# Testing for isetcam-merge and dev-flare branches

Test on January 13, 2024

FAILS

[ 4] 'v\_ibioRDT\_cmCurrentImpulse': .................................. [023.79 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: FAILED ;

[ 11] 'v\_ibioRDT\_HumanRetinalIlluminance580nm': ...................... [000.52 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: FAILED ;

[ 13] 'v\_ibioRDT\_oi': ................................................ [001.89 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: FAILED ;

[ 15] 'v\_ibioRDT\_oiSequence': ........................................ [001.70 secs] Internal validation: FAILED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: FAILED ;

[ 21] 'v\_ibioRDT\_osTimeStep': ........................................ [027.70 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: FAILED ;

PASSES

[ 1] 'v\_ibioRDT\_numericalPrecision': ................................ [000.03 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 2] 'v\_ibioRDT\_Colorimetry': ....................................... [000.59 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 3] 'v\_ibioRDT\_stockman2xyz': ...................................... [000.50 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 5] 'v\_ibioRDT\_cmosaic': ........................................... [001.00 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 6] 'v\_ibioRDT\_conesrect': ......................................... [001.12 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 7] 'v\_ibioRDT\_DisplayColorConversion': ............................ [000.77 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ; (using custom tolerances for some fields);

[ 8] 'v\_ibioRDT\_DisplayLUTinversion': ............................... [000.44 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 9] 'v\_ibioRDT\_PTBcalStructToIsetbioDisplayObjectAndBack': ......... [000.09 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 10] 'v\_ibioRDT\_eyeMovementsPhysio': ................................ [000.00 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 12] 'v\_ibioRDT\_OTFandPupilSize': ................................... [009.71 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 14] 'v\_ibioRDT\_oiTransmittance': ................................... [001.00 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ; (using custom tolerances for some fields);

[ 16] 'v\_ibioRDT\_osEMData': .......................................... [001.72 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 17] 'v\_ibioRDT\_osIncDec': .......................................... [003.74 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 18] 'v\_ibioRDT\_osLinearFilters': ................................... [002.41 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ; (using custom tolerances for some fields);

[ 19] 'v\_ibioRDT\_osStep': ............................................ [008.85 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 20] 'v\_ibioRDT\_osStepFlash': ....................................... [011.96 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 22] 'v\_ibioRDT\_IrradianceIsomerizations': .......................... [003.27 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 23] 'v\_ibioRDT\_statsPoisson': ...................................... [001.50 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 24] 'v\_ibioRDT\_wvfComputeConePSF': ................................. [006.02 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ;

[ 25] 'v\_ibioRDT\_wvfDiffractionPSF': ................................. [000.86 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ; (using custom tolerances for some fields);

[ 26] 'v\_ibioRDT\_wvfSpatialSampling': ................................ [000.22 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ; (using custom tolerances for some fields);

[ 27] 'v\_ibioRDT\_wvfStilesCrawford': ................................. [000.14 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ; (using custom tolerances for some fields);

[ 28] 'v\_ibioRDT\_wvfZernikePolynomials': ............................. [000.52 secs] Internal validation: PASSED ; Runtime status: NO EXCEPTION RAISED ; Fast validation: NoTest ; Full validation: PASSED ; (using custom tolerances for some fields);

# The validations all pass for isetcam-merge and dev branches using ieValidateRDTFullAll, FullOne.

Verified all passing 1/8/24 – DHB

Confirmed by DHB again in an email on 1/13/24

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It may be worth some thought about how we have rng calls scattered throughout the code. Adding an rng('default') in a subroutine changed

the rng sequence in a calling routine.

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Worried about needing to call wvfComputePupilFunction and wvfComputePSF over and over again. Used to be cached for speed. Should replace with wvfCompute in any case, and watch out for correct key value pairs on

LCA and SCE.

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The rgc validations were not being run on the ISETBio master. I think those date back to James Golden and bear no relation to anything we currently care about.

Need to think about:

1) opticsGet - lensmakers formula in image/focal plane distance for SI? We think this is right

2) oiGet - we think we should get the focal length not distance to image plane to compute angular height and width.

3) oiGet - maybe should not allow asking for distance to image/focal plane without saying specifically what sDist is.

4) opticsGet - check comment on RTeffective focal length.

5) cos4th line 40. Should this be focal length?

6) oiGet angular resolution based on fL. This may be solved when we think about 2 above.

7) We have 1.2 hard coded as the default for sDist in oiGet and that is not good.