J. Roberts’s thesis- Corrections

1. Glossary: add the following definitions:
2. ‘Energy’ or ‘energy spread’: unless otherwise stated, these terms denote the fractional momentum error or offset (Δp/p) of the beam from the nominal design momentum p0.
3. ‘Resolution’: when used in connection with the phase monitors, the term denotes the instrumental uncertainty of that specific device.
4. Many figures showing data with error bars (or “error bands”) – exact meaning/definition should be noted in the caption. - but maybe need to define better.
5. P16 bottom of para 5: the freedom to design a purpose built chicane with additional kickers in the CLIC design does not simplify the challenges at the CTF3 (it merely avoids them in CLIC).
6. P17, line 3 from bottom: ‘…will be used…’
7. P24, line 5 from bottom: delete one ‘involving’
8. P26, line 1: change ‘relates’ to ‘relate’
9. P27, line 4: delete ‘a’ in front of ‘weak optics’
10. P27, 4th line after eq. 2.10: delete one of the two ‘…between the entrance…’
11. P28, 2nd line after eq. 2.11: it should be x’K1
12. P45, 3rd & 5th lines from bottom: delete ‘an’ in front of ‘optics’
13. P40, para.2, line 1: ‘show’ (rather than ‘shows’)
14. P52, line 4: ‘…cannot be…’
15. P57 and throughout the thesis: the definition of ‘resolution’ would be misleading for most physicists who think that ‘high resolution’ is a good thing. What is called ‘resolution’ here is really the instrument error (or uncertainty). Therefore, change the sentence to read as follows: ‘The resolution is defined in this thesis as… and the true beam phase and is a measure of the uncertainty of the instrument. It can be calculated by comparing…’ Make sure to underline this, so that it is clear in the reader’s mind and include it in the Glossary (see item 1 above).
16. P62, next to last line of para.1: the word ‘criteria’ is plural; the singular is ‘criterion’. Therefore, correct ‘criteria’ to ‘criterion’. The same error occurs on page 85 (twice) and possibly in other places as well.
17. P68, caption of fig. 3.17: delete the sentence ‘Markers show…’
18. P80-81, captions of figs. 3.29-3.31, 3.34-3.35: give conversion factor of ‘sample’ to time. This occurs in a number of plots and should be corrected.
19. P96, section 3.11, line 1: delete ‘at’ and on line 2 replace ‘at’ with ‘than’.
20. P97, caption of fig.3.48: ‘phase difference’, rather than ‘phase’.
21. P104, section 3.14, line 8: ‘…monitor electronics provide…’
22. P107, x-axis label of fig. 4.2: delete ‘time’ and give in the caption the conversion factor between pulse no. and time.
23. P110, line 15 from bottom: ‘Frascati’
24. P111, fig.4.6: horizontal axis label is meaningless because ‘pulse number’ is not a unit of time. Delete ‘time’ from the label and give an indication in the caption about the elapsed time for the 500 pulses.
25. P111, line 5: ‘see’ (not seen).
26. P116: line 6 of para.3, delete ‘an’ in front of ‘optics’. Also on line 1 of section 4.3.4 change ‘has’ to ‘have’ after the word ‘optics’.
27. P118: first sentence of last paragraph is meaningless; re-phrase.
28. P128: first word; change ‘explains’ to ‘explain’.
29. P130, immediately after eq. 4.17: change to ‘...by zeroing the derivative of equation 4.16 with respect to…’
30. P130, line 6 after eq. 4.17: ‘…creating small differences between…the optics have been set for…’
31. P130, last line: change ‘removes’ to ‘remove’. (The word ‘optics’ is plural).
32. P133, caption of fig. 4.29: what is the blue line? Delete?
33. P136, caption of 4.33: ‘…energy jitter (σp)…’
34. P138, end of 2nd paragraph: ‘…i n in…’
35. P141, caption of fig. 4.40: change to ‘upstream phase vs beam energy with the R56…’. Also, 2nd sentence on this page is wrong; either change or delete.
36. P142-144, figs. 4.41, 4.42 & 4.44: what is ‘sample number’? I assume it is some measure of time. If so, either change the axes labels to time and the appropriate units or give in the caption the conversion factor of *sample* into time. - but would be nicer to convert axes
37. P150, caption of fig.4.49: change to ‘Upstream and downstream phase vs energy …’ The figure does not show the correlation of these quantities and the numbers given cannot be read from this plot. The same situation occurs in para.2, with the alleged correlation coefficients not being obvious from fig. 4.51
38. P151, label of x-axis of fig.4.50: delete ‘time’ and give in the caption the approx. conversion factor of ‘pulse number’ into time. Also, change caption of fig. 4.51 to ‘Downstream phase vs upstream phase with optimised…’
39. P165-168, x-axis label of figs. 5.5-5.9: delete ‘time’ and give conversion factor in caption.
40. P181, para. 2 from bottom, 1st line: delete ‘mean’.
41. P182, caption of fig. 5.19: either show CC480 & CC780 or delete from the caption.
42. P183, 2nd paragraph, line 1: delete ‘a’ in front of ‘…completely nominal optics’
43. P185, eq. 5.10: change ρ to ρud
44. P188, captions of figs. 5.23 and 5.24: give the conversion factor of ‘samples’ to ns.
45. P196, line 5: change to ‘…output as soon as possible…’
46. P197-199, figs. 5.29-5.33: see comment for p188, above.
47. P201-204, captions of figs. 5.33, 5.35 & 5.37: see comment for p188.
48. P207, paragraph 3, line 1: ‘The data were taken…’
49. References 21, 22, 23, 34, 35 **and many others** are inadequate: please give Conference title, venue and date