The validations all pass, now ieValidateRDTFullAll, FullOne.

Verified still all passing 12/31/23 - DHB

Failure is now due to dimension change.

[ 13] 'v\_ibioRDT\_oi'

Internal validation : PASSED

Run-time status : no exception raised

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Validating using custom tolerance for field diffractionLimitedFromScenePhotons: 1.79296e+11

Validating using custom tolerance for field humanWVFFromScenePhotons: 6.99555e+10

Validating using custom tolerance for field theScenePhotons: 3.76241e+12

Full validation : FAILED against ground truth data of 01-Sep-2023 15:07:37.

[data mismatch 1] : 'groundTruthData(1).humanMWOIFromScenePhotons' is a [80 120 31 ] matrix whereas 'validationData(1).humanMWOIFromScenePhotons' is a [160 160 31 ] matrix.

[data mismatch 2] : 'groundTruthData(1).unifromEEFromScenePhotons' is a [80 120 31 ] matrix whereas 'validationData(1).unifromEEFromScenePhotons' is a [160 160 31 ] matrix.

Validation report :

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

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.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

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.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

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.