Errata for
The Feynman Lectures on Physics Volume I
New Millennium Edition (5th printing)

The errors in this list appear in the 5th printing of *The Feynman Lectures on Physics: New Millennium Edition* and earlier printings and editions; these errors have been corrected in the 6th printing of the New Millennium Edition.

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.

last updated: 7/3/2015 7:42 AM

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Global change: $\mu \rightarrow \mu$m

The outdated abbreviation μ for "micron" should be replaced with its modern equivalent μm ("micrometer") for better readability.

Global change: m$\mu \rightarrow$ nm

The outdated abbreviation mμ for "millimicron" should be replaced with its modern equivalent nm ("nanometer") for better readability.

I:4-4, par 4

In the initial circumstance, (a), the one pound weight is at the bottom and weight *W* is at the top. When *W* has slipped down in a reversible way, we have a one-pound weight at the top and the weight *W* the slant distance, (b), or five feet, from the plane in which it was before.

Misplaced label (b).

In the initial circumstance, (a), the one pound weight is at the bottom and weight *W* is at the top. When *W* has slipped down in a reversible way, (b), we have a one-pound weight at the top and the weight *W* the slant distance, or five feet, from the plane in which it was before.

I:4-7, par 1

We know that it is not electrical, not gravitational, and not purely chemical, but we do not know what it is.

Wrong word ('chemical' vs. 'kinetic' – this is a transcription error; Feynman actually said 'kinetic').

We know that it is not electrical, not gravitational, and not purely kinetic, but we do not know what it is.

I:7-5, par 3 [approved]

These satellites were studied very carefully by Roemer,… This was done in 1656.

Misspelling of name (also in name index) and incorrect date.

These satellites were studied very carefully by Rømer,… This was done in 1676.

I:14-8, fig 14-4

Wrong symbol for gravitational potential,('ϕ' vs. 'Ψ'), three occurrences. This is a transcription error; Feynman actually wrote 'Ψ' in his blackboard figure.

I:22-6, Table 22-2, 4th row

$$=10\left[\frac{1}{1024}\left(256+32+16+4+0.254\right)\right]=10\left[\frac{308.254}{1024}\right]$$

The quantity in square brackets should be exponents.

$$=10^{\left[\frac{1}{1024}\left(256+32+16+4+0.254\right)\right]}=10^{\left[\frac{308.254}{1024}\right]}$$

I:26-7, par 1

… a single number for each material, namely its index relative to vacuum, called n_i (n_1 is the speed in air relative to the speed in vacuum, etc.), …

Definition of index of refraction is backwards.

… a single number for each material, namely its index relative to vacuum, called n_i (n_1 is the speed in vacuum relative to the speed in air, etc.), …

I:28-1, par 2

... one day in the 1860's, …

Incorrect punctuation.

... one day in the 1860s, …

I:31-3, Eq 31.7

$$e^{-i\omega(n-1)\Delta z/c}=1-i\omega\left(n-1\right)\Delta z/c. \quad (31.7)$$

This is an approximation and should be shown as such.

$$e^{-i\omega(n-1)\Delta z/c}\approx 1-i\omega\left(n-1\right)\Delta z/c. \quad (31.7)$$

I:31-3, par 4

Using this equality in Eq. (31.6), we have …

This sentence refers to Eq. (31.7), which is an approximation (see correction for Eq I:31.7).

Using this approximation in Eq. (31.6), we have …

I:31-10, par 1

We now go back to Eq. (31.19), which tells us that for large z…

Incorrect reference ('31.19' vs. '30.19').

We now go back to Eq. (30.19), which tells us that for large z…

I:37-11, par 2 [approved]

… $\Delta x \ge \hbar/2\,\Delta p$. The uncertainties in the position and momentum at any instant must have their product greater than half the reduced Planck constant.

Inconsistent statement.

… $\Delta x \ge \hbar/2\,\Delta p$. The uncertainties in the position and momentum at any instant must have their product greater than or equal to half the reduced Planck constant.

I:38-4, par 3 [approved]

The same thing works whether the waves are in space and k is the number of radians per centimeter and L is the length of the train, or the waves are in time and ω is the number of oscillations per second and T is the "length" in time that the wave train comes in.

Wrong word (oscillations vs. radians).

The same thing works whether the waves are in space and k is the number of radians per centimeter and L is the length of the train, or the waves are in time and ω is the number of radians per second and T is the "length" in time that the wave train comes in.

I:39-10, footnote [approved]

The centigrade scale is just this Kelvin scale with a zero chosen at 273.16 °K, so T = 273.16 + centigrade temperature.

Wrong temperature.

The centigrade scale is just this Kelvin scale with a zero chosen at 273.15 °K, so T = 273.15 + centigrade temperature.

I:41-4, Eq 41.7

$$\frac{dW}{dt} = \frac{2}{3}\frac{r_0 w_0^2 kT}{c} \tag{41.7}$$

Missing average operator, as per Eq. (41.5).

$$\left\langle dW/dt \right\rangle = \frac{2}{3}\frac{r_0 w_0^2 kT}{c} \tag{41.7}$$