Errata for
The Feynman Lectures on Physics Volume I
New Millennium Edition (4^{th} printing)

The errors in this list appear in the 4^{th} printing of *The Feynman Lectures on Physics: New Millennium Edition* (2011) and earlier printings and editions; these errors have been corrected in the 4^{th} paperback printing and will be corrected in the 5^{th} 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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I:8-4, par 2

What we should do is take a millionth of a second, and divide that distance by a millionth of a second.

Unclear wording (Feynman originally said, "…what we should do is take a millionth of a second, see? Find out how far the car will go, or has gone, in a *millionth* of a second, and divide that distance by a millionth of a second, …") .

What we should do is take a *millionth* of a second, find out how far the car has gone, and divide that distance by a millionth of a second.

I:9-9, par 2

Thus it take only two minutes to follow Jupiter around the sun, …

Grammatical error ('take' vs. 'takes').

Thus it takes only two minutes to follow Jupiter around the sun, …

I:10-1, par 2

Anything like the motion of the molecules or atoms of a gas or a block or iron, …

Wrong word ('or' vs. 'of').

Anything like the motion of the molecules or atoms of a gas or a block of iron, …

I:16-7, par 2

So we need use the conservation law only for the upward velocity $u \tan\alpha$.

Missing word ('need use' vs. 'need to use').

So we need to use the conservation law only for the upward velocity $u \tan\alpha$.

I:30-2, par 3

… so when $\sin n\phi/2 = 1$ we are very close to the maximum.

Missing exponent. (For example, the second maximum comes when $n\phi/2 = 3\pi/2$.)

… so when $\sin^2 n\phi/2 = 1$ we are very close to the maximum.

I:30-5, par 5

In such circumstances we find the same general kind of a picture as for finite spacing with $d > \lambda$; all the side lobes are practically the same as before, but there are no higher-order maxima.

Inequality reversed; higher-order maxima are absent when $d < \lambda$.

In such circumstances we find the same general kind of a picture as for finite spacing with $d < \lambda$; all the side lobes are practically the same as before, but there are no higher-order maxima.

I:31-10, par 1

Putting Eq. (31.26) into the left-hand side of (31.25), we get

$$2\alpha \frac{N\Delta z\, q_{\mathrm{e}}}{2\varepsilon_0 c} \overline{E_s(\text{at } z) \cdot v(\text{ret by } z/c)}.$$

Sign error.

Putting Eq. (31.26) into the left-hand side of (31.25), we get

$$-2\alpha \frac{N\Delta z\, q_{\mathrm{e}}}{2\varepsilon_0 c} \overline{E_s(\text{at } z) \cdot v(\text{ret by } z/c)}.$$

I:32-3, par 4, unnumbered Eq

$$Q = \frac{W}{dW/d\phi}$$

Sign error. dW is negative, and Q must be positive, by definition.

$$Q = -\frac{W}{dW/d\phi}$$

I:32-4, Eq 32.8

$$Q = \frac{\omega W}{dW/dt}$$

Sign error. dW is negative, and Q must be positive, by definition. Compare to Eq. (24.8).

$$Q = -\frac{\omega W}{dW/dt}$$

I:35-6, par 1

In fact, Schrödinger wrote a wonderful paper on color vision in which he developed this theory of vector analysis as applied to the mixing of colors.

Needs citation.

In fact, Schrödinger wrote a wonderful paper on color vision in which he developed this theory of vector analysis as applied to the mixing of colors.†

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†*Über das Verhältnis der Vierfarben- zur Dreifarbentheorie*, Sitzungsberichte der Akademie der Wissenschaften in Wien. Mathematisch-naturwissenschaftliche Klasse, Abteilung 2a, 134, (1925), 471-490.

I:40-9, par 2

About 1890, Jeans was to talk about this puzzle again. One often hears it said that physicists at the latter part of the nineteenth century thought they knew all the significant physical laws and that all they had to do was to calculate more decimal places.

Wrong date and missing physicist. (James Hopwood) Jeans was 13 years old in1890; he didn't publish anything until 1901, which makes him a 20th century physicist. Apparently Feynman was referring to the Rayleigh-Jeans law, which was first derived by Lord Rayleigh in 1900 using physical arguments (Phil. Mag. [5] XLIX. (1900)). It was taken up by Jeans who published a more refined version in his 1905 paper, *On the Laws of Radiation*, in which he acknowledges Lord Rayleigh in the opening paragraph, and clearly states the dilemma presented by the conflict of fact and (Newtonian) theory for the blackbody radiation.

About 1905, Sir James Hopwood Jeans and Lord Rayleigh (John William Strutt) were to talk about this puzzle again. One often hears it said that physicists at the latter part of the nineteenth century thought they knew all the significant physical laws and that all they had to do was to calculate more decimal places.

I:50-7, par 4

When we expand the square of the bracketed term we will get all possible cross terms, such as $a_5 \cos 5\omega t \cdot b_7 \cos 7\omega t$.

Invalid cross term ($a_5 \cos 5\omega t \cdot b_7 \cos 7\omega t$ vs. $a_5 \cos 5\omega t \cdot a_7 \cos 7\omega t$ or $a_5 \cos 5\omega t \cdot b_7 \sin 7\omega t$).

When we expand the square of the bracketed term we will get all possible cross terms, such as $a_5 \cos 5\omega t \cdot a_7 \cos 7\omega t$ and $a_5 \cos 5\omega t \cdot b_7 \sin 7\omega t$.