Corrections to

Waves Notes

(Draft of an eventual book)

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

The corrections below are listed by page number ("chapter.page"). 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.

A thank-you to Barry Tng, who found many of these typos.

Important errors:

(None yet)

Minor errors:

1.3: Eq. (6): The left-hand side should have an integral sign.

1.6: Eq. (21): The second $(dx_1/dt)^2$ should be $(dx_{\mathbf{2}}/dt)^2$.

1.10: Line after Eq. (35): "$x(0) = x_0$ and $\mathbf{v}(\mathbf{0}) = v_0$"

1.15: Eq. (55): The denominator of the last term should contain ω_0, not ω_0^2.

1.23: Fig. 20: The vertical-axis units should be F_d/k (equivalently F/ω_0^2), not F_d/m.

1.25: Eq. (99): The RHS of the first equation should just be $Fe^{i\omega t}$ (delete the C).

2.6: 4th line after Eq. (20): "the velocities $\dot{x}_1(0) = \dot{x}_{\mathbf{2}}(0) = 0$" (subscript 2)

2.8: 6th line after Eq. (32): "in the $\omega = \omega_{\mathbf{f}}$ case"

2.9: Eq. (37): The ω_0 in the second solution should be ω_0^2.

3.9: 3rd line before Eq. (35): The e^{-z} should be e^{iz}.

3.11: Eq. (41): The first integral should have an i in the exponent.

3.20: 6th line of 2nd paragraph: "now $2\pi/k_{\min} = \mathbf{4}\pi$"

4.3: Sentence before Eq. (7): "From Eqs. (**2**.91) and (**2**.92) a couple"

7.2: 3rd line after Eq. (1): "$S\Delta x\Delta y(\partial^2 z/\partial \mathbf{y}^2)$" (partial with respect to y)

7.3: Eq. (7): The last equation should be $k_{\mathbf{y}} = \mathbf{m}\pi/L_{\mathbf{y}}$.

7.8: Eq. (14): The middle product should contain an f.

8.12: 3rd line of last paragraph: "and $\mathbf{B}$ is the superposition"

8.18: Eq. (65): A factor of ω should appear in front of every B term.

10.6: Eq. (13): "$B\mathbf{e}^{-\kappa x}$" (the a should be e)

10.7: 3rd line of paragraph before Section 10.3.2: another "$B\mathbf{e}^{-\kappa x}$"

Trivial errors:

1.1: 2nd line of 2nd paragraph: "**motion** governed by"

1.2: 3rd line of footnote: "**the** frequency"

1.3: 2nd line on page: "**Equations** have only two sides"

1.4: 1st line after Eq. (12): "a **sine** and a cosine"

1.5: 1st line of "PHASE" bullet point: "what the position is **at** $t = 0$"

3.14: Line after Eq. (50): "**if** n is odd"

3.17: First line of Section 3.4: "**There** are a number"

3.31: 4th line on page: "To demonstrate the 9% [delete **the**] result"

6.5: Last two sentences on page: The question mark and period should be swapped.

6.14: 1st line of paragraph in middle of page: "**As** t increases"

7.9: The first sub-heading: "**Doppler** Radar"

8.1: 10th line of 2nd paragraph: "Poynting **vector**"

8.5: 1st line on page: "to get **rid** of"

8.12: 2nd line of last paragraph: "which makes **sense**"

8.25: 3rd line of footnote: The word "pick" is repeated.