Classroom License -- for classroom instructional use only.

>> contrastThresholds

PTB-INFO: This is Psychtoolbox-3 for Apple OS X, under Matlab 64-Bit (Version 3.0.15 -∠ Build date: Oct 19 2018).

PTB-INFO: Support status on this operating system release: OSX version 10.12 is not ✓ officially supported or tested at all for this release.

PTB-INFO: Type 'PsychtoolboxVersion' for more detailed version information.

PTB-INFO: Most parts of the Psychtoolbox distribution are licensed to you under terms of ∠ the MIT License, with

PTB-INFO: some restrictions. See file 'License.txt' in the Psychtoolbox root folder for⊌ the exact licensing conditions.

PTB-INFO: OpenGL-Renderer is Intel Inc. :: Intel(R) Iris(TM) Pro Graphics 6200 :: 2.1 ✓ INTEL-10.25.24

PTB-INFO: Renderer has 1536 MB of VRAM and a maximum 1536 MB of texture memory.

PTB-INFO: VBL startline = 1200 , VBL Endline = -1

PTB-INFO: Beamposition queries unsupported or defective on this system. Using basic ✓ timestamping as fallback.

PTB-INFO: Timestamps returned by Screen('Flip') will be therefore less robust and ✓

PTB-INFO: Measured monitor refresh interval from VBLsync = 16.679605 ms [59.953460 Hz]. ✓ (50 valid samples taken, stddev=0.351505 ms.)

PTB-INFO: Small deviations between reported values are normal and no reason to worry. PTB-WARNING: ∠

PTB-WARNING: DESKTOP COMPOSITOR IS ACTIVE! ALL FLIP STIMULUS ONSET TIMESTAMPS WILL BE∠ VERY LIKELY UNRELIABLE AND LESS ACCURATE!

PTB-WARNING: STIMULUS ONSET TIMING WILL BE UNRELIABLE AS WELL, AND GRAPHICS PERFORMANCE ∠ MAY BE REDUCED!

PTB-WARNING: DO NOT USE THIS MODE FOR RUNNING REAL EXPERIMENT SESSIONS WITH ANY ✓

REQUIREMENTS FOR ACCURATE TIMING! PTB-WARNING: ∠

WARNING: Couldn't compute a reliable estimate of monitor refresh interval! Trouble with ∠ VBL syncing?!?

----! PTB - ERROR: SYNCHRONIZATION FAILURE! ----

One or more internal checks (see Warnings above) indicate that synchronization of Psychtoolbox to the vertical retrace (VBL) is not working on your setup.

This will seriously impair proper stimulus presentation and stimulus presentation timing! Please read 'help SyncTrouble' for information about how to solve or work—around the ∠ problem.

You can force Psychtoolbox to continue, despite the severe problems, by adding the ✓

Screen('Preference', 'SkipSyncTests', 1); at the top of your script, if you really know∠ what you are doing.

PTB-INFO: Psychtoolbox imaging pipeline starting up for window with requested imaging mode \checkmark 1061 ...

PTB—INFO: Will use 32 bits per color component floating point framebuffer for stimulus ∠ drawing. Alpha blending should work correctly.

PTB-INFO: Will use 32 bits per color component floating point framebuffer for stimulus ∠ post-processing (if any).

Building a fragment shader: Reading shader from file ∠

/Users/Shared/Psychtoolbox/PsychOpenGL/PsychGLSLShaders/ICMSimpleGammaCorrectionShader. ∠ frag.txt ...

Compiling all shaders matching BasicGaborShader * into a GLSL program.

Building a fragment shader:Reading shader from file ∠

/Users/Shared/Psychtoolbox/PsychOpenGL/PsychGLSLShaders/BasicGaborShader.frag.txt ...

Building a vertex shader:Reading shader from file ✓

/Users/Shared/Psychtoolbox/PsychOpenGL/PsychGLSLShaders/BasicGaborShader.vert.txt ...

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PTB-INFO: VBL startline = 1200 , VBL Endline = -1

PTB-INFO: Beamposition queries unsupported or defective on this system. Using basic

timestamping as fallback.

PTB—INFO: Timestamps returned by Screen('Flip') will be therefore less robust and ∠ accurate.

PTB-INFO: Measured monitor refresh interval from VBLsync = 16.647289 ms [60.069839 Hz]. ∠ (50 valid samples taken, stddev=0.796134 ms.)

PTB-INFO: Small deviations between reported values are normal and no reason to worry. PTB-WARNING: ∠

PTB-WARNING: DESKTOP COMPOSITOR IS ACTIVE! ALL FLIP STIMULUS ONSET TIMESTAMPS WILL BE

✓ VERY LIKELY UNRELIABLE AND LESS ACCURATE!

PTB-WARNING: STIMULUS ONSET TIMING WILL BE UNRELIABLE AS WELL, AND GRAPHICS PERFORMANCE ✓ MAY BE REDUCED!

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REQUIREMENTS FOR ACCURATE TIMING!

PTB-WARNING: ∠

WARNING: Couldn't compute a reliable estimate of monitor refresh interval! Trouble with ✓ VBL syncing?!?

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```
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problem. You can force Psychtoolbox to continue, despite the severe problems, by adding the ∠ command

```
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what you are doing.
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1061 ...
PTB-INFO: Will use 32 bits per color component floating point framebuffer for stimulus ✓
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Building a fragment shader:Reading shader from file ✓
/Users/Shared/Psychtoolbox/PsychOpenGL/PsychGLSLShaders/BasicGaborShader.frag.txt ...
Building a vertex shader:Reading shader from file ∠
/Users/Shared/Psychtoolbox/PsychOpenGL/PsychGLSLShaders/BasicGaborShader.vert.txt ...
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Building a vertex shader:Reading shader from file ∠
/Users/Shared/Psychtoolbox/PsychOpenGL/PsychGLSLShaders/BasicGaborShader.vert.txt ...
Screen Test: contrast 3.0%, min 184, 188, delta 4
Screen Test: contrast 3.2%, min 184, 189, delta 5
Screen Test: contrast 3.4%, min 183, 189, delta 6
Screen Test: contrast 4.5%, min 183, 190, delta 7
Screen Test: contrast 5.2%, min 182, 190, delta 8
Screen Test: contrast 6.0%, min 181, 191, delta 10
Screen Test: contrast 5.8%, min 182, 191, delta 9
Screen Test: contrast 6.2%, min 181, 191, delta 10
Screen Test: contrast 7.1%, min 180, 191, delta 11
Screen Test: contrast 8.4%, min 179, 192, delta 13
Screen Test: contrast 9.6%, min 178, 193, delta 15
Screen Test: contrast 12.1%, min 176, 195, delta 19
Screen Test: contrast 12.0%, min 177, 195, delta 18
Screen Test: contrast 12.6%, min 176, 196, delta 20
Screen Test: contrast 13.3%, min 175, 196, delta 21
Screen Test: contrast 14.0%, min 175, 197, delta 22
Screen Test: contrast 18.0%, min 171, 199, delta 28
Screen Test: contrast 23.8%, min 166, 204, delta 38
Screen Test: contrast 24.0%, min 166, 204, delta 38
Screen Test: contrast 24.9%, min 165, 204, delta 39
Screen Test: contrast 26.0%, min 164, 205, delta 41
Screen Test: contrast 27.1%, min 163, 206, delta 43
Screen Test: contrast 35.7%, min 155, 212, delta 57
Screen Test: contrast 48.0%, min 143, 220, delta 77
```

```
Screen Test: contrast 48.0%, min 143, 220, delta 77 Screen Test: contrast 49.5%, min 141, 221, delta 80 Screen Test: contrast 51.4%, min 139, 222, delta 83 Screen Test: contrast 55.0%, min 135, 224, delta 89 Screen Test: contrast 71.8%, min 114, 234, delta 120 Screen Test: contrast 96.1%, min 71, 248, delta 177 ctDrawStatusText(handles, 'idle');
```

INFO: PTB's Screen('Flip', 10) command seems to have missed the requested stimulus
presentation deadline

INFO: a total of 25 times out of a total of 37 flips during this session.

INFO: This number is fairly accurate (and indicative of real timing problems in your own
code or your system)

INFO: if you provided requested stimulus onset times with the 'when' argument of Screen ∠ ('Flip', window [, when]);

INFO: If you called Screen('Flip', window); without the 'when' argument, this count is
more of a ''mild'' indicator

INFO: of timing behaviour than a hard reliable measurement. Large numbers may indicate

problems and should at least

INFO: deserve your closer attention. Cfe. 'help SyncTrouble', the FAQ section at www.∠ psychtoolbox.org and the

INFO: examples in the PDF presentation in PsychDocumentation/Psychtoolbox3-Slides.pdf for ✓ more info and timing tips.