

PSYC 1340 / VLST 2110 Perception

Recitation 10 - dB, spatial frequency, contrast, and sounds

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Decibels

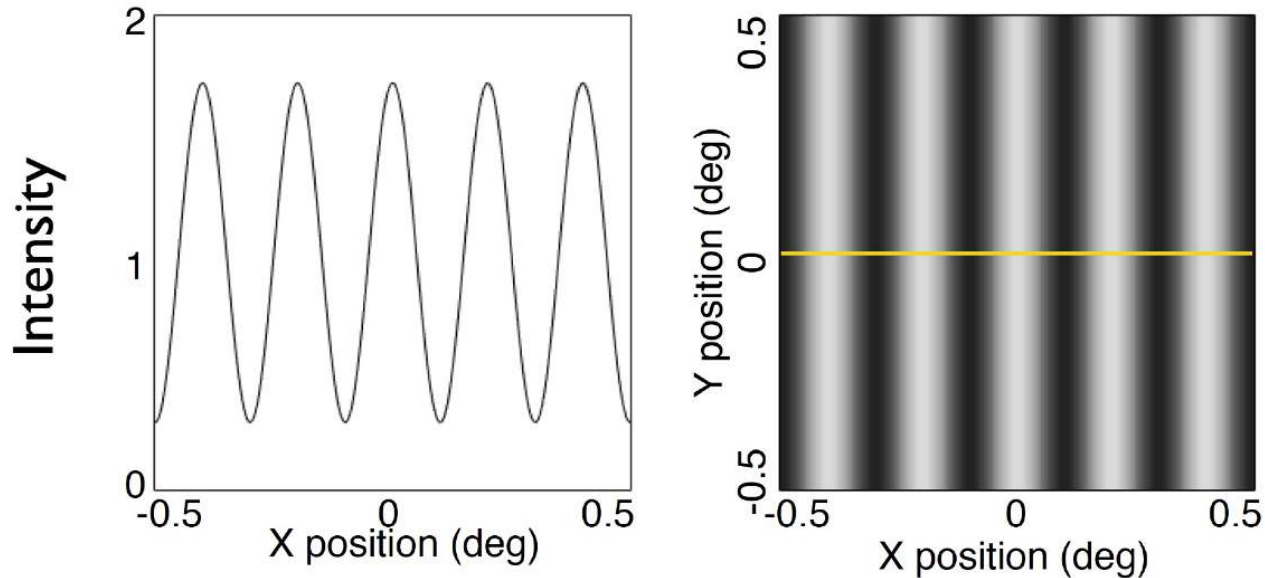
1. What's the formula for computing dB, given the pressure amplitude p of the sound wave and a reference pressure p_0 ? What value (in micro pascals) do we usually use for p_0 ?
2. Suppose pure tone has a pressure amplitude of 10,000 micro pascals, compute its amplitude in dB. Show your work.
3. Suppose pure tone has an amplitude of 80 dB. What is the pressure amplitude in micro pascals?

Spatial Frequency

1. If one cycle is 1 degree, it's a 1 cpd grating. If one cycle is $1/3$ degree, it is a 3 cpd grating.
2. If one cycle takes 0.2 degrees, what is the spatial frequency?
3. If one cycle is 15 minutes what is the spatial frequency?

Contrast

Given $I_{max} = 1.75$ and $I_{min} = 0.25$ - what is the contrast?



$$\text{Contrast } C = (I_{\max} - I_{\min}) / (I_{\max} + I_{\min})$$

Sounds

Demo Sounds

Waveacity

See you next week!