Comparison of the base repository

Summary of Repositories

Comparison run at 07:31PM on June 07, 2015
There are **32** differences between the two repositories

Repository **/Users/nate/repos_hsc/base/**
Revision **019d7d34166bc13d8d93c8139e16abc08c2e1663**
Branch **master**
Last commit was on **2013-12-08 06:34:27 +0900**

Repository **/Users/nate/repos_lsst/base/**
Revision **8080078c56ef7b263fa802b99239a3895db748a0**
Branch **master**
Last commit was on **2015-04-30 09:05:26 -0400**

Files only in /Users/nate/repos_hsc/base/

Files only in /Users/nate/repos_lsst/base/

doc/mainpage.dox

```
commit 8080078c56ef7b263fa802b99239a3895db748a0
Merge: 766159b a445737
Author: Jim Bosch
Date:   Thu Apr 30 09:05:26 2015 -0400

    Merge branch 'tickets/DM-2435'
```

List of the files in common

Files without links do not differ

- doc/base.inc
- python/lsstDebug.py
- python/lsst64defs.py.m4
- doc/doxygen.conf.in
- doc/SConscript
- include/lsst/base.h
- include/lsst/base/ModuleImporter.h
- ups/base.cfg
- python/lsstimport.py
- lib/SConscript
- ups/base.table
- SConstruct
- tests/SConscript
- python/SConscript
- python/lsst/__init__.py
- ups/base.build
- tests/testModuleImporter2.py
- src/ModuleImporter.cc
- .gitignore
- tests/testModuleImporterLib.i
- python/lsstcppimport.i
- python/lsst/base/__init__.py
- tests/ptr.cc
- tests/testModuleImporter1.cc

doc/base.inc

Diff:

```
                # Doxyfile 1.8.5

                # This file describes the settings to be used by the documentation sy
stem
                # doxygen (www.doxygen.org) for a project.
                #
                # All text after a double hash (##) is considered a comment and is pl
aced in
                # front of the TAG it is preceding.
                #
                # All text after a single hash (#) is considered a comment and will b
e ignored.
                # The format is:
                # TAG = value [value, ...]
                # For lists, items can also be appended using:
                # TAG += value [value, ...]
                # Values that contain spaces should be placed between quotes (\" \").

                #---------------------------------------------------------------------
-------
                # Project related configuration options
                #---------------------------------------------------------------------
-------

                # This tag specifies the encoding used for all characters in the conf
ig file
                # that follow. The default is UTF-8 which is also the encoding used f
or all text
                # before the first occurrence of this tag. Doxygen uses libiconv (or
the iconv
                # built into libc) for the transcoding. See http://www.gnu.org/softwa
re/libiconv
                # for the list of possible encodings.
                # The default value is: UTF-8.

                DOXYFILE_ENCODING      = UTF-8

                # The PROJECT_NAME tag is a single word (or a sequence of words surro
unded by
                # double-quotes, unless you are using Doxywizard) that should identif
y the
                # project for which the documentation is generated. This name is used
```

```
 in the
               # title of most generated pages and in a few other places.
               # The default value is: My Project.

               # PROJECT_NAME           =

               # The PROJECT_NUMBER tag can be used to enter a project or revision n
umber. This
               # could be handy for archiving the generated documentation or if some
 version
               # control system is used.

               # PROJECT_NUMBER         =

               # Using the PROJECT_BRIEF tag one can provide an optional one line de
scription
               # for a project that appears at the top of each page and should give
viewer a
               # quick idea about the purpose of the project. Keep the description s
hort.

               # PROJECT_BRIEF          =

               # With the PROJECT_LOGO tag one can specify an logo or icon that is i
ncluded in
               # the documentation. The maximum height of the logo should not exceed
 55 pixels
               # and the maximum width should not exceed 200 pixels. Doxygen will co
py the logo
               # to the output directory.

               PROJECT_LOGO           =

               # The OUTPUT_DIRECTORY tag is used to specify the (relative or absolu
te) path
               # into which the generated documentation will be written. If a relati
ve path is
               # entered, it will be relative to the location where doxygen was star
ted. If
               # left blank the current directory will be used.

               OUTPUT_DIRECTORY       =

               # If the CREATE_SUBDIRS tag is set to YES, then doxygen will create 4
096 sub-
```

```
                # directories (in 2 levels) under the output directory of each output
 format and
                # will distribute the generated files over these directories. Enablin
g this
                # option can be useful when feeding doxygen a huge amount of source f
iles, where
                # putting all generated files in the same directory would otherwise c
auses
                # performance problems for the file system.
                # The default value is: NO.

                CREATE_SUBDIRS         = NO

                # The OUTPUT_LANGUAGE tag is used to specify the language in which al
l
                # documentation generated by doxygen is written. Doxygen will use thi
s
                # information to generate all constant output in the proper language.
                # Possible values are: Afrikaans, Arabic, Brazilian, Catalan, Chinese
, Chinese-
                # Traditional, Croatian, Czech, Danish, Dutch, English, Esperanto, Fa
rsi,
                # Finnish, French, German, Greek, Hungarian, Italian, Japanese, Japan
ese-en,
                # Korean, Korean-en, Latvian, Norwegian, Macedonian, Persian, Polish,
                # Portuguese, Romanian, Russian, Serbian, Slovak, Slovene, Spanish, S
wedish,
                # Turkish, Ukrainian and Vietnamese.
                # The default value is: English.

                OUTPUT_LANGUAGE        = English

                # If the BRIEF_MEMBER_DESC tag is set to YES doxygen will include bri
ef member
                # descriptions after the members that are listed in the file and clas
s
                # documentation (similar to Javadoc). Set to NO to disable this.
                # The default value is: YES.

                BRIEF_MEMBER_DESC      = YES

                # If the REPEAT_BRIEF tag is set to YES doxygen will prepend the brie
f
                # description of a member or function before the detailed description
                #
```

```
                # Note: If both HIDE_UNDOC_MEMBERS and BRIEF_MEMBER_DESC are set to N
O, the
                # brief descriptions will be completely suppressed.
                # The default value is: YES.

                REPEAT_BRIEF           = YES

                # This tag implements a quasi-intelligent brief description abbreviat
or that is
                # used to form the text in various listings. Each string in this list
, if found
                # as the leading text of the brief description, will be stripped from
 the text
                # and the result, after processing the whole list, is used as the ann
otated
                # text. Otherwise, the brief description is used as-is. If left blank
, the
                # following values are used ($name is automatically replaced with the
 name of
                # the entity):The $name class, The $name widget, The $name file, is,
provides,
                # specifies, contains, represents, a, an and the.

                ABBREVIATE_BRIEF       =

                # If the ALWAYS_DETAILED_SEC and REPEAT_BRIEF tags are both set to YE
S then
                # doxygen will generate a detailed section even if there is only a br
ief
                # description.
                # The default value is: NO.

                ALWAYS_DETAILED_SEC    = NO

                # If the INLINE_INHERITED_MEMB tag is set to YES, doxygen will show a
ll
                # inherited members of a class in the documentation of that class as
if those
                # members were ordinary class members. Constructors, destructors and
assignment
                # operators of the base classes will not be shown.
                # The default value is: NO.

                INLINE_INHERITED_MEMB  = NO
```

```
                # If the FULL_PATH_NAMES tag is set to YES doxygen will prepend the f
ull path
                # before files name in the file list and in the header files. If set
to NO the
                # shortest path that makes the file name unique will be used
                # The default value is: YES.

                FULL_PATH_NAMES        = YES

                # The STRIP_FROM_PATH tag can be used to strip a user-defined part of
 the path.
                # Stripping is only done if one of the specified strings matches the
left-hand
                # part of the path. The tag can be used to show relative paths in the
 file list.
                # If left blank the directory from which doxygen is run is used as th
e path to
                # strip.
                #
                # Note that you can specify absolute paths here, but also relative pa
ths, which
                # will be relative from the directory where doxygen is started.
                # This tag requires that the tag FULL_PATH_NAMES is set to YES.

                STRIP_FROM_PATH        =

                # The STRIP_FROM_INC_PATH tag can be used to strip a user-defined par
t of the
                # path mentioned in the documentation of a class, which tells the rea
der which
                # header file to include in order to use a class. If left blank only
the name of
                # the header file containing the class definition is used. Otherwise
one should
                # specify the list of include paths that are normally passed to the c
ompiler
                # using the -I flag.

                STRIP_FROM_INC_PATH    =

                # If the SHORT_NAMES tag is set to YES, doxygen will generate much sh
orter (but
                # less readable) file names. This can be useful is your file systems
doesn't
                # support long names like on DOS, Mac, or CD-ROM.
```

```
                # The default value is: NO.

                SHORT_NAMES            = NO

                # If the JAVADOC_AUTOBRIEF tag is set to YES then doxygen will interp
ret the
                # first line (until the first dot) of a Javadoc-style comment as the
brief
                # description. If set to NO, the Javadoc-style will behave just like
regular Qt-
                # style comments (thus requiring an explicit @brief command for a bri
ef
                # description.)
                # The default value is: NO.

                JAVADOC_AUTOBRIEF      = NO

                # If the QT_AUTOBRIEF tag is set to YES then doxygen will interpret t
he first
                # line (until the first dot) of a Qt-style comment as the brief descr
iption. If
                # set to NO, the Qt-style will behave just like regular Qt-style comm
ents (thus
                # requiring an explicit \brief command for a brief description.)
                # The default value is: NO.

                QT_AUTOBRIEF           = NO

                # The MULTILINE_CPP_IS_BRIEF tag can be set to YES to make doxygen tr
eat a
                # multi-line C++ special comment block (i.e. a block of //! or /// co
mments) as
                # a brief description. This used to be the default behavior. The new
default is
                # to treat a multi-line C++ comment block as a detailed description.
Set this
                # tag to YES if you prefer the old behavior instead.
                #
                # Note that setting this tag to YES also means that rational rose com
ments are
                # not recognized any more.
                # The default value is: NO.

                MULTILINE_CPP_IS_BRIEF = NO
```

```
                # If the INHERIT_DOCS tag is set to YES then an undocumented member i
nherits the
                # documentation from any documented member that it re-implements.
                # The default value is: YES.

                INHERIT_DOCS           = YES

                # If the SEPARATE_MEMBER_PAGES tag is set to YES, then doxygen will p
roduce a
                # new page for each member. If set to NO, the documentation of a memb
er will be
                # part of the file/class/namespace that contains it.
                # The default value is: NO.

                SEPARATE_MEMBER_PAGES  = NO

                # The TAB_SIZE tag can be used to set the number of spaces in a tab.
Doxygen
                # uses this value to replace tabs by spaces in code fragments.
                # Minimum value: 1, maximum value: 16, default value: 4.

                TAB_SIZE               = 8

                # This tag can be used to specify a number of aliases that act as com
mands in
                # the documentation. An alias has the form:
                # name=value
                # For example adding
                # "sideeffect=@par Side Effects:\n"
                # will allow you to put the command \sideeffect (or @sideeffect) in t
he
                # documentation, which will result in a user-defined paragraph with h
eading
                # "Side Effects:". You can put \n's in the value part of an alias to
insert
                # newlines.

                ALIASES                =

                # This tag can be used to specify a number of word-keyword mappings (
TCL only).
                # A mapping has the form "name=value". For example adding "class=itcl
::class"
                # will allow you to use the command class in the itcl::class meaning.
```

```
TCL_SUBST              =

# Set the OPTIMIZE_OUTPUT_FOR_C tag to YES if your project consists o
f C sources
# only. Doxygen will then generate output that is more tailored for C
. For
# instance, some of the names that are used will be different. The li
st of all
# members will be omitted, etc.
# The default value is: NO.

OPTIMIZE_OUTPUT_FOR_C  = NO

# Set the OPTIMIZE_OUTPUT_JAVA tag to YES if your project consists of
 Java or
# Python sources only. Doxygen will then generate output that is more
 tailored
# for that language. For instance, namespaces will be presented as pa
ckages,
# qualified scopes will look different, etc.
# The default value is: NO.

OPTIMIZE_OUTPUT_JAVA   = NO

# Set the OPTIMIZE_FOR_FORTRAN tag to YES if your project consists of
 Fortran
# sources. Doxygen will then generate output that is tailored for For
tran.
# The default value is: NO.

OPTIMIZE_FOR_FORTRAN   = NO

# Set the OPTIMIZE_OUTPUT_VHDL tag to YES if your project consists of
 VHDL
# sources. Doxygen will then generate output that is tailored for VHD
L.
# The default value is: NO.

OPTIMIZE_OUTPUT_VHDL   = NO

# Doxygen selects the parser to use depending on the extension of the
 files it
# parses. With this tag you can assign which parser to use for a give
n
# extension. Doxygen has a built-in mapping, but you can override or
```

```
extend it
                # using this tag. The format is ext=language, where ext is a file ext
ension, and
                # language is one of the parsers supported by doxygen: IDL, Java, Jav
ascript,
                # C#, C, C++, D, PHP, Objective-C, Python, Fortran, VHDL. For instanc
e to make
                # doxygen treat .inc files as Fortran files (default is PHP), and .f
files as C
                # (default is Fortran), use: inc=Fortran f=C.
                #
                # Note For files without extension you can use no_extension as a plac
eholder.
                #
                # Note that for custom extensions you also need to set FILE_PATTERNS
otherwise
                # the files are not read by doxygen.

                EXTENSION_MAPPING      =

                # If the MARKDOWN_SUPPORT tag is enabled then doxygen pre-processes a
ll comments
                # according to the Markdown format, which allows for more readable
                # documentation. See http://daringfireball.net/projects/markdown/ for
 details.
                # The output of markdown processing is further processed by doxygen,
so you can
                # mix doxygen, HTML, and XML commands with Markdown formatting. Disab
le only in
                # case of backward compatibilities issues.
                # The default value is: YES.

    281  019d7d34 - MARKDOWN_SUPPORT       = NO

             ?                            ^^

    281  548d41d8 + MARKDOWN_SUPPORT       = YES

             ?                            ^^^

                # When enabled doxygen tries to link words that correspond to documen
ted
```

```
                # classes, or namespaces to their corresponding documentation. Such a
 link can
                # be prevented in individual cases by by putting a % sign in front of
 the word
                # or globally by setting AUTOLINK_SUPPORT to NO.
                # The default value is: YES.

                AUTOLINK_SUPPORT       = NO

                # If you use STL classes (i.e. std::string, std::vector, etc.) but do
 not want
                # to include (a tag file for) the STL sources as input, then you shou
ld set this
                # tag to YES in order to let doxygen match functions declarations and
                # definitions whose arguments contain STL classes (e.g. func(std::str
ing);
                # versus func(std::string) {}). This also make the inheritance and co
llaboration
                # diagrams that involve STL classes more complete and accurate.
                # The default value is: NO.

                BUILTIN_STL_SUPPORT    = YES

                # If you use Microsoft's C++/CLI language, you should set this option
 to YES to
                # enable parsing support.
                # The default value is: NO.

                CPP_CLI_SUPPORT        = NO

                # Set the SIP_SUPPORT tag to YES if your project consists of sip (see
:
                # http://www.riverbankcomputing.co.uk/software/sip/intro) sources onl
y. Doxygen
                # will parse them like normal C++ but will assume all classes use pub
lic instead
                # of private inheritance when no explicit protection keyword is prese
nt.
                # The default value is: NO.

                SIP_SUPPORT            = NO

                # For Microsoft's IDL there are propget and propput attributes to ind
icate
                # getter and setter methods for a property. Setting this option to YE
```

```
S will make
                # doxygen to replace the get and set methods by a property in the doc
umentation.
                # This will only work if the methods are indeed getting or setting a
simple
                # type. If this is not the case, or you want to show the methods anyw
ay, you
                # should set this option to NO.
                # The default value is: YES.

                IDL_PROPERTY_SUPPORT   = NO

                # If member grouping is used in the documentation and the DISTRIBUTE_
GROUP_DOC
                # tag is set to YES, then doxygen will reuse the documentation of the
 first
                # member in the group (if any) for the other members of the group. By
 default
                # all members of a group must be documented explicitly.
                # The default value is: NO.

                DISTRIBUTE_GROUP_DOC   = YES

                # Set the SUBGROUPING tag to YES to allow class member groups of the
same type
                # (for instance a group of public functions) to be put as a subgroup
of that
                # type (e.g. under the Public Functions section). Set it to NO to pre
vent
                # subgrouping. Alternatively, this can be done per class using the
                # \nosubgrouping command.
                # The default value is: YES.

                SUBGROUPING            = YES

                # When the INLINE_GROUPED_CLASSES tag is set to YES, classes, structs
 and unions
                # are shown inside the group in which they are included (e.g. using \
ingroup)
                # instead of on a separate page (for HTML and Man pages) or section (
for LaTeX
                # and RTF).
                #
                # Note that this feature does not work in combination with
                # SEPARATE_MEMBER_PAGES.
```

```
                # The default value is: NO.

                INLINE_GROUPED_CLASSES = NO

                # When the INLINE_SIMPLE_STRUCTS tag is set to YES, structs, classes,
 and unions
                # with only public data fields or simple typedef fields will be shown
 inline in
                # the documentation of the scope in which they are defined (i.e. file
,
                # namespace, or group documentation), provided this scope is document
ed. If set
                # to NO, structs, classes, and unions are shown on a separate page (f
or HTML and
                # Man pages) or section (for LaTeX and RTF).
                # The default value is: NO.

                INLINE_SIMPLE_STRUCTS  = NO

                # When TYPEDEF_HIDES_STRUCT tag is enabled, a typedef of a struct, un
ion, or
                # enum is documented as struct, union, or enum with the name of the t
ypedef. So
                # typedef struct TypeS {} TypeT, will appear in the documentation as
a struct
                # with name TypeT. When disabled the typedef will appear as a member
of a file,
                # namespace, or class. And the struct will be named TypeS. This can t
ypically be
                # useful for C code in case the coding convention dictates that all c
ompound
                # types are typedef'ed and only the typedef is referenced, never the
tag name.
                # The default value is: NO.

                TYPEDEF_HIDES_STRUCT   = NO

                # The size of the symbol lookup cache can be set using LOOKUP_CACHE_S
IZE. This
                # cache is used to resolve symbols given their name and scope. Since
this can be
                # an expensive process and often the same symbol appears multiple tim
es in the
                # code, doxygen keeps a cache of pre-resolved symbols. If the cache i
s too small
```

```
                # doxygen will become slower. If the cache is too large, memory is wa
sted. The
                # cache size is given by this formula: 2^(16+LOOKUP_CACHE_SIZE). The
valid range
                # is 0..9, the default is 0, corresponding to a cache size of 2^16=65
536
                # symbols. At the end of a run doxygen will report the cache usage an
d suggest
                # the optimal cache size from a speed point of view.
                # Minimum value: 0, maximum value: 9, default value: 0.

                LOOKUP_CACHE_SIZE      = 0

                #---------------------------------------------------------------------
-------
                # Build related configuration options
                #---------------------------------------------------------------------
-------

                # If the EXTRACT_ALL tag is set to YES doxygen will assume all entiti
es in
                # documentation are documented, even if no documentation was availabl
e. Private
                # class members and static file members will be hidden unless the
                # EXTRACT_PRIVATE respectively EXTRACT_STATIC tags are set to YES.
                # Note: This will also disable the warnings about undocumented member
s that are
                # normally produced when WARNINGS is set to YES.
                # The default value is: NO.

                EXTRACT_ALL            = YES

                # If the EXTRACT_PRIVATE tag is set to YES all private members of a c
lass will
                # be included in the documentation.
                # The default value is: NO.

                EXTRACT_PRIVATE        = NO

                # If the EXTRACT_PACKAGE tag is set to YES all members with package o
r internal
                # scope will be included in the documentation.
                # The default value is: NO.

                EXTRACT_PACKAGE        = NO
```

```
                # If the EXTRACT_STATIC tag is set to YES all static members of a fil
e will be
                # included in the documentation.
                # The default value is: NO.

                EXTRACT_STATIC         = NO

                # If the EXTRACT_LOCAL_CLASSES tag is set to YES classes (and structs
) defined
                # locally in source files will be included in the documentation. If s
et to NO
                # only classes defined in header files are included. Does not have an
y effect
                # for Java sources.
                # The default value is: YES.

                EXTRACT_LOCAL_CLASSES  = YES

                # This flag is only useful for Objective-C code. When set to YES loca
l methods,
                # which are defined in the implementation section but not in the inte
rface are
                # included in the documentation. If set to NO only methods in the int
erface are
                # included.
                # The default value is: NO.

                EXTRACT_LOCAL_METHODS  = NO

                # If this flag is set to YES, the members of anonymous namespaces wil
l be
                # extracted and appear in the documentation as a namespace called
                # 'anonymous_namespace{file}', where file will be replaced with the b
ase name of
                # the file that contains the anonymous namespace. By default anonymou
s namespace
                # are hidden.
                # The default value is: NO.

                EXTRACT_ANON_NSPACES   = NO

                # If the HIDE_UNDOC_MEMBERS tag is set to YES, doxygen will hide all
                # undocumented members inside documented classes or files. If set to
NO these
```

```
                # members will be included in the various overviews, but no documenta
tion
                # section is generated. This option has no effect if EXTRACT_ALL is e
nabled.
                # The default value is: NO.

                HIDE_UNDOC_MEMBERS     = NO

                # If the HIDE_UNDOC_CLASSES tag is set to YES, doxygen will hide all
                # undocumented classes that are normally visible in the class hierarc
hy. If set
                # to NO these classes will be included in the various overviews. This
 option has
                # no effect if EXTRACT_ALL is enabled.
                # The default value is: NO.

                HIDE_UNDOC_CLASSES     = NO

                # If the HIDE_FRIEND_COMPOUNDS tag is set to YES, doxygen will hide a
ll friend
                # (class|struct|union) declarations. If set to NO these declarations
will be
                # included in the documentation.
                # The default value is: NO.

                HIDE_FRIEND_COMPOUNDS  = NO

                # If the HIDE_IN_BODY_DOCS tag is set to YES, doxygen will hide any
                # documentation blocks found inside the body of a function. If set to
 NO these
                # blocks will be appended to the function's detailed documentation bl
ock.
                # The default value is: NO.

                HIDE_IN_BODY_DOCS      = NO

                # The INTERNAL_DOCS tag determines if documentation that is typed aft
er a
                # \internal command is included. If the tag is set to NO then the doc
umentation
                # will be excluded. Set it to YES to include the internal documentati
on.
                # The default value is: NO.

                INTERNAL_DOCS          = NO
```

```
                # If the CASE_SENSE_NAMES tag is set to NO then doxygen will only gen
erate file
                # names in lower-case letters. If set to YES upper-case letters are a
lso
                # allowed. This is useful if you have classes or files whose names on
ly differ
                # in case and if your file system supports case sensitive file names.
 Windows
                # and Mac users are advised to set this option to NO.
                # The default value is: system dependent.

                CASE_SENSE_NAMES       = NO

                # If the HIDE_SCOPE_NAMES tag is set to NO then doxygen will show mem
bers with
                # their full class and namespace scopes in the documentation. If set
to YES the
                # scope will be hidden.
                # The default value is: NO.

                HIDE_SCOPE_NAMES       = NO

                # If the SHOW_INCLUDE_FILES tag is set to YES then doxygen will put a
 list of
                # the files that are included by a file in the documentation of that
file.
                # The default value is: YES.

                SHOW_INCLUDE_FILES     = YES

                # If the FORCE_LOCAL_INCLUDES tag is set to YES then doxygen will lis
t include
                # files with double quotes in the documentation rather than with shar
p brackets.
                # The default value is: NO.

                FORCE_LOCAL_INCLUDES   = NO

                # If the INLINE_INFO tag is set to YES then a tag [inline] is inserte
d in the
                # documentation for inline members.
                # The default value is: YES.

                INLINE_INFO            = YES
```

```
                # If the SORT_MEMBER_DOCS tag is set to YES then doxygen will sort th
e
                # (detailed) documentation of file and class members alphabetically b
y member
                # name. If set to NO the members will appear in declaration order.
                # The default value is: YES.

                SORT_MEMBER_DOCS       = YES

                # If the SORT_BRIEF_DOCS tag is set to YES then doxygen will sort the
 brief
                # descriptions of file, namespace and class members alphabetically by
 member
                # name. If set to NO the members will appear in declaration order.
                # The default value is: NO.

                SORT_BRIEF_DOCS        = NO

                # If the SORT_MEMBERS_CTORS_1ST tag is set to YES then doxygen will s
ort the
                # (brief and detailed) documentation of class members so that constru
ctors and
                # destructors are listed first. If set to NO the constructors will ap
pear in the
                # respective orders defined by SORT_BRIEF_DOCS and SORT_MEMBER_DOCS.
                # Note: If SORT_BRIEF_DOCS is set to NO this option is ignored for so
rting brief
                # member documentation.
                # Note: If SORT_MEMBER_DOCS is set to NO this option is ignored for s
orting
                # detailed member documentation.
                # The default value is: NO.

                SORT_MEMBERS_CTORS_1ST = YES

                # If the SORT_GROUP_NAMES tag is set to YES then doxygen will sort th
e hierarchy
                # of group names into alphabetical order. If set to NO the group name
s will
                # appear in their defined order.
                # The default value is: NO.

                SORT_GROUP_NAMES       = NO
```

```
                # If the SORT_BY_SCOPE_NAME tag is set to YES, the class list will be
 sorted by
                # fully-qualified names, including namespaces. If set to NO, the clas
s list will
                # be sorted only by class name, not including the namespace part.
                # Note: This option is not very useful if HIDE_SCOPE_NAMES is set to
YES.
                # Note: This option applies only to the class list, not to the alphab
etical
                # list.
                # The default value is: NO.

                SORT_BY_SCOPE_NAME     = YES

                # If the STRICT_PROTO_MATCHING option is enabled and doxygen fails to
 do proper
                # type resolution of all parameters of a function it will reject a ma
tch between
                # the prototype and the implementation of a member function even if t
here is
                # only one candidate or it is obvious which candidate to choose by do
ing a
                # simple string match. By disabling STRICT_PROTO_MATCHING doxygen wil
l still
                # accept a match between prototype and implementation in such cases.
                # The default value is: NO.

                STRICT_PROTO_MATCHING  = NO

                # The GENERATE_TODOLIST tag can be used to enable ( YES) or disable (
 NO) the
                # todo list. This list is created by putting \todo commands in the
                # documentation.
                # The default value is: YES.

                GENERATE_TODOLIST      = YES

                # The GENERATE_TESTLIST tag can be used to enable ( YES) or disable (
 NO) the
                # test list. This list is created by putting \test commands in the
                # documentation.
                # The default value is: YES.

                GENERATE_TESTLIST      = YES
```

```
                # The GENERATE_BUGLIST tag can be used to enable ( YES) or disable (
NO) the bug
                # list. This list is created by putting \bug commands in the document
ation.
                # The default value is: YES.

                GENERATE_BUGLIST       = YES

                # The GENERATE_DEPRECATEDLIST tag can be used to enable ( YES) or dis
able ( NO)
                # the deprecated list. This list is created by putting \deprecated co
mmands in
                # the documentation.
                # The default value is: YES.

                GENERATE_DEPRECATEDLIST= YES

                # The ENABLED_SECTIONS tag can be used to enable conditional document
ation
                # sections, marked by \if  ... \endif and \cond
                # ... \endcond blocks.

                ENABLED_SECTIONS       =

                # The MAX_INITIALIZER_LINES tag determines the maximum number of line
s that the
                # initial value of a variable or macro / define can have for it to ap
pear in the
                # documentation. If the initializer consists of more lines than speci
fied here
                # it will be hidden. Use a value of 0 to hide initializers completely
. The
                # appearance of the value of individual variables and macros / define
s can be
                # controlled using \showinitializer or \hideinitializer command in th
e
                # documentation regardless of this setting.
                # Minimum value: 0, maximum value: 10000, default value: 30.

                MAX_INITIALIZER_LINES  = 30

                # Set the SHOW_USED_FILES tag to NO to disable the list of files gene
rated at
                # the bottom of the documentation of classes and structs. If set to Y
ES the list
```

```
                # will mention the files that were used to generate the documentation
.
                # The default value is: YES.

                SHOW_USED_FILES        = YES

                # Set the SHOW_FILES tag to NO to disable the generation of the Files
 page. This
                # will remove the Files entry from the Quick Index and from the Folde
r Tree View
                # (if specified).
                # The default value is: YES.

                SHOW_FILES             = YES

                # Set the SHOW_NAMESPACES tag to NO to disable the generation of the
Namespaces
                # page. This will remove the Namespaces entry from the Quick Index an
d from the
                # Folder Tree View (if specified).
                # The default value is: YES.

                SHOW_NAMESPACES        = YES

                # The FILE_VERSION_FILTER tag can be used to specify a program or scr
ipt that
                # doxygen should invoke to get the current version for each file (typ
ically from
                # the version control system). Doxygen will invoke the program by exe
cuting (via
                # popen()) the command command input-file, where command is the value
 of the
                # FILE_VERSION_FILTER tag, and input-file is the name of an input fil
e provided
                # by doxygen. Whatever the program writes to standard output is used
as the file
                # version. For an example see the documentation.

                FILE_VERSION_FILTER    =

                # The LAYOUT_FILE tag can be used to specify a layout file which will
 be parsed
                # by doxygen. The layout file controls the global structure of the ge
nerated
                # output files in an output format independent way. To create the lay
```

```
out file
                # that represents doxygen's defaults, run doxygen with the -l option.
 You can
                # optionally specify a file name after the option, if omitted Doxygen
Layout.xml
                # will be used as the name of the layout file.
                #
                # Note that if you run doxygen from a directory containing a file cal
led
                # DoxygenLayout.xml, doxygen will parse it automatically even if the
LAYOUT_FILE
                # tag is left empty.

                LAYOUT_FILE            =

                # The CITE_BIB_FILES tag can be used to specify one or more bib files
 containing
                # the reference definitions. This must be a list of .bib files. The .
bib
                # extension is automatically appended if omitted. This requires the b
ibtex tool
                # to be installed. See also http://en.wikipedia.org/wiki/BibTeX for m
ore info.
                # For LaTeX the style of the bibliography can be controlled using
                # LATEX_BIB_STYLE. To use this feature you need bibtex and perl avail
able in the
                # search path. Do not use file names with spaces, bibtex cannot handl
e them. See
                # also \cite for info how to create references.

                CITE_BIB_FILES         =

                #---------------------------------------------------------------------
-------
                # Configuration options related to warning and progress messages
                #---------------------------------------------------------------------
-------

                # The QUIET tag can be used to turn on/off the messages that are gene
rated to
                # standard output by doxygen. If QUIET is set to YES this implies tha
t the
                # messages are off.
                # The default value is: NO.
```

```
                QUIET                  = YES

                # The WARNINGS tag can be used to turn on/off the warning messages th
at are
                # generated to standard error ( stderr) by doxygen. If WARNINGS is se
t to YES
                # this implies that the warnings are on.
                #
                # Tip: Turn warnings on while writing the documentation.
                # The default value is: YES.

                WARNINGS               = YES

                # If the WARN_IF_UNDOCUMENTED tag is set to YES, then doxygen will ge
nerate
                # warnings for undocumented members. If EXTRACT_ALL is set to YES the
n this flag
                # will automatically be disabled.
                # The default value is: YES.

                WARN_IF_UNDOCUMENTED   = YES

                # If the WARN_IF_DOC_ERROR tag is set to YES, doxygen will generate w
arnings for
                # potential errors in the documentation, such as not documenting some
 parameters
                # in a documented function, or documenting parameters that don't exis
t or using
                # markup commands wrongly.
                # The default value is: YES.

                WARN_IF_DOC_ERROR      = YES

                # This WARN_NO_PARAMDOC option can be enabled to get warnings for fun
ctions that
                # are documented, but have no documentation for their parameters or r
eturn
                # value. If set to NO doxygen will only warn about wrong or incomplet
e parameter
                # documentation, but not about the absence of documentation.
                # The default value is: NO.

                WARN_NO_PARAMDOC       = YES

                # The WARN_FORMAT tag determines the format of the warning messages t
```

```
hat doxygen
                # can produce. The string should contain the $file, $line, and $text
tags, which
                # will be replaced by the file and line number from which the warning
 originated
                # and the warning text. Optionally the format may contain $version, w
hich will
                # be replaced by the version of the file (if it could be obtained via
                # FILE_VERSION_FILTER)
                # The default value is: $file:$line: $text.

                WARN_FORMAT            = "$file:$line: $text"

                # The WARN_LOGFILE tag can be used to specify a file to which warning
 and error
                # messages should be written. If left blank the output is written to
standard
                # error (stderr).

                WARN_LOGFILE           =

                #---------------------------------------------------------------------
-------
                # Configuration options related to the input files
                #---------------------------------------------------------------------
-------

                # The INPUT tag is used to specify the files and/or directories that
contain
                # documented source files. You may enter file names like myfile.cpp o
r
                # directories like /usr/src/myproject. Separate the files or director
ies with
                # spaces.
                # Note: If this tag is empty the current directory is searched.

                INPUT                  =

                # This tag can be used to specify the character encoding of the sourc
e files
                # that doxygen parses. Internally doxygen uses the UTF-8 encoding. Do
xygen uses
                # libiconv (or the iconv built into libc) for the transcoding. See th
e libiconv
                # documentation (see: http://www.gnu.org/software/libiconv) for the l
```

```
ist of
                # possible encodings.
                # The default value is: UTF-8.

                INPUT_ENCODING         = UTF-8

                # If the value of the INPUT tag contains directories, you can use the
                # FILE_PATTERNS tag to specify one or more wildcard patterns (like *.
cpp and
                # *.h) to filter out the source-files in the directories. If left bla
nk the
                # following patterns are tested:*.c, *.cc, *.cxx, *.cpp, *.c++, *.jav
a, *.ii,
                # *.ixx, *.ipp, *.i++, *.inl, *.idl, *.ddl, *.odl, *.h, *.hh, *.hxx,
*.hpp,
                # *.h++, *.cs, *.d, *.php, *.php4, *.php5, *.phtml, *.inc, *.m, *.mar
kdown,
                # *.md, *.mm, *.dox, *.py, *.f90, *.f, *.for, *.tcl, *.vhd, *.vhdl, *
.ucf,
                # *.qsf, *.as and *.js.

                FILE_PATTERNS          =

                # The RECURSIVE tag can be used to specify whether or not subdirector
ies should
                # be searched for input files as well.
                # The default value is: NO.

                RECURSIVE              = NO

                # The EXCLUDE tag can be used to specify files and/or directories tha
t should be
                # excluded from the INPUT source files. This way you can easily exclu
de a
                # subdirectory from a directory tree whose root is specified with the
 INPUT tag.
                #
                # Note that relative paths are relative to the directory from which d
oxygen is
                # run.

                EXCLUDE                =

                # The EXCLUDE_SYMLINKS tag can be used to select whether or not files
 or
```

```
                # directories that are symbolic links (a Unix file system feature) ar
e excluded
                # from the input.
                # The default value is: NO.

                EXCLUDE_SYMLINKS       = NO

                # If the value of the INPUT tag contains directories, you can use the
                # EXCLUDE_PATTERNS tag to specify one or more wildcard patterns to ex
clude
                # certain files from those directories.
                #
                # Note that the wildcards are matched against the file with absolute
path, so to
                # exclude all test directories for example use the pattern */test/*

                EXCLUDE_PATTERNS       = */.svn \
                                         */.sconf_temp

                # The EXCLUDE_SYMBOLS tag can be used to specify one or more symbol n
ames
                # (namespaces, classes, functions, etc.) that should be excluded from
 the
                # output. The symbol name can be a fully qualified name, a word, or i
f the
                # wildcard * is used, a substring. Examples: ANamespace, AClass,
                # AClass::ANamespace, ANamespace::*Test
                #
                # Note that the wildcards are matched against the file with absolute
path, so to
                # exclude all test directories use the pattern */test/*

                EXCLUDE_SYMBOLS        =

                # The EXAMPLE_PATH tag can be used to specify one or more files or di
rectories
                # that contain example code fragments that are included (see the \inc
lude
                # command).

                EXAMPLE_PATH           =

                # If the value of the EXAMPLE_PATH tag contains directories, you can
use the
                # EXAMPLE_PATTERNS tag to specify one or more wildcard pattern (like
```

```
*.cpp and
                # *.h) to filter out the source-files in the directories. If left bla
nk all
                # files are included.

                EXAMPLE_PATTERNS       =

                # If the EXAMPLE_RECURSIVE tag is set to YES then subdirectories will
 be
                # searched for input files to be used with the \include or \dontinclu
de commands
                # irrespective of the value of the RECURSIVE tag.
                # The default value is: NO.

                EXAMPLE_RECURSIVE      = NO

                # The IMAGE_PATH tag can be used to specify one or more files or dire
ctories
                # that contain images that are to be included in the documentation (s
ee the
                # \image command).

                IMAGE_PATH             =

                # The INPUT_FILTER tag can be used to specify a program that doxygen
should
                # invoke to filter for each input file. Doxygen will invoke the filte
r program
                # by executing (via popen()) the command:
                #
                #
                #
                # where  is the value of the INPUT_FILTER tag, and  is the
                # name of an input file. Doxygen will then use the output that the fi
lter
                # program writes to standard output. If FILTER_PATTERNS is specified,
 this tag
                # will be ignored.
                #
                # Note that the filter must not add or remove lines; it is applied be
fore the
                # code is scanned, but not when the output code is generated. If line
s are added
                # or removed, the anchors will not be placed correctly.
```

```
INPUT_FILTER           =

# The FILTER_PATTERNS tag can be used to specify filters on a per fil
e pattern
# basis. Doxygen will compare the file name with each pattern and app
ly the
# filter if there is a match. The filters are a list of the form: pat
tern=filter
# (like *.cpp=my_cpp_filter). See INPUT_FILTER for further informatio
n on how
# filters are used. If the FILTER_PATTERNS tag is empty or if none of
 the
# patterns match the file name, INPUT_FILTER is applied.

FILTER_PATTERNS        =

# If the FILTER_SOURCE_FILES tag is set to YES, the input filter (if
set using
# INPUT_FILTER ) will also be used to filter the input files that are
 used for
# producing the source files to browse (i.e. when SOURCE_BROWSER is s
et to YES).
# The default value is: NO.

FILTER_SOURCE_FILES    = NO

# The FILTER_SOURCE_PATTERNS tag can be used to specify source filter
s per file
# pattern. A pattern will override the setting for FILTER_PATTERN (if
 any) and
# it is also possible to disable source filtering for a specific patt
ern using
# *.ext= (so without naming a filter).
# This tag requires that the tag FILTER_SOURCE_FILES is set to YES.

FILTER_SOURCE_PATTERNS =

# If the USE_MDFILE_AS_MAINPAGE tag refers to the name of a markdown
file that
# is part of the input, its contents will be placed on the main page
# (index.html). This can be useful if you have a project on for insta
nce GitHub
# and want to reuse the introduction page also for the doxygen output
.
```

```
                USE_MDFILE_AS_MAINPAGE =

                #---------------------------------------------------------------------
-------
                # Configuration options related to source browsing
                #---------------------------------------------------------------------
-------

                # If the SOURCE_BROWSER tag is set to YES then a list of source files
 will be
                # generated. Documented entities will be cross-referenced with these
sources.
                #
                # Note: To get rid of all source code in the generated output, make s
ure that
                # also VERBATIM_HEADERS is set to NO.
                # The default value is: NO.
```

```
886  2d9d6fcc - SOURCE_BROWSER         = NO
             ?                           ^^
886  f8e3da99 + SOURCE_BROWSER         = YES
             ?                           ^^^
```

```
                # Setting the INLINE_SOURCES tag to YES will include the body of func
tions,
                # classes and enums directly into the documentation.
                # The default value is: NO.

                INLINE_SOURCES         = NO

                # Setting the STRIP_CODE_COMMENTS tag to YES will instruct doxygen to
 hide any
                # special comment blocks from generated source code fragments. Normal
 C, C++ and
                # Fortran comments will always remain visible.
                # The default value is: YES.

                STRIP_CODE_COMMENTS    = YES
```

```
                # If the REFERENCED_BY_RELATION tag is set to YES then for each docum
ented
                # function all documented functions referencing it will be listed.
                # The default value is: NO.

    905  2d9d6fcc - REFERENCED_BY_RELATION = YES
             ?                            ^^^
    905  f3520995 + REFERENCED_BY_RELATION = NO
             ?                            ^^

                # If the REFERENCES_RELATION tag is set to YES then for each document
ed function
                # all documented entities called/used by that function will be listed
.
                # The default value is: NO.

    911  2d9d6fcc - REFERENCES_RELATION    = YES
             ?                            ^^^
    911  f3520995 + REFERENCES_RELATION    = NO
             ?                            ^^

                # If the REFERENCES_LINK_SOURCE tag is set to YES and SOURCE_BROWSER
tag is set
                # to YES, then the hyperlinks from functions in REFERENCES_RELATION a
nd
                # REFERENCED_BY_RELATION lists will link to the source code. Otherwis
e they will
                # link to the documentation.
                # The default value is: YES.

                REFERENCES_LINK_SOURCE = YES

                # If SOURCE_TOOLTIPS is enabled (the default) then hovering a hyperli
nk in the
```

```
                # source code will show a tooltip with additional information such as
 prototype,
                # brief description and links to the definition and documentation. Si
nce this
                # will make the HTML file larger and loading of large files a bit slo
wer, you
                # can opt to disable this feature.
                # The default value is: YES.
                # This tag requires that the tag SOURCE_BROWSER is set to YES.

                SOURCE_TOOLTIPS        = YES

                # If the USE_HTAGS tag is set to YES then the references to source co
de will
                # point to the HTML generated by the htags(1) tool instead of doxygen
 built-in
                # source browser. The htags tool is part of GNU's global source taggi
ng system
                # (see http://www.gnu.org/software/global/global.html). You will need
 version
                # 4.8.6 or higher.
                #
                # To use it do the following:
                # - Install the latest version of global
                # - Enable SOURCE_BROWSER and USE_HTAGS in the config file
                # - Make sure the INPUT points to the root of the source tree
                # - Run doxygen as normal
                #
                # Doxygen will invoke htags (and that will in turn invoke gtags), so
these
                # tools must be available from the command line (i.e. in the search p
ath).
                #
                # The result: instead of the source browser generated by doxygen, the
 links to
                # source code will now point to the output of htags.
                # The default value is: NO.
                # This tag requires that the tag SOURCE_BROWSER is set to YES.

                USE_HTAGS              = NO

                # If the VERBATIM_HEADERS tag is set the YES then doxygen will genera
te a
                # verbatim copy of the header file for each class for which an includ
e is
```

```
                # specified. Set to NO to disable this.
                # See also: Section \class.
                # The default value is: YES.

                VERBATIM_HEADERS       = YES

                #---------------------------------------------------------------------
-------
                # Configuration options related to the alphabetical class index
                #---------------------------------------------------------------------
-------

                # If the ALPHABETICAL_INDEX tag is set to YES, an alphabetical index
of all
                # compounds will be generated. Enable this if the project contains a
lot of
                # classes, structs, unions or interfaces.
                # The default value is: YES.

                ALPHABETICAL_INDEX     = NO

                # The COLS_IN_ALPHA_INDEX tag can be used to specify the number of co
lumns in
                # which the alphabetical index list will be split.
                # Minimum value: 1, maximum value: 20, default value: 5.
                # This tag requires that the tag ALPHABETICAL_INDEX is set to YES.

                COLS_IN_ALPHA_INDEX    = 5

                # In case all classes in a project start with a common prefix, all cl
asses will
                # be put under the same header in the alphabetical index. The IGNORE_
PREFIX tag
                # can be used to specify a prefix (or a list of prefixes) that should
 be ignored
                # while generating the index headers.
                # This tag requires that the tag ALPHABETICAL_INDEX is set to YES.

                IGNORE_PREFIX          =

                #---------------------------------------------------------------------
-------
                # Configuration options related to the HTML output
                #---------------------------------------------------------------------
-------
```

```
                # If the GENERATE_HTML tag is set to YES doxygen will generate HTML o
utput
                # The default value is: YES.

                GENERATE_HTML          = YES

                # The HTML_OUTPUT tag is used to specify where the HTML docs will be
put. If a
                # relative path is entered the value of OUTPUT_DIRECTORY will be put
in front of
                # it.
                # The default directory is: html.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                HTML_OUTPUT            = html

                # The HTML_FILE_EXTENSION tag can be used to specify the file extensi
on for each
                # generated HTML page (for example: .htm, .php, .asp).
                # The default value is: .html.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                HTML_FILE_EXTENSION    = .html

                # The HTML_HEADER tag can be used to specify a user-defined HTML head
er file for
                # each generated HTML page. If the tag is left blank doxygen will gen
erate a
                # standard header.
                #
                # To get valid HTML the header file that includes any scripts and sty
le sheets
                # that doxygen needs, which is dependent on the configuration options
 used (e.g.
                # the setting GENERATE_TREEVIEW). It is highly recommended to start w
ith a
                # default header using
                # doxygen -w html new_header.html new_footer.html new_stylesheet.css
                # YourConfigFile
                # and then modify the file new_header.html. See also section "Doxygen
 usage"
                # for information on how to generate the default header that doxygen
normally
                # uses.
```

```
                # Note: The header is subject to change so you typically have to rege
nerate the
                # default header when upgrading to a newer version of doxygen. For a
description
                # of the possible markers and block names see the documentation.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                HTML_HEADER            =

                # The HTML_FOOTER tag can be used to specify a user-defined HTML foot
er for each
                # generated HTML page. If the tag is left blank doxygen will generate
 a standard
                # footer. See HTML_HEADER for more information on how to generate a d
efault
                # footer and what special commands can be used inside the footer. See
 also
                # section "Doxygen usage" for information on how to generate the defa
ult footer
                # that doxygen normally uses.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                HTML_FOOTER            =

                # The HTML_STYLESHEET tag can be used to specify a user-defined casca
ding style
                # sheet that is used by each HTML page. It can be used to fine-tune t
he look of
                # the HTML output. If left blank doxygen will generate a default styl
e sheet.
                # See also section "Doxygen usage" for information on how to generate
 the style
                # sheet that doxygen normally uses.
                # Note: It is recommended to use HTML_EXTRA_STYLESHEET instead of thi
s tag, as
                # it is more robust and this tag (HTML_STYLESHEET) will in the future
 become
                # obsolete.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                HTML_STYLESHEET        =

                # The HTML_EXTRA_STYLESHEET tag can be used to specify an additional
user-
                # defined cascading style sheet that is included after the standard s
```

```
tyle sheets
                # created by doxygen. Using this option one can overrule certain styl
e aspects.
                # This is preferred over using HTML_STYLESHEET since it does not repl
ace the
                # standard style sheet and is therefor more robust against future upd
ates.
                # Doxygen will copy the style sheet file to the output directory. For
 an example
                # see the documentation.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                HTML_EXTRA_STYLESHEET  =

                # The HTML_EXTRA_FILES tag can be used to specify one or more extra i
mages or
                # other source files which should be copied to the HTML output direct
ory. Note
                # that these files will be copied to the base HTML output directory.
Use the
                # $relpath^ marker in the HTML_HEADER and/or HTML_FOOTER files to loa
d these
                # files. In the HTML_STYLESHEET file, use the file name only. Also no
te that the
                # files will be copied as-is; there are no commands or markers availa
ble.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                HTML_EXTRA_FILES       =

                # The HTML_COLORSTYLE_HUE tag controls the color of the HTML output.
Doxygen
                # will adjust the colors in the stylesheet and background images acco
rding to
                # this color. Hue is specified as an angle on a colorwheel, see
                # http://en.wikipedia.org/wiki/Hue for more information. For instance
 the value
                # 0 represents red, 60 is yellow, 120 is green, 180 is cyan, 240 is b
lue, 300
                # purple, and 360 is red again.
                # Minimum value: 0, maximum value: 359, default value: 220.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                HTML_COLORSTYLE_HUE    = 220
```

```
                # The HTML_COLORSTYLE_SAT tag controls the purity (or saturation) of
the colors
                # in the HTML output. For a value of 0 the output will use grayscales
 only. A
                # value of 255 will produce the most vivid colors.
                # Minimum value: 0, maximum value: 255, default value: 100.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                HTML_COLORSTYLE_SAT    = 100

                # The HTML_COLORSTYLE_GAMMA tag controls the gamma correction applied
 to the
                # luminance component of the colors in the HTML output. Values below
100
                # gradually make the output lighter, whereas values above 100 make th
e output
                # darker. The value divided by 100 is the actual gamma applied, so 80
 represents
                # a gamma of 0.8, The value 220 represents a gamma of 2.2, and 100 do
es not
                # change the gamma.
                # Minimum value: 40, maximum value: 240, default value: 80.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                HTML_COLORSTYLE_GAMMA  = 80

                # If the HTML_TIMESTAMP tag is set to YES then the footer of each gen
erated HTML
                # page will contain the date and time when the page was generated. Se
tting this
                # to NO can help when comparing the output of multiple runs.
                # The default value is: YES.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                HTML_TIMESTAMP         = YES

                # If the HTML_DYNAMIC_SECTIONS tag is set to YES then the generated H
TML
                # documentation will contain sections that can be hidden and shown af
ter the
                # page has loaded.
                # The default value is: NO.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                HTML_DYNAMIC_SECTIONS  = NO
```

```
# With HTML_INDEX_NUM_ENTRIES one can control the preferred number of
 entries
# shown in the various tree structured indices initially; the user ca
n expand
# and collapse entries dynamically later on. Doxygen will expand the
tree to
# such a level that at most the specified number of entries are visib
le (unless
# a fully collapsed tree already exceeds this amount). So setting the
 number of
# entries 1 will produce a full collapsed tree by default. 0 is a spe
cial value
# representing an infinite number of entries and will result in a ful
l expanded
# tree by default.
# Minimum value: 0, maximum value: 9999, default value: 100.
# This tag requires that the tag GENERATE_HTML is set to YES.

HTML_INDEX_NUM_ENTRIES = 100

# If the GENERATE_DOCSET tag is set to YES, additional index files wi
ll be
# generated that can be used as input for Apple's Xcode 3 integrated
development
# environment (see: http://developer.apple.com/tools/xcode/), introdu
ced with
# OSX 10.5 (Leopard). To create a documentation set, doxygen will gen
erate a
# Makefile in the HTML output directory. Running make will produce th
e docset in
# that directory and running make install will install the docset in
# ~/Library/Developer/Shared/Documentation/DocSets so that Xcode will
 find it at
# startup. See http://developer.apple.com/tools/creatingdocsetswithdo
xygen.html
# for more information.
# The default value is: NO.
# This tag requires that the tag GENERATE_HTML is set to YES.

GENERATE_DOCSET        = NO

# This tag determines the name of the docset feed. A documentation fe
ed provides
# an umbrella under which multiple documentation sets from a single p
```

```
rovider
                # (such as a company or product suite) can be grouped.
                # The default value is: Doxygen generated docs.
                # This tag requires that the tag GENERATE_DOCSET is set to YES.

                DOCSET_FEEDNAME        = "Doxygen generated docs"

                # This tag specifies a string that should uniquely identify the docum
entation
                # set bundle. This should be a reverse domain-name style string, e.g.
                # com.mycompany.MyDocSet. Doxygen will append .docset to the name.
                # The default value is: org.doxygen.Project.
                # This tag requires that the tag GENERATE_DOCSET is set to YES.

                DOCSET_BUNDLE_ID       = org.doxygen.Project

                # The DOCSET_PUBLISHER_ID tag specifies a string that should uniquely
 identify
                # the documentation publisher. This should be a reverse domain-name s
tyle
                # string, e.g. com.mycompany.MyDocSet.documentation.
                # The default value is: org.doxygen.Publisher.
                # This tag requires that the tag GENERATE_DOCSET is set to YES.

                DOCSET_PUBLISHER_ID    = org.doxygen.Publisher

                # The DOCSET_PUBLISHER_NAME tag identifies the documentation publishe
r.
                # The default value is: Publisher.
                # This tag requires that the tag GENERATE_DOCSET is set to YES.

                DOCSET_PUBLISHER_NAME  = Publisher

                # If the GENERATE_HTMLHELP tag is set to YES then doxygen generates t
hree
                # additional HTML index files: index.hhp, index.hhc, and index.hhk. T
he
                # index.hhp is a project file that can be read by Microsoft's HTML He
lp Workshop
                # (see: http://www.microsoft.com/en-us/download/details.aspx?id=21138
) on
                # Windows.
                #
                # The HTML Help Workshop contains a compiler that can convert all HTM
L output
```

```
                # generated by doxygen into a single compiled HTML file (.chm). Compi
led HTML
                # files are now used as the Windows 98 help format, and will replace
the old
                # Windows help format (.hlp) on all Windows platforms in the future.
Compressed
                # HTML files also contain an index, a table of contents, and you can
search for
                # words in the documentation. The HTML workshop also contains a viewe
r for
                # compressed HTML files.
                # The default value is: NO.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                GENERATE_HTMLHELP      = NO

                # The CHM_FILE tag can be used to specify the file name of the result
ing .chm
                # file. You can add a path in front of the file if the result should
not be
                # written to the html output directory.
                # This tag requires that the tag GENERATE_HTMLHELP is set to YES.

                CHM_FILE               =

                # The HHC_LOCATION tag can be used to specify the location (absolute
path
                # including file name) of the HTML help compiler ( hhc.exe). If non-e
mpty
                # doxygen will try to run the HTML help compiler on the generated ind
ex.hhp.
                # The file has to be specified with full path.
                # This tag requires that the tag GENERATE_HTMLHELP is set to YES.

                HHC_LOCATION           =

                # The GENERATE_CHI flag controls if a separate .chi index file is gen
erated (
                # YES) or that it should be included in the master .chm file ( NO).
                # The default value is: NO.
                # This tag requires that the tag GENERATE_HTMLHELP is set to YES.

                GENERATE_CHI           = NO

                # The CHM_INDEX_ENCODING is used to encode HtmlHelp index ( hhk), con
```

```
tent ( hhc)
                # and project file content.
                # This tag requires that the tag GENERATE_HTMLHELP is set to YES.

                CHM_INDEX_ENCODING     =

                # The BINARY_TOC flag controls whether a binary table of contents is
generated (
                # YES) or a normal table of contents ( NO) in the .chm file.
                # The default value is: NO.
                # This tag requires that the tag GENERATE_HTMLHELP is set to YES.

                BINARY_TOC             = NO

                # The TOC_EXPAND flag can be set to YES to add extra items for group
members to
                # the table of contents of the HTML help documentation and to the tre
e view.
                # The default value is: NO.
                # This tag requires that the tag GENERATE_HTMLHELP is set to YES.

                TOC_EXPAND             = NO

                # If the GENERATE_QHP tag is set to YES and both QHP_NAMESPACE and
                # QHP_VIRTUAL_FOLDER are set, an additional index file will be genera
ted that
                # can be used as input for Qt's qhelpgenerator to generate a Qt Compr
essed Help
                # (.qch) of the generated HTML documentation.
                # The default value is: NO.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                GENERATE_QHP           = NO

                # If the QHG_LOCATION tag is specified, the QCH_FILE tag can be used
to specify
                # the file name of the resulting .qch file. The path specified is rel
ative to
                # the HTML output folder.
                # This tag requires that the tag GENERATE_QHP is set to YES.

                QCH_FILE               =

                # The QHP_NAMESPACE tag specifies the namespace to use when generatin
g Qt Help
```

```
                # Project output. For more information please see Qt Help Project / N
amespace
                # (see: http://qt-project.org/doc/qt-4.8/qthelpproject.html#namespace
).
                # The default value is: org.doxygen.Project.
                # This tag requires that the tag GENERATE_QHP is set to YES.

                QHP_NAMESPACE          = org.doxygen.Project

                # The QHP_VIRTUAL_FOLDER tag specifies the namespace to use when gene
rating Qt
                # Help Project output. For more information please see Qt Help Projec
t / Virtual
                # Folders (see: http://qt-project.org/doc/qt-4.8/qthelpproject.html#v
irtual-
                # folders).
                # The default value is: doc.
                # This tag requires that the tag GENERATE_QHP is set to YES.

                QHP_VIRTUAL_FOLDER     = doc

                # If the QHP_CUST_FILTER_NAME tag is set, it specifies the name of a
custom
                # filter to add. For more information please see Qt Help Project / Cu
stom
                # Filters (see: http://qt-project.org/doc/qt-4.8/qthelpproject.html#c
ustom-
                # filters).
                # This tag requires that the tag GENERATE_QHP is set to YES.

                QHP_CUST_FILTER_NAME   =

                # The QHP_CUST_FILTER_ATTRS tag specifies the list of the attributes
of the
                # custom filter to add. For more information please see Qt Help Proje
ct / Custom
                # Filters (see: http://qt-project.org/doc/qt-4.8/qthelpproject.html#c
ustom-
                # filters).
                # This tag requires that the tag GENERATE_QHP is set to YES.

                QHP_CUST_FILTER_ATTRS  =

                # The QHP_SECT_FILTER_ATTRS tag specifies the list of the attributes
this
```

```
                # project's filter section matches. Qt Help Project / Filter Attribut
es (see:
                # http://qt-project.org/doc/qt-4.8/qthelpproject.html#filter-attribut
es).
                # This tag requires that the tag GENERATE_QHP is set to YES.

                QHP_SECT_FILTER_ATTRS  =

                # The QHG_LOCATION tag can be used to specify the location of Qt's
                # qhelpgenerator. If non-empty doxygen will try to run qhelpgenerator
 on the
                # generated .qhp file.
                # This tag requires that the tag GENERATE_QHP is set to YES.

                QHG_LOCATION           =

                # If the GENERATE_ECLIPSEHELP tag is set to YES, additional index fil
es will be
                # generated, together with the HTML files, they form an Eclipse help
plugin. To
                # install this plugin and make it available under the help contents m
enu in
                # Eclipse, the contents of the directory containing the HTML and XML
files needs
                # to be copied into the plugins directory of eclipse. The name of the
 directory
                # within the plugins directory should be the same as the ECLIPSE_DOC_
ID value.
                # After copying Eclipse needs to be restarted before the help appears
.
                # The default value is: NO.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                GENERATE_ECLIPSEHELP   = NO

                # A unique identifier for the Eclipse help plugin. When installing th
e plugin
                # the directory name containing the HTML and XML files should also ha
ve this
                # name. Each documentation set should have its own identifier.
                # The default value is: org.doxygen.Project.
                # This tag requires that the tag GENERATE_ECLIPSEHELP is set to YES.

                ECLIPSE_DOC_ID         = org.doxygen.Project
```

```
                # If you want full control over the layout of the generated HTML page
s it might
                # be necessary to disable the index and replace it with your own. The
                # DISABLE_INDEX tag can be used to turn on/off the condensed index (t
abs) at top
                # of each HTML page. A value of NO enables the index and the value YE
S disables
                # it. Since the tabs in the index contain the same information as the
 navigation
                # tree, you can set this option to YES if you also set GENERATE_TREEV
IEW to YES.
                # The default value is: NO.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                DISABLE_INDEX          = NO

                # The GENERATE_TREEVIEW tag is used to specify whether a tree-like in
dex
                # structure should be generated to display hierarchical information.
If the tag
                # value is set to YES, a side panel will be generated containing a tr
ee-like
                # index structure (just like the one that is generated for HTML Help)
. For this
                # to work a browser that supports JavaScript, DHTML, CSS and frames i
s required
                # (i.e. any modern browser). Windows users are probably better off us
ing the
                # HTML help feature. Via custom stylesheets (see HTML_EXTRA_STYLESHEE
T) one can
                # further fine-tune the look of the index. As an example, the default
 style
                # sheet generated by doxygen has an example that shows how to put an
image at
                # the root of the tree instead of the PROJECT_NAME. Since the tree ba
sically has
                # the same information as the tab index, you could consider setting
                # DISABLE_INDEX to YES when enabling this option.
                # The default value is: NO.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                GENERATE_TREEVIEW      = NO

                # The ENUM_VALUES_PER_LINE tag can be used to set the number of enum
values that
```

```
                # doxygen will group on one line in the generated HTML documentation.
                #
                # Note that a value of 0 will completely suppress the enum values fro
m appearing
                # in the overview section.
                # Minimum value: 0, maximum value: 20, default value: 4.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                ENUM_VALUES_PER_LINE   = 4

                # If the treeview is enabled (see GENERATE_TREEVIEW) then this tag ca
n be used
                # to set the initial width (in pixels) of the frame in which the tree
 is shown.
                # Minimum value: 0, maximum value: 1500, default value: 250.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                TREEVIEW_WIDTH         = 250

                # When the EXT_LINKS_IN_WINDOW option is set to YES doxygen will open
 links to
                # external symbols imported via tag files in a separate window.
                # The default value is: NO.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                EXT_LINKS_IN_WINDOW    = NO

                # Use this tag to change the font size of LaTeX formulas included as
images in
                # the HTML documentation. When you change the font size after a succe
ssful
                # doxygen run you need to manually remove any form_*.png images from
the HTML
                # output directory to force them to be regenerated.
                # Minimum value: 8, maximum value: 50, default value: 10.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                FORMULA_FONTSIZE       = 10

                # Use the FORMULA_TRANPARENT tag to determine whether or not the imag
es
                # generated for formulas are transparent PNGs. Transparent PNGs are n
ot
                # supported properly for IE 6.0, but are supported on all modern brow
sers.
```

```
                #
                # Note that when changing this option you need to delete any form_*.p
ng files in
                # the HTML output directory before the changes have effect.
                # The default value is: YES.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                FORMULA_TRANSPARENT    = YES

                # Enable the USE_MATHJAX option to render LaTeX formulas using MathJa
x (see
                # http://www.mathjax.org) which uses client side Javascript for the r
endering
                # instead of using prerendered bitmaps. Use this if you do not have L
aTeX
                # installed or if you want to formulas look prettier in the HTML outp
ut. When
                # enabled you may also need to install MathJax separately and configu
re the path
                # to it using the MATHJAX_RELPATH option.
                # The default value is: NO.
                # This tag requires that the tag GENERATE_HTML is set to YES.

                USE_MATHJAX            = YES

                # When MathJax is enabled you can set the default output format to be
 used for
                # the MathJax output. See the MathJax site (see:
                # http://docs.mathjax.org/en/latest/output.html) for more details.
                # Possible values are: HTML-CSS (which is slower, but has the best
                # compatibility), NativeMML (i.e. MathML) and SVG.
                # The default value is: HTML-CSS.
                # This tag requires that the tag USE_MATHJAX is set to YES.

                MATHJAX_FORMAT         = HTML-CSS

                # When MathJax is enabled you need to specify the location relative t
o the HTML
                # output directory using the MATHJAX_RELPATH option. The destination
directory
                # should contain the MathJax.js script. For instance, if the mathjax
directory
                # is located at the same level as the HTML output directory, then
                # MATHJAX_RELPATH should be ../mathjax. The default value points to t
he MathJax
```

```
                # Content Delivery Network so you can quickly see the result without
installing
                # MathJax. However, it is strongly recommended to install a local cop
y of
                # MathJax from http://www.mathjax.org before deployment.
                # The default value is: http://cdn.mathjax.org/mathjax/latest.
                # This tag requires that the tag USE_MATHJAX is set to YES.

    1424 448cf0bd - MATHJAX_RELPATH        = http://www.mathjax.org/mathjax

            ?                                   ^^^

    1424 1ce92093 + MATHJAX_RELPATH        = https://cdn.mathjax.org/mathjax/lates
    t

            ?                                 +   ^^^                   +++++++

                # The MATHJAX_EXTENSIONS tag can be used to specify one or more MathJ
ax
                # extension names that should be enabled during MathJax rendering. Fo
r example
                # MATHJAX_EXTENSIONS = TeX/AMSmath TeX/AMSsymbols
                # This tag requires that the tag USE_MATHJAX is set to YES.

                MATHJAX_EXTENSIONS     =

                # The MATHJAX_CODEFILE tag can be used to specify a file with javascr
ipt pieces
                # of code that will be used on startup of the MathJax code. See the M
athJax site
                # (see: http://docs.mathjax.org/en/latest/output.html) for more detai
ls. For an
                # example see the documentation.
                # This tag requires that the tag USE_MATHJAX is set to YES.

                MATHJAX_CODEFILE       =

                # When the SEARCHENGINE tag is enabled doxygen will generate a search
 box for
                # the HTML output. The underlying search engine uses javascript and D
HTML and
                # should work on any modern browser. Note that when using HTML help
```

```
                # (GENERATE_HTMLHELP), Qt help (GENERATE_QHP), or docsets (GENERATE_D
OCSET)
                # there is already a search function so this one should typically be
disabled.
                # For large projects the javascript based search engine can be slow,
then
                # enabling SERVER_BASED_SEARCH may provide a better solution. It is p
ossible to
                # search using the keyboard; to jump to the search box use  + S
                # (what the  is depends on the OS and browser, but it is typically
                # , /
```

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Commits in /Users/nate/repos_hsc/base/

2d9d6fcc

```
commit 2d9d6fcc5549b958c32a770a8a19e3c048fb2153
Author: rhl
Date:   Tue Jun 1 22:03:54 2010 +0000

    Added PTR/CONST_PTR
```

019d7d34

```
commit 019d7d34166bc13d8d93c8139e16abc08c2e1663
Author: Paul Price
Date:   Sun Dec 8 06:34:27 2013 +0900

    doc: upgrade for doxygen 1.8.5
```

448cf0bd

```
commit 448cf0bdcc20b4f636be316990c9db736ce028d3
Author: jbosch
Date:   Wed Oct 12 21:20:52 2011 +0000

    base #1780 - sconsUtils now supports improved Doxygen builds
```

Commits in /Users/nate/repos_lsst/base/

1ce92093

```
commit 1ce9209393e190b56f39d9b14d05873c81007283
Author: John Swinbank
Date:   Wed Apr 15 08:55:36 2015 -0400

    Correct path to MathJax.
```

f3520995

```
commit f352099593ac25bc8d4d949e6bd3d2157dc3214b
Author: Russell Owen
Date:   Fri Jul 18 09:01:36 2014 -0700

    Disable "references" and "referenced by" sections in Doxygen
```

f8e3da99

```
commit f8e3da99db223519f481cccc0f3aa5e1ca2e8023
Author: Russell Owen
Date:   Fri Jul 25 10:08:37 2014 -0700

    Enable source browser in doxygen.
```

548d41d8

```
commit 548d41d8ed999ad57d53ec2ad408c2ebf5b82cf5
Author: John Swinbank
Date:   Tue Jan 13 17:30:34 2015 -0500

    Enable MARKDOWN_SUPPORT, per RFC-10
```

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python/lsstDebug.py

Diff:

```
                #
                # LSST Data Management System
                # Copyright 2008, 2009, 2010 LSST Corporation.
                #
                # This product includes software developed by the
                # LSST Project (http://www.lsst.org/).
                #
                # This program is free software: you can redistribute it and/or modif
y
                # it under the terms of the GNU General Public License as published b
y
                # the Free Software Foundation, either version 3 of the License, or
                # (at your option) any later version.
                #
                # This program is distributed in the hope that it will be useful,
                # but WITHOUT ANY WARRANTY; without even the implied warranty of
                # MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
                # GNU General Public License for more details.
                #
                # You should have received a copy of the LSST License Statement and
                # the GNU General Public License along with this program.  If not,
                # see .
                #

                #
                # Define a class to configure debugging information
                #
                class Info(object):
                    """An object cognisant of debugging parameters appropriate for mo
dule "name"; any request for a value
                will return False unless that value has been set, either in the modul
e or as an attribute of this object.

                E.g.
                    import lsstDebug

                    display = lsstDebug.Info(__name__).display

   34   28a13438 - will set display to False, unless display has been set:
```

```
            ?                                                       ^

34  10205307 + will set display to False, unless display has been set with
            ?                                                       ^^^^^
35  28a13438 -     display = True
36  28a13438 -     print lsstDebug.Info(__name__).display
37  28a13438 - will print True; this is equivalent to
                 lsstDebug.Info(__name__).display = True
39  28a13438 -     print lsstDebug.Info(__name__).display
```

Why is this interesting? Because you can replace lsstDebug.Info with your own version, e.g.

```
import lsstDebug

def DebugInfo(name):
    di = lsstDebug.getInfo(name)        # N.b. lsstDebug.Info(name) would call us recursively
    if name == "foo":
        di.display = True

    return di

lsstDebug.Info = DebugInfo
"""
    def __init__(self, modname):
        import sys
        self.__dict__["_dict"] = sys.modules[modname].__dict__
        self._modname = modname

    def __getattr__(self, what):
```

```
                        """Return the value of the variable "what" in self.__modname
if set, else False"""
                        return self._dict.get(what, False)

                    def __setattr__(self, what, value):
                        """Set the value of the variable "what" in self.__modname to
value"""
                        self._dict[what] = value

                getInfo = Info
```

Return to list

Commits in /Users/nate/repos_hsc/base/

28a13438

```
commit 28a134383c7fa7de993a7e615bef7737892dcaf0
Author: rhl
Date:   Fri May 21 15:26:53 2010 +0000

    A class that can be used to configure debugging variables (e.g. display) i
n a way that users can over-ride non intrusively
```

Commits in /Users/nate/repos_lsst/base/

10205307

```
commit 10205307b2d315cae856b7b3011875ccae1bae09
Author: Robert Lupton the Good
Date:   Mon Jun 2 17:27:27 2014 -0400

    Worked on documentation
```

Return to list

doc/SConscript

Diff:

```
              # -*- python -*-
              from lsst.sconsUtils import scripts

3    448cf0bd - scripts.BasicSConscript.doc(inputs=["#include", "#python"])

3    10205307 + scripts.BasicSConscript.doc()
```

Return to list

Commits in /Users/nate/repos_hsc/base/

448cf0bd

```
commit 448cf0bdcc20b4f636be316990c9db736ce028d3
Author: jbosch
Date:   Wed Oct 12 21:20:52 2011 +0000

    base #1780 - sconsUtils now supports improved Doxygen builds
```

Commits in /Users/nate/repos_lsst/base/

10205307

```
commit 10205307b2d315cae856b7b3011875ccae1bae09
Author: Robert Lupton the Good
Date:   Mon Jun 2 17:27:27 2014 -0400

    Worked on documentation
```

Return to list

include/lsst/base/ModuleImporter.h

Diff:

```
                // -*- lsst-c++ -*-
                /*
                 * LSST Data Management System
                 * Copyright 2008-2013 LSST Corporation.
                 *
                 * This product includes software developed by the
                 * LSST Project (http://www.lsst.org/).
                 *
                 * This program is free software: you can redistribute it and/or modi
fy
                 * it under the terms of the GNU General Public License as published
by
                 * the Free Software Foundation, either version 3 of the License, or
                 * (at your option) any later version.
                 *
                 * This program is distributed in the hope that it will be useful,
                 * but WITHOUT ANY WARRANTY; without even the implied warranty of
                 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
                 * GNU General Public License for more details.
                 *
                 * You should have received a copy of the LSST License Statement and
                 * the GNU General Public License along with this program.  If not,
                 * see .
                 */
                #ifndef LSST_BASE_ModuleImporter_h_INCLUDED
                #define LSST_BASE_ModuleImporter_h_INCLUDED

                /**
    27   b273dffe -  *  @file lsst/afw/table/io/ModuleImporter.h

    27   10205307 +  *  @file
```

```
 *
 *  Mechanism for safely importing Python modules from C++; should no
t be included
 *  except by its own implementation file, the ioLib.i file, and Pers
istable.cc.
 */

#include

#include "boost/noncopyable.hpp"

namespace lsst { namespace base {

/**
 *  @brief Base class that defines an interface for importing Python
modules.
 *
 *  The default implementation (defined in the source file) simply re
turns
 *  false, indicating that it can't import the given module.  The fun
ctional
 *  implementation is in the ioLib Swig module, which is installed wh
en that
 *  module is imported.  That machinery keeps us from calling Python
C-API
 *  functions from standalone C++ binaries that aren't linked with Py
thon.
 */
class ModuleImporter : private boost::noncopyable {
public:

    /// Import the given Python module, and return true if successful
.
    static bool import(std::string const & name);

protected:

    ModuleImporter() {}

    virtual bool _import(std::string const & name) const = 0;

    virtual ~ModuleImporter() {}

private:
```

```
        friend void installPythonModuleImporter();

        static void install(ModuleImporter const * importer);

    };

    }} // namespace lsst::base

    #endif // !LSST_BASE_ModuleImporter_h_INCLUDED
```

Return to list

Commits in /Users/nate/repos_hsc/base/

b273dffe

```
commit b273dffe406b45ab3f1b449048b102ab2ae9b7c1
Author: Jim Bosch
Date:   Mon Mar 4 13:56:10 2013 -0500

    Add functionality to import Python modules from within pure C++ code (#269
6).

    This functionality is necessary for the table-based persistence framework,
 which needs to import Python modules to ensure the singleton registry of fact
ories is populated before being searched.  It needs to go in the 'base' packag
e (and outside the 'lsst' python package) because it needs to be imported by t
he lsstimport.py.
    This change adds a C++ shared library to the base package, which is perhap
s slightly unfortunate, especially as the library name is simply "base" accord
ing to our conventions.
```

Commits in /Users/nate/repos_lsst/base/

10205307

```
commit 10205307b2d315cae856b7b3011875ccae1bae09
Author: Robert Lupton the Good
Date:   Mon Jun 2 17:27:27 2014 -0400

    Worked on documentation
```

Return to list

ups/base.table

Diff:

```
1    5d6e2852 - setupRequired(boost >= 1.47.0)
            ?                       ----------
1    9278ce57 + setupRequired(boost)

2    c4d7229f - setupRequired(sconsUtils >= 4.6.0.6)
            ?                           -----------
2    9278ce57 + setupRequired(sconsUtils)

              setupRequired(swig)
4    5d6e2852 - setupOptional(doxygen >= 1.7.5.1)
            ?                        -----------
4    9278ce57 + setupOptional(doxygen)


              envPrepend(LD_LIBRARY_PATH, ${PRODUCT_DIR}/lib)
              envPrepend(DYLD_LIBRARY_PATH, ${PRODUCT_DIR}/lib)
              envPrepend(PYTHONPATH, ${PRODUCT_DIR}/python)
```

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Commits in /Users/nate/repos_hsc/base/

c4d7229f

```
commit c4d7229fbb7b0412a353e6bd4cfcaae8017eb2d7
Author: Jim Bosch
Date:   Wed Nov 16 16:37:44 2011 -0500

    added sconsUtils-generated version module
```

5d6e2852

```
commit 5d6e28524ff0cd9b9f3975d3717650cdceff1f6f
Author: jbosch
Date:   Tue Oct 18 21:44:26 2011 +0000

    #1780 - lots of dependency tree fixes; removed separate scons package
```

Commits in /Users/nate/repos_lsst/base/

9278ce57

```
commit 9278ce576a92fe8773cd5117c317c1fcf14388af
Author: Mario Juric
Date:   Wed Mar 5 16:28:59 2014 -0600

    removed explicit versions from the table file.
```

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.gitignore

Diff:

```
                .sconsign.dblite
                config.log
                .sconf_temp
                *.o
                *.os
                *.so
                *.cfgc
                *.pyc

9     c6d40fc6 + lib/libbase.*

                python/lsst/base/version.py
                python/lsst64defs.py
                python/lsstcppimport.py
                doc/html
                doc/doxygen.conf
                doc/base.tag
                doc/base.inc
                tests/.tests
                tests/ptr
                tests/testModuleImporter1
                tests/testModuleImporterLib.py
                *_wrap.cc
```

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Commits in /Users/nate/repos_hsc/base/

Commits in /Users/nate/repos_lsst/base/

c6d40fc6

```
commit c6d40fc69effe3aeb220c84e2a562e8d5ed62897
Author: Jim Bosch
Date:   Wed Nov 16 16:47:53 2011 -0500

    added .gitignore, prepared for version introspection
```

Return to list

python/lsstcppimport.i

Diff:

```
                /*
                 * LSST Data Management System
                 * Copyright 2008-2013 LSST Corporation.
                 *
                 * This product includes software developed by the
                 * LSST Project (http://www.lsst.org/).
                 *
                 * This program is free software: you can redistribute it and/or modi
fy
                 * it under the terms of the GNU General Public License as published
by
                 * the Free Software Foundation, either version 3 of the License, or
                 * (at your option) any later version.
                 *
                 * This program is distributed in the hope that it will be useful,
                 * but WITHOUT ANY WARRANTY; without even the implied warranty of
                 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
                 * GNU General Public License for more details.
                 *
                 * You should have received a copy of the LSST License Statement and
                 * the GNU General Public License along with this program.  If not,
                 * see .
                 */

                %module lsstcppimport

                %{
                #include "lsst/base/ModuleImporter.h"

                namespace lsst { namespace base {

                class PythonModuleImporter : public ModuleImporter {
                public:
                    static ModuleImporter const * get() {
                        static PythonModuleImporter const instance;
                        return &instance;
```

```
                }
            private:
                PythonModuleImporter() {}
            protected:
                virtual bool _import(std::string const & name) const;
            };

            bool PythonModuleImporter::_import(std::string const & name) const {
                PyObject * mod = PyImport_ImportModule(name.c_str());
                if (mod) {
                    Py_DECREF(mod);
                    return true;
47  b273dffe +      } else {
48  b273dffe +          // If the Python C API call returned a null pointer, i
t will
49  b273dffe +          // also have set an exception.  We don't want that, be
cause
50  b273dffe +          // this isn't necessarily an error (that's up to the c
aller).
51  b273dffe +          PyErr_Clear();
                }
                return false;
            }

            void installPythonModuleImporter() {
                ModuleImporter::install(PythonModuleImporter::get());
            }

            }} // namespace lsst::base
            %}
```

```
%init %{
    lsst::base::installPythonModuleImporter();
%}
```

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Commits in /Users/nate/repos_hsc/base/

Commits in /Users/nate/repos_lsst/base/

b273dffe

```
commit b273dffe406b45ab3f1b449048b102ab2ae9b7c1
Author: Jim Bosch
Date:   Mon Mar 4 13:56:10 2013 -0500

    Add functionality to import Python modules from within pure C++ code (#269
6).

    This functionality is necessary for the table-based persistence framework,
 which needs to import Python modules to ensure the singleton registry of fact
ories is populated before being searched.  It needs to go in the 'base' packag
e (and outside the 'lsst' python package) because it needs to be imported by t
he lsstimport.py.
    This change adds a C++ shared library to the base package, which is perhap
s slightly unfortunate, especially as the library name is simply "base" accord
ing to our conventions.
```

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