# Profile Summary

*Generated 16-Sep-2018 22:21:08 using performance time.*

| Function Name | Calls | Total Time | Self Time* | Total Time Plot (dark band = self time) |
|---|---|---|---|---|
| MainOptimizing5 | 1 | 564.960 s | 212.565 s | |
| Olho_mex (MEX-file) | 256 | 98.606 s | 98.606 s | |
| DelayInterfG | 6350 | 86.416 s | 86.416 s | |
| OpticalFFTGT | 3810 | 73.427 s | 22.265 s | |
| OpticalIFFTGT | 2540 | 43.641 s | 8.387 s | |
| ProgationDelayT | 1 | 33.645 s | 6.986 s | |
| MZMGT | 1280 | 24.911 s | 24.329 s | |
| MeasPower | 512 | 22.278 s | 22.278 s | |
| findpeaks | 256 | 21.545 s | 0.338 s | |
| RedDowOok_mex (MEX-file) | 256 | 16.173 s | 16.173 s | |
| FiltroGaussiano | 644 | 15.926 s | 15.926 s | |
| SelectEachCarrier | 1 | 15.890 s | 12.910 s | |
| findpeaks>getAllPeaks | 256 | 13.553 s | 0.677 s | |
| findpeaks>findLocalMaxima | 256 | 12.875 s | 12.875 s | |
| mean | 1018890 | 6.402 s | 6.402 s | |
| Fibra_Monomodo1 | 132 | 5.904 s | 5.812 s | |
| findpeaks>orderPeaks | 256 | 2.889 s | 2.889 s | |
| fftshift | 781 | 2.661 s | 2.661 s | |
| findpeaks>removePeaksBelowThreshold | 256 | 2.036 s | 2.036 s | |
| findpeaks>combinePeaks | 256 | 1.107 s | 0.043 s | |
| union | 256 | 1.064 s | 0.014 s | |

| | | | | |
|---|---|---|---|---|
| [union>unionR2012a](#) | 256 | 1.051 s | 0.180 s | |
| [unique](#) | 256 | 0.871 s | 0.024 s | |
| [unique>uniqueR2012a](#) | 256 | 0.846 s | 0.846 s | |
| [findpeaks>removePeaksBelowMinPeakHeight](#) | 256 | 0.839 s | 0.839 s | |
| [rectpulse](#) | 259 | 0.774 s | 0.774 s | |
| [findpeaks>parse_inputs](#) | 256 | 0.604 s | 0.548 s | |
| [ptxExpr](#) | 17 | 0.561 s | 0.025 s | |
| [ptxExpr>exprcompile](#) | 17 | 0.222 s | 0.008 s | |
| [close](#) | 257 | 0.211 s | 0.018 s | |
| [+gpu\private\compileAssignExpr](#) | 17 | 0.189 s | 0.005 s | |
| [+gpu\private\compileAssignExpr>ops](#) | 47 | 0.180 s | 0.006 s | |
| [+gpu\private\compileAssignExpr>call](#) | 17 | 0.169 s | 0.013 s | |
| [...aksSeparatedByMoreThanMinPeakDistance](#) | 256 | 0.149 s | 0.149 s | |
| [close>safegetchildren](#) | 257 | 0.140 s | 0.027 s | |
| [allchild](#) | 257 | 0.113 s | 0.067 s | |
| [flipud](#) | 512 | 0.075 s | 0.075 s | |
| [+gpu\private\compileAssignExpr>infixImpl](#) | 7 | 0.072 s | 0.007 s | |
| [...er>ptxEmitter.moduleHeaderLazyEval](#) | 17 | 0.057 s | 0.002 s | |
| [ptxEmitter>ptxEmitter.functionHeader](#) | 17 | 0.053 s | 0.007 s | |
| [close>getEmptyHandleList](#) | 257 | 0.051 s | 0.051 s | |
| [ptxEmitter>ptxEmitter.ptxEmitter](#) | 17 | 0.047 s | 0.013 s | |
| [validatestring](#) | 768 | 0.042 s | 0.017 s | |
| [ptxEmitter>ptxEmitter.bincall](#) | 6 | 0.042 s | 0.007 s | |
| [InternalState>InternalState.getHeaders](#) | 17 | 0.042 s | 0.010 s | |
| [ptxEmitter>ptxEmitter.generateInlinePtx](#) | 7 | 0.040 s | 0.025 s | |
| [...r>ptxEmitter.arithmeticInstruction](#) | 12 | 0.038 s | 0.006 s | |
| [Symbols>Symbols.Symbols](#) | 17 | 0.036 s | 0.014 s | |

| | | | | |
|---|---|---|---|---|
| ...;ptxEmitter.mangleCprotoEntryLazyEval | 17 | 0.036 s | 0.025 s | |
| ptxEmitter>ptxEmitter.castregisters | 13 | 0.035 s | 0.007 s | |
| ...signExpr>arithmeticTypeCombination | 8 | 0.035 s | 0.005 s | |
| ptxEmitter>ptxEmitter.loadSymbols | 17 | 0.033 s | 0.002 s | |
| time2freq_lamb_2 | 5 | 0.032 s | 0.027 s | |
| ...>ptxEmitter.loadSymbolsNoExpansion | 17 | 0.031 s | 0.003 s | |
| ptxEmitter>ptxEmitter.castreg | 27 | 0.029 s | 0.003 s | |
| ptxEmitter>ptxEmitter.loadSymbol | 30 | 0.029 s | 0.014 s | |
| GPUDevice.GPUDevice>GPUDevice.current | 17 | 0.028 s | 0.027 s | |
| findpeaks>keepAtMostNpPeaks | 256 | 0.028 s | 0.028 s | |
| +gpu\private\compileAssignExpr>dotexp | 1 | 0.027 s | 0.003 s | |
| Set_MZ_Input_Data_Simp | 5 | 0.023 s | 0.019 s | |
| cell.ismember | 3 | 0.023 s | 0.006 s | |
| ptxEmitter>ptxEmitter.formatInstruction | 518 | 0.023 s | 0.023 s | |
| +gp...te\compileAssignExpr>dotexpImpl | 1 | 0.023 s | 0.003 s | |
| cell.unique | 10 | 0.023 s | 0.007 s | |
| Symbols>Symbols.makeTypedSymbol | 30 | 0.022 s | 0.007 s | |
| ...gnExpr>floatingPointFullDomainImpl | 2 | 0.022 s | 0.003 s | |
| Atomic>Atomic.coerceScalar | 142 | 0.021 s | 0.021 s | |
| mtree.mtree>mtree.mtree | 17 | 0.021 s | 0.019 s | |
| ptxEmitter>ptxEmitter.calculateOffset | 17 | 0.021 s | 0.007 s | |
| onCleanup>onCleanup.delete | 257 | 0.020 s | 0.006 s | |
| Symbols>Symbols.scalarizeSymbols | 17 | 0.017 s | 0.009 s | |
| ptxEmitter>ptxEmitter.makePrologue | 17 | 0.017 s | 0.003 s | |
| ptxEmitter>ptxEmitter.unacall | 2 | 0.016 s | 0.003 s | |
| cell.unique>celluniqueR2012a | 10 | 0.016 s | 0.016 s | |
| validatestring>checkString | 768 | 0.016 s | 0.016 s | |

| | | | | |
|---|---|---|---|---|
| ...te\compileAssignExpr>plusMinusImpl | 5 | 0.015 s | 0.004 s | |
| ...er>ptxEmitter.storeSymbolsLazyEval | 17 | 0.015 s | 0.002 s | |
| Symbols>Symbols.updateSymbol | 17 | 0.014 s | 0.007 s | |
| ptxEmitter>ptxEmitter.storeSymbol | 17 | 0.014 s | 0.008 s | |
| ...set(rootobj,'ShowHiddenHandles',Temp) | 257 | 0.013 s | 0.013 s | |
| ptxEmitter>ptxEmitter.castregToFloat | 7 | 0.013 s | 0.008 s | |
| allchild>getchildren | 257 | 0.012 s | 0.012 s | |
| onCleanup>onCleanup.onCleanup | 257 | 0.012 s | 0.012 s | |
| ...gt:ptxEmitter.replaceLoadInstructions | 14 | 0.012 s | 0.012 s | |
| InternalState>InternalState.tGet | 93 | 0.012 s | 0.004 s | |
| Atomic>Atomic.isSameBaseType | 40 | 0.011 s | 0.001 s | |
| ptxEmitter>ptxEmitter.copyreg | 37 | 0.010 s | 0.003 s | |
| validatestring>checkInputs | 768 | 0.010 s | 0.010 s | |
| ptxEmitter>ptxEmitter.arraySizeCheck | 17 | 0.010 s | 0.004 s | |
| target | 1536 | 0.009 s | 0.009 s | |
| ptxEmitter>ptxEmitter.declareRegisters | 17 | 0.007 s | 0.006 s | |
| +gpu\private\compileAssignExpr>absImpl | 1 | 0.007 s | 0.004 s | |
| ...lState>InternalState.InternalState | 17 | 0.007 s | 0.007 s | |
| InternalState>InternalState.manageFunc | 8 | 0.007 s | 0.006 s | |
| Atomic>Atomic.enumerate | 30 | 0.006 s | 0.003 s | |
| ismember | 3 | 0.005 s | 0.001 s | |
| +gp...te\compileAssignExpr>uminusImpl | 1 | 0.005 s | 0.003 s | |
| ...leAssignExpr>variableInSymbolTable | 30 | 0.005 s | 0.002 s | |
| ...gt:ptxEmitter.initialCheckOfErrorFlag | 17 | 0.005 s | 0.002 s | |
| Atomic>Atomic.cType | 47 | 0.005 s | 0.004 s | |
| num2str | 12 | 0.005 s | 0.003 s | |
| Atomic>Atomic.isDouble | 302 | 0.005 s | 0.005 s | |

| | | | | |
|---|---|---|---|---|
| ptxEmitter>ptxEmitter.getCodetable | 17 | 0.005 s | 0.003 s | |
| ptxEmitter>ptxEmitter.regsuffix | 72 | 0.005 s | 0.001 s | |
| ismember>ismemberR2012a | 3 | 0.004 s | 0.002 s | |
| InternalState>InternalState.fdGet | 158 | 0.004 s | 0.004 s | |
| InternalState>InternalState.ptrGet | 128 | 0.004 s | 0.001 s | |
| ...te\compileAssignExpr>prebinarycall | 12 | 0.004 s | 0.003 s | |
| mtree.Ins | 17 | 0.004 s | 0.004 s | |
| Atomic>Atomic.coerceReal | 144 | 0.003 s | 0.003 s | |
| mtree.strings | 34 | 0.003 s | 0.003 s | |
| InternalState>InternalState.rGet | 171 | 0.003 s | 0.003 s | |
| ptxEmitter>ptxEmitter.endEpilogue | 17 | 0.003 s | 0.002 s | |
| mtree.Next | 30 | 0.003 s | 0.003 s | |
| Symbols>Symbols.getSymbol | 64 | 0.003 s | 0.003 s | |
| Symbols>Symbols.getSymbolIns | 60 | 0.003 s | 0.003 s | |
| InternalState>InternalState.getKernels | 17 | 0.003 s | 0.001 s | |
| mtree.Left | 34 | 0.003 s | 0.003 s | |
| uitools\private\allchildRootHelper | 257 | 0.003 s | 0.003 s | |
| mtree.mtree>mtree.list | 34 | 0.003 s | 0.001 s | |
| mtree.Body | 17 | 0.003 s | 0.003 s | |
| mtree.Outs | 17 | 0.003 s | 0.003 s | |
| InternalState>InternalState.rdGet | 128 | 0.003 s | 0.003 s | |
| Symbols>Symbols.makeshapeinfo | 77 | 0.003 s | 0.003 s | |
| signal\private\chkinputdatatype | 512 | 0.003 s | 0.003 s | |
| mtree.Right | 34 | 0.003 s | 0.003 s | |
| Fibra_Monomodo_Input_Data | 132 | 0.003 s | 0.003 s | |
| ptxEmitter>ptxEmitter.typesize | 58 | 0.003 s | 0.001 s | |
| ismember>ismemberBuiltinTypes | 3 | 0.002 s | 0.002 s | |

| | | | | |
|---|---|---|---|---|
| mtree.List | 34 | 0.002 s | 0.002 s | |
| mtree.Arg | 17 | 0.002 s | 0.002 s | |
| Atomic>Atomic.buildAtomic | 30 | 0.002 s | 0.002 s | |
| time2freq | 1 | 0.002 s | 0.001 s | |
| Symbols>Symbols.makeemptysymbol | 17 | 0.002 s | 0.001 s | |
| mtree.kind | 83 | 0.002 s | 0.002 s | |
| mtree.wholetree | 17 | 0.002 s | 0.002 s | |
| floatingPointFullDomainRule | 2 | 0.002 s | 0.002 s | |
| Symbols>Symbols.makesymbol | 47 | 0.002 s | 0.002 s | |
| arithmeticOperandInDoubleRule | 13 | 0.002 s | 0.002 s | |
| str2double | 17 | 0.002 s | 0.002 s | |
| ptxEmitter>ptxEmitter.absreg | 1 | 0.002 s | 0.002 s | |
| ...r>ptxEmitter.regsuffixForOperation | 39 | 0.002 s | 0.001 s | |
| findpeaks>assignOutputs | 256 | 0.002 s | 0.002 s | |
| mtree.string | 64 | 0.002 s | 0.002 s | |
| Atomic>Atomic.isSingle | 127 | 0.002 s | 0.002 s | |
| int2str | 12 | 0.002 s | 0.002 s | |
| Atomic>Atomic.isArray | 60 | 0.001 s | 0.001 s | |
| ...t:ptxEmitter.conditionalBranchToLabel | 1 | 0.001 s | 0.000 s | |
| Atomic>Atomic.isLogical | 67 | 0.001 s | 0.001 s | |
| Atomic>Atomic.isComplexDouble | 110 | 0.001 s | 0.001 s | |
| ptxEmitter>ptxEmitter.getVariableName | 19 | 0.001 s | 0.001 s | |
| isduration | 768 | 0.001 s | 0.001 s | |
| close>checkfigs | 257 | 0.001 s | 0.001 s | |
| +gp...\compileAssignExpr>preunarycall | 4 | 0.001 s | 0.001 s | |
| Emitter>Emitter.makehexnumber | 7 | 0.001 s | 0.001 s | |
| InternalState>InternalState.rhGet | 34 | 0.001 s | 0.001 s | |

| | | | | |
|---|---|---|---|---|
| ptxEmitter>ptxEmitter.negatereg | 2 | 0.001 s | 0.001 s | |
| ...ter>ptxEmitter.initializeRandState | 17 | 0.001 s | 0.001 s | |
| close>request_close | 257 | 0.001 s | 0.001 s | |
| linspace | 1 | 0.001 s | 0.001 s | |
| InternalState>InternalState.labelGet | 24 | 0.001 s | 0.001 s | |
| nextpow2 | 3 | 0.001 s | 0.001 s | |
| gpuDeviceCount | 1 | 0.001 s | 0.000 s | |
| CallInfo | 17 | 0.001 s | 0.001 s | |
| ...er>ptxEmitter.getCurrentDebugState | 17 | 0.001 s | 0.001 s | |
| ...ignExpr>determinePowerOptimization | 1 | 0.001 s | 0.001 s | |
| ...ter>ptxEmitter.getVersionAndTarget | 17 | 0.001 s | 0.001 s | |
| Symbols>Symbols.symbolPresent | 30 | 0.001 s | 0.001 s | |
| ptxEmitter>ptxEmitter.branchToLabel | 7 | 0.001 s | 0.001 s | |
| ...ter>ptxEmitter.emitPtxWithComments | 266 | 0.001 s | 0.001 s | |
| isdatetime | 256 | 0.001 s | 0.001 s | |
| isNodeKindEqualsOrAnon | 17 | 0.001 s | 0.001 s | |
| ptxEmitter>ptxEmitter.getErrorCheckFcn | 2 | 0.001 s | 0.001 s | |
| Symbols>Symbols.updateshapeinfo | 13 | 0.001 s | 0.001 s | |
| Atomic>Atomic.isComplex | 184 | 0.001 s | 0.001 s | |
| InternalState>InternalState.pGet | 18 | 0.001 s | 0.001 s | |
| ptxEmitter>ptxEmitter.formatComment | 51 | 0.001 s | 0.001 s | |
| isAnyDeviceSelected | 17 | 0.001 s | 0.001 s | |
| ...ate>InternalState.containsRandCall | 17 | 0.001 s | 0.001 s | |
| Atomic>Atomic.validateIsScalar | 64 | 0.001 s | 0.001 s | |
| arithmeticMapsToRealRule | 1 | 0.001 s | 0.001 s | |
| ptxEmitter>ptxEmitter.formatLabel | 24 | 0.001 s | 0.001 s | |
| ...tate>InternalState.emitAsInlinePTX | 16 | 0.001 s | 0.001 s | |

| | | | | |
|---|---|---|---|---|
| ...lState>InternalState.getMachineptr | 81 | 0.001 s | 0.001 s | |
| Atomic>Atomic.isComplexFloatingPoint | 25 | 0.001 s | 0.001 s | |
| Atomic>Atomic.mType | 17 | 0.001 s | 0.000 s | |
| GPUDevice.GPUDevice>GPUDevice.count | 1 | 0.000 s | 0.000 s | |
| ...;InternalState.getCellArrayOfWarnings | 17 | 0.000 s | 0.000 s | |
| Atomic>Atomic.isNumeric | 60 | 0.000 s | 0.000 s | |
| ...t;InternalState.containsNonStaticLoop | 17 | 0.000 s | 0.000 s | |
| mtree.count | 83 | 0.000 s | 0.000 s | |
| ...e>InternalState.setCompilationNode | 17 | 0.000 s | 0.000 s | |
| ptxEmitter>ptxEmitter.beginEpilogue | 17 | 0.000 s | 0.000 s | |
| Atomic>Atomic.isRealFloatingPoint | 7 | 0.000 s | 0.000 s | |
| Atomic>Atomic.isUnsignedInteger | 2 | 0.000 s | 0.000 s | |
| currentDeviceIndex | 17 | 0.000 s | 0.000 s | |
| mtree.isnull | 51 | 0.000 s | 0.000 s | |
| Atomic>Atomic.makeKey | 8 | 0.000 s | 0.000 s | |
| Atomic>Atomic.isComplexSingle | 12 | 0.000 s | 0.000 s | |
| ...nternalState.setNodeForErrorMechanism | 17 | 0.000 s | 0.000 s | |
| Emitter>Emitter.Emitter | 17 | 0.000 s | 0.000 s | |
| Atomic>Atomic.isScalar | 40 | 0.000 s | 0.000 s | |
| deal | 3 | 0.000 s | 0.000 s | |
| ...gt;InternalState.initializeBlockError | 34 | 0.000 s | 0.000 s | |
| pwd | 4 | 0.000 s | 0.000 s | |
| ...ate>InternalState.useDeviceLibrary | 22 | 0.000 s | 0.000 s | |
| ...e>InternalState.getCompilationNode | 17 | 0.000 s | 0.000 s | |
| ...rnalState.useDeviceLibraryForFunction | 8 | 0.000 s | 0.000 s | |
| InternalState>InternalState.getRuleset | 17 | 0.000 s | 0.000 s | |
| InternalState>InternalState.getRegP | 17 | 0.000 s | 0.000 s | |

| | | | | |
|---|---|---|---|---|
| [InternalState>InternalState.getRegRD](#) | 17 | 0.000 s | 0.000 s | |
| [InternalState>InternalState.getRegF](#) | 17 | 0.000 s | 0.000 s | |
| [InternalState>InternalState.getRegRB](#) | 17 | 0.000 s | 0.000 s | |
| [InternalState>InternalState.getRegRH](#) | 17 | 0.000 s | 0.000 s | |
| [Atomic>Atomic.isInteger](#) | 9 | 0.000 s | 0.000 s | |
| [Atomic>Atomic.isFloatingPoint](#) | 7 | 0.000 s | 0.000 s | |
| [InternalState>InternalState.getRegR](#) | 17 | 0.000 s | 0.000 s | |
| [InternalState>InternalState.getRegFD](#) | 17 | 0.000 s | 0.000 s | |
| [deviceCount](#) | 1 | 0.000 s | 0.000 s | |
| [arithmeticRule](#) | 1 | 0.000 s | 0.000 s | |
| [Atomic>Atomic.isSignedInteger](#) | 1 | 0.000 s | 0.000 s | |

**Self time** is the time spent in a function excluding the time spent in its child functions. Self time also includes overhead resulting from the process of profiling.