

Re: What is a diffraction order?

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- *From:* Peter Jay Salzman <p@xxxxxxxx>
 - *Date:* Mon, 30 May 2005 17:50:35 -0500
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redbelly <redbelly98@xxxxxxxx> wrote:

- > "Diffraction order" refers to diffraction gratings, and the angles of
- > the beams that are either reflected from or transmitted through them.
- >
- > A diagram would illustrate the concept better than I could describe
- > with text alone. It might help for you to Google "diffraction grating"
- > and look for a figure that explains the concept.
- >
- > At any rate, here is my text description of diffraction orders. Again,
- > a diagram is really required to understand it:
- >
- > The (reflected or transmitted) beams from a grating have the following
- > property: the optical path difference for adjacent rulings on the
- > grating must be an integer multiple of the wavelength. This integer
- > gives the order for that particular beam.
- >
- > So:
- > The zero-th order beam has an optical path difference of zero between
- > rulings,
- > The first order beam has an optical path difference equal to one
- > wavelength,
- > The second order beam has ... two wavelengths,
- > etc. etc.
- >
- > Mark

Hi Mark,

I believe I know which diagram you're talking about -- the one used to describe (for example) wave interference for Young's double slit, where you show that $d \sin(\theta) = n \lambda$.

If so, then I totally understand your explanation. Thank you!

Pete

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Re: What is a diffraction order?

- **References:**

- ◆ **What is a diffraction order?**

- ◇ *From:* Peter Jay Salzman

- ◆ **Re: What is a diffraction order?**

- ◇ *From:* redbelly

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