





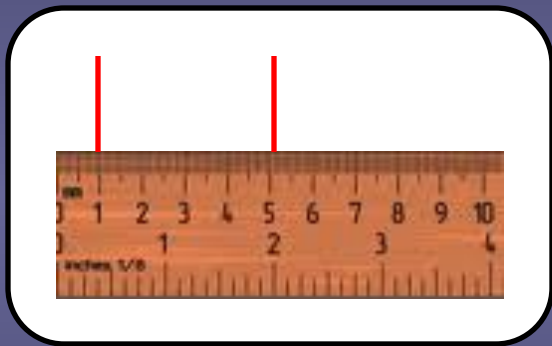




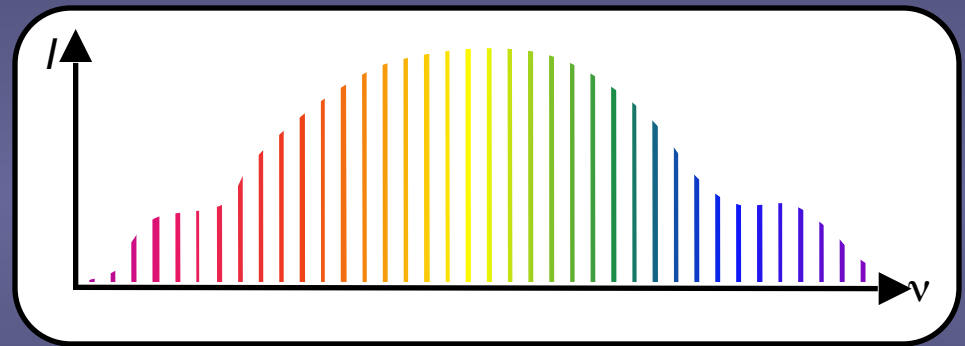
How do we measure frequencies of light?

- We make a “light ruler”

$$\text{Comb Equation: } \nu_n = n f_{\text{rep}} + f_0$$



Ruler: Number of ticks
Offset
Spacing between ticks



Optical Frequency Comb: Mode number
Offset frequency
Frequency spacing

- This structure is called an optical frequency comb – a set of equidistantly spaced spectral lines
- By interfering different colors in the comb, we can produce radio frequencies that we can control

How do we make a frequency comb?

