


























## Profile Summary (Total time: 769.181 s)

Generated 27-sep.-2022 14:41:04 using performance time.

Function Name	Calls	Total Time (s)	Self Time* (s)	Total Time Plot (dark band = self time)
<a href="#">PlusOp&gt;PlusOp.forward</a>	1179351	308.933	308.933	
<a href="#">RecordingArray.backwardPass</a>	1	581.308	186.102	
<a href="#">RecordingArray.parenReference</a>	786235	42.539	29.714	
<a href="#">internal_parenReferenceBackward</a>	786232	38.594	18.259	
<a href="#">dlarray.size</a>	1206526	18.093	18.093	
<a href="#">dlarray.parenReference</a>	786243	75.760	17.542	
<a href="#">RecordingArray.parenAssign</a>	393128	24.608	16.851	
<a href="#">internal_parenAssignBackward&gt;iComputeRHSGradient</a>	393128	23.516	16.581	
<a href="#">SAXS_tomo_3D_err_metric_AD</a>	1	768.911	14.349	
<a href="#">dlarray.parenAssign</a>	393128	54.984	12.259	
<a href="#">ParenReferenceOp&gt;ParenReferenceOp.backward</a>	786232	48.635	10.041	
<a href="#">dlarray.plus</a>	393120	19.582	9.930	
<a href="#">ndgrid</a>	393112	8.813	8.813	
<a href="#">ParenReferenceOp&gt;ParenReferenceOp.forward</a>	786235	8.639	8.639	
<a href="#">internal_parenReferenceBackward&gt;iReplaceColonAndRemoveLogical</a>	786232	10.880	8.178	
<a href="#">FormattedData&gt;FormattedData.extractData</a>	1572506	7.388	7.388	
<a href="#">dlfeval</a>	1	754.446	6.964	
<a href="#">ParenAssignOp&gt;ParenAssignOp.backward</a>	393128	37.509	6.613	
<a href="#">@dlarray\private\extractBinaryBroadcastData</a>	393125	7.498	6.464	
<a href="#">repmat</a>	393128	6.935	6.309	
<a href="#">FormattedData&gt;FormattedData.insertData</a>	1179379	5.306	5.306	
<a href="#">ParenAssignOp&gt;ParenAssignOp.forward</a>	393128	5.040	5.040	
<a href="#">arb_projection</a>	1	166.052	3.793	
<a href="#">dlarray.parenReference&gt;iRemoveDlarray</a>	786243	5.699	3.430	
<a href="#">internal_parenAssignBackward</a>	393128	30.897	3.344	
<a href="#">internal_parenReferenceBackward&gt;iAdjustSizeVector</a>	1179344	3.344	3.344	
<a href="#">internal_parenAssignBackward&gt;iComputeXGradient</a>	393119	3.074	3.074	
<a href="#">ParenReferenceOp&gt;ParenReferenceOp.memory</a>	786235	2.668	2.668	
<a href="#">dlarray.dims</a>	1179373	2.131	2.131	
<a href="#">@dlarray\private\addOrDropDimensionLabels</a>	1179371	2.094	2.094	
<a href="#">ParenAssignOp&gt;ParenAssignOp.memory</a>	393128	1.894	1.894	
<a href="#">dlarray.parenAssign&gt;iGetRHS</a>	393128	3.430	1.859	
<a href="#">dlarray.parenAssign&gt;iRemoveDlarray</a>	393128	3.160	1.831	
<a href="#">@dlarray\private\restoreBinaryBroadcastData</a>	393125	1.587	1.587	
<a href="#">ParenReferenceOp&gt;ParenReferenceOp.ParenReferenceOp</a>	786235	1.518	1.518	
<a href="#">dlarray.parenReference&gt;iIsDlarray</a>	1179372	1.274	1.274	
<a href="#">@dlarray\private\extractBinaryBroadcastData&gt;iCombineLayouts</a>	393125	1.033	1.033	
<a href="#">dlarray.parenReference&gt;iIsRecordingArray</a>	786243	0.995	0.995	
<a href="#">internal_parenAssignBackward&gt;iRemoveObjectIndex</a>	393128	0.962	0.962	
<a href="#">dlarray.parenAssign&gt;iIsDlarray</a>	786264	0.879	0.879	
<a href="#">ParenAssignOp&gt;ParenAssignOp.ParenAssignOp</a>	393128	0.823	0.823	
<a href="#">PlusOp&gt;PlusOp.backward</a>	393120	0.660	0.660	
<a href="#">repmat&gt;checkSizesType</a>	393128	0.625	0.625	
<a href="#">dlarray.parenAssign&gt;iIsRecordingArray</a>	393128	0.450	0.450	
<a href="#">containerfeval&gt;iProcessStruct_1out_1in</a>	768	0.082	0.082	

<a href="#">containerfeval&gt;iDispatch_1out_1in</a>	16123	0.145	0.064	
<a href="#">recordContainer&gt;iRecordValue</a>	14835	0.043	0.027	
<a href="#">workspacefunc</a>	5	0.101	0.022	
<a href="#">workspacefunc&gt;getShortValueObjectJ</a>	149	0.072	0.021	
<a href="#">workspacefunc&gt;getAbstractValueSummaryJ</a>	81	0.022	0.017	
<a href="#">SAXS_AD_forward_backward&gt;SAXS_AD_cost_function</a>	1	747.472	0.016	
<a href="#">bsxpagemult (MEX-file)</a>	2	0.015	0.015	
<a href="#">recordContainer&gt;iIsUnrecordedDlarray</a>	14835	0.015	0.014	
<a href="#">ParamTableCreator&gt;ParamTableCreator.validateTableStructure</a>	4853	0.017	0.013	
<a href="#">workspacefunc&gt;num2complex</a>	142	0.042	0.012	
<a href="#">FileStorage&gt;FileStorage.getSortedJobIDsFromDisk</a>	1	0.016	0.011	
<a href="#">dlarray.dlgradient</a>	1	581.336	0.009	
<a href="#">containerfeval&gt;iProcessCell_1out_1in</a>	513	0.011	0.009	
<a href="#">containerfeval&gt;iIsParameterTable</a>	4853	0.026	0.008	
<a href="#">MtimesOp&gt;MtimesOp.backward</a>	1	0.006	0.006	
<a href="#">PowerBroadcastOp&gt;iPowerBroadcastBackward</a>	2	0.015	0.006	
<a href="#">PowerBroadcastOp&gt;PowerBroadcastOp.forward</a>	2	0.006	0.006	
<a href="#">unbroadcast</a>	4	0.005	0.005	
<a href="#">containerfeval</a>	5	0.020	0.005	
<a href="#">SumOp&gt;SumOp.backward</a>	3	0.006	0.005	
<a href="#">containerfeval&gt;iIsParameterProvider</a>	4853	0.004	0.004	
<a href="#">istable</a>	4853	0.004	0.004	
<a href="#">PowerBroadcastOp&gt;PowerBroadcastOp.backward</a>	2	0.019	0.004	
<a href="#">workspacefunc&gt;locallsDistributedType</a>	248	0.004	0.004	
<a href="#">MatlabUpdateProviderWrapper&gt;iGetJobStatusData</a>	1	0.030	0.003	
<a href="#">codetools\private\dataviewerhelper</a>	50	0.004	0.003	
<a href="#">PowerBroadcastOp&gt;iBackwardUntraced</a>	2	0.009	0.003	
<a href="#">optimize_SH</a>	1	768.917	0.003	
<a href="#">workspacefunc&gt;getclass</a>	81	0.003	0.003	
<a href="#">dlarray.mtimes</a>	1	0.004	0.003	
<a href="#">dlarray.times</a>	2	0.013	0.003	
<a href="#">containerfeval&gt;iDispatch_0out_1in</a>	4	0.007	0.003	
<a href="#">meshgrid</a>	1	0.003	0.003	
<a href="#">workspacefunc&gt;locallsString</a>	142	0.003	0.003	
<a href="#">@dlarray\private\helperReduction</a>	3	0.004	0.003	
<a href="#">workspacefunc&gt;getWhosInformation</a>	2	0.003	0.003	
<a href="#">dlarray.dlarray&gt;dlarray.dlarray</a>	10	0.005	0.003	
<a href="#">TimesBroadcastOp&gt;TimesBroadcastOp.forward</a>	2	0.002	0.002	
<a href="#">FormattedData&gt;FormattedData.gatherData</a>	36	0.003	0.002	
<a href="#">dlarray.permute</a>	1	0.005	0.002	
<a href="#">PowerBroadcastOp&gt;iComputeXGradientZeroNeg</a>	1	0.004	0.002	
<a href="#">dlarray.reshape</a>	1	0.010	0.002	
<a href="#">TimesBroadcastOp&gt;TimesBroadcastOp.backward</a>	2	0.008	0.002	
<a href="#">unique&gt;uniqueR2012a</a>	1	0.002	0.002	
<a href="#">PowerBroadcastOp&gt;iComputeXGradient</a>	1	0.002	0.002	
<a href="#">@dlarray\private\permuteExplicitly</a>	1	0.006	0.002	
<a href="#">PermuteOp&gt;PermuteOp.backward</a>	1	0.003	0.002	
<a href="#">dlarray.mrdivide</a>	1	0.003	0.002	
<a href="#">dlarray.sum</a>	3	0.009	0.002	
<a href="#">workspacefunc&gt;createComplexVector</a>	8	0.004	0.002	

<a href="#">cgmin1</a>	1	768.913	0.002	
<a href="#">RecordingArray.sum</a>	3	0.003	0.002	
<a href="#">validateNonDlarray</a>	17	0.002	0.002	
<a href="#">RecordingArray.permute</a>	1	0.003	0.002	
<a href="#">dlarray.sqrt</a>	1	0.002	0.002	
<a href="#">dlarray.minus</a>	1	0.003	0.002	
<a href="#">unique</a>	1	0.004	0.002	
<a href="#">containerfeval&gt;iProcessCell_0out_1in</a>	2	0.003	0.002	
<a href="#">datenum</a>	5	0.002	0.002	
<a href="#">networkInputContainerFun</a>	2	0.006	0.002	
<a href="#">dlfeval</a>	1	754.448	0.002	
<a href="#">dlarray.pagemtimes</a>	1	0.010	0.002	
<a href="#">TimesBroadcastOp&gt;iComputeXGradient</a>	2	0.006	0.001	
<a href="#">CJSSupport&gt;CJSSupport.getJobs</a>	1	0.021	0.001	
<a href="#">CJSSupport&gt;CJSSupport.getJobsForCluster</a>	1	0.019	0.001	
<a href="#">num2str</a>	1	0.002	0.001	
<a href="#">workspacefunc&gt;getCleanupHandler</a>	2	0.001	0.001	
<a href="#">FormattedData&gt;FormattedData.getRecorded</a>	5	0.002	0.001	
<a href="#">...spreadsheet.data.ValueSummaryFactory.getInstance (Java method)</a>	88	0.001	0.001	
<a href="#">dlarray.power&gt;iPower</a>	2	0.008	0.001	
<a href="#">RdivideOp&gt;RdivideOp.backward</a>	1	0.001	0.001	
<a href="#">ipermute</a>	1	0.001	0.001	
<a href="#">dlarray.ndims</a>	2	0.002	0.001	
<a href="#">SAXS_AD_forward_backward</a>	1	754.452	0.001	
<a href="#">RecordingArray.reshape</a>	1	0.002	0.001	
<a href="#">dlarray.power</a>	2	0.011	0.001	
<a href="#">get_Ylm_coeff</a>	1	0.001	0.001	
<a href="#">dlarray.abs</a>	1	0.002	0.001	
<a href="#">dlarray.double</a>	1	0.002	0.001	
<a href="#">workspacefunc&gt;createComplexScalar</a>	35	0.002	0.001	
<a href="#">CJSCluster&gt;CJSCluster.getJobs</a>	1	0.022	0.001	
<a href="#">recordContainer</a>	1	0.006	0.001	
<a href="#">errorplot</a>	1	0.001	0.001	
<a href="#">MatlabUpdateProviderWrapper&gt;iGetCachedJobStatusData</a>	1	0.001	0.001	
<a href="#">networkContainerFun</a>	2	0.008	0.001	
<a href="#">PermuteOp&gt;PermuteOp.forward</a>	1	0.001	0.001	
<a href="#">getCluster</a>	1	0.002	0.001	
<a href="#">Cluster.Cluster&gt;Cluster.get.Jobs</a>	1	0.023	0.001	
<a href="#">MinusOp&gt;MinusOp.forward</a>	1	0.001	0.001	
<a href="#">dlarray.pagemtimes&gt;iScalarPages</a>	2	0.002	0.001	
<a href="#">dlarray.isreal</a>	12	0.001	0.001	
<a href="#">FormattedData&gt;FormattedData.stop</a>	5	0.001	0.001	
<a href="#">getCluster&gt;ilsClusterUnavailable</a>	1	0.001	0.001	
<a href="#">CJSSupport&gt;@(x,y)obj.getJobsForCluster(x,y{1})</a>	1	0.019	0.001	
<a href="#">dlarray.dlarray&gt;dlarray.getDataDim</a>	3	0.001	0.001	
<a href="#">dlarray.dlarray&gt;dlarray.getRecorded</a>	5	0.002	0.001	
<a href="#">FileStorage&gt;iUnique</a>	1	0.004	0.001	
<a href="#">dlarray.isnumeric</a>	20	0.003	0.001	
<a href="#">SqrtOp&gt;SqrtOp.forward</a>	1	0.001	0.001	
<a href="#">FormattedData&gt;FormattedData.FormattedData</a>	10	0.001	0.001	

<a href="#">now</a>	5	0.002	0.001	
<a href="#">FileStorage&gt;FileStorage.getJobSlds</a>	1	0.017	0.001	
<a href="#">FileStorage&gt;FileStorage.parseJobIDs</a>	1	0.001	0.001	
<a href="#">SumOp&gt;SumOp.forward</a>	3	0.001	0.001	
<a href="#">AbsOp&gt;AbsOp.forward</a>	1	0.001	0.001	
<a href="#">SqrtOp&gt;SqrtOp.backward</a>	1	0.001	0.001	
<a href="#">dlarray.dlarray&gt;dlarray.isscalar</a>	1	0.001	0.001	
<a href="#">+operations\private\computeReductionDim</a>	3	0.001	0.001	
<a href="#">codetools\private\dataviewerhelper&gt;upconvertIntegralType</a>	43	0.001	0.001	
<a href="#">int2str</a>	1	0.001	0.001	
<a href="#">@dlarray\private\omitnanUnsupported</a>	3	0.001	0.001	
<a href="#">...dateFunction&gt;LearnableUpdateFunction.makeUnaryUpdateFunction</a>	1	0.001	0.001	
<a href="#">dlfeval&gt;stopRecording</a>	6	0.001	0.001	
<a href="#">@dlarray\private\extractUnaryElwiseData</a>	3	0.001	0.001	
<a href="#">ReshapeOp&gt;ReshapeOp.forward</a>	1	0.001	0.001	
<a href="#">dlarray.dlarray&gt;dlarray.stop</a>	5	0.001	0.001	
<a href="#">@dlarray\private\dropTrailingODims</a>	14	0.001	0.001	
<a href="#">dlarray.dlarray&gt;dlarray.isempty</a>	8	0.000	0.000	
<a href="#">dlarray.islogical</a>	16	0.001	0.000	
<a href="#">...UpdateProviderWrapper&gt;MatlabUpdateProviderWrapper.getJobData</a>	1	0.030	0.000	
<a href="#">FormattedData&gt;FormattedData.record</a>	1	0.000	0.000	
<a href="#">AbsOp&gt;AbsOp.backward</a>	1	0.000	0.000	
<a href="#">dlarray.dlarray&gt;dlarray.hasFormat</a>	4	0.000	0.000	
<a href="#">CJSCluster&gt;CJSCluster.hGetSupportID</a>	1	0.000	0.000	
<a href="#">PowerBroadcastOp&gt;ilsRecordingArray</a>	2	0.000	0.000	
<a href="#">ReshapeOp&gt;ReshapeOp.backward</a>	1	0.000	0.000	
<a href="#">Collection&gt;Collection.collect</a>	1	0.000	0.000	
<a href="#">validateGradientInput&gt;iValidate</a>	1	0.000	0.000	
<a href="#">RecordingArray.ndims</a>	3	0.000	0.000	
<a href="#">@dlarray\private\addTrailingODims</a>	1	0.000	0.000	
<a href="#">...pdateFunction&gt;LearnableUpdateFunction.LearnableUpdateFunction</a>	1	0.000	0.000	
<a href="#">dlarray.mrdivide&gt;ilsDLArray</a>	3	0.000	0.000	
<a href="#">dlarray.dlarray&gt;dlarray.record</a>	1	0.001	0.000	
<a href="#">startTracingAndSetupCleanup</a>	1	0.000	0.000	
<a href="#">internal_isRecordingArray</a>	34	0.000	0.000	
<a href="#">dlarray.dlgradient&gt;@(~)retrieve(collector)</a>	1	0.000	0.000	
<a href="#">dlarray.dlgradient&gt;collectfun</a>	1	0.001	0.000	
<a href="#">MinusOp&gt;MinusOp.backward</a>	1	0.000	0.000	
<a href="#">codetools\private\dataviewerhelper&gt;isUnsignedIntegralType</a>	7	0.000	0.000	
<a href="#">@dlarray\private\restoreUnaryElwiseData</a>	3	0.000	0.000	
<a href="#">...gets_spreadsheet_data.ComplexScalarFactory.valueOf (Java method)</a>	35	0.000	0.000	
<a href="#">MtimesOp&gt;MtimesOp.forward</a>	1	0.000	0.000	
<a href="#">RecordingArray.isreal</a>	3	0.000	0.000	
<a href="#">com.mathworks.mlwidgets.workspace.WhosInformation (Java method)</a>	2	0.000	0.000	
<a href="#">basicContainerFun</a>	1	0.009	0.000	
<a href="#">...s.mlwidgets.workspace.MatlabWorkspaceListener.swl (Java method)</a>	4	0.000	0.000	
<a href="#">unbroadcast&gt;iUniformizeShapes</a>	4	0.000	0.000	
<a href="#">SumOp&gt;SumOp.SumOp</a>	3	0.000	0.000	
<a href="#">validateGradientInput</a>	1	0.009	0.000	
<a href="#">...UpdateProviderWrapper&gt;@()feature('hotlinks',currentHotLinksValue)</a>	1	0.000	0.000	



<a href="#">dlarray.pagemtimes&gt;iErrorForLabeledUnlessScalarPages</a>	1	0.000	0.000	
<a href="#">RecordingArray.issparse</a>	1	0.000	0.000	
<a href="#">RdivideOp&gt;RdivideOp.forward</a>	1	0.000	0.000	
<a href="#">...mathworks.mlwidgets.workspace.MatlabWorkspaceListener.swl(swl)</a>	2	0.000	0.000	
<a href="#">@dlarray\private\omitnanUnsupported&gt;ilsOmitnan</a>	3	0.000	0.000	
<a href="#">ReshapeOp&gt;ReshapeOp.memory</a>	1	0.000	0.000	
<a href="#">RecordingArray.internal_isRecordingArray</a>	15	0.000	0.000	
<a href="#">...gets.spreadsheet.data.ComplexArrayFactory.valueOf (Java method)</a>	8	0.000	0.000	
<a href="#">ReshapeOp&gt;ReshapeOp.ReshapeOp</a>	1	0.000	0.000	
<a href="#">@dlarray\private\errorForLabeledUnlessScalar</a>	1	0.000	0.000	
<a href="#">DoubleOp&gt;DoubleOp.forward</a>	1	0.000	0.000	
<a href="#">PermuteOp&gt;PermuteOp.PermuteOp</a>	1	0.000	0.000	
<a href="#">SumOp&gt;SumOp.memory</a>	3	0.000	0.000	
<a href="#">RecordingArray.permute&gt;ilsRecordingArray</a>	1	0.000	0.000	
<a href="#">Collection&gt;Collection.retrieve</a>	1	0.000	0.000	
<a href="#">PermuteOp&gt;PermuteOp.memory</a>	1	0.000	0.000	
<a href="#">RecordingArray.backwardPass&gt;iValidateAdjoint</a>	1	0.000	0.000	
<a href="#">RdivideOp&gt;iComputeXGradient</a>	1	0.000	0.000	
<a href="#">java.lang.String (Java method)</a>	7	0.000	0.000	
<a href="#">Collection&gt;Collection.Collection</a>	1	0.000	0.000	
<a href="#">...mathworks.widgets.spreadsheet.data.ValueSummary (Java method)</a>	10	0.000	0.000	
<a href="#">DoubleOp&gt;DoubleOp.backward</a>	1	0.000	0.000	
<a href="#">java.util.ArrayList (Java method)</a>	1	0.000	0.000	

\***Self time** is the time spent in a function excluding any time spent in child functions. The time includes any overhead time resulting from the profiling process.