHIC energies." - DONE

Line 52: "…further constrains." --> "…further constraints." - DONE

Line 53: "In this analysis…" "In this analysis,…" - DONE

Line 81: "…only accounts for…" -> "…only account for…" - DONE

Line 84: "…, and it's correction and uncertainty…" -> "…, and its correction and uncertainty…" - DONE

Line 114: "The tower is corrected for by…" -> "The tower is corrected by…" - DONE

Line 140: "collecting neutral particle…" -> "collecting neutral particles…" - Did not change this one. Plural 'particles' sounds weird here.

Line 155: "reduces the the … " -> "reduces the …" - DONE

Line 161: "Discussion of the jet energy scale…" --> "A discussion of the jet energy scale…" - DONE

Line 191:".. with a another jet in…" --> "with another jet in…" - DONE

Line 207: 1 -> one

Line 228: "used random…" -> "using random… " - DONE

Line 266: "…the Modified Reaction Plane method (MRP)…" -> "…the Modified Reaction Plane (MRP) method…" - DONE

Line 418: "to the that of …" -> "to that of …" - DONE

Line 498: "For the the …." -> "For the…" - DONE

Line 515: "For the the 10-20…"-> "For the 10-20…" - DONE

Line 583: "then"-> "than" - DONE

Line 586: "This effects…" -> "This affects…" - DONE

Line 609:"…fluctuations to the…" -> "…fluctuations on the…" - DONE

Line 628: "… and selecting on low…"_> "…and selecting low…" - DONE

========================= OLGA comments ===========================

Thank you for providing updated draft and documentations. We are getting there, but I feel the paper still needs a lot of work. In general, it would benefit from a careful "systematization" – there are a lot of repetitions, variables/observables used multiple times before introduction, there is a section for uncertainty discussion, yet some uncertainties are scattered through the text. On physics side, there are TWO MANY interpretative statements and many of them speculative or at least too strong. I include below my first set of comments, but these do not

address such overall issues. It would be great if you could consider the structure of the paper while implementing the feedback you got so far.

Abstract – needs improvements! It mixes motivation, gives partial analysis description, but does not define well what is used. Here is a proposal for revamped version, please consider:

Angular distributions of charged particles relative to jets are studied in 200 GeV Au-Au collisions as function of orientation with respect to event plane.

This differential study tests the expected path-length dependence of a hard scattered parton as it traverses the hot and dense medium formed in such collisions.

A second-order event plane is used in the analysis as experimental estimate of the reaction plane formed by the collision impact parameter and the beam direction.

Charged particle jets with 15 < pjet T < 20 and 20 < pjet 18 T < 40 GeV/c were reconstructed with anti-Kt algorithm with radius parameter setting of R=0.3 setting in in 20-50% centrality bin to maximize the initial state eccentricity of the interaction region. The reaction plane fit (RPF) method is implemented to remove the flow modulated background with better precision than prior methods. Associated track yields and widths of charged hadrons associated with jets are extracted in three angular bins between the jet axis and event plane.

The event plane dependence is further quantified by taking ratios of the associate yields in different EP bins. No dependence on the orientation of jet axis with respect to event plane is seen within uncertainties in the kinematic regime studied. This finding is consistent with similar experimental observation by ALICE in 2.76 TeV Pb-Pb collision data. -DONE

l.28 – LHC has now HIN collisions at over 5 TeV. I suggest dropping all the "<" signs and spell out in words (which would reed better and give flexibility) - DONE

l.29 At RHIC, a new phase of matter has been discovered… -> A new form of matter has been discovered in such collisions (I personally believe the discovery indeed belongs to RHIC, but this is a "sore spot" for some of our non-RHIC colleagues, so why upset people?) - FIXED

l.32 "Well identified decay products" – I would have no idea what are you talking about here. What is "well identified??" Please use "Experimentally observable remnants " or something like that. Drop "also" - FIXED

l.33 are well calibrated -> are considered to be well calibrated - FIXED

l.35 "as their propagation through the medium is affected by strong interactions." – this part has nothing to do with the statement of "well calibrated," so does not belong in this sentence. Please move this up (right after the first sentence of the paragraph, or blend into it) – this should

motivate why we use hard probes for QGP studies (in fact, even then it would be ambiguous, as any colored probe would be affected by QGP, not just "hard") -DONE

l.36 used to identify the properties -> used to trace the properties - FIXED

l.37 "Their interactions…" – this sentence is better to be moved AFTER the historic discussion of quenching studies (and make a more clear connection to this analysis) -DONE

l.38 via -> via, for example, - DONE

l.39 by medium induced soft gluon radiation – modify! Energy loss models (especially for RHIC kinematics) include collisional and radiative processes, not just "soft gluon radiation" -DONE

l.39 measurements of energy loss -> evidence of energy loss (these did not measure the energy) - FIXED

l.46 "are studied at RHIC energies" – why drop LHC?? They were the first! You could start the next sentence with "At RHIC," as you discuss RHIC results then - DONE, need to add the citation for LHC study

l.48 therefore -> and therefore; medium -> medium-induced - FIXED

l.49 traversed -> traversed by a hard-scattered parton - FIXED

l.50 Move "at LHC energies" after "event plane" (to shift the emphasis) - FIXED

l.52 provide further constrains. – spell out on what -DONE, need to recheck the language

l.53 In this analysis we first measure the correlations of charged tracks with fully reconstructed jets and extend this measurement relative to the second order event plan

->

In this analysis we angular correlations of charged tracks with fully reconstructed jets are measure differentially in jet axis orientation with respect to second order event plane…

FIXED

l.55 plane defined -> plane, which is defined - DONE

l.55 – equation for the "second order event plane" (and a reference) should be added here (OR just keep the introduction here worded in terms of reaction plane, and wait til section 3.3 for proper introduction) -DONE

l.59 differentially to the event plane -> differentially in relative orientation to the event plane - FIXED

l.62 – provide R parameter for anti-kt – We removed the first sentence.

l.66 define (by equations) dEta and dPhi explicitly -DONE

l.68 "is arbitrary but" – drop, it's NOT arbitrary, it gives average yield per jet! - DONE

l.70 of the jet relative to the event plane -> of angle between the jet axis and the event plane - FIXED

l.81 accounts -> account - DONE

l.84 and it's correction and uncertainty are -> with details - FIXED

l.85 We then present the results in Sect. 4 and conclude with a discussion -> The results are presented in Sect. 4 followed by discussion… (Keep a passive voice throughout) - FIXED

l.89 sub-detectors -> subsystems - FIXED

l.89 "The detectors …" replace the two sentences with:

The two sub-detectors used for this analysis, the Time Projection Chamber (TPC) [31] and the Barrel Electromagnetic Calorimeter (BEMC) [32], are briefly described below. - FIXED

l.94 and nearly uniform azimuthal acceptance. – drop; you do not "optimize" azimuthal acceptance - FIXED

l.94 "At least 15 hits fit in the TPC are required along with a minimum of 52% of the maximum hits." -> Reconstructed charged particle tracks are required to have at least 15 "hit" points, and no less than 52% of the maximum hits possible for a given track kinematics. -DONE

l.95 Spell DCA. Also, fix the meaning: DCA cut is to select the primary tracks; 30 GeV cut is to remove tracks with deteriorating quality -DONE

l.96 "All tracks" is confusing here, as there are further selections for jet reco. Please fix! -DONE

l.98 tracks simulated -> charged particles generated (PYTHIA doesn't give you "tracks") - FIXED

l.115 fraction, f, -- remove both commas - FIXED

l.119 – remove the centrality from the first sentence. We collected AuAu data; you then selected desired bins for analysis. Please separate the two - FIXED

l.123 the effects of background -> the pair-acceptance effects (NOT background; at least not in this analysis) - FIXED

l.128 "event plane" is semi-introduced again but not defined; an equation should be provided already (here or earlier, if you decide to rephrase the introduction) -DONE

l.142 -146 Is greatly confusing! You should clearly separate the R parameter of the FastJet (which is NOT a radius as you define it) and the, say, dR jet size (characteristic extent) that you could calculate as stated. These are NOT the same, but for anti-kT jets dR is a reasonable _estimate_ for resulting jet shape. Also – STATE the resolution parameter R used!! DONE needs further verification

l.155 "median background energy density rho down to 0. " -- incorrect, as you have discovered. Provide a number (actually, it should have the random cone study of track momenta AND calo energy; I did not think of the calo; but we could safely use the assumption of ½ ratio of neutral/charged energy, so your ~0.4 GeV would turn into 0.6) DONE

l.167 cuts – selections (avoid jargon) - FIXED

l.168 I would changed both "measured" to "reconstructed" here - DONE

l.171 how the jets are modified in the process of passing through the detectors -> the effects of detector response of jet reconstruction - FIXED

l.173 each gen-jet that we ke
ep one reco-jet -> each gen-jet is matched to one reco-jet ; new variable r here, define or synchronize - DONE

l.175 – Is this necessary?? Nothing was said before about pt-hard (pt-hat?), nor was it defined/explained. Just drop the sentence - FIXED

the Fig.1, DONE (but need to recheck)

l.196-205 Related to the above; the tracking efficiency study discussed, but no word on how this is relevant for _jet reconstruction_. Please fix -Removed

l.196-215 – does not belong in this section! Goes to the correlations/yields/systematic uncertainties. Things like "over-weighting pthard" sampling should NOT be in the paper – if there was no error, no contribution to systematics – just drop it; if there is remaining non-closure – it should be quantified and assigned as a systematic uncertainty -Removed

3.2 Jet energy scale correction -- sorry, don't like the whole section! This should be a conceptual discussion, not an oddly technical list of steps This does not need a section; the essence should be explained in 3-4 sentences and belongs right in the jet reconstruction. ("To account for jet energy shift due to underlying event background contribution to the reconstructed jet energy and provide and adequate comparison for the jet samples from different orientation relative to event plane, a random cone study was performed on the minimum bias data of matching centrality selection. The average rho is found to be xxx, yyy, zzz, for in-, out- and mid-plane selections. Shifting the jet momenta selection by the corresponding thresholds was

utilized in correlation analysis to remove the shift-related differences between the jet collections"). The error discussion should be moved to errors section. DONE

3.3 Centrality determination and event plane reconstruction -- needs to be earlier! Right after detector description (would void many problems) DONE

l.243 Centrality is a measure of how much overlap the colliding nuclei have -> Centrality is a measure of the transverse overlap between the colliding nuclei - FIXED

l.246 maximize the effects contributed to the event plane -> to maximize the eccentricity of the interaction region - FIXED

l.243-251 Centrality discussion: should not this be "reference multiplicity?" Do not remember "raw" used in this context. It would be best to just ad a reference and shorten the description (or otherwise spell out the track selection used for this) DONE

l.252 RP was already introduced DONE

l.268 " This procedure removes the away side jet as well, which is located opposite in azimuth." – incorrect; it's opposite in phi, but almost random (in the relevant range) in eta; so you could say "partially removes," but not more. DONE

l.282 "higher harmonics from the resulting Psi_n" – I don't understand the "from resulting" part; Psi_n is not "resulting" from re-centering discussed, perhaps you tried to say "associated with" DONE

l.297-301 "measured Fourier coefficients .. corrected up to what they would be relative to the real reaction plane" – Why? This is not right. Indeed if your goal is to MEASURE the true vn, I would agree with this, but your jets are subdivided into samples wrt EP, so it's EP-dependent vn's that one should use for correcting…

Removed the part with "real reaction plane", which was a typo, and rephrased

l.340 the statistics for the sampling of the -> the sample size of mixed events used for the - FIXED

l.342 undergo an additional weight factor -> are added with an additional weight factor - FIXED

l.351 There is no difference -> There is no difference in efficiency and acceptance - FIXED

l.355 "flat plateau region in f was fit with a constant" – specify the range DONE, though needs further verification

l.374 quite negligible -> negligible - FIXED

l.388 while soft hadrons can be correlated -> while soft hadrons are predominantly correlated - FIXED

l.389 "in a similar way to that of correlations strictly due to jet production and this dominates at low momenta." – I have no idea what is this trying to say

Simplified and rephrased with the previous sentence.

l.391 To remove the soft processes which contribute to the event plane dependent combinatorial background -> To remove the combinatorial background comprised by contributions from soft processes, - FIXED

l.493 Where -> Here, Couldnt find this, have you gotten this Joel?

l.425 dominated region at small dPhi -> dominated region at large dEta and small Df - DONE

l.437 After background subtraction is performed to the signal + background region, we can begin to compare… -> Comparison of in-, mid-, and out-of-plane jet-hadron correlations is performed after background subtraction to explore the effects related to event plane orientation. DONE

l.439 An example of event plane dependent correlation function for 15-20 GeV/c jets is shown after the RPF background subtraction -> An example of event plane dependent correlation function after the RPF background subtraction for 15-20 GeV/c jets is shown DONE

l.444 and are shown in gray -> These are shown in gray. - FIXED

l.450 range from -> include - FIXED

l.456 uncertainties highly dependent on the angle of the jet relative to the event plane and the associated particle's momentum ->

uncertainties, highly dependent on the angle of the jet relative to the event plane and the associated particle's momentum,   - (punctuation) - FIXED

l.466 Both of these sources are stronger on the near-side at   low-momenta, while being stronger on the away-side for higher momenta. -> Both of these sources result in larger uncertainties on the near-side at lower-momenta than at high, and   on the away-side for higher than lower momenta. - --- Major question here: how could this be?? The acceptance correction (mixed event) has no significant phi dependance, who come the difference in the errors?

We dropped that sentence since table 2 provides the necessary information. (The differences come from the fact that fits depend on the distributions and relative contributions of a given constituent pt varies (less high pt constituents for away side jet than nearside jet as can be seen in Fig 5.)

l.469 The yield of tracks -> Charged particle yields - FIXED

l.476-482 – why the error discussion is repeated here? DONE, I just removed the errors and uncertainties discussion in this section, but if you all feel any of it is needed there please uncomment them

l.492 "the expectation is they would interact less and therefore have larger associated yields (on the away side) than the out-of-plane Jets" -- this is not correct, or, rather, strongly pt-dependent statement. Where would the "lost energy" go? More quenching ->higher yields, or, more precisely, redistribution of the yields/momenta from high to low pt. This discussion needs major reworking

We would expect an in-plane jet and and out-of-plane jet with the same \pt to have different distributions of hard and soft constituents. An in-plane jet with less path travelled in the medium in average would be expected to show higher yields of constituents with higher \ptAssoc than the more quenched out-of-plane jet, which would be expected to show higher yields of constituents with lower \ptAssoc

l.502-505 "the errors associated with the fit are purely statistical" -- does this mean you did not use the systematic errors on correlation points? Why?

Removed the sentence, The errors associated with the fit are due to reduced stability of the fits from less statistics.

l.508 "From Fig. 6, it is clear a broadening of the jet peaks is occurring for increasing passoc -- is this a mistake? I don't see this in the figure! The next sentence is not appropriate as stated. -DONE, though not sure about the next sentence

l.559 "This occurs due to the longer path-length traversed by jets that are not in-plane." -- why do we need to say this? The discussion around this line (and in many places in the "Results" should be certainly soften (use "could be," "possibly explained") and generally would benefit from reducing the amount of speculative statements). Example: "More soft particles are seen due to more potential interactions with the medium." – how do you know this? Please read through and try to improve DONE

l.565 "However, the away-side measurement is not sensitive enough to the potential effects because the uncertainties associated with the result are dominated…" – drop this sentence. You already stated the measurement sees no differences within the uncertainties. This has nothing to do with what dominates the uncertainties (say, the uncertainties are the same but due to tracking – would this change anything?) DONE

l.604 "of away-side jets is maximized by the surface bias" - use "potentially" and "increased" instead of "maximized;" there are studies at LHC that show quenching of leading jets, so while there could be some shift towards the surface, it is certainly not an idealized "on the surface/unquenched" DONE

l.608 "JEWEL predicts.." and to the very end of the paragraph: does NOT belong here! Keep in the discussion. The summary should be about your results; please highlight the observed DATA trends only (with minimal mentioning of JEWEL here) DONE