Errata for
The Feynman Lectures on Physics Volume III
New Millennium Edition (4th printing)

The errors in this list appear in the 4th printing of The Feynman Lectures on Physics: New Millennium Edition (2011) and earlier printings and editions; these errors have been corrected in the 4th paperback printing and will be corrected in the 5th hardback printing of the New Millennium Edition (2011).

Errors are listed in the order of their appearance in the book. Each listing consists of the errant text followed by a brief description of the error, followed by corrected text.

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III:21-17, par 1
For convenience, I will write
\[
\delta_a = \delta_0 + \frac{qe}{\hbar} \Phi, \quad \delta_b = \delta_0 - \frac{qe}{\hbar} \Phi.
\]

Sign error; conflicts with equation 21.51, \(\delta_b - \delta_a = \frac{2qe}{\hbar} \Phi\).

For convenience, I will write
\[
\delta_a = \delta_0 - \frac{qe}{\hbar} \Phi, \quad \delta_b = \delta_0 + \frac{qe}{\hbar} \Phi.
\]

III:21-17, Eq 21.52
Then,
\[
J_{\text{total}} = J_0 \left\{ \sin \left( \delta_0 + \frac{qe}{\hbar} \Phi \right) + \sin \left( \delta_0 - \frac{qe}{\hbar} \Phi \right) \right\}
\]
\[
= 2J_0 \sin \delta_0 \cos \frac{qe \Phi}{\hbar}.
\]

For consistency with the correction to \(\delta_a\) and \(\delta_b\) above, and with the text, which describes \(J_{\text{total}}\) as “the sum of \(J_a\) and \(J_b\),”
\[
J_{\text{total}} = J_0 \left\{ \sin \left( \delta_0 - \frac{qe}{\hbar} \Phi \right) + \sin \left( \delta_0 + \frac{qe}{\hbar} \Phi \right) \right\}
\]
\[
= 2J_0 \sin \delta_0 \cos \frac{qe \Phi}{\hbar}.
\]