The Pulfrich effect is a stereo-motion phenomenon. When the two eyes are presented with visual targets moving in fronto-parallel motion at different luminances or contrasts, the perception is of a target moving-in-depth. It is thought that this percept of motion-in-depth occurs because lower luminance or contrast delays the speed of visual processing.

We show that interocular spatial frequency differences, but not interocular size differences of image features, produce interocular processing delays.

**RESULTS**

- **Figure A** is a plot of PSEs as a function of the ratios between the sizes of the Gabor patches shown to the left and right eye when both eyes were shown Gabor patches at the spatial frequency of 2.8 c/d. We did not observe changes of the PSEs as a function of the size ratio between the left and right eye.

- **Figure B** is a plot of PSEs as a function of the ratio between the spatial frequency shown to the left and right eye when both eyes were shown Gabor patches at the size of 0.3 degrees. We observed that the PSEs decrease as a function of the spatial frequency ratio between the left and right eye.

- **Figure C** is a plot of PSEs for conditions where the Gabor patches had the aspect ratio of 0.84 cycles, which is the product of size (deg) and spatial frequency (c/d). A decreasing trend in PSEs as the spatial frequency in the left eye increases relative to the right eye was observed.

**REFERENCES**


- Vassilev, A.; Mihaylova, M.; Bonnet, C. On the delay in processing high spatial frequency visual information: Reaction time and VEP latency study of the effect of local intensity of stimulation.


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