

Corrections to
Electricity and Magnetism
Third Edition

First Printing

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Please email morin@physics.harvard.edu if you find any errors.

The corrections below are listed by page number. They are grouped into three categories: (1) Important errors that will cause confusion, (2) minor errors that might cause confusion, and (3) trivial errors that should not cause confusion.

Important errors:

(None yet)

Minor errors:

- 19: Figure 1.10: The rightward arrow a little bit to the right of the negative charge should be pointing leftward.
- 22: 8th line from top of page: The $\sin \phi$ in $r^2 \sin \phi d\phi d\theta dr$ should be $\sin \theta$.
- 46: Problem 1.28(b): $q/4\pi\epsilon_0 r$ should be $q/4\pi\epsilon_0 r^2$.
- 99: Fig. 2.40(d): “That is enough to ensure zero divergence.” This statement is being made for the tangential field in the figure. It isn’t true in general; for example, a constant radial field has nonzero divergence.
- 458: 1st line of Problem 9.5(b): $\nabla \times \mathbf{B} = \partial \mathbf{E} / \partial t$ should be $\nabla \times \mathbf{B} = \mu_0 \epsilon_0 \partial \mathbf{E} / \partial t$.
- 576: 3rd line of Problem 11.10: “bound-charge current” should just be “bound current”
- 582: 6th line of Exercise 11.34: The muon rest energy should be 106 MeV (not 200).
- 592: 1st and 9th lines after Eq. (12.20): 2.414 should be 3.414. (Eq. (12.20) is correct.)
- 664: 2nd line on page: “. . . proportional to the radius **squared**, . . .” (The subsequent equation is correct.)
- 718: Solution to Problem 7:13(b), last line in 2nd-to-last paragraph: “So L must be very small.” (not large)
- 825: (*also inside front cover*): Avogadro’s number: The power of 10 should be 23, not -23 . (But hey, what’s a factor of 10^{46} .)

Trivial errors:

- 10: Eq. (1.8): The force \mathbf{F} should have a subscript “3”

166: 4th line of Exercise 3.40: “lies” should be “lie”

188: Table 4.1: The σ for germanium (273 K) should have units of s^{-1} , not s^1

240: Last line of Footnote 4: The period after “discuss” should be a comma.

325: 3rd line of part (b) of Exercise 6.7: The second ω_1 should be ω_2 .

543: Last equation in Fig 11.13: \mathbf{B}_1 should be B_1 , as in Eq. (11.38).

599: 6th line from end of solution to Problem 1.17: “masses” should be “charges”

815: Title of Exercise H.2: “moton” should be “motion”

Solutions manual:

A solutions manual to the exercises is available to instructors via Cambridge University Press. I won't post all the errata here, but just the important ones (and a few of the minor ones).

14: Last line on page: The 180° should be 90° .

15: Figs. 14 and 15: The field lines are incorrect; I had an errant factor of 2 in my Mathematica code. In the correct figure, the dark curve in Fig. 15 is more circular.