IMPORTANT: The number of pages is limited to 10. Please re-organize your article to keep this limit. The followings are comments mainly related to the style.

Overall STYLE:

1. british or american english? It seems british is used throughout except -zation (-sation), -rized (-rised), and center (centre)

2. please add a space between number and unit. e.g. not 50μm but 50 μm. The changes be made almost every numbers with cm, mm, μm, GeV, GΩ, V, min, ke-, T (maybe some more. No space before % and °C, as they are now)

Page2:

3. please arrange Fig.1 to appear at the bottom of the page (at least after 1. Introduction)

4. Figure 1 can be in color, or the light gray curves are hard to recognize.

5. please check the ion concentrations quoted in the footnote. Your numbers are too small compared to the bulk concentration. Are they the specs given by Hamamatsu?

Page4.

6. As the charged particle, you take protons instead of pions for irradiation. Could you comment on any difference in the damage by protons and pions? Need some explanation why you take values as given in Table 1.
7. Table 1 is confusing. First of all, in Fig.3a, the fluence point 3 is noted as a “mixed irradiation” but it seems to be “proton only”. Then I got that the six fluence points are actually listed in this table! This can be made clear if you bold the six numbers 3, 4, 7, 10,5,15 and not 40 cm nor 20 cm. The p/n ratio should be attached to the numbers 7 and 15. You quote values for pixel at Z=0; this is not as described in the caption. I suggest to add also Z in the table. For bold and italics explanation, you may say “Bold numbers indicate irradiation covered in this paper. Irradiation to roman numbers is in progress and irradiation to italics (pixel region) is planned.”

Page5

8. Two styles, “Figure 4 (b) shows” and “Fig.5 summarizes…”(page6). Please be

consistent.

9. “During the campaign we decided to add further irradiations with 800MeV and 23GeV protons”. I wondered if “the fluence was not enough, so added”, or “you may want to investigate particle energy dependence?”, or “you wanted to calibrate the fluence at separate beamlines”. Later I came to see you mean to add another fluence point. It is better to be clear at this stage and in Table 1 as suggested before.

page6

10. Please place some more space between Fig.3a and 3[illegible]ptions.
11. Page7
    Particle type in Fig.4b and 4c should be “p” and “n”, not “P” and “N”. What is N*? Please check tat the consistency with Fig.3a and Table 1.

Page9

12. “80e-/μm” be “80 e^-/μm” (upperscript)

Page11

13. To save the page, you may drop linear graphs in Fi
14. Page12
15. The detector cartoon in page12 is not understandable. You may put one large cartoon corresponding to “Four-fold segments” and put two lines indicating (a) and (b).
16. “suggest to implant a p-type layer” may be explicitly re-written to ““suggest to implant a common p-type layer”
17. Question: in writing Nimp=1e16/cm3, which depth is assumed ?

Page13

18. Conclusion 1 (40%) is first time to appear. According to Fig.3b comparison, 40% is a maximum deviation wrt the orange lines (though FDV is not assured, but you nevertheless draw orange lines).

Page14

19. Conclusion 5 “<10 ke is not sufficient any more” is not justified at this stage since you have not quoted the noise value or some value to compare.

References

Some inconsistent lower and capital letters

[9] irradiated -> Irradiated

[14] new->New

My understanding for pp. is to be used like “pp.54-60” but not like “pp.90”. Please check.