

Errata for The Feynman Lectures on Physics Volume I New Millennium Edition (submitted 9/13/2019)

The errors in this list appear in *The Feynman Lectures on Physics: New Millennium Edition* and earlier editions; errors validated by Caltech will be corrected in future printings of the *New Millennium Edition* or in future editions.

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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I:2-7, par 1

It is not necessary that science do that;

Grammatical error ('do that' vs. 'does that').

It is not necessary that science does that;

I:7-1, par 2

In the beginning of the fifteenth century there were great debates as to whether they really went around the sun or not.

Wrong century (15th vs. 16th). Copernicus published in 1543. Brahe published in 1588.

Beginning in the sixteenth century there were great debates as to whether they really went around the sun or not.

I:7-5, par 4

If all of the planets push and pull on each other, ...

Transcription error. Feynman said, "If all the planets push – I mean *pull* – on each other, ..."

If all of the planets pull on each other, ...

I:15-5, par 5

That is because the time t_3 , calculated for the trip from B to C and back, ...

Missing factor 2.

That is because the time $2t_3$, calculated for the trip from B to C and back, ...

I:16-5, par 2

Thus u is $\frac{1}{2}c$ and v is $\frac{1}{2}c$, but in the denominator uv is one-fourth, ...

Missing factor $1/c^2$.

Thus u is $\frac{1}{2}c$ and v is $\frac{1}{2}c$, but in the denominator uv/c^2 is one-fourth, ...

I:23-4, Eq 23.11

$$\dots = \frac{1}{m^2 \left[(\omega^2 - \omega_0^2)^2 + \gamma^2 \omega^2 \right]} \quad (23.11)$$

Inconsistent notation (that does not agree with Feynman's blackboard).

$$\dots = \frac{1}{m^2 \left[(\omega_0^2 - \omega^2)^2 + \gamma^2 \omega^2 \right]} \quad (23.11)$$

I:27-8, par 2

If the distance of separation of the two points is called D , and if the opening angle of the lens is called θ , then one can demonstrate that (27.17) is exactly equivalent to the statement that D must exceed $\lambda/n \sin \theta$, where n is the index of refraction at P and λ is the wavelength.

Two errors: (1) Theta (as shown in Fig. 27-9 and Feynman's blackboard drawing) is the opening half-angle of the the lens, and (2) there is a missing factor 2 in the denominator of the minimum value for D .

If the distance of separation of the two points is called D , and if the opening half-angle of the lens is called θ , then one can demonstrate that (27.17) is exactly equivalent to the statement that D must exceed $\lambda/2n \sin \theta$, where n is the index of refraction at P and λ is the wavelength.

I:28-3, par 5

In addition, there were discovered a number of new phenomena, of which the first was radioactivity, discovered by Becquerel in 1898...

Wrong year (1898 vs. 1896).

In addition, there were discovered a number of new phenomena, of which the first was radioactivity, discovered by Becquerel in 1896...

I:37-2, par 3

In front of the wall we have an object which we shall call a "detector" of bullets.

Wrong object ('wall' vs. 'backstop').

In front of the backstop we have an object which we shall call a "detector" of bullets.

I:40-8, par 6

We might try some force law other than a spring, but it turns out that anything else will only make γ higher.

Incorrect statement. Feynman actually said, "It turns out anything you suppose will only make this thing higher," referring to the energy per molecule.

We might try some force law other than a spring, but it turns out that anything else will only make U higher.