

L63: in view of the High-Luminosity (add the) → ok
L110: and to partly reuse (add to) → ok
Fig. 3 caption: add white space after upgrade. → ok
L130: explain unit n_{eq} (fluence measured in units of 1 MeV neutron equivalents) → ok
L136: consider splitting in two sentences → prefer to keep as is
L239: add closing bracket → ok
L241: sensor bias voltage → ok
L261: using a 40 MHz serial bus (add a) → ok
L262: unchanged compared to the PSI46 → ok
L284: for consistency use PSI46dig instead of upgrade chip → ok
L356: before issuing the next → ok
L363: suggest to spell out 4-bit/5-bit → ok
L404: fraction of TBM cores (as you quote it in per cent rather than Hz) → ok
L438: process quality → ok
L450: base strips that were glued under the ROCs → ok
L451: chosen as the material → ok
L481: Sylgard is just the encapsulant brand, please quote the type number as well →
Replace: Sylgard with Dow Corning Sylgard 186
L484: in this section the tenses are mixed up. To my (limited) understanding general procedures should be described in present tense, while things that happened at a specific time in the past use past tense (or present perfect) → ok, to be checked again with CCLE
L552: suggest to mention that the different BB processes lead to different bump heights and hence to different capacitances (which may make it difficult to reach the 5 sigma criterion despite good bump connections) → added sentence at the end of the paragraph
L577: the quoted uncertainties → ok
L577: ROC-to-ROC → ok
Fig. 14: I'm confused about the first item in the legend. The K_{α} energy is not measured in this setup. Typically people take the NIST table of values measured elsewhere. Suggest to mention this (with a reference) in the caption. What is measured instead is the PH. → ok, added statement to caption.
L638: delamination of what? → of the glued structures (ladders, endrings etc)
L653: in this paragraph you are again switching between tenses → ok, to be checked again with CCLE
L659: suggest to add comma after stiffness → ok
L663: Segments B and C (plural) → ok
L821: An FED (if you say Eff-E-Dee) or A FED (if you say FED)? → the latter
L838: through the polyimide flex cables (do not use the trade name) → ok
L1029: is it evaporation temperature or evaporating temperature? → the former, changed.
L1057: suggest to introduce the term backup mode here that you use in L1092 → ok
L1072: briefly explain purpose of 9th loop? → ok
L1127: mechanics is plural, so I am not sure if *a mechanics* works → changed to mechanical structure.
L1134: modifications of what? → added „of the readout system“
L1255: suggest to add percentage of non-working channels after replacement (like for BPIX) → **Replace:** ... only a few modules were found that needed replacement. With: ... only four modules were found that needed replacement. All modules were working prior to integration in the half cylinder.
L1280: be more explicit: thought to be disconnected bump bonds due to... → ok
L1292: add full stop after sentence, merge with following paragraph → ok
L1316: half-shells stay away? → ok
L1319: After both halves? → ok
L1331: can you be more precise? Does in 2017 refer to prior to installation? During installation? During commissioning? During data taking? → added „after installation“

Fig. 40 caption: suggest to give inner/outer radius of the close up in right panel → then we would have to give three radii: inner, outer and displaced. Considered to be too much detail. But the reader can find this information in the section describing the BPIX mechanics (Section 4.1).

L1404: add comma after sharing → ok

L1421: add comma after ROC → ok

L1423: I believe the term year-end technical stop 2017/2018 has been used before, can be used here as well → this refers to technical stops during the running period in 2017 and not the year-end technical stop.

L1458: once a year → ok

L1490: can you be more specific: which PCBs do you refer to? → added adapter board and extension board

L1498: does it matter which edge? If so, please add this information → Yes, it matters, it is the right edge, but the reader will have no clue why, what is the right edge. I am adding a comment, however I am not sure how much will this comment help?

L1515: please stick with American English: center → ok

L1519: suggest to add information on the accuracy in 2018: was it similar to 2017? →

The accuracy was similar. Added a sentence, however I am not sure how useful this is for the paper. Changed according to Andreas comment. L1526:

suggest to rephrase: In such cases one of two recovery procedures is initiated. In the first procedure, ... → ok

L1529: this recovery procedure → ok

L1569: being more sensitive (delete in this way) → ok

L1574: suggest to split sentence: resolution. This will be... → ok

L1577: Lorentz angle (small a) → ok

Fig. 44: wrong legend in left figure, should contain L1-L4 → ok, fixed

Table 5: Lorentz angle (small a) → ok

Fig. 46: Lorentz angle (small a) → ok

Fig. 47: please use vector graphics, consider colors for Disk 1-3 that can be distinguished more easily by red-green blind folks like me → ok, changed.

L1621: description seems to be written for old 3-layer BPIX, maybe: predict the hit position in *a* third layer → ok

L1627: sometimes called → ok

L1627: remove closing bracket after point resolution → instead added bracket.

Fig. 48: As you have the fit parameters, mean and RMS do not add too much information, could be deleted in order not to overload the plots → No, I disagree. The fit parameters describe the core of the distribution, it is a fit. The mean and RMS describe the real distribution in a model independent way, for example in case of long tails the RMS will reflect this much more than the sigma of the fit.

L1638: The original silicon pixel detector of the CMS experiment at the CERN LHC... → ok

L1648: typo: efficient → ok