Pytest Migration

This page can be used to track progress on migrating the DM and Sims software stack to use pytest.

Install pytest using:

```
conda install pytest
```

Each package will have a JIRA ticket with an associated git branch. Share the branch and work on test files independently. Do one commit per test file. Take ownership of specific files by annotating the item on this page with your name. Tick the check box when the file runs with pytest. If a package is not listed below, add it and create a JIRA ticket.

Instructions for using pytest can be found in the developer guide. A migration guide can be found at SQR-012.

Jenkins integration: ⚠ DM-7600 - Jira project doesn't exist or you don't have permission to view it.

AFW ⚠ **DM-7207 - Jira project doesn't exist or you don't have permission to view it.**

AFW can now be fixed up.

- [x] angle.py Unknown User (pschella)
- [x] approximate.py John Parejko
- [x] background.py John Parejko
- [x] box.py John Parejko
- [x] color.py John Parejko
- [x] convolve.py Unknown User (pschella)
- [x] coord.py Unknown User (pschella)
- [x] coordinates.py Unknown User (pschella)
- [x] coordptr.py Unknown User (pschella)
- [x] display.py Unknown User (pschella)
- [x] ellipse.py Unknown User (pschella)
- [x] exposure.py Unknown User (pschella)
- [x] footprint1.py Unknown User (pschella)
- [x] footprint2.py Unknown User (pschella)
- [x] footprintEllipse.py John Parejko
- [x] footprintMergeCatalog.py John Parejko
- [x] function.py John Parejko
- [x] header.py Fred Moolekamp
- [x] heavyFootprint.py Fred Moolekamp
- [x] image.py Fred Moolekamp
- [x] imageIo1.py Fred Moolekamp

- [x] imageIo2.py Fred Moolekamp
- [x] imagePca.py Fred Moolekamp
- [x] imagePersistence1.py Fred Moolekamp
- [x] imagePickle.py Fred Moolekamp
- [x] interpolate.py Fred Moolekamp
- [x] kernel.py Fred Moolekamp
- [x] kernelImagesForRegion.py Fred Moolekamp
- [x] kernelIo1.py Fred Moolekamp
- [x] mask.py Fred Moolekamp
- [x] maskedImage.py Fred Moolekamp
- [x] maskedImageIO.py Fred Moolekamp
- [x] maskedImagePersistence1.py Fred Moolekamp
- [x] matchFits.py Fred Moolekamp
- [x] minimize.py Fred Moolekamp
- [x] offsetImage.py Fred Moolekamp
- [x] pickles.py Fred Moolekamp
- [x] polygon.py Fred Moolekamp
- [x] random1.py Fred Moolekamp
- [x] rgb.py Fred Moolekamp
- [x] rowColumnStats.py Fred Moolekamp
- [x] scaledPlus.py Fred Moolekamp
- [x] sourceMatch.py Fred Moolekamp
- [x] spatialCell.py Fred Moolekamp
- [x] spline.py Fred Moolekamp
- [x] stacker.py Fred Moolekamp
- [x] statBug1697.py Fred Moolekamp
- [x] statClipException1045.py Fred Moolekamp
- [x] statistics.py Fred Moolekamp
- [x] statisticsMasked.py Fred Moolekamp
- [x] statisticsOverloads.py Fred Moolekamp
- [x] test1079.py Fred Moolekamp
- [x] testAmpInfoTable.py Fred Moolekamp
- [x] testApCorrMap.py Fred Moolekamp
- [x] testAstropyTableViews.py Fred Moolekamp
- [x] testCamGeomFitsUtils.py Fred Moolekamp
- [x] testCameraGeom.py Fred Moolekamp
- [x] testCameraSys.py Unknown User (pschella)
- [x] testCameraTransformMap.py Unknown User (pschella)
- [x] testChebyshevBoundedField.py Unknown User (pschella)
- [x] testDetector.py Unknown User (pschella)
- [x] testDistortedTanWcs.py Unknown User (pschella)
- [x] testDs9.py Fred Moolekamp
- [x] testExposureTable.py Unknown User (pschella)
- [x] testFluxFromABMag.py Nate Lust
- [x] testFunctor.py Nate Lust
- [x] testFunctorKeys.py Nate Lust
- [x] testGaussianProcess.py Unknown User (pschella)

- [x] testGaussianPsf.py Unknown User (pschella)
- [x] testGeomTestUtils.py Unknown User (pschella)
- [x] testImageTestUtils.py Unknown User (pschella)
- [x] testLeastSquares.py Unknown User (pschella)
- [x] testMakePixelToTanPixel.py Unknown User (pschella)
- [x] testMakeWcs.py Unknown User (pschella)
- [x] testOrientation.py Unknown User (pschella)
- [x] testRaWrap.py Unknown User (pschella)
- [x] testSchema.py Unknown User (pschella)
- [x] testSeparableXYTransform.py Unknown User (pschella)
- [x] testSimpleTable.py Unknown User (pschella)
- [x] testSourceTable.py Unknown User (pschella)
- [x] testTableAliases.py Unknown User (pschella)
- [x] testTableArchiveImport.py Unknown User (pschella)
- [x] testTableUtils.py Unknown User (pschella)
- [x] testTestMethods.py Unknown User (pschella)
- [x] testValidPolygon.py Unknown User (pschella)
- [x] testWcs835.py Unknown User (pschella)
- [x] testWcsFitsTable.py Unknown User (pschella)
- [x] testXYTransform.py Unknown User (pschella)
- [x] ticket2019.py Unknown User (pschella)
- [x] ticket2026.py Unknown User (pschella)
- [x] ticket2162.py Unknown User (pschella)
- [x] ticket2233.py Unknown User (pschella)
- [x] ticket2352.py Unknown User (pschella)
- [x] ticket2707.py Unknown User (pschella)
- [x] ticket2905.py Unknown User (pschella)
- [x] ticketDM-433.py Unknown User (pschella)
- [x] warpExposure.py Unknown User (pschella)
- [x] warper.py Unknown User (pschella)
- [x] wcs1.py Unknown User (pschella)

pipe_base

⚠ **DM-7232 - Jira project doesn't exist or you don't have permission to view it.**

- [x] testArgumentParser.py Unknown User (vpk24)
- [x] testCmdLineTask.py Hsin-Fang Chiang
- [x] testShowTasks.py Unknown User (mtpatter)
- [x] testStruct.py Unknown User (vpk24)
- [x] testTask.py Unknown User (vpk24)

daf_butlerUtils

⚠ **DM-7230 - Jira project doesn't exist or you don't have permission to view it.**

- [x] cameraMapper.py Unknown User (npease)
- [x] testOutputRoot.py Fred Moolekamp
- [x] testDM-329.py Unknown User (npease)

ctrl_events

⚠ DM-7252 - Jira project doesn't exist or you don't have permission to view it.

- [x] All Steve Pietrowicz

cat

⚠ DM-7231 - Jira project doesn't exist or you don't have permission to view it.

- [x] testCleanupExpiredRuns.py
- [x] testDbSetup.py
- [x] testMySQLBase.py
- [x] timeFuncs.py

meas_astrom

⚠ DM-3904 - Jira project doesn't exist or you don't have permission to view it.

- [x] createWcsWithSip.py Russell Owen
- [x] lsf1d.py Russell Owen
- [x] lsf2d.py Russell Owen
- [x] openFiles.py Russell Owen
- [x] testAstrometryTask.py Russell Owen
- [x] testFindAstrometryNetDataDir.py Russell Owen
- [x] testFitTanSipWcsHighOrder.py Russell Owen
- [x] testFitTanSipWcsTask.py Russell Owen
- [x] testJoinMatchListWithCatalog.py Matthew Rumore but accidentally stolen by Russell Owen
- [x] testLoadAstrometryNetObjects.py Russell Owen
- [x] testMakeMatchStatistics.py Russell Owen
- [x] testMatchOptimisticB.py Angelo Fausti
- [x] testMultiIndex.py Russell Owen
- [x] testSetMatchDistance.py Russell Owen
- [x] testSipTransformations.py Russell Owen
- [x] ticket1979.py Russell Owen

meas_base

⚠ DM-7229 - Jira project doesn't exist or you don't have permission to view it.

- [x] centroid.py Nate Lust
- [x] importCentroidAlgorithm.py Ian Sullivan
- [x] measureSources.py Ian Sullivan
- [x] sincPhotSums.py Ian Sullivan
- [x] testAfterburners.py Ian Sullivan
- [x] testApCorrNameSet.py Ian Sullivan
- [x] testApertureFlux.py Ian Sullivan
- [x] testApplyApCorr.py Ian Sullivan
- [x] testBlendedness.py Angelo Fausti
- [x] testCentroidChecker.py Angelo Fausti
- [x] testClassification.py Angelo Fausti
- [x] testFPPosition.py Angelo Fausti
- [x] testFlagHandler.py Nate Lust
- [x] testGaussianCentroid.py David Reiss
- [x] testGaussianFlux.py David Reiss
- [x] testInputCount.py Hsin-Fang Chiang
- [x] testInputUtilities.py Ian Sullivan
- [x] testJacobian.py Nate Lust
- [x] testLib.py SWIG file, do not update
- [x] testNaiveCentroid.py Ian Sullivan
- [x] testNoiseReplacer.py Ian Sullivan
- [x] testPeakCentroid.py Ian Sullivan
- [x] testPeakLikelyhoodFlux.py Ian Sullivan
- [x] testPixelFlags.py Ian Sullivan
- [x] testPsfFlux.py David Reiss
- [x] testScaledApertureFlux.py Ian Sullivan
- [x] testSdssCentroid.py Ian Sullivan
- [x] testSdssShape.py Ian Sullivan
- [x] testShapeUtilities.py Ian Sullivan
- [x] testSkyCoord.py Ian Sullivan
- [x] testTransform.py Hsin-Fang Chiang
- [x] testVariance.py Ian Sullivan

ip_isr

DM-7233 - Jira project doesn't exist or you don't have permission to view it.

- [x] testApplyLookupTable.py John Parejko
- [x] testBiasAndDarkCorrection.py John Parejko
- [x] testBrighterFatter.py John Parejko
- [x] testDefect.py John Parejko
- [x] testFlatAndIlluminationCorrection.py John Parejko
- [x] testFringes.py John Parejko
- [x] testLinearizeLookupTable.py John Parejko
- [x] testLinearizeSquared.py John Parejko
- [x]

- [x] testOverscanCorrection.py John Parejko
- [x] testSaturationCorrection.py John Parejko
- [x] testSetValidPolygonIntersect.py John Parejko
- [x] testSuspectMasking.py John Parejko
- [x] testMaskNans.py John Parejko

pipe_tasks

> ⚠ **DM-7235 - Jira project doesn't exist or you don't have permission to view it.**

- [x] testConfig.py Paul Price
- [x] testMatchBackgrounds.py Paul Price
- [x] testCoadds.py Paul Price
- [x] testColorterm.py Paul Price
- [x] testFakes.py Paul Price
- [x] testFindAstrometryNetDataDir.py Paul Price
- [x] testInterpImageTask.py Paul Price
- [x] testMakeDiscreteSkyMap.py Unknown User (vpk24)
- [x] testPhotoCal.py Unknown User (vpk24)
- [x] testProcessCcd.py Unknown User (vpk24)
- [x] testRegister.py Unknown User (vpk24)
- [x] testScaleZeroPoint.py Unknown User (vpk24)
- [x] testSnapCombine.py Unknown User (vpk24)
- [x] testTransform.py Unknown User (vpk24)
- [x] testTicket-2155.py Unknown User (vpk24)
- [x] testWcsSelectImages.py Unknown User (vpk24)

meas_algorithms

> ⚠ **DM-7248 - Jira project doesn't exist or you don't have permission to view it.**

- [x] testCoaddApCorrMap.py Unknown User (vpk24)
- [x] testCoaddPsf.py Unknown User (vpk24)
- [x] testInterp.py Unknown User (vpk24)
- [x] testBinnedWcs.py Unknown User (vpk24)
- [x] testCr.py Unknown User (vpk24)
- [x] testMeasure.py Ian Sullivan
- [x] testNegative.py Ian Sullivan
- [x] testPsfIO.py Ian Sullivan
- [x] testPsfSelectTest.py Ian Sullivan
- [x] testAstrometrySourceSelector.py Unknown User (vpk24)
- [x] testCoaddBoundedField.py Unknown User (vpk24)
- [x] testDetection.py Unknown User (vpk24)
- [x] testDoubleGaussianPsf.py Unknown User (vpk24)
- [x] testGaussianPsfFactory.py Unknown User (vpk24)

- testHtmIndex.py Unknown User (vpk24)
- testInstallGaussianPsf.py Unknown User (vpk24)
- testLoadReferenceObjects.py Unknown User (vpk24)
- testMeasureApCorr.py Ian Sullivan
- testPsfAttributes.py Ian Sullivan
- testPsfCandidate.py Ian Sullivan
- testPsfDetermination.py Ian Sullivan
- testReadFitsCatalog.py Ian Sullivan
- testReadTextCatalog.py Ian Sullivan
- testTicket-2986.py Ian Sullivan

obs_test ⚠ **DM-7244 - Jira project doesn't exist or you don't have permission to view it.**

- pexPolicyToButlerPolicy.py Russell Owen
- policyInRepo.py Russell Owen
- map.py Russell Owen

coadd_utils ⚠ **DM-7258 - Jira project doesn't exist or you don't have permission to view it.**

- testAddToCoadd.py Russell Owen
- testCoadd.py Russell Owen
- testCopyGoodPixels.py Russell Owen
- testSetCoaddEdgeBits.py Russell Owen
- testSetMaskBits.py Russell Owen

coadd_chisquared

⚠ **DM-7614 - Jira project doesn't exist or you don't have permission to view it.**

- testCoadd Russell Owen

validate_drp ⚠ DM-7241 - Jira project doesn't exist or you don't have permission to view it.

- test*.py Jonathan Sick

utils

⚠ DM-7270 - Jira project doesn't exist or you don't have permission to view it.

- raDecToStr.py John Parejko
- raDecToStr.py John Parejko
- swig.py John Parejko
- testExecutables.py John Parejko
- testGetPackageDir.py John Parejko
- testGetTempFilePath.py John Parejko
- testLib.py John Parejko
- testLockProtection.py John Parejko
- testOrdering.py John Parejko
- testSharedData.py John Parejko
- utils.py John Parejko

skymap

⚠ DM-7246 - Jira project doesn't exist or you don't have permission to view it.

- SkyMapTestCase.py Unknown User (jmatt)
- testDiscreteSkyMap.py Unknown User (jmatt)
- testDodecaSkyMap.py Unknown User (jmatt)
- testEquatSkyMap.py Unknown User (jmatt)
- testHealpixSkyMap.py Unknown User (jmatt)
- testRingsSkyMap.py Unknown User (jmatt)

sphgeom

⚠ DM-7315 - Jira project doesn't exist or you don't have permission to view it.

- testAngle.py Unknown User (vpk24)
- testAngleIntervals.py Unknown User (vpk24)
- testConvexPolygon.py Unknown User (vpk24)
- testInterval1d.py Unknown User (vpk24)
- testLonLat.py Unknown User (vpk24)
- testNormalizedAngle.py Unknown User (vpk24)
- testUnitVector3d.py Unknown User (vpk24)
- testVector3d.py Unknown User (vpk24)

ip_diffim

⚠ DM-7320 - Jira project doesn't exist or you don't have permission to view it.

Fred Moolekamp

- [x] AssessSpatialKernelVisitor.py
- [x] BasisLists.py
- [x] BuildSingleKernelVisitor.py
- [x] BuildSpatialKernelVisitor.py
- [x] FindSetBits.py
- [x] ImagePsfMatch.py
- [x] ImageStatistics.py
- [x] ImageSubtract.py
- [x] KernelCandidateAndSolution.py
- [x] KernelCandidateDetection.py
- [x] KernelPca.py
- [x] KernelSumVisitor.py
- [x] ModelPsfMatch.py
- [x] SnapPsfMatch.py
- [x] compareToHotpants.py
- [x] diaCatalogSourceSelector.py
- [x] dipole.py
- [x] ipDiffimConfig.py
- [x] subtractExposures.py
- [x] testDipoleFitter.py
- [x] testImageDecorrelation.py

meas_extensions_photometryKron

> ⚠ **DM-7329 - Jira project doesn't exist or you don't have permission to view it.**

- [x] testKron.py Unknown User (vpk24)
- [x] testFlaghandler.py Unknown User (vpk24)

meas_extensions_simpleShape

> ⚠ **DM-7332 - Jira project doesn't exist or you don't have permission to view it.**

- [x] testMeasurementFramework.py Unknown User (vpk24)
- [x] testSimpleShape.py Unknown User (vpk24)

meas_extensions_psfex

> ⚠ **DM-7343 - Jira project doesn't exist or you don't have permission to view it.**

- [x] testPsfexPsf.py Unknown User (vpk24)

meas_extensionts_shapeHSM

> ⚠ **DM-7344 - Jira project doesn't exist or you don't have permission to view it.**

- [x] testHsm.py Unknown User (vpk24)

meas_deblender

> ⚠ **DM-7347 - Jira project doesn't exist or you don't have permission to view it.**

- [x] testEdges.py Unknown User (vpk24)
- [x] testFitPsf.py Unknown User (vpk24)
- [x] teststrayFlux.py Unknown User (vpk24)
- [x] testInclude.py Unknown User (vpk24)
- [x] testTicket-2871.py Unknown User (vpk24)

meas_modelfit

> ⚠ **DM-7358 - Jira project doesn't exist or you don't have permission to view it.**

- [x] testCModel.py Unknown User (vpk24)
- [x] testCModelPlugins.py Unknown User (vpk24)
- [x] testDefaultZeroPoint.py Unknown User (vpk24)
- [x] testDoubleShapeletPsfApprox.py Unknown User (vpk24)
- [x] testGeneralShapeletPsfApproxPlugins.py Unknown User (vpk24)
- [x] testGeneralShapeletPsfModels.py Unknown User (vpk24)
- [x] testIntegrals.py Unknown User (vpk24)
- [x] testMeasureImage.py Unknown User (vpk24)
- [x] testMixture.py Unknown User (vpk24)
- [x] testOptimizer.py Unknown User (vpk24)
- [x] testProjectedLikelihood.py Unknown User (vpk24)
- [x] testPsfFitter.py Unknown User (vpk24)
- [x] testSemiEmpiricalPrior.py Unknown User (vpk24)
- [x] testSoftenedLinearPrior.py Unknown User (vpk24)
- [x] testTruncatedGaussian.py Unknown User (vpk24)

obs_sdss

> ⚠ DM-7346 - Jira project doesn't exist or you don't have permission to view it.

F

red Moolekamp

- [x] getId.py
- [x] testSdss.py
- [x] testSelectFluxMag0.py
- [x] testSelectSdssImages.py

obs_lsstSim

> ⚠ DM-7384 - Jira project doesn't exist or you don't have permission to view it.

Michael Wood-Vasey

- [x] getBias.py Michael Wood-Vasey
- [x] getCamera.py Michael Wood-Vasey
- [x] getDefects.py Michael Wood-Vasey
- [x] getFlat.py Michael Wood-Vasey
- [x] getId.py Michael Wood-Vasey
- [x] getMD.py Michael Wood-Vasey
- [x] getRaw.py Michael Wood-Vasey
- [x] testEdgeRolloffFunctor.py Michael Wood-Vasey
- [x] testLsstSimIsrTask.py Michael Wood-Vasey
- [x] testSelectFluxMag0.py Michael Wood-Vasey
- [x] testSelectLsstImages.py Michael Wood-Vasey
- [x] validate.py Michael Wood-Vasey

obs_subaru

> ⚠ DM-7378 - Jira project doesn't exist or you don't have permission to view it.

- [x] testCamera.py Unknown User (vpk24)
- [x] testDistortion.py Unknown User (vpk24)
- [x] testRepository.py Unknown User (vpk24)
- [x] testColorterms.py Unknown User (vpk24)

obs_cfht

⚠ DM-7624 - Jira project doesn't exist or you don't have permission to view it.

- [ ] testButler.py
- [ ] testColorterms.py

obs_decam

⚠ DM-7387 - Jira project doesn't exist or you don't have permission to view it.

J ohn Parejko

- [x] getId.py John Parejko
- [x] getRaw.py John Parejko
- [x] testButler.py John Parejko
- [x] testProcessCcd.py John Parejko
- [x] testWcsCards.py John Parejko

shapelet

⚠ DM-7615 - Jira project doesn't exist or you don't have permission to view it.

- [ ] profiles.py
- [ ] testFunctorKeys.py
- [ ] testHermiteTransformMatrix.py
- [ ] testMatrixBuilder.py
- [ ] testMultiShapelet.py
- [ ] testProjection.py
- [ ] testShapeletFunction.py

datarel

⚠ DM-7623 - Jira project doesn't exist or you don't have permission to view it.

- [x] testGetPsf.py

Qserv

⚠ DM-7625 - Jira project doesn't exist or you don't have permission to view it.

- [ ] MySqlUdf.py
- [ ] testApp.py
- [ ] testProtocol.py

- [ ] test_chunkMapping.py
- [ ] test_configParser.py
- [ ] test_cssNodes.py
- [ ] test_cssVersion.py
- [ ] test_nodeAdmin.py
- [ ] test_nodePool.py
- [ ] test_ssh.py
- [ ] test_watcherLib.py

Qserv_testdata

> ⚠ **DM-7617 - Jira project doesn't exist or you don't have permission to view it.**

- [ ] testDataConfig.py
- [ ] testDataCustomizer.py
- [ ] testIntegration.py

dax_webservcommon

> ⚠ **DM-7626 - Jira project doesn't exist or you don't have permission to view it.**

- [ ] test_response.py
- [ ] test_templates.py

dax_dbserv

> ⚠ **DM-7627 - Jira project doesn't exist or you don't have permission to view it.**

- [ ] test_dbserv.py

dax_imgserv

> ⚠ **DM-7628 - Jira project doesn't exist or you don't have permission to view it.**

- [ ] metadataFitsTest.py

dax_metaserv

> ⚠ **DM-7629 - Jira project doesn't exist or you don't have permission to view it.**

- [ ] reinit.py
- [ ] testSchemaToMeta.py

- [ ] test_metaserv.py