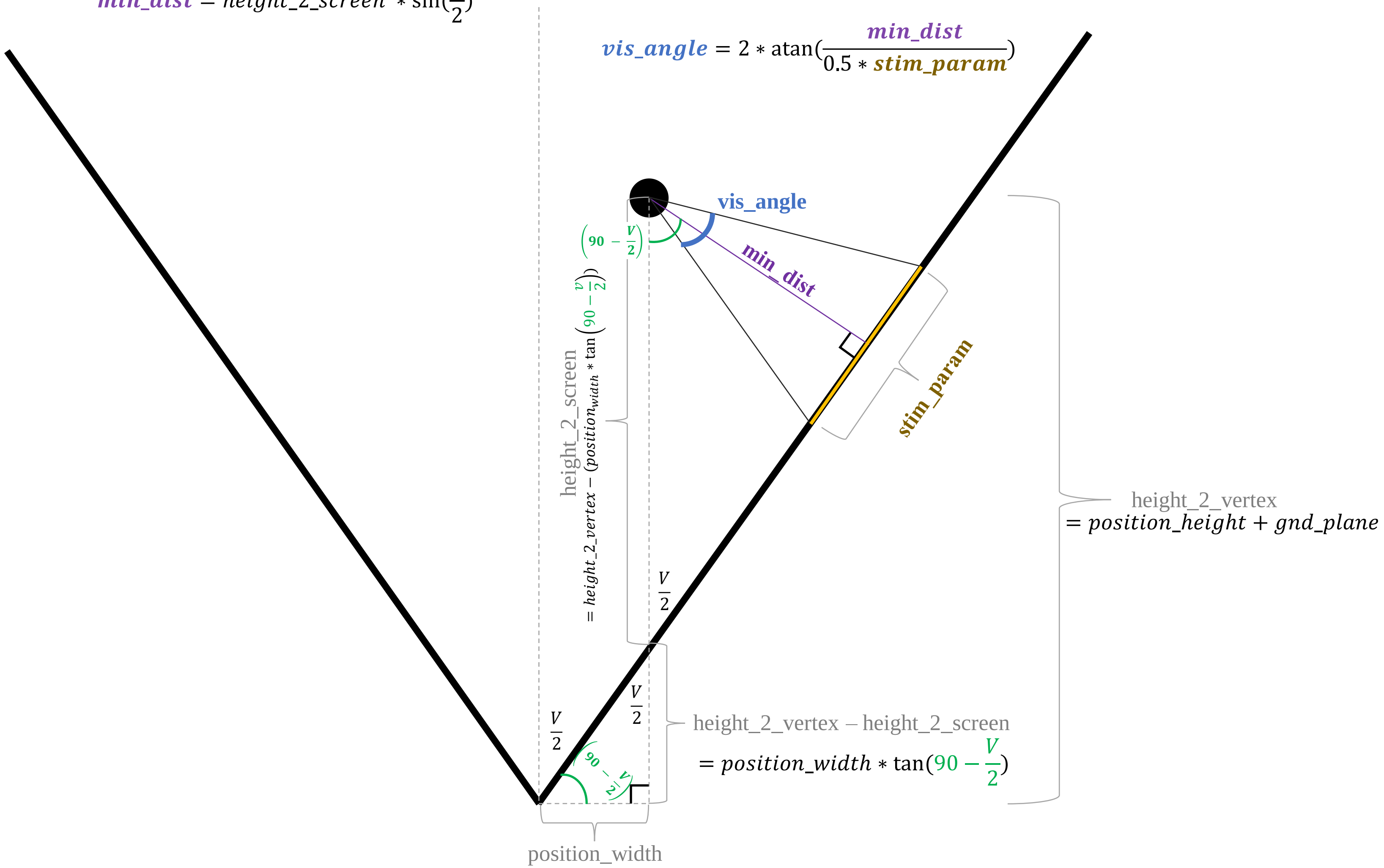
$$\sin\left(\frac{V}{2}\right) = \frac{min\_dist}{height\_2\_screen}$$

$$min\_dist = height\_2\_screen * \sin\left(\frac{V}{2}\right)$$

$$\tan\left(\frac{vis\_angle}{2}\right) = \frac{min\_dist}{0.5 * stim\_param}$$

$$\frac{vis\_angle}{2} = \text{atan}\left(\frac{min\_dist}{0.5 * stim\_param}\right)$$

$$vis\_angle = 2 * \text{atan}\left(\frac{min\_dist}{0.5 * stim\_param}\right)$$

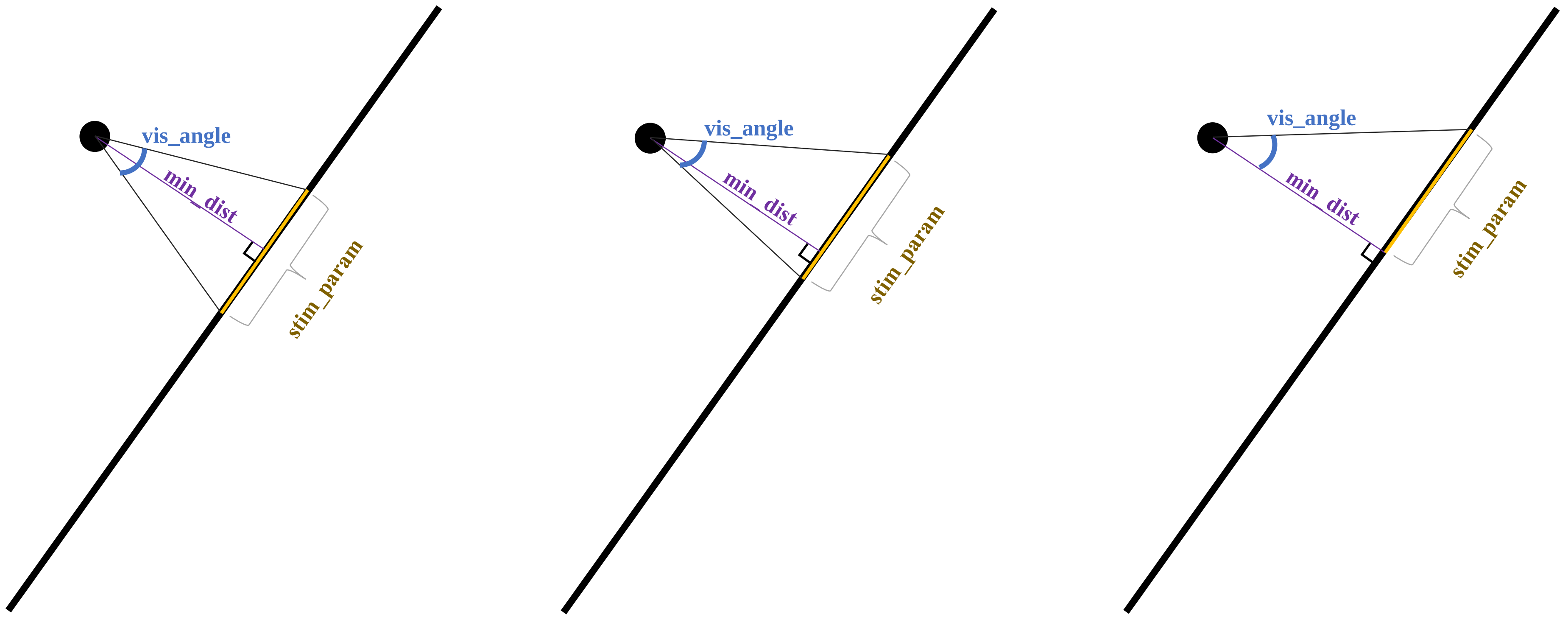



$$Vertex\ angle = V$$

**2020-07-18 Some observations by VBB:**

- Please check my math against yours! I am hopeful that I didn't make any errors here. Let me know if I've made incorrect assumptions about what your variables represent.
- I think height_2_screen may be calculated incorrectly. I don't see how it can be a function of tan(vertex_angle). The calculations need to be done using either (vertex_angle/2) or with $\left(90 - \frac{V}{2}\right)$ as done on this page.
- I don't think calculating a width_2_screen helps, or at least I think it's confusing the issue of how to calculate min_dist right now.
- See next page for some concerns about vis_angle relative to stim_param.

What happens when the stimulus is not centered around min_dist?




Across all three drawings, only stim_param is moving. The bird's position relative to the screen is identical. It seems unreliable to gauge how min_dist and vis_angle relate. But maybe I am missing the point??

Maybe the thing to do ultimately (or in addition) is to use min_dist to calculate how spatial frequency information is modulated?