

Errata for The Feynman Lectures on Physics Volume I New Millennium Edition (submitted 6/3/2018)

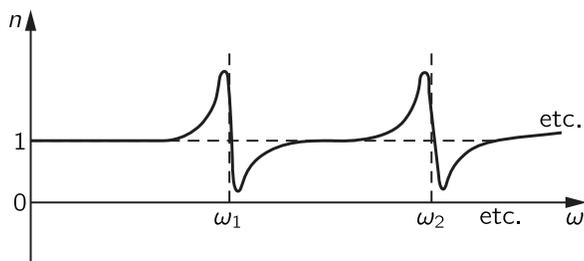
The errors in this list appear in *The Feynman Lectures on Physics: New Millennium Edition* and earlier editions; errors validated by Caltech will be corrected in future printings of the *New Millennium Edition* or in future editions.

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.

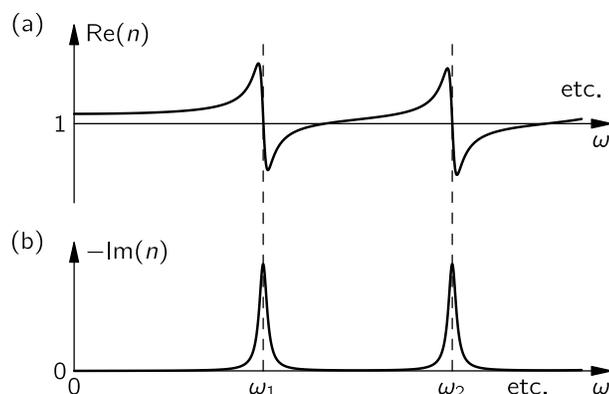
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Michael A. Gottlieb
Playa Tamarindo, Guanacaste
Costa Rica
mg@feynmanlectures.info

I:31-8, Fig 31-5



There were several problems with this figure: the index of refraction cannot go to 1 when the frequency approaches 0 (see Eq. 31.20), the “spikes” are much too long on the scale shown, and part of Feynman’s figure showing the imaginary part of the index is missing. The figure now looks like this:



I:31-8, par 1

The index described by this formula varies with frequency roughly like the curve shown in Fig. 31–5.

Changed text to agree with corrected Fig. 31-5 (see above).

The real part of the index described by this formula varies with frequency roughly like the curve shown in Fig. 31–5(a).

I:31-8, par 4

We can see what such a complex index means by going back to Eq. (31.6), ...

Clarification.

We can see what such a complex index means when there is only one resonant frequency by going back to Eq. (31.6), ...

I:31-9, par 1

But if the light frequency ω is very close to ω_k then the resonance term $(\omega_k^2 - \omega^2)$ can become small compared with $i\gamma_k\omega$ and the index becomes almost completely imaginary.

Added reference to corrected Fig. 31-5 (see above).

But if the light frequency ω is very close to ω_k then the resonance term $(\omega_k^2 - \omega^2)$ can become small compared with $i\gamma_k\omega$ and the index becomes almost completely imaginary, as shown in Fig 31-5(b).