

PIPT Manual

This manual applies to version 4.19 of the PIPT. It is a work in progress and will be extended to cover phase 2 in more detail.

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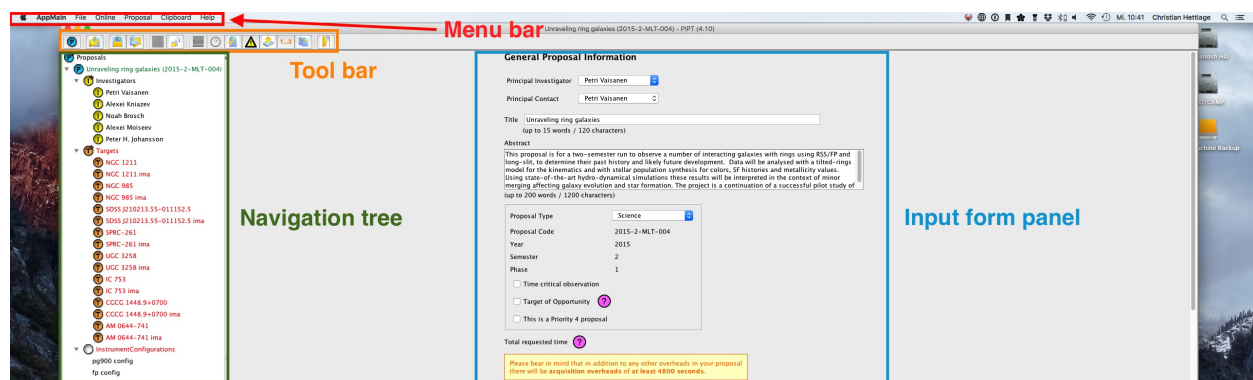
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Overview

The PIPT has four main components.

1. The navigation tree
2. The tool bar
3. The menu bar
4. The input form panel

These are indicated in the image below.



The navigation tree

The navigation tree lets you view and update the structure of all your proposals. As you would expect, you can collapse or expand subtrees by clicking on the little triangle next to the label icon. But if you have to expand (or collapse) a subtree with lots of descendants it is much more convenient to right-click on the subtree's root node and choose *Expand subtree* or *Collapse subtree* from the context menu.

As you may have guessed, the label icons symbolise the kind of content represented by the tree node. If you click on a node, you get to the form for editing this content. The label text is either generic (such as *Investigators* or *Targets*) or is based on a name you've chosen.

The proposal nodes in the tree can be sorted by proposal code or by proposal title, either in ascending or descending order. This sorting criterion can be chosen on the *Sort Proposals* tab of the preferences panel.

You can edit the navigation tree by right-clicking on any of its nodes and choosing an action

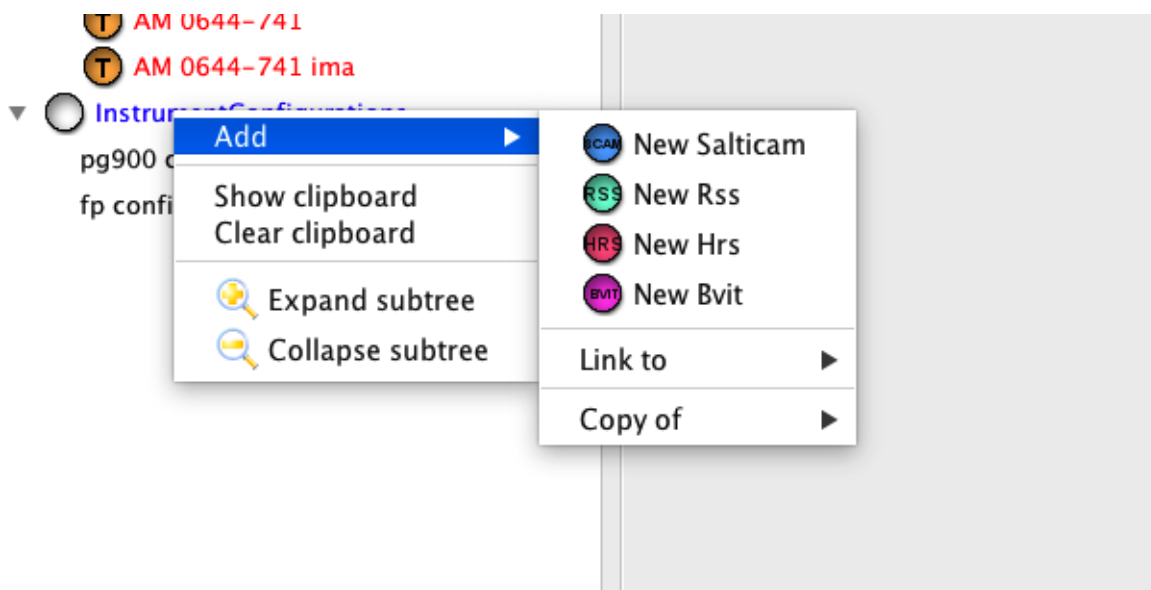
from the context menu. The following table lists the various options. Not all of these are available for all nodes, though.

Option	Explanation
Add	Add a new element as the last child.
Insert before	Insert a new element before this element
Insert after	Insert a new element after this element
Add ... to clipboard	Add the element(s) to the clipboard for later use
Show clipboard	Show the clipboard content
Clear clipboard	Remove all content from the clipboard
Expand subtree	Fully expand this node and all its descendants
Collapse subtree	Collapse this node

Adding elements

There are various ways of adding an element:

- You can create a completely new element from scratch.
- You can copy another element from the same proposal.
- You can link to another element from the same proposal.
- You can copy all the elements from the clipboard. This is intended for copying content between proposals, and you shouldn't use it for elements within the same proposal.















If you *copy* an element, you create a completely new element, which has the same content as the copied element, but otherwise is independent. Changes in the copied element won't affect the original element (and vice versa).

On the other hand, if you *link* to another element, no copy is created; you use the existing element. So any changes you make will affect all instances where the element is used.

Note that element copies are deep. In other words, all descendants of the original element are copied (rather than linked to).

The tool bar

The tool bar contains shortcuts to various items from the menu bar.

Icon	Menu bar item
	File > New Proposal
	File > Import from Zip File
	File > Save
	File > Export as Zip File
	Online > Login
	Online > Logout
	Proposal > Show Timeline
	Proposal > Show Observing Times
	Proposal > Show Warnings
	Online > Submit
1...2	Online > Convert to Phase 2
	Proposal > Clone
	PiptManager > Quit PiptManager <i>or</i> File > Quit

The menu bar

As you'd expect, there is a menu bar either at the top of the PIPT window (for Windows or Linux) or at the top of the screen (for Mac OS). The menu items are the same for all operating systems, but some of their locations differ.

Menu item for Mac OS	Menu item for Windows/Linux
PiptManager > About PiptManager	Help > About the PIPT
PiptManager > Preferences	Edit > Preferences
PiptManager > Quit PiptManager	File > Quit

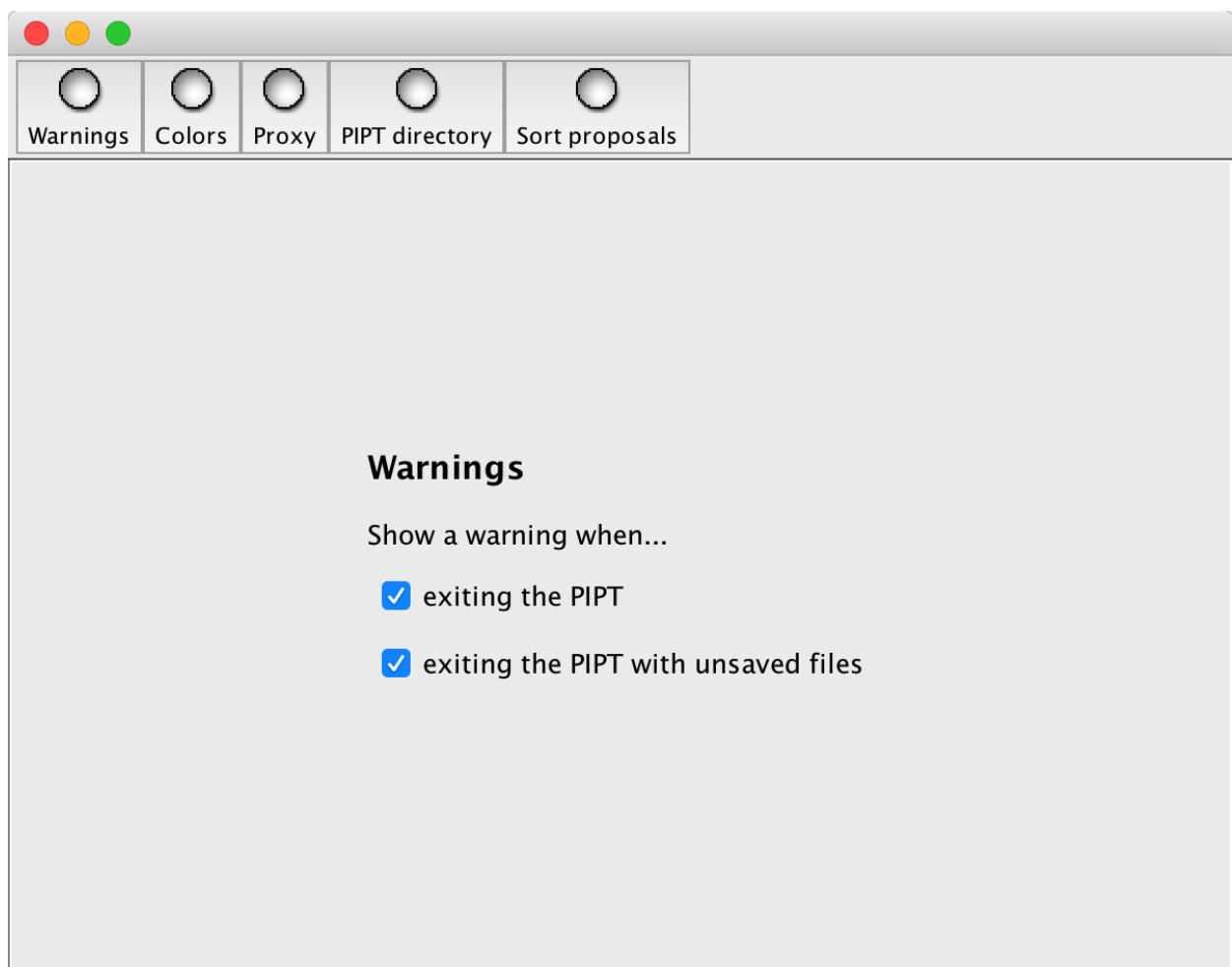
Here is an overview of all the available menu items.

PiptManager > About PiptManager | Help > About the PIPT

Shows a dialog with the application name (as if you didn't know you are using the PIPT), the version number (which you can also find in the window title) and the email address for support (salthelp@salt.ac.za).

PiptManager > Preferences | Edit > Preferences

Opens a window for setting preferences, which has various tabs.



Warnings

By default the PIPT asks for confirmation before it quits. In addition, it points out any unsaved files. You may disable these notifications on the warnings tab.

Colors

Lets you set the color for the navigation tree labels, depending on whether they are selected (i.e. their content currently is shown in the form panel), whether you have right-clicked on them (to see the context menu), or whether they are incomplete.

The colour for incomplete tree nodes should be taken with a grain of salt; nodes may be shown as incomplete even though they aren't.

Proxy

In case you are accessing the internet via a proxy, you need to supplied the proxy's URL. Tick the respective checkbox if your proxy requires authentication.

If you are in doubt about whether you are using a proxy, you should ask your local IT guru.

PIPT directory

Lets you choose the directory where to store all the proposals and related PIPT files. The change will only take place the next time you launch the PIPT.

The PIPT won't move any files on your disk, so it is up to you to move all the existing content. The easiest might be to just rename the existing (old) directory. On a Mac or Linux you can use a

command like

```
mv /path/to/old/pipt-dir /path/to/new/pipt-dir
```

Organise proposals

Lets you choose how the proposal node should be sorted in the navigation tree, and how the proposal should be displayed.

The options for sorting are to sort by proposal code or by proposal title, and in both cases you may choose to use ascending or descending order.

The options for the proposal name are to use the proposal title followed by the proposal code in parentheses (such as "My Shiny Proposal (2016-2-SCI-078)"), or to use the proposal code followed by the proposal title in parentheses (such as "2016-2-SCI-078 (My Shiny Proposal)", or to just use the proposal code (such as "2016-2-SCI-079").

Changing these preferences collapses any currently expanded tree nodes.

PiptManager > Quit PiptManager | File > Quit

Quits the PIPT. No files are saved. You may choose in the preferences whether you want to be warned about quitting and/or about unsaved files.

New Proposal

Creates a new proposal. There are four different proposals types.

Science

The default proposal type for a "normal" proposal.

Large Science

Large science proposals request 150 hours from one or more partners, which can be spread over up to six semesters. If you are planning to submit a Large Science Proposal you should email the head of Astronomy Operations at least two weeks prior to the deadline.

Director's Discretionary Time (DDT)

DDT proposals will be assessed by the Head of SALT Astronomy Operations and the SAAO Director. Please contact ddt@salt.ac.za with your DDT request before submitting the proposal.

Commissioning

A proposal for telescope commissioning.

In the majority of cases you should opt for a Science proposal. You may find more details about Large Science and DDT proposals in the [call for proposals](#).

There are templates for the scientific justification of Science and Large Science proposals, which can be downloaded from <http://astronomers.salt.ac.za/proposals/proposal-templates/>. Please use the correct template, as otherwise your scientific justification might not be accepted.

File > Import from Zip File

Imports a proposal from a zip file, as created by the menu item *File > Export as Zip File*. If the proposal exists already you can choose whether to replace the existing proposal or create a new one.

In most cases you should opt for replacing the existing content, as a newly created proposal will have no proposal code.

File > Save

Saves the currently edited proposal. Note that unfortunately there is no autosave functionality, so that saving regularly might be a good idea.

File > Export as PDF (Phase 1 only)

Exports the proposal content to PDF. The same PDF will be generated for the Time Allocation Committee when you submit the proposal.

File > Export as Zip File

Exports the proposal as a zip file. This is particularly useful if you get stuck and need to send your proposal to salthelp@salt.ac.za.

File > Export Target Data

Exports the details of all the targets in the currently selected proposal to a csv file.

Online > Login

Logs you in to the SALT server. You usually don't have to use this menu item, as the PIPT will prompt you for your username and password when required.

Online > Logout

Logs you out from the SALT server.

Online > Update Science Database Information

The PIPT uses some technical information (such as exposure times for RSS arcs) which are stored in SALT's science database. Whenever this information is updated in the database, the PIPT will ask you to use this menu item to keep the PIPT up-to-date.

Online > Select the Server

Allows you to select another server to use for the PIPT. This is solely for testing, and you can safely ignore this menu item.

Online > Convert to Phase 2 (Phase 1 only)

Converts the currently selected phase 1 proposal into phase 2. The existing phase 1 content will be replaced. Converting the proposal is possible only if it has been accepted and time has been allocated to it.

Online > Import from Server

Imports a proposal from the server. You may choose whether to import a phase 1 or phase 2 proposal. If the imported proposal exists in the PIPT already, you may choose whether to replace

the existing content or create a new proposal.

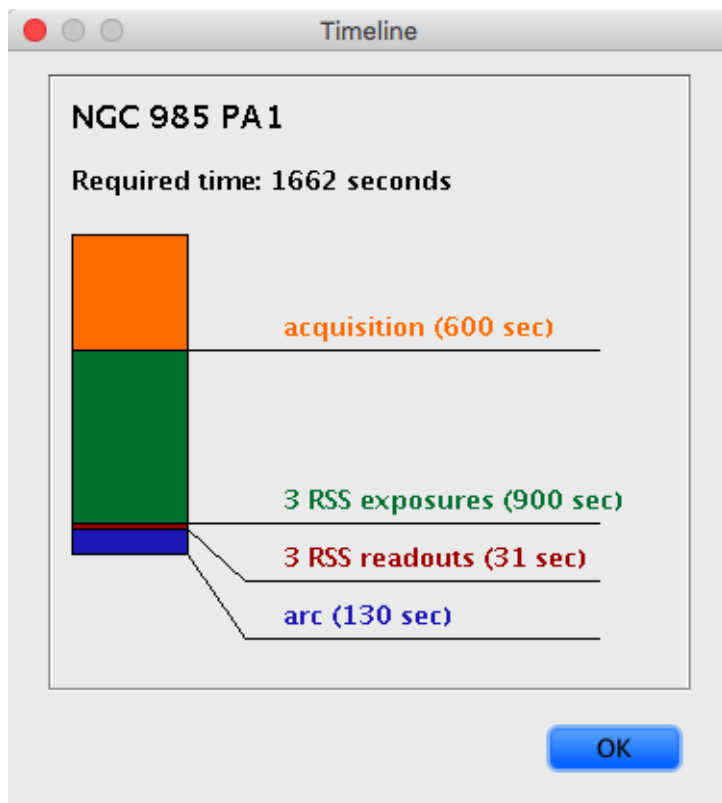
In most cases you should opt for replacing the existing content, as a newly created proposal will have no proposal code.

Online > Submit

Submits the currently selected proposal to the server.

Proposal > Show Timeline (Phase 2 only)

Shows the timeline for the currently selected element, i.e. the sequence of steps and the times required for them. An example is shown below.



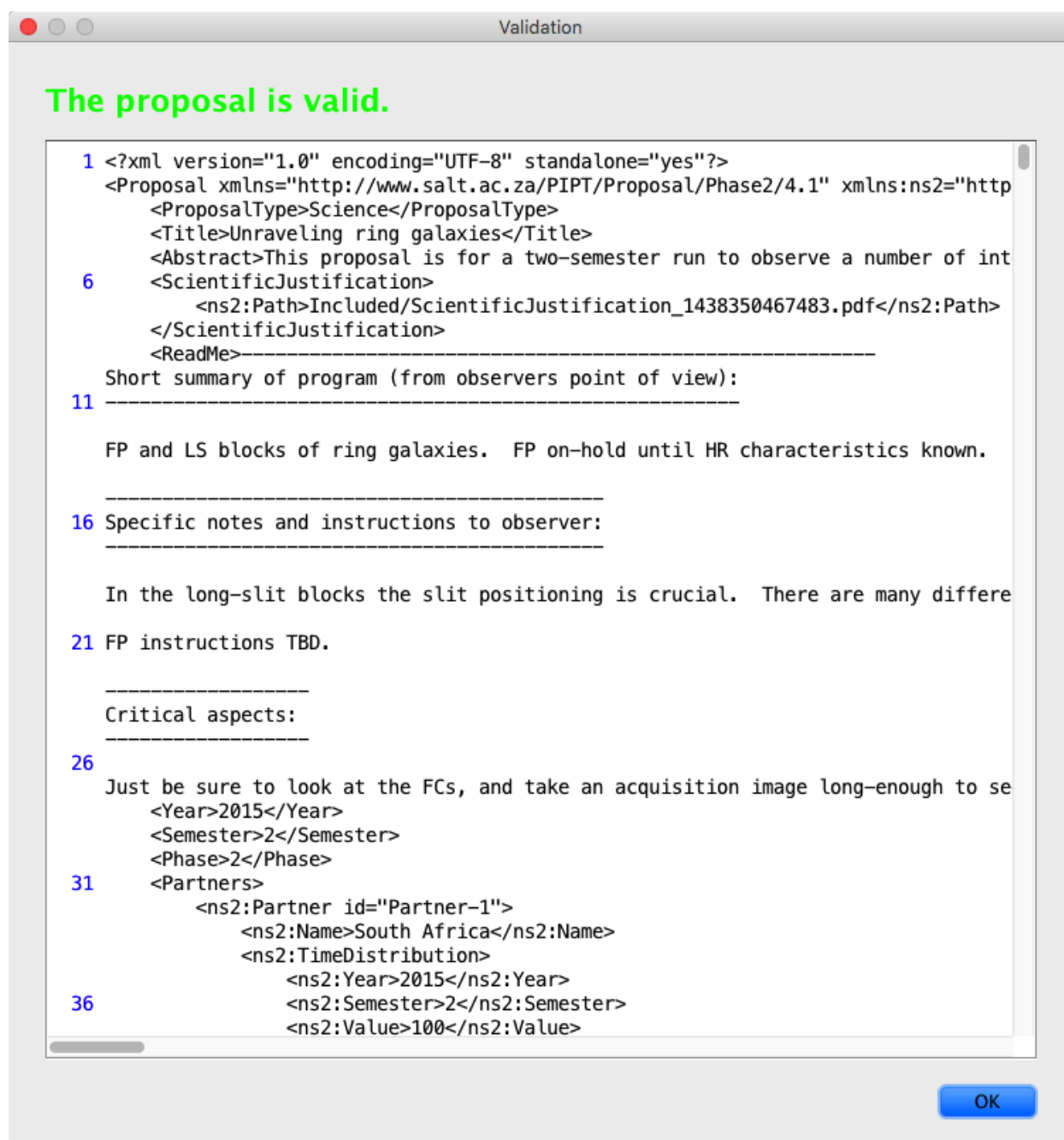
Proposal > Show Observing Times (Phase 2 only)

Opens a window displaying the observing times for the currently selected element, its block and the proposal. The times are updated whenever you make a change or select another element.

Observing Times	
Rss	
Effective exposure time:	900 s
Overhead time:	162 s
Total charged time:	1062 s
Block	
Effective exposure time:	900 s
Overhead time:	762 s
Total charged time:	1662 s
Proposal	
Effective exposure time:	10200 s
Overhead time:	3026 s
Total charged time:	13226 s

Proposal > Validate

Validates the currently selected proposal. If the proposal is valid, its XML is shown.



If it is invalid, a list of errors is shown as well.

Validation

The proposal is not valid.

```

1 <?xml version="1.0" encoding="UTF-8" standalone="yes"?>
  <Proposal xmlns="http://www.salt.ac.za/PIPT/Proposal/Phase1/2.9" xmlns:ns2="http
    <ProposalType>Science</ProposalType>
    <Title>Unraveling ring galaxies</Title>
    <Abstract>This proposal is for a two-semester run to observe a number of int
6    <Year>2015</Year>
    <Semester>2</Semester>
    <Phase>1</Phase>
    <Partners>
      <ns2:Partner id="Partner-1">
11        <ns2:Name>South Africa</ns2:Name>
        <ns2:TimeDistribution>
          <ns2:Year>2015</ns2:Year>
          <ns2:Semester>2</ns2:Semester>
          <ns2:Value>100</ns2:Value>
16          <ns2:Units>%</ns2:Units>
        </ns2:TimeDistribution>
        <ns2:TimeDistribution>
          <ns2:Year>2016</ns2:Year>
          <ns2:Semester>1</ns2:Semester>
21          <ns2:Value>100</ns2:Value>
          <ns2:Units>%</ns2:Units>
        </ns2:TimeDistribution>
      </ns2:Partner>
      <ns2:Partner id="Partner-2">
26        <ns2:Name>Other</ns2:Name>
        <ns2:TimeDistribution>
          <ns2:Year>2015</ns2:Year>

```

Error message	Line
[ERROR] At least one of the following elements is ill-positioned or is missing: http://www.salt.ac.za/PIPT/Proposal/Shared/2.3:Minimum http://www.salt.ac.za/PIPT/Proposal/Shared/2.3:Maximum	197
[ERROR] At least one of the following elements is ill-positioned or is missing: http://www.salt.ac.za/PIPT/Proposal/Phase1/2.9:Visits	555

OK

The error messages can be a bit cryptic. However, if you have a look at the line in the XML where the error was found you might find a clue as to where the issue might be.

You might find that the error is in an element which appears nowhere in the proposal. This may happen as the PIPT unfortunately sometimes fails to remove all elements it should remove. So if you are completely dumbstruck by an error, you might try whether the menu item *Proposal > Clean* resolves the problem.

And if the source of the error completely eludes you, export the proposal as a zip file and send it to salthelp@salt.ac.za.

Proposal > Show Warnings

Shows all the warnings for the currently selected proposal. You should pay close attention to these, as some of these may be actual errors (which will prevent proposal submission) or may imply that you are requesting a setup which doesn't necessarily make sense.

Proposal > Show Feasibility (Phase 2 only)

Opens a window which list the number of nights when the blocks in the currently selected proposal can be observed. It may take a few moments for the window to appear.

Proposal > Update Executed Observation Details (Phase 2 only)

Updates the details regarding already executed observations for the currently selected proposal. Use this menu item to ensure that the observing and available times in the proposal are up-to-date.

Proposal > Clone

Creates a new proposal with the same content as the currently selected one.

Proposal > Change Semester

When you create a new proposal, a semester (such as 2015-2 or 2016-1) is assigned to it. (In case of a DDT or commissioning proposal you actually select it.) While in most cases the semester should be the one you intended, you may use this menu item to change it if need be. *Make sure the semester is correct, as otherwise your proposal won't be observed.*

Proposal > Clean

Sometimes elements aren't properly removed by the PIPT, and while these zombie elements aren't shown in the navigation tree, they may cause errors. This menu item removes all such elements.

When you try to submit a proposal with zombie elements, you should get an error message asking you to apply this menu item.

Proposal > Enable non-standard setups

In rare cases you might need a slit mask or filter which is only offered for other modes or for commissioning proposals. If you have good reason to request any of these in your setup (and know what you are doing), you can use this menu item to enable such non-standard setups.

If non-standard setups are enabled, the form for Phase 2 RSS configurations will include a checkbox for showing non-standard masks and filters.

Please consult with your liaison SALT Astronomer before using non-standard setups.

Proposal > Customize Hidden Elements

In rare cases your proposal may require a more complicated structure than what the PIPT allows by default. If so, you can use this menu item to explicitly show elements which usually are hidden. The rule of thumb for using this feature is *Don't*. Or at least *Don't without asking salthelp@salt.ac.za first.*

Clipboard > Show Clipboard

Shows the content of the clipboard. The clipboard may contain blocks, instrument setups and targets, and you can use it to copy items across proposals. You shouldn't use it for copying elements within the same proposal.

Clipboard > Clear Clipboard

Removes all content from the clipboard.

Help > Online Help

Opens the [PIPT web page](#) in your default browser.

Some of the menu items have keyboard shortcuts. These are shown in the menu.

The input form panel

Whenever you select an element, the input form panel shows the corresponding form for defining the element content. The forms are discussed in detail in later sections.

Creating a proposal

This section walks you through the whole proposal process from installing the PIPT to receiving the data. It won't touch on the details of the various forms (which will be covered in later sections) but is intended to give you a general idea of how to use the PIPT.

Before you start

Before downloading the PIPT, you should make sure that two prerequisites are fulfilled.

First, Java 8 must be installed on your computer.

Java is a platform independent language which is available for Windows, Mac OS and Linux alike. You can download it from [Oracle's Java download page](#). It doesn't matter whether you download the Java SDK for developers or just the runtime environment for end-users.

Unfortunately, earlier versions of Java are no longer supported. You might have to upgrade your operating system to run Java 8, at least if you haven't updated it in the last years. Mac OS users should take note that Java isn't included out of the box any more.

Linux users might be tempted to use their package manager to install Java. However, more likely than not this will install the Open JDK rather than Oracle's Java. And while this might change in future, the OpenJDK at the moment isn't supported by the PIPT, as it cannot handle JPEG images.

Second, you must have a SALT account. You can get this by registering at <https://www.salt.ac.za/wm/index.php?tab=Register>. You'll have to choose a username and password, provide your name and contact details, and select the partner and institute you are affiliated with.

If you are affiliated to a SALT partner and cannot find your institute on the registration form, you should contact salthelp@salt.ac.za. If you aren't affiliated to a SALT partner, you must select the partner *Other*. In this case you may add your institute (if it's not in the list already) by choosing the item *ADD NEW INSTITUTE* from the list of institutes.



Once you have registered you will receive an email with a confirmation link. It is of utmost importance that you use this link to validate your email address, as otherwise you won't be able to submit proposals later on.

Downloading and installing the PIPT

You may download the PIPT from <http://astronomers.salt.ac.za/software/>. The PIPT is supplied as a Windows exe file, a Mac OS dmg file and as a generic jar file.

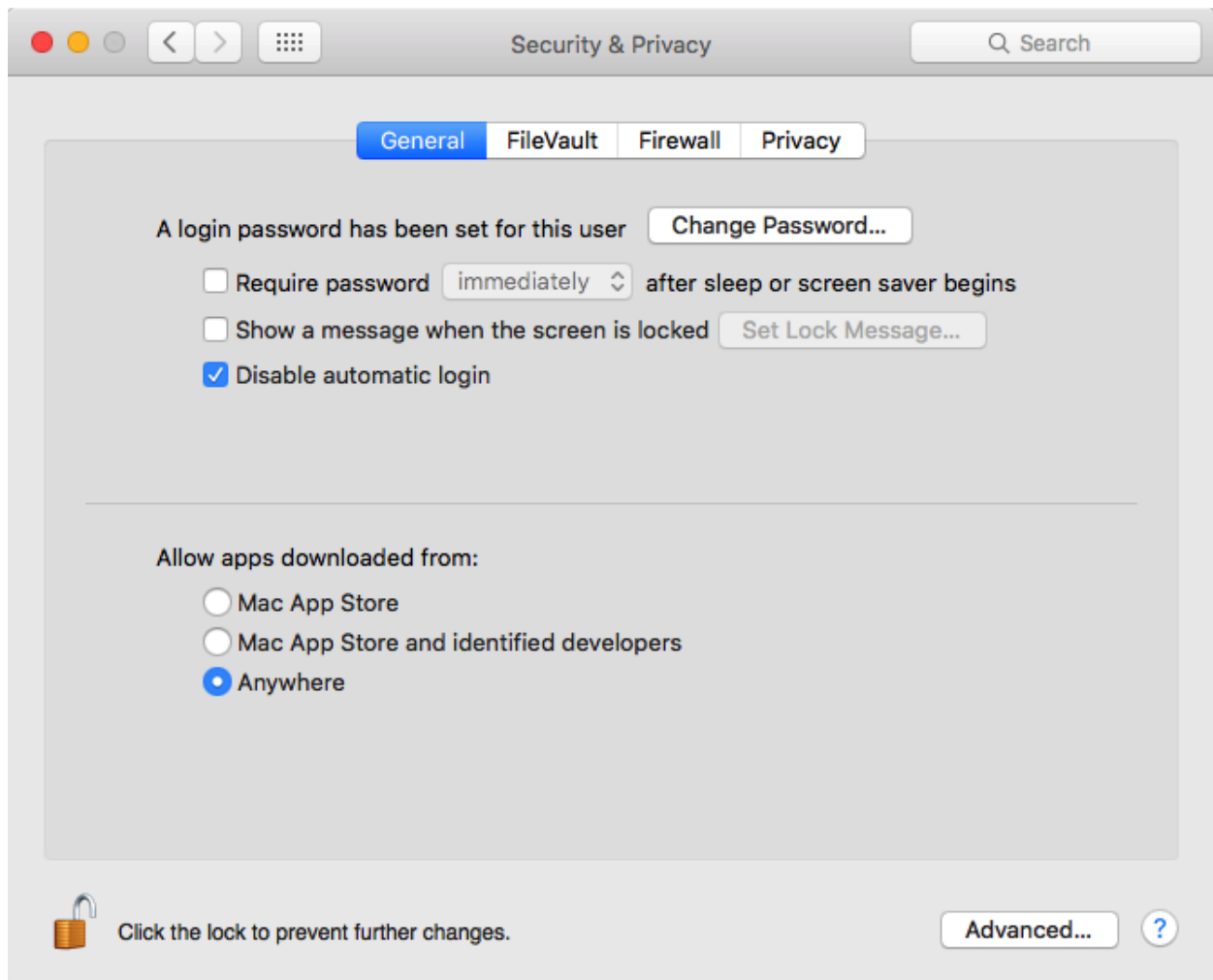
Running on Windows

Just move the downloaded exe file wherever you deem fit. You can launch the PIPT by double-clicking the file icon, as you would for any other application.

Running on Mac OS

Double-click the downloaded dmg file, and in the window that opens move the PIPT file into the Applications folder. (You may instead move the file to another convenient location.) You can launch the PIPT by double-clicking the file icon, as you would for any other application.

You may get an error message informing you that the dmg file is corrupted. This is caused by security restrictions. Open the Security & Privacy pane in the system preferences and make sure that the option *Anywhere* is chosen for *Allow applications downloaded from*, as shown below.



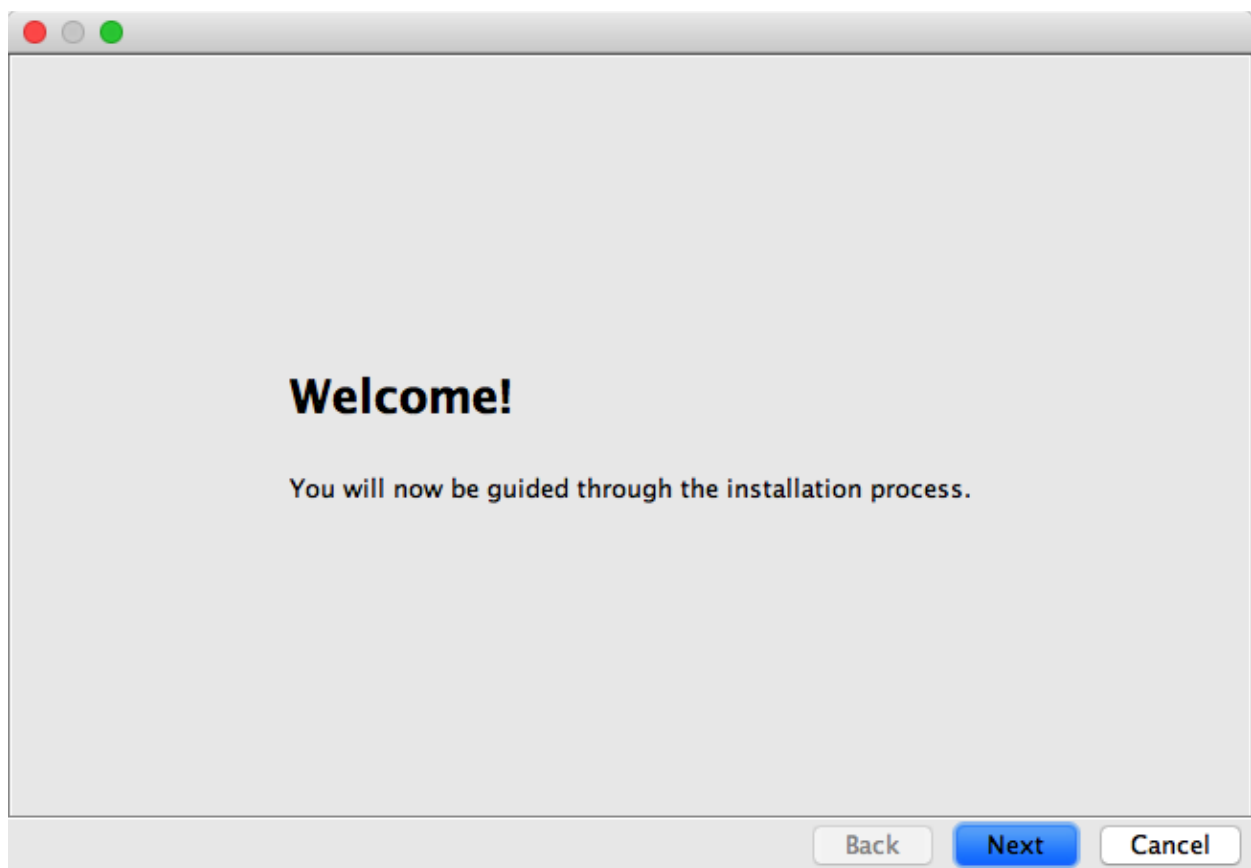
Running on Linux

Move the jar file to a convenient location. Depending on your system setup you might be able to launch the PIPT by double-clicking the jar file icon. Otherwise you can start it by running the following command in a terminal (assuming you are in the directory of the jar file).

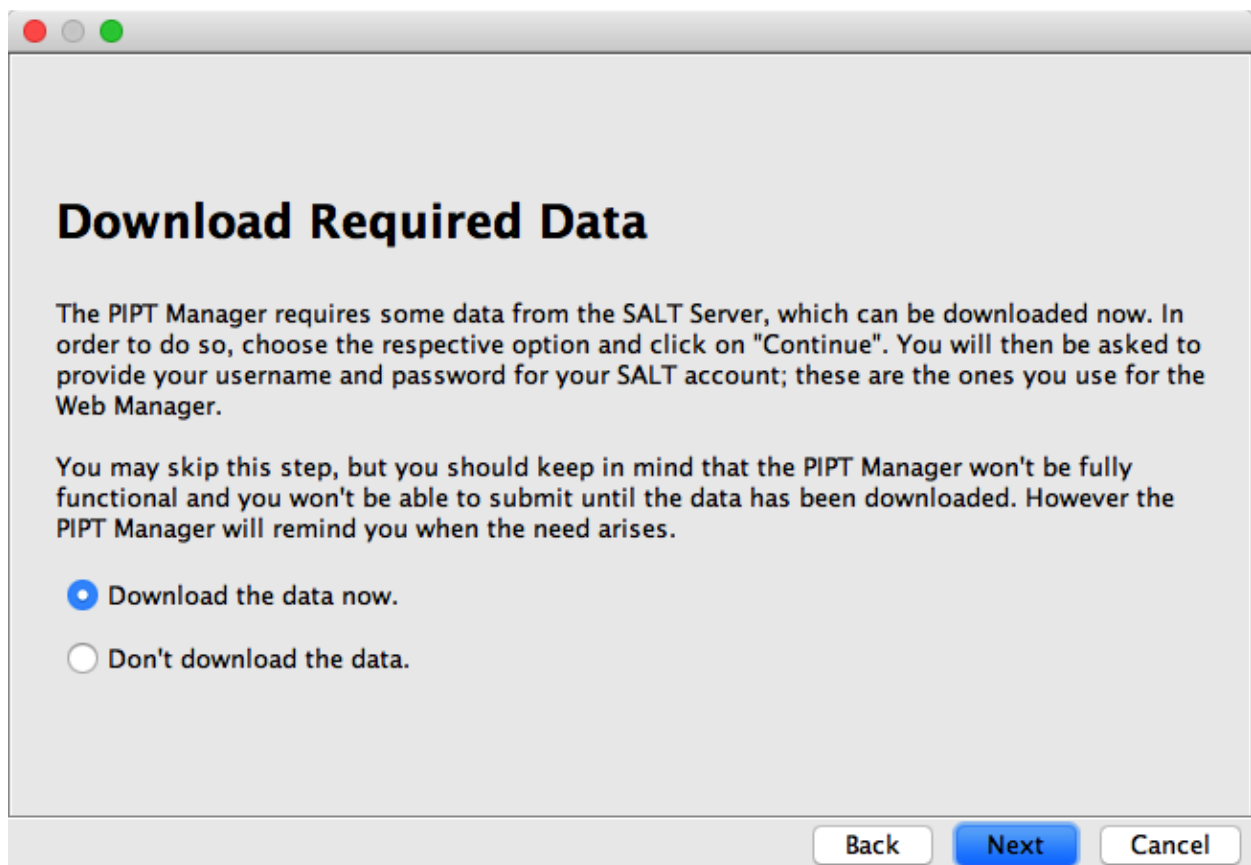
```
java -jar PIPT.jar
```

Launching the PIPT for the first time

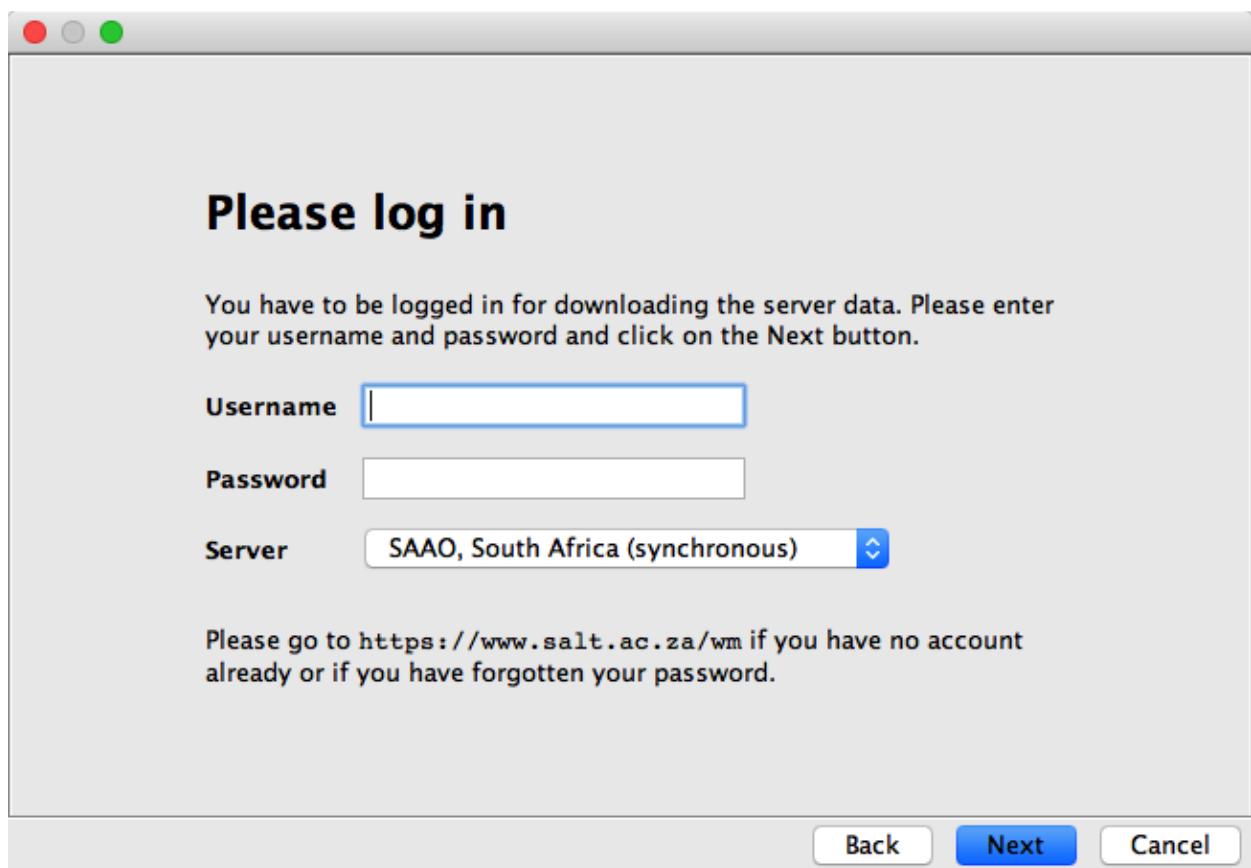
When you launch the PIPT for the first, you are greeted by a welcome window.



Once you feel sufficiently welcome, click on the *Next* button. You are then confronted with the harsh reality of having to make a decision: Do you want to download the database data the PIPT requires?



Unless you are reading this in a plane 30,000 feet above ground, you are strongly encouraged to select the *Download the data now* option. You will then be asked to authenticate yourself.



Please log in

You have to be logged in for downloading the server data. Please enter your username and password and click on the Next button.

Username

Password

Server

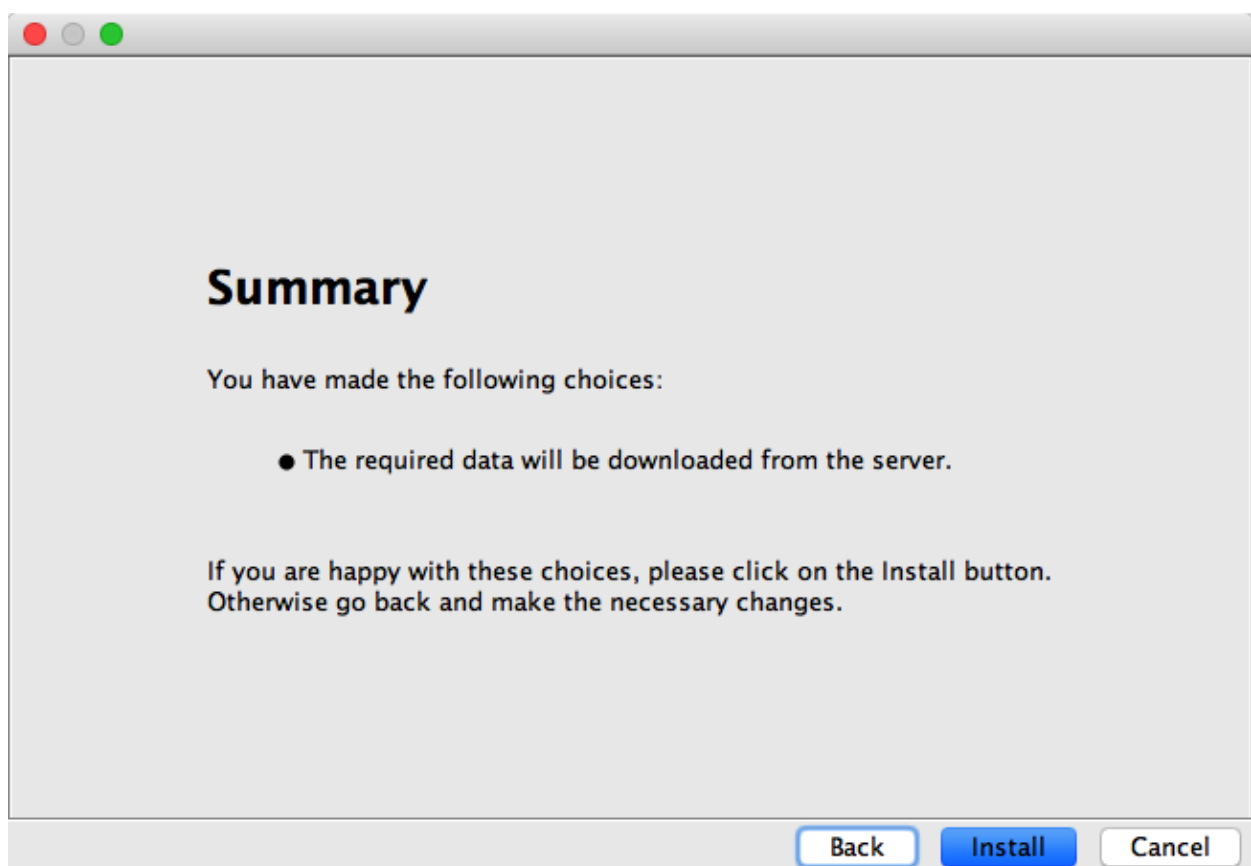
Please go to <https://www.salt.ac.za/wm> if you have no account already or if you have forgotten your password.

Back Next Cancel

The username and password are those you chose when setting up your SALT account. If you've forgotten these, you can request a password reset on <https://www.salt.ac.za/wm/PasswordReminder/>.

You can ignore the server dropdown menu, not least because it only offers one choice.

After logging in you are presented with a summary.



Summary

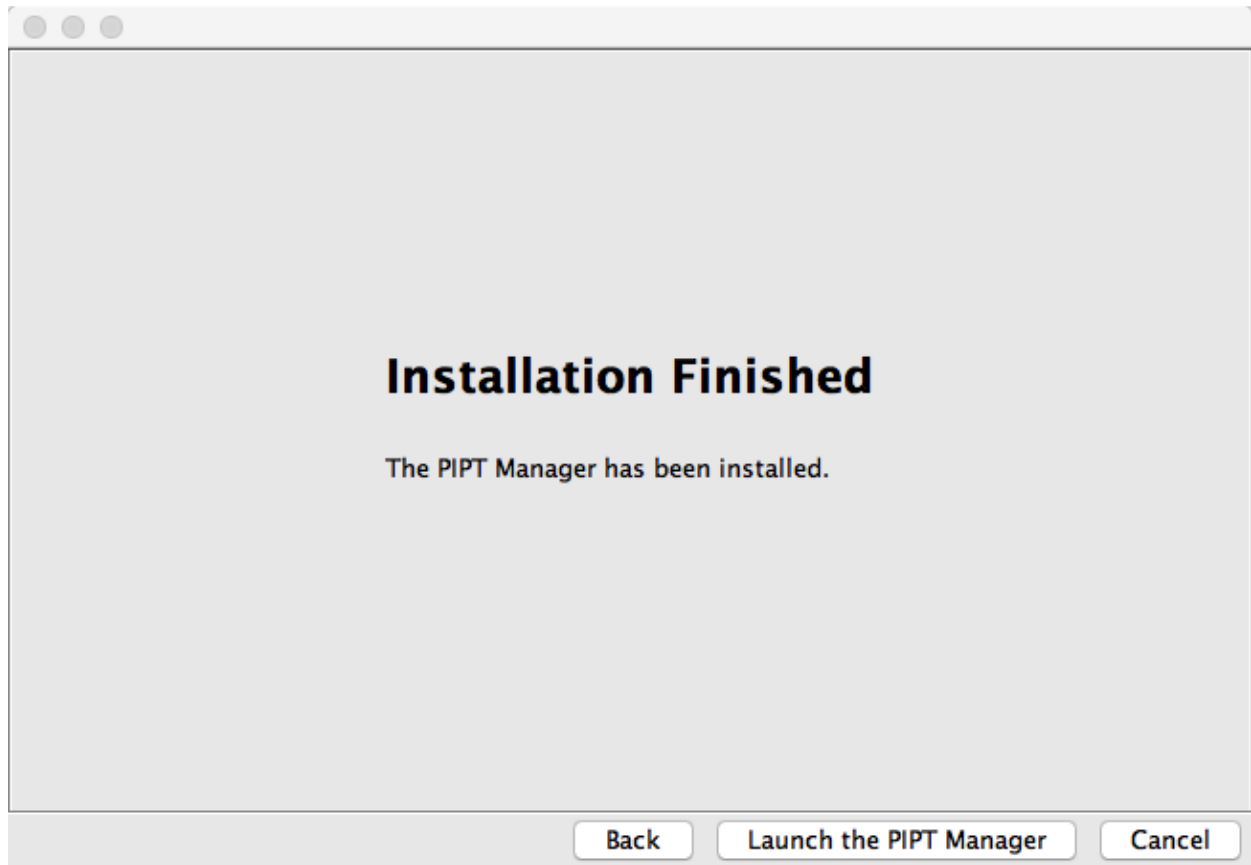
You have made the following choices:

- The required data will be downloaded from the server.

If you are happy with these choices, please click on the Install button. Otherwise go back and make the necessary changes.

Back Install Cancel

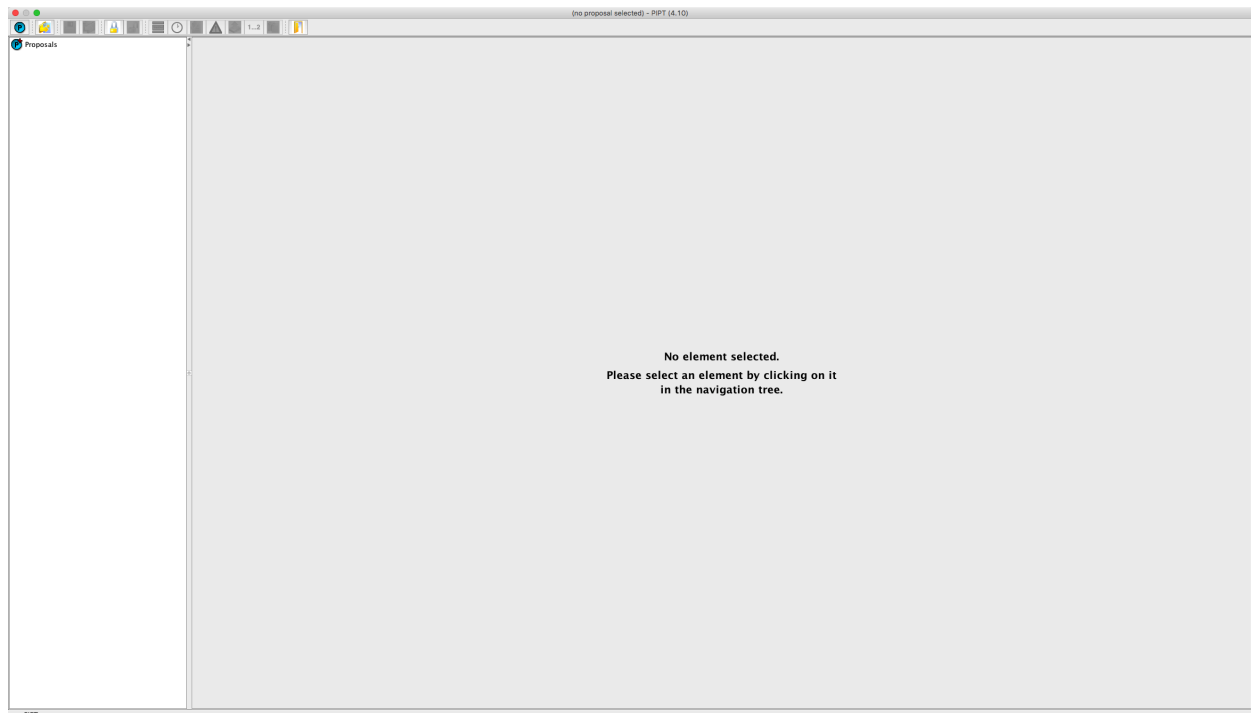
If you are happy with the summary, click on the *Install* button. The PIPT downloads the database data (in case you've chosen that option) and informs you once all is installed.



Now the wonders of the PIPT are only a click (on the *Launch the PIPT Manager* button) away!

Create a new proposal

When the PIPT opens, you are confronted with a clean slate with no sign of any proposal.



On the left of the screen there is the navigation tree, which currently consists of a single

Proposals node. On the right there is the form pane, which shows no form as nothing has been selected so far. Above these two there is a toolbar, and at the top of the window or, for Mac OS, the screen you can find the menu bar.

As the form panel instructs us to select an element, we might as well do. Click on the *Proposals* link in the navigation tree. The node changes its colour to a dark green (indicating it is selected), and the form panel displays an (empty) table of proposals.

When this manual mentions a click, it always refers to a click with the left mouse button, unless it specifically mentions a right-click. If you are a hard core Mac user, you might object to right clicks on the grounds that mice only have one button. Feel free to replace all mentions of a right click with something like "click the mouse with the ctrl key held down".

Right-click on the table and select *New Proposal* from the context menu. Choose the default option (*Science*) when prompted for the proposal type, and opt to create the proposal from scratch when asked in the next dialog. Voila, a new proposal appears in the navigation tree, and a form for general proposal information is shown in the form pane.

There are actually three other ways to create a new proposal:

- Right-click on the *Proposals* node in the navigation tree and choose the item *New Proposal* from the context menu.
- Use the menu item *File > New Proposal*.
- Use the keyboard shortcut for this menu item.

Go ahead and try these out. If you do this, you will face the next question: How do I get rid of all the surplus proposals now? There are two ways to achieve this goal:

- Right-click on the proposal's node in the navigation tree and select the delete option from the context menu.
- Click on the *Proposals* node in the navigation tree, right-click on the proposal in the table of proposals displayed in the form pane and select the delete option from the context menu.

You will have noticed the general pattern in the above: If you have to create or delete elements,

the right mouse button is your friend.

Of XML and proposal structure

If you've read the preceding section carefully, you might have stumbled over the word *element*. Element? What element?

All the proposal content (save attachments like finding charts) are stored as XML by the PIPT. So in principle a proposal looks like the following:

```
<Proposal>
  <Investigators>
    <Investigator>...</Investigator>
    <Investigator>...</Investigator>
  </Investigators>
  <Targets>
    <Target>...</Target>
    <Target>...</Target>
  </Targets>
  ...
</Proposal>
```

The XML defines a tree structure, and the tree nodes are called elements. So in the example above the Proposal element contains a Targets and an Investigators child element, which in turn contain Target and Investigator elements.

Each tree node in the PIPT's navigation tree (apart from the Proposals node) can be mapped to an XML element, which is why the word *element* is used in this manual.

Let us have a quick look at the structure of a phase 1 proposal before moving on:

```
Proposal
  Investigators
    Investigator 1
    Investigator 2
    ...
  Targets
    Target 1
    Target 2
    ...
  Instrument Configurations
    Instrument Configuration 1
    Instrument Configuration 2
    ...
```

The Proposal, Investigators, Targets and InstrumentConfigurations elements are all generated automatically when you create a proposal, but it remains up to you to fill this structure with life.

So you have to add various elements, and if you remember how you added a new proposal, it shouldn't come as a surprise that there are several ways of doing this.

1. You can right-click on the parent node in the navigation tree (such as the Investigators node if you want to create an investigator) and choose the *Add* item from the context menu.
2. You can right-click on what would be a sibling node (such as an existing Investigator node if you want to create an investigator) and choose to insert the new element before or after.

3. The form for the parent node (i.e. the form you get when selecting that node) contains a table of child elements. You can right-click on this table and choose the appropriate item from the context menu.

And if you need to delete an element, you have two options.

1. You can right-click on its node in the navigation tree and choose the *Delete* item from the context menu.
2. You can right-click on its entry in the table of elements (see option 3 for creating a new element above) and choose the *Delete* item from the context menu.

You might note that for targets the context menu offers to add a target from the clipboard. You may ignore this for now.

Creating the proposal content

Now that you know how to create new elements, you only have to fill in their forms... We will discuss the forms in detail in a later section, but there are a few general aspects you should keep in mind while working on your proposal.

- The Principal Investigator must belong to a SALT partner.
- Make sure you complete all relevant sections in the scientific justification. Your TAC might strongly disapprove of missing details.
- Add all your targets, even if its dozens of them. As we'll see in the next section, you don't have to enter their details manually. If your proposal is for ToO (target of opportunity) observations, you should include a dummy target.
- Use the simulator tools for planning your instrument configurations, even though you don't have to include all the details in the PIPT for phase 1. Please include your simulations in your proposal, as this makes the life of the SALT Astronomers and the TAC much easier.

Using a proposal from a previous semester

If you want to base your proposal on an existing proposal from a previous semester, the easiest might be to use the menu item `Online > Import from Server` to import that proposal. In case the proposal exists in the PIPT already, you will be asked whether you want to replace the existing version. Choose not to replace it.

If the imported proposal has a real proposal code (i.e. *not* a code of the form `Unsubmitted-...`), you have to use the menu item `Proposal > Clone` to create a new proposal with the same content.

Chances are that the semester of the imported or cloned proposal isn't correct, and if so you'll have to use the menu item `Proposal > Change Semester` to select the correct one.

Afterwards you can make all the necessary changes. In particular, you should remember to replace the scientific justification and to update the details for the proposals from the last four semesters. Both can be done on the general information form.

Adding many targets

While adding a hundred targets in the PIPT may perhaps count as a form of meditation or be used as a form of self-punishment, luckily there is no need for it.

Instead you may include all the target details in a comma-separated values (csv) file and import it

on the Targets form. A simple way to figure out what this csv file must look like is to add a target with all required details, and then to use the menu item *File > Export Target Data* to export it.

The following table lists all the columns available for the csv file.

Column name	Required?	Default value	Notes
target name	Yes		must be unique
target type	Yes		see below for the list of available types
right ascension	Yes		a float
declination	Yes		a float
equinox	Yes	2000	a float value
bandpass	Yes		bandpass for the magnitudes; must be U, B, V, R or I
minimum magnitude	Yes		
maximum magnitude	Yes		
observing time	For Phase 1		observing time per visit, including overheads; ignored for Phase 2 proposals
maximum lunar phase	For Phase 1		in percent; ignored for Phase 2 proposals
epoch	No	1 January 2000, 12:00:00 UT	string of the form yyyy-mm-ddThh:mm:ss.s
proper motion ra	No	0	in arcsec/year
proper motion dec	No	0	in arcsec/year
visits	No	1	number of visits for this target; ignored for Phase 2 proposals
ranking	No	High	ranking relative to other targets; must be High, Medium or Low; ignored for Phase 2
ephemeris time base	No		must be BJD, HJD or JD; UTC is assumed as time standard
ephemeris T0	No		must be given in the chosen ephemeris time base
ephemeris period	No		in days
ephemeris period change	No	0	rate of change in the period, in days/day

A simple example would be

target name, target type, right ascension, declination, equinox, bandpass, minimum magnitude, maximum magnitude, visits, observing time, maximum lunar phase, ranking

QPO 6754, EllipticalG, 120.534, -0.317, 2000, R, 18.3, 18.3, 1, 1200, 50, High
 BX 45, Irregular_V*, 195.194, 0.981, 2000, B, 16.6, 19.0, 3, 940, 15, Low

The following table lists the available target types. The bullets in the first column are only included to give an idea of how the types are related, and they mustn't be included in the csv file. So for example, use WD* for a white dwarf or Compact_Gr_G for a compact group of galaxies.

Target type	Explanation
Unknown	
Unknown	object of unknown nature
Radio sources	
Radio	radio-source
· Maser	maser
X-ray sources	
X	X-ray source
· SuperSoft	supersoft source
Gamma-ray sources	
gamma	gamma-ray source
· gammaBurst	gamma-ray burst
Inexistant	
Inexistant	inexistent objects
· Error	not an object (artefact)
Gravitation	
Gravitation	gravitational source
· LensingEv	(micro)lensing event
· Candidate_Lens	possible gravitational lens
· Possible_lensImage	possible gravitationally lensed image
· GravLens	gravitational lens
· GravLensSystem	gravitational lens system (lens+images)
Candidates	
Candidates	candidate objects
· Possible_SCIG	possible supercluster of galaxies
· Possible_CIG	possible cluster of galaxies
· Possible_GrG	possible Group of galaxies
· Candidate_**	physical binary candidate
· · Candidate_EB*	eclipsing binary candidate
· · Candidate_CV*	cataclysmic binary candidate
· · Candidate_XB*	X-ray binary candidate
· · · Candidate_LMXB	low-mass X-ray binary candidate
· · · Candidate_HMXB	high-mass X-ray binary candidate
· Candidate_Pec*	possible peculiar star
· · Candidate_YSO	young stellar object candidate
· · Candidate_pMS*	pre-main sequence star candidate
· · · Candidate_TTau*	T Tau star candidate
· · Candidate_C*	possible carbon Star
· · Candidate_S*	possible S Star
· · Candidate_OH	possible star with envelope of OH/IR type
· · Candidate_CH	possible star with envelope of CH type

Target type	Explanation
· · Candidate_WB*	possible Wolf-Rayet star
· · Candidate_Be*	possible Be star
· · Candidate_HB*	possible horizontal branch star
· · Candidate_RGB*	possible red giant Branch star
· · Candidate_RSG*	possible red supergiant star
· · Candidate_AGB*	possible asymptotic giant branch star
· · Candidate_post-AGB*	post-AGB star candidate
· · Candidate_BSS	candidate blue straggler Star
· · Candidate_WD*	white dwarf candidate
· · Candidate_NS	neutron star candidate
· · Candidate_BH	black hole candidate
· · Candidate_SN*	supernova candidate
· · Candidate_low-mass*	low-mass star candidate
· · Candidate_brownD*	brown dwarf candidate
Multiple objects	
multiple_object	composite object
· Region	region defined in the sky
· · Void	underdense region of the Universe
· SuperCIG	supercluster of galaxies
· ClG	cluster of galaxies
· GroupG	group of galaxies
· · Compact_Gr_G	compact group of galaxies
· · Gr_QSO	group of quasars
· PairG	pair of galaxies
· · IG	interacting galaxies
· GICl?	possible globular cluster
· Cl*	cluster of stars
· · GICl	globular cluster
· · OpCl	open (galactic) cluster
· Assoc*	association of stars
· **	double, binary or multiple star
· · EB*	eclipsing binary
· · · EB*Algol	eclipsing binary of Algol type
· · · EB*betLyr	eclipsing binary of beta Lyr type
· · · EB*WUMa	eclipsing binary of W UMa type
· · · EB*Planet	star showing eclipses by its planet
· · SB	spectroscopic binary
· · CataclyV*	cataclysmic variable star
· · · DQHer	cataclysmic var. DQ Her type
· · · AMHer	cataclysmic var. AM Her type
· · · Nova-like	nova-like star
· · · Nova	nova
· · · DwarfNova	dwarf nova
· · XB	X-ray binary
· · · LMXB	low mass X-ray binary
· · · HMXB	high mass X-ray binary
· ***	star field

Interstellar matter target type	Explanation
ISM	interstellar matter
· PartofCloud	part of cloud
· PN?	possible planetary nebula
· ComGlob	cometary globule
· Bubble	bubble
· EmObj	emission object
· Cloud	cloud or nebula
· · GalNeb	galactic nebula
· · BrNeb	bright nebula
· · DkNeb	dark cloud (nebula)
· · RfNeb	reflection nebula
· · MolCld	molecular cloud
· · · Globule	globule (low-mass dark cloud)
· · · denseCore	dense core inside a molecular cloud
· · HVCld	high-velocity cloud
· · BiNeb	bipolar nebula
· · GasNeb	gaseous nebula
· HII	HII (ionized) region
· PN	planetary nebula
· HIshell	HI shell
· SNR?	supernova remnant candidate
· SNR	supernova remnant
· Circumstellar	circumstellar matter
· · outflow?	outflow candidate
· · Outflow	outflow
· · OutflowJet	outflow or jet
· · HH	Herbig-Haro object
Stars	
Star	star
· *inCl	star in cluster
· *inNeb	star in nebula
· *inAssoc	star in association
· *in**	star in double system
· V*?	star suspected of variability
· Pec*	peculiar star
· · HB*	horizontal branch star
· · YSO	young stellar object
· · Em*	emission-line star
· · · Be*	Be star
· · BlueStraggler	blue straggler star
· · RGB*	red giant branch star
· · AGB*	asymptotic giant branch star (He-burning)
· · · C*	carbon star
· · · S*	S star
· · RSG*	red supergiant star
· · post-AGB*	post-AGB star (proto-PN)
· · WD*	white dwarf

Target type	Explanation
··· pulsWD*	pulsating white dwarf
·· low-mass*	low-mass star ($M < 1 \text{ solMass}$)
·· brownD*	brown dwarf ($M < 0.08 \text{ solMass}$)
·· OH/IR	star with envelope of OH/IR type
·· CH	star with envelope of CH type
·· pMS*	pre-main sequence star
··· TTau*	T Tau-type star
·· WR*	Wolf-Rayet star
·· NS*	neutron star
·· BH*	black hole
· PM*	high proper-motion star
·· near*	nearby star
· HV*	high-velocity star
· V*	variable star
·· Irregular_V*	variable star of irregular type
··· Orion_V*	variable star of Orion type
··· Rapid_Irreg_V*	variable star with rapid variations
·· Eruptive*	eruptive variable star
··· Flare*	flare star
··· FUOr	variable star of FU Ori type
··· Erupt*RCrB	variable star of R CrB type
·· RotV*	rotationally variable star
··· RotV*alf2CVn	variable star of alpha2 CVn type
··· RotV*Ell	ellipsoidal variable star
··· Pulsar	pulsar
··· BYDra	variable of BY Dra type
··· RSCVn	variable of RS CVn type
·· PulsV*	pulsating variable star
··· RRLyr	variable star of RR Lyr type
··· Cepheid	Cepheid variable star
··· PulsV*delSct	variable star of delta Sct type
··· PulsV*RVTau	variable star of RV Tau type
··· PulsV*WVir	variable star of W Vir type
··· PulsV*bCep	variable star of beta Cep type
··· deltaCep	classical Cepheid (delta Cep type)
··· gammaDor	variable star of gamma Dor type
·· LPV*	long-period variable star
··· Mira	variable Star of Mira Cet type
··· semi-regV*	semi-regular pulsating star
·· SN	supernova
·· Symbiotic*	symbiotic star
· Sub-stellar	sub-stellar object
·· Planet?	extra-solar planet candidate
· ExG*	isolated star (not a member of a particular galaxy)
Galaxies	
Galaxy	galaxy
· EllipticalG	elliptical galaxy

Target type	Explanation
· SpiralG	spiral galaxy
· DwarfG	dwarf galaxy
· IrregG	irregular galaxy
· PartofG	part of a galaxy
· GinCl	galaxy in cluster of galaxies
· · BCIG	brightest galaxy in a cluster (BCG)
· GinGroup	galaxy in group of galaxies
· GinPair	galaxy in Pair of galaxies
· High_z_G	galaxy with high redshift
· AbsLineSystem	absorption line system
· · Ly-alpha_ALS	Ly alpha absorption line system
· · DLy-alpha_ALS	damped Ly-alpha absorption line system
· · metal_ALS	metallic absorption line system
· · Ly-limit_ALS	Lyman limit system
· · Broad_ALS	broad absorption line system
· RadioG	radio galaxy
· HII_G	HII galaxy
· LSB_G	low surface brightness galaxy
· AGN_Candidate	possible active galactic nucleus
· · QSO_Candidate	possible quasar
· · Blazar_Candidate	possible blazar
· · BLLac_Candidate	possible BL Lac
· EmG	emission-line galaxy
· StarburstG	starburst galaxy
· BlueCompG	blue compact galaxy
· LensedImage	gravitationally lensed image
· · LensedG	gravitationally lensed image of a galaxy
· · LensedQ	gravitationally lensed image of a quasar
· AGN	active galactic nucleus
· · LINER	LINER-type active galactic nucleus
· · Seyfert	Seyfert galaxy
· · · Seyfert_1	Seyfert 1 galaxy
· · · Seyfert_2	Seyfert 2 galaxy
· · Blazar	blazar
· · · BLLac	BL Lac – type object
· · · OVV	optically violently variable object
· · QSO	quasar
· GSN	galaxy with supernova
Solar system objects	
Solar_System	Solar System object
· Planet	planet
· · Mercury	Mercury
· · Venus	Venus
· · Earth	Earth
· · Moon	Moon
· · Mars	Mars
· · Jupiter	Jupiter
· · Saturn	Saturn

Target type	Explanation
· · Uranus	Uranus
· · Neptune	Neptune
· DwarfPlanet	dwarf planet
· · Pluto	Pluto
· · Ceres	Ceres
· · Haumea	Haumea
· · MakeMake	MakeMake
· · Eris	Eris
· sSSBody	small Solar System body
· · Comet	comet
· · Asteroid	asteroid
· TNO	Trans-Neptunian object
· PMoon	planetary moon
· PRing	planetary ring
Calibration	
Calib	calibration
Calib_S	standard
Calib_aS	astrometric standard
Calib_phS	photometric standard
Calib_sS	spectroscopic standard
Cal_polS	polarimetric standard
Cal_spS	spectropolarimetric standard
Cal_rvS	radial velocity standard
Cal_Flat	flat
Cal_SFlat	sky flat
Cal_DFlat	dome flat
Cal_Guide*	guide star
Man-made object	
mmObj	man-made object

A word on storing your username and password

When you log in, the PIPT offers you remember your username and password so that the login form will prepopulated when you login next time. Your credentials will be saved in a file. The content of that file is sufficiently scrambled to avoid that someone can glance your username and password by accident, but it does *not* use safe encryption.

While on Unix systems the file permissions should be set correctly, *it is your responsibility to ensure that nobody else has access to the file.*

If you don't want to store your user credentials any longer just unselect the checkbox on the login panel.

Submitting the proposal

Once you are ready to submit, you should use the menu item *Proposal > Validate* to check that your proposal doesn't contain any errors. If there are errors, you will get a list of error messages underneath the proposal XML.

Validation

The proposal is not valid.

```

1 <?xml version="1.0" encoding="UTF-8" standalone="yes"?>
  <Proposal xmlns="http://www.salt.ac.za/PIPT/Proposal/Phase1/2.9" xmlns:ns2="http
    <ProposalType>Science</ProposalType>
    <Title>Unraveling ring galaxies</Title>
    <Abstract>This proposal is for a two-semester run to observe a number of int
6    <Year>2015</Year>
    <Semester>2</Semester>
    <Phase>1</Phase>
    <Partners>
      <ns2:Partner id="Partner-1">
11        <ns2:Name>South Africa</ns2:Name>
          <ns2:TimeDistribution>
            <ns2:Year>2015</ns2:Year>
            <ns2:Semester>2</ns2:Semester>
            <ns2:Value>100</ns2:Value>
16            <ns2:Units>%</ns2:Units>
          </ns2:TimeDistribution>
          <ns2:TimeDistribution>
            <ns2:Year>2016</ns2:Year>
            <ns2:Semester>1</ns2:Semester>
21            <ns2:Value>100</ns2:Value>
            <ns2:Units>%</ns2:Units>
          </ns2:TimeDistribution>
        </ns2:Partner>
        <ns2:Partner id="Partner-2">
26          <ns2:Name>Other</ns2:Name>
          <ns2:TimeDistribution>
            <ns2:Year>2015</ns2:Year>

```

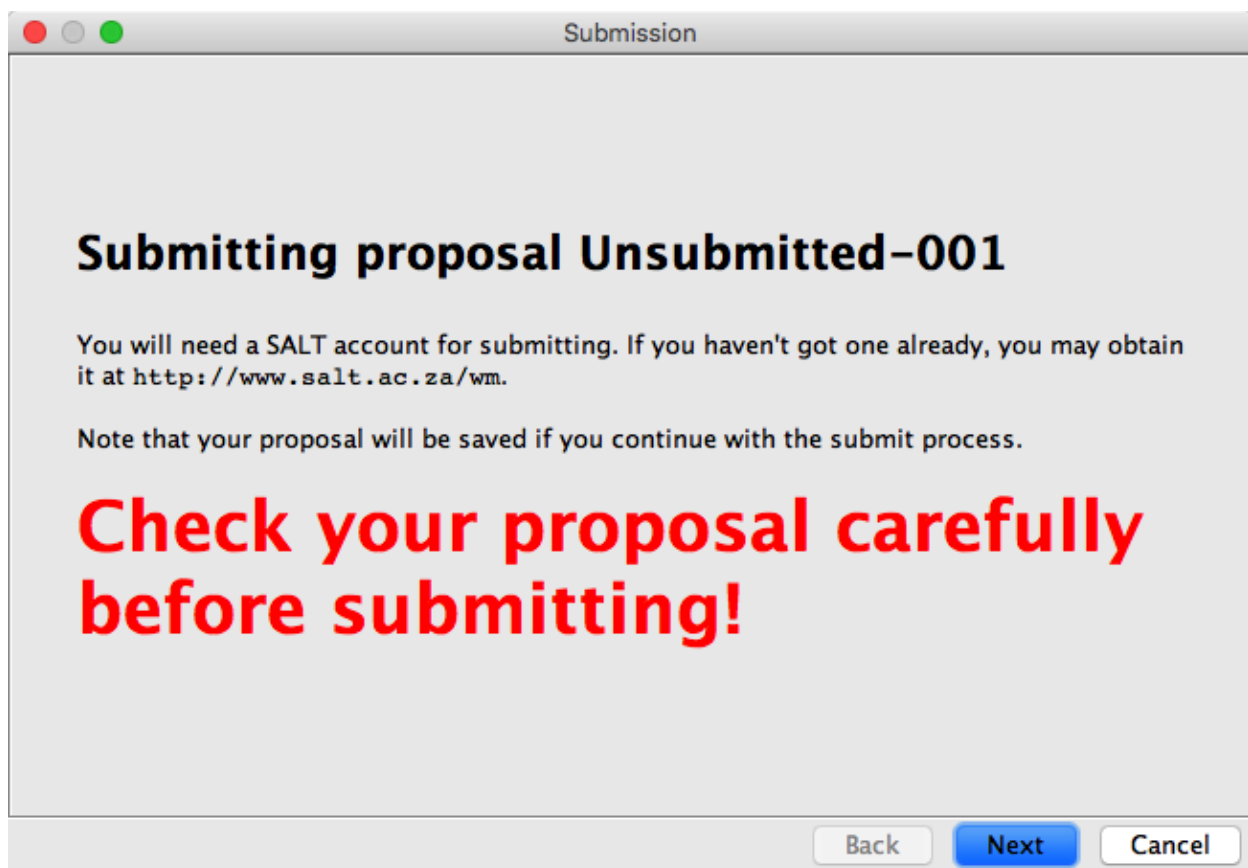
Error message	Line
[ERROR] At least one of the following elements is ill-positioned or is missing: http://www.salt.ac.za/PIPT/Proposal/Shared/2.3:Minimum http://www.salt.ac.za/PIPT/Proposal/Shared/2.3:Maximum	197
[ERROR] At least one of the following elements is ill-positioned or is missing: http://www.salt.ac.za/PIPT/Proposal/Phase1/2.9:Visits	555

OK

The error messages may be a bit cryptic. In this case looking at the part of the XML where the error is raised might give you a better idea of where to look for the problem.

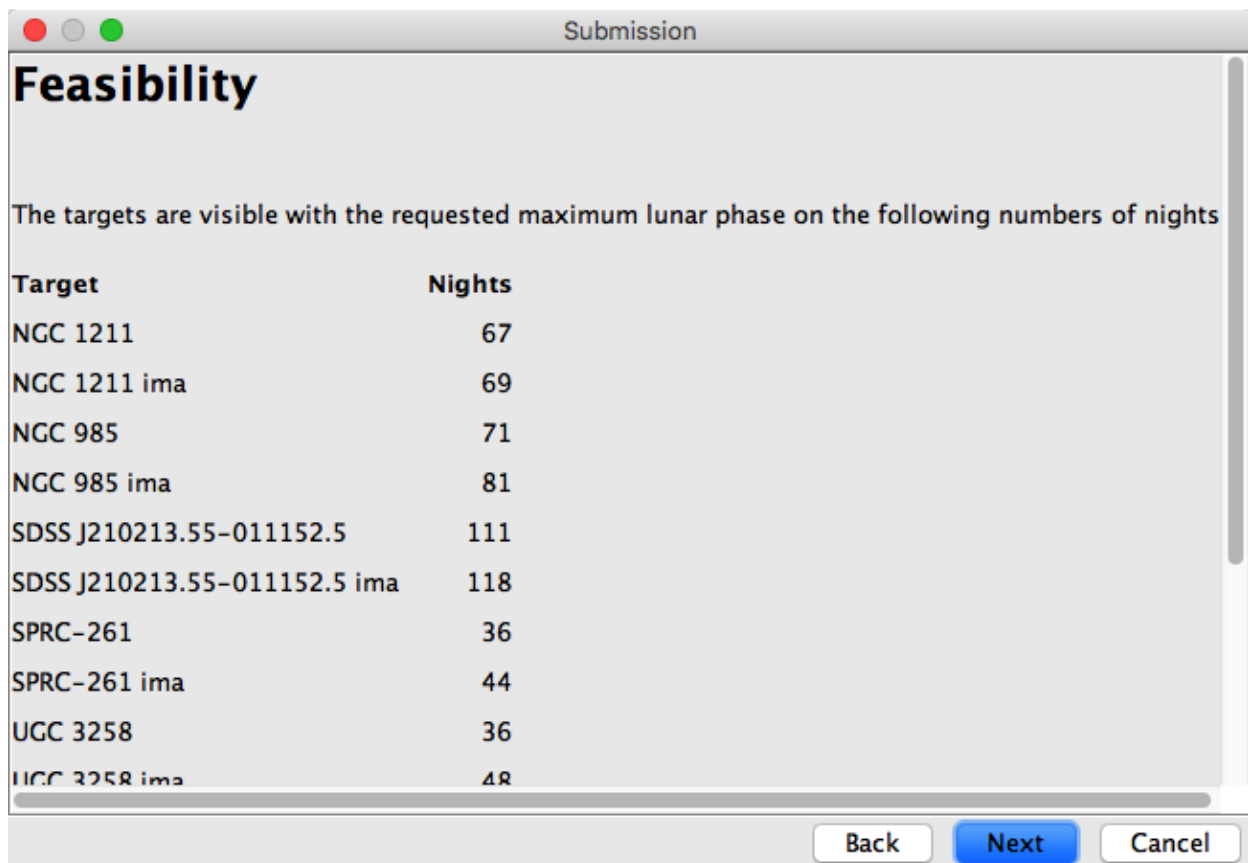
When your proposal is valid, you should check for warnings by using the menu item *Proposal > Show Warnings*. Do heed any warnings you get, as they might indicate that your proposal setup is not precisely what you expect it to be.

If you are convinced that all is well with your proposal you can start the submission process by means of the menu item *Proposal > Submit*. This will launch the submission dialog.



Pay attention to the proposal code shown (*Unsubmitted-001* in the screen shot above). When you resubmit a proposal it should *never* be of the form *Unsubmitted-nnn*, but must be the proposal code of the resubmitted proposal.

Once you click the *Next* button your proposal is saved and the PIPT calculates for how many nights your targets are visible.



While nothing will prevent you from submitting a proposal which can only be observed on a handful of nights, the chances of such a proposal being accepted or even observed might be rather slim.

The next step in the submission process is that the PIPT checks whether all your investigators are in the science database. An investigator is deemed to be in the database if and only if there exists a user with the same email address in the database. You cannot submit a proposal with non-existing investigators.

As the following example shows, it is easy to have an investigator in your proposal who apparently doesn't exist.

The screenshot shows a window titled "Submission" with a header "Unknown Investigators". Below the header, it states: "The following investigators aren't included in the science database. Please ensure that they have created a SALT account on the Web Manager and that their email address for the account is the same you are using in the proposal." A table lists the following investigator:

Name	Email
Petri Vaisanen	petri@salt.ac.za

At the bottom of the window are three buttons: "Back", "Next", and "Cancel".

Here, Petri Vaisanen is a user who exists in the database, and the email address petri@salt.ac.za is perfectly valid. It just so happens that the email address in the database is petri@sao.ac.za...

The PIPT also checks that the contact details in the proposal match those in the database for all the investigators. If that's not the case you have to confirm that the ones from the database may be used.

Submission

Conflicting contact details

The contact details for the following email addresses conflict with the contact details stored in the Science Database (SDB).
You can only submit your proposal with the contact details from the SDB.

petri@sao.ac.za

☐ Use contact details from SDB.

Property	Database value	Proposal value
phone	+27 21 447 0025	+27 21 447 00225

Back Next Cancel

If all is well with the contact details the PIPT checks your target details by comparing them to the details SIMBAD, NED and VizieR return for the target name. As this may take a while and isn't always helpful, you may skip this check.

Submission

You may check your targets

You may check your target data against catalog data.
This might take a while.

Checking 7 of 16

Skip remaining checks

Back Next Cancel

The PIPT will display any discrepancies found while checking the targets. This is for information purposes only; you can proceed with the submission if your details are correct.

Submission

Catalog data for targets

For the following targets there exists catalog data, and the positions in your and the catalog data differ by more than 2 arcminutes.

NGC 1211

Property	Catalog value	Proposal value
right ascension	3h 06m 52.4s	13h 06m 52.4s

Back Next Cancel

Finally the PIPT asks you to confirm that you really want to submit the proposal. Muster your courage, take a deep breath and hit the *Submit* button.

Submission

All systems 'go'!

You are now ready to submit your proposal.

Your proposal will be submitted to:
SAAO, South Africa

Your proposal will be visible in the Web Manager immediately after the submission.

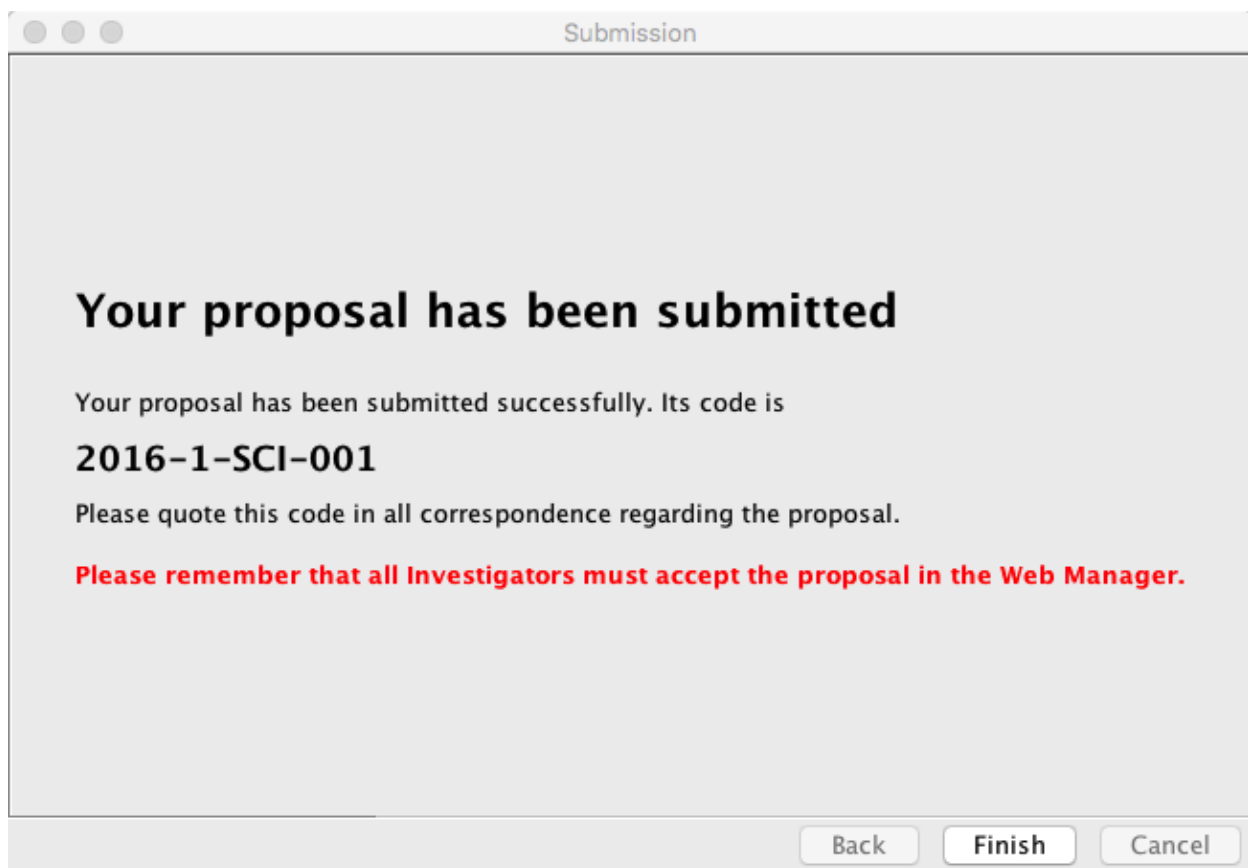
Submitting your proposal may take a while, so please be patient.
Do not close this window or quit the PIPT Manager while submitting
is in progress, but wait until you get either a confirmation or an error message.

In case you get the feeling that the program has hung and you thus terminate it,
please DO NOT SUBMIT AGAIN until you have waited for at least 30 minutes
and have received no email with regards to your submission.

If you encounter a problem or if you have any question, please
don't hesitate to write to salthe@lp@sao.ac.za.

Back Submit Cancel

Depending on the size of your proposal it might take a few minutes for your proposal to be submitted. Once the submission is accomplished a success message is shown.



The proposal code shown in this message is the unique identifier for your proposal and remains the same across resubmissions. As noted above, the start window of the submission dialog always shows the proposal code, and you should ensure it is correct.

Of course things can go wrong in life and you might get an error message, as your proposal couldn't be submitted. In this case you should fix the error and submit again.

In rare cases (and presumably under Windows only) you might get an error that the existing proposal content couldn't be moved. Chances are good that your proposal has been submitted in this case, and you should check whether this is the case before trying to resubmit.

After the successful submission of the proposal all investigators receive a confirmation email, which includes a link for accepting or rejecting the proposal.

Dear Christian Hettlage,

a SALT proposal has just been submitted with you as investigator.

Title: Unraveling ring galaxies

Abstract:

This proposal is for a two-semester run to observe a number of interacting galaxies with rings using RSS/FP and long-slit, to determine their past history and likely future development. Data will be analysed with a tilted-rings model for the kinematics and with stellar population synthesis for colors, SF histories and metallicity values. Using state-of-the-art hydro-dynamical simulations these results will be interpreted in the context of minor merging affecting galaxy evolution and star formation. The project is a continuation of a successful pilot study of a single coreless ring with an intriguing history and morphology.

Principal Investigator: Christian Hettlage (hettlage@sao.ac.za)

Principal Contact: Christian Hettlage (hettlage@sao.ac.za)

You have to approve of this proposal (or refuse it) by pointing your web browser to the following address:

<http://www.salt.ac.za/wm/ApproveProposal/j4vN5Ir>

Please note that the proposal will not be accepted until all the investigators have approved.

To get more information about the proposal, please login to the Web Manager at:
<http://www.salt.ac.za/wm/>

The proposal code for your proposal is 2016-1-SCI-002. You are kindly asked to quote it in the subject of all correspondence relating to the proposal.

If you have any questions, please feel free to reply to this email.

Sincerely,
Your SALT Team

Clicking on the link leads you to the page where you can approve (or reject) the proposal.

Approve proposal

Please do not forget to approve (or refuse) the proposal at the bottom of this page!

Proposal information

Code: 2016-1-SCI-004
Title: Unraveling ring galaxies

Abstract:
This proposal is for a two-semester run to observe a number of interacting galaxies with rings using RSS/FP and long-slit, to determine their past history and likely future development. Data will be analysed with a tilted-rings model for the kinematics and with stellar population synthesis for colors, SF histories and metallicity values. Using state-of-the-art hydro-dynamical simulations these results will be interpreted in the context of minor merging affecting galaxy evolution and star formation. The project is a continuation of a successful pilot study of a single coreless ring with an intriguing history and morphology.

Principal Investigator: Christian Hettlage
Principal Contact: Christian Hettlage

Total requested time: 47400 seconds

Your partner: South Africa
Requested time distribution: 100%

User information

You have successfully been identified as:

Username:	hettlage
Name:	Christian Hettlage
Institute:	South African Astronomical Observatory -
Phone:	0027214609328
Email:	hettlage@sao.ac.za

Approve proposal

Do you want to approve of this proposal?

☐ Yes, I want to support this proposal with 100% of the requested time of 47400 seconds.

☐ No, I do not want to support this proposal. Please note that the proposal will not be accepted in that case.

Submit

You shouldn't reject a proposal just because it contains an error. In this case you should rather resubmit it; see the next section. Similarly, don't reject erroneous submissions, but instead notify salthelp@salt.ac.za, so that a SALT Astronomer can delete your proposal.

It is a good idea to thoroughly check your proposal, and you can do this by pointing your

browser to http://www.salt.ac.za/wm/proposal/your_proposal_code (where `your_proposal_code` must be replaced with the proposal's proposal code, such as 2016-1-SCI-002).

Resubmitting the proposal

Of course it might happen that you've made a mistake in your proposal which needs to be fixed. If you notice this before the phase 1 deadline, that is no problem at all - just resubmit the proposal.

However, before making the change(s) you should double-check that the proposal code is correct. The code is shown not only in the label of the proposal's (root) node in the navigation tree, but also on the General Proposal Information form, which you get when clicking on that node.

General Proposal Information

Principal Investigator

Principal Contact

Title
(up to 15 words / 120 characters)

Abstract

This proposal is for a two-semester run to observe a number of interacting galaxies with rings using RSS/FP and long-slit, to determine their past history and likely future development. Data will be analysed with a tilted-rings model for the kinematics and with stellar population synthesis for colors, SF histories and metallicity values. Using state-of-the-art hydro-dynamical simulations these results will be interpreted in the context of minor merging affecting galaxy evolution and star formation. The project is a continuation of a successful pilot study of

(up to 200 words / 1200 characters)

Proposal Type

Proposal Code

Year

Semester

Phase

☐ Time critical observation

☐ Target of Opportunity ?

☐ This is a Priority 4 proposal

Total requested time ?

If the proposal code starts with *Unsubmitted-*, the submission would create a new proposal. Clearly this is something you'd like to avoid.

But this might raise the question what to do if the proposal with the correct is nowhere to be found in the PIPT. The answer is straightforward; by means of the menu item *Online > Import from Server* you can always download the latest version of a submitted proposal (both for phase 1 and phase 2).

If you notice an error after the phase 1 deadline, you should contact salthelp@salt.ac.za, explaining what the issue is and why you feel a resubmission is necessary.

Creating and submitting a phase 2 proposal

After the TACs have made their time allocations, you will be informed by email of the outcome for your proposal. If you have been awarded time, you need to convert your proposal from phase 1 to phase 2. You can do this in two ways.

1. You may use the menu item *Online > Convert to Phase 2*.
2. You may download the phase 2 version from the server by means of the menu item *Online > Import from Server*.

The structure of a phase 2 proposal looks as follows.

Proposal

Investigators

Investigator 1

Investigator 2

...

Targets

Target 1

Target 2

...

Blocks

Block 1

Observation 1

Acquisition 1

Instrument setup 1

Instrument setup 2

...

Block 2

Observation 2

Acquisition 2

Instrument setup 3

Instrument setup 4

...

...

Pools

Pool 1

Pool 2

...

You already know investigator and target elements from phase 1.

A block is the smallest schedulable unit in a proposal. In other words, a block is observed in one go, without any intermissions. As such you should make sure that your blocks aren't too long, as long blocks are harder to schedule and hence less likely to be observed. In addition weather conditions might deteriorate while a long block is observed.

If your block is longer than an hour and the observing conditions at some time after an hour fail to satisfy your requirements, your block won't be rejected.

In case you have to create more than a dozen or so of blocks it might be easier to generate them with an external script. This will be covered in a later section.

Pools are optional and will be explained in a later section.

Clearly new elements must be added to the proposal to get the required structure, and this is done in the same way as for a phase 1 proposal. Right clicks, be they on a navigation tree node label or on a table row, are still your friend.

Details about the forms for the various proposal elements are given in a later section.

Proposal submission works in the same way as for phase 1. The only difference is that near its end the submission process includes an additional step allowing you to check the structure of your proposal.

Please check your proposal content

The Observations have the following content.

Observation	Target	Acquisition Configuration
RBS9	Target-1	Saltcam-1
Observation	Target-2	Saltcam-2
Observation	Target-3	Saltcam-3
Observation	Target-4	Saltcam-4
Observation	Target-5	Saltcam-5

The proposal contains the following Block structure.

Block	Pointing	Observation
RBS9	[Pointing]	RBS9
PGS456	[Pointing]	Observation
ESO350-IG38	[Pointing]	Observation
PKS2155-304	[Pointing]	Observation
ESO462-G09	[Pointing]	Observation

In addition to the acquisitions, the proposal contains the following configurations.

Observation	Instrument Configuration
RBS9	HR
Observation	HRS MR

Back Next Cancel

Note that no confirmation email is sent to the investigators.


After the submission

As with phase 1 proposals, it is a good idea to check your submission in the Web Manager and to resubmit if necessary.

The submitted proposal undergoes a technical review by your liaison SALT Astronomer (SA). If they spot an issue, they will send you an email. Once the SA is satisfied that the proposal can be observed as is, they will activate it, so that it appears in the queue at the telescope.

When an observation is taken for your proposal, you are sent an email with a link for downloading the data. The data is stored on the download server for a few days. After that you have to request the data to be put back onto the server, which you can do on your proposal's page in the Web Manager.

↑ top


Summary of executed observations

Please note that this summary may be incomplete.

Block				Observation details				Download Requests
Block	Observation time	Priority	Moon	Target(s)	Observation Date	Accepted?	Rejection reason	Edit
UGC 3258 PA1 (view details)	3151 sec	1	Any	UGC 3258	2015-11-16	Yes		REJECT

Data
☐ Select/Deselect all
☐ Request data
☐ Select/Deselect all
Calibrations
☐ Request spectrophotometric standards
[SUBMIT](#)

Pools

In most cases you don't have to worry about pools in your proposal and may just ignore them. But there are two exceptions.

1. In survey proposals you might have more targets than you can observe with the allocated time, so that you would like to request to take as many observations as possible from a list of observations.
2. You are monitoring a target and need different blocks with a wait period between subsequent observations.

The second case might need some explanation. So assume that you want to observe the same target ten times, with at least three days between the observations. Further assume that you were given time for five priority 1 observations and five priority 2 observations.

Then you might think that all you have to do is to create a priority 1 block with five visits and a priority 2 block with five visits, setting the wait period to three days for both. Then indeed two observations of the priority 1 block will be at least three days apart, and two observations of the priority 2 block will be at least three days apart as well.

But you might still get an observation of the priority 1 block and an observation of the priority 2 block during the same night. To avoid this you would define a pool with a wait period of three days and add the two blocks to this pool.

Adding many blocks

While a handful of blocks can be added with reasonable effort, adding dozens of blocks is tedious and error-prone. For such cases it makes much more sense to generate the blocks with an external script and then import them into the proposal.

To do so define a block with the setup you want to use. You can use arbitrary values for the exposure times etc., the important aspect is that the block is valid. You should use the menu item *Proposal > Validate* to check this.

Select this block in the navigation tree and scroll down to the bottom of the form. You should find a button *Export as Template*.

Maximum seeing arcseconds

Observations

#	Observations
1	NGC 2626

Check Feasibility

Export as Template ☒ The target exists in the proposal already.

Overhead estimates

Acquisition: 600 seconds per acquisition

Use this button to export the block. The checkbox to the right of the button lets you specify whether the template should assume that the target for the block exists in the proposal already. If that is indeed the case, only the target name is defined in the template; otherwise the full target details are included.

You'll get an XML file with the block details, which contains various placeholders:

--INSERT NAME--

A name. If you don't replace this placeholder a generic name based on the target is chosen (if you allow this).

--INSERT TARGET NAME--

To be replaced with the name of the target for the acquisition. A target with this name must exist in the proposal already when you import the block.

--INSERT ABSOLUTE FILE PATH--

To be replaced with the absolute file path of the file to attach.

--INSERT ABSOLUTE FILE PATH OR AUTOMATIC--

To be replaced with the absolute file path of the finding chart or with the word `auto-generated`. In case of the latter the finding chart will be generated when importing the block or when submitting the proposal. The generated finding chart will be the same as the one you get when generating the finding chart on the acquisition form in the PIPT. If you don't want to use the default image server (POSS2/UKSTU Red), you may replace the `<ns:Path>...</ns:Path>` with `<ns:ImageServer>image_server</ns:ImageServer>`. Here `ns` must be replaced by whatever prefix is used for the `Path` element.

The following image servers can be chosen for auto-generating a finding chart. It is your responsibility to ensure that the chosen server actually covers your target location.

Accepted image server names
POSS2/UKSTU Red

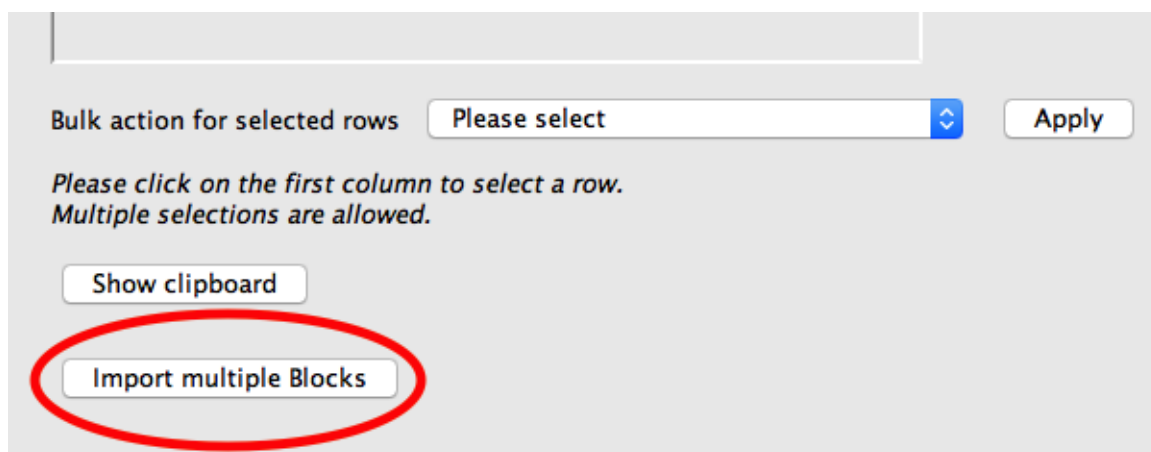
Accepted image server names
POSS2/UKSTU IR
POSS1 Red
POSS1 Blue
2MASS-J
2MASS-H
2MASS-K

It is your responsibility to ensure that the target is covered by the image server you choose.

You should use this template to generate an xml file for each block in your proposal. All these generated files must be stored in the same directory, and they must have the extension `.xml`. When choosing filenames you should keep in mind that the PIPT will read in the files in alphabetical order. (If you use numbers in the filename, pad them with zeros to make sure that they all have the same length, as otherwise the order might not be what you expect.)

An example of how to generate the xml files is given below.

Once you have generated the files, you can select the Blocks element in the navigation tree. Its form contains a button for importing multiple blocks.



If you click on this button you get a dialog which allows you to make some choices regarding the import.

- You have to choose the directory containing the xml files to import. Note that you have to select the directory, not the files.
- You can request that all blocks are validated before being imported. If any of the blocks is invalid, the import will fail. It is highly recommended that you select this option.
- You can allow the PIPT to generate generic names from the target names if you haven't replaced `--INSERT NAME--` placeholders.
- You can request that finding charts are only generated during the submission process on the server. It is highly recommended that you select this option, unless there's a need for you to check the finding charts.

Clicking on the *Ok* button starts the import.

At the time of writing, you cannot select the observations of imported blocks in the navigation tree. Saving the proposal and restarting the PIPT fixes this problem.

An example

Let's assume we want to create xml files for four blocks, with target name, exposure time and block comments differing across the files. Then we could have a csv file with the following content.

```
Target,Exposure Time,Comments
NGC 985 PA1,900,The slit goes through two nuclei very close together in the "fat"
part of the ring.
NGC 985 PA2,900,The slit goes through a section of the ring opposite to the nuclei
.
UGC 3258 PA1,1200,This block has the slit going along the bar of the galaxy throug
h the nucleus.
UGC 3258 PA2,1200,This block has the slit going along one side of the ring.
```

The following Python script creates the xml files from this csv file.

```
#
# Example script for generating multiple blocks for the PIPT.
#
# The script reads the block template from an xml file and each block's details fr
om a csv file. It sets the target
# name, exposure time, finding chart path (to 'auto-generated') and block comments
.
#
# The csv file is assumed to have the columns 'Target', 'Exposure Time' and 'Comme
nts'. For example:
#
# The xml files for the blocks are stored in a user-specified output directory wit
h names of the form "BlockNNN.xml",
# where NNN is a running number.
#
# Usage: python block_generator.py path_to_block_template path_to_block_details_cs
v output_dir
#
# Namespaces (i.e. strings like 'http://www.salt.ac.za/PIPT/Proposal/Phase2/4.6',
so please check them before using this
# script.

import xml.etree.ElementTree as ElementTree
import csv
import os
import sys

block_details_file = sys.argv[1]
block_template = sys.argv[2]
output_dir = sys.argv[3]

# read in block details
blocks = []
with open(block_details_file, 'r') as f:
    reader = csv.DictReader(f)
    for row in reader:
        blocks.append(row)

# generate file for each block
for index, block in enumerate(blocks):
    with open(block_template, 'r') as f:
```

```

tree = ElementTree.parse(f)

# set target name
xpath = '.://{http://www.salt.ac.za/PIPT/Proposal/Phase2/4.6}Acquisition/'
\4.6
        '{http://www.salt.ac.za/PIPT/Proposal/Phase2/4.6}Target/' \
        '{http://www.salt.ac.za/PIPT/Proposal/Phase2/4.6}Name'
targetName = tree.find(xpath)
targetName.text = block['Target']

# set exposure time
xpath = '.://{http://www.salt.ac.za/PIPT/RSS/Phase2/2.2}RssDetector/' \
        '{http://www.salt.ac.za/PIPT/RSS/Phase2/2.2}ExposureTime/' \
        '{http://www.salt.ac.za/PIPT/Shared/1.4}Value'
exposureTimeValue = tree.find(xpath)
exposureTimeValue.text = block['Exposure Time']

# set finding chart path
xpath = '.://{http://www.salt.ac.za/PIPT/Proposal/Phase2/4.6}Acquisition/'
\
        '{http://www.salt.ac.za/PIPT/Proposal/Phase2/4.6}FindingChart/' \
        '{http://www.salt.ac.za/PIPT/Proposal/Shared/2.6}Path'
findingChartPath = tree.find(xpath)
findingChartPath.text = 'auto-generated'

# set block comments
xpath = '{http://www.salt.ac.za/PIPT/Proposal/Phase2/4.6}Comments'
comments = tree.find(xpath)
comments.text = block['Comments']

# name of the created file
counter = index + 1
if counter < 10:
    zeros = '00'
elif counter < 100:
    zeros = '0'
else:
    zeros = ''

# output updated xml
name = 'Block' + zeros + str(counter) + '.xml'
path = os.path.join(output_dir, name)
with open(path, 'w') as o:
    o.write(ElementTree.tostring(tree.find('.')))

```

While this script hopefully may serve as a starting point, you will undoubtedly have to tweak it to fit your needs. You should contact salthelp@salt.ac.za if you run into any troubles with this.

Phase 1 forms

Having covered the general workflow for creating proposals, let us now turn to the nitty-gritty details of the various forms.

General proposal information

General Proposal Information

Principal Investigator

Principal Contact

Title
(up to 15 words / 120 characters)

Abstract

This proposal is for a two-semester run to observe a number of interacting galaxies with rings using RSS/FP and long-slit, to determine their past history and likely future development. Data will be analysed with a tilted-rings model for the kinematics and with stellar population synthesis for colors, SF histories and metallicity values. Using state-of-the-art hydro-dynamical simulations these results will be interpreted in the context of minor merging affecting galaxy evolution and star formation. The project is a continuation of a successful pilot study of

(up to 200 words / 1200 characters)

Proposal Type

Proposal Code 2015-2-MLT-004

Year 2015

Semester 2

Phase 1

☐ Time critical observation

☐ Target of Opportunity ?

☐ This is a Priority 4 proposal

Total requested time ?

Please bear in mind that in addition to any other overheads in your proposal there will be acquisition overheads of at least 4800 seconds.

Time request for Semester 2015-2

Total requested time seconds (including overheads) [from mandatory targets: 0 seconds]

Minimum useful time seconds (including overheads)

Comments ?

This semester has 60% of total time. Which targets and visits exactly would get done is flexible. Minimum time is set for targeting 6 objects, a minimum for useful general results.

Time request for Semester 2016-1

Total requested time seconds (including overheads) [from mandatory targets: 0 seconds]

Minimum useful time seconds (including overheads)

Comments ?

The rest, 40% of total time. We are open also for spreading time over three semesters.

Scientific Rationale ([Word/LaTeX template](#))

Click to view in Browser

Tightest Observing Constraints

Maximum seeing arcseconds

Transparency

Brief description of observing constraints ?

The general proposal information form asks for general information about the proposal.

Title. The proposal title, which shouldn't have more than 15 words and must not be longer than 120 characters.

Abstract. The proposal abstract, which shouldn't have more than 200 words and must not be longer than 1200 characters.

Proposal Type. The proposal type can be either *Science* or *Key Science Project*. Key science projects attempt to answer an important scientific topic through a concentrated effort of SALT observations, and they should involve cross-consortium collaboration. At this time, not all

partners have committed time to this program. Please ask your SALT representative about the current status prior to submitting a proposal.

If in doubt, you should choose *Science* as the proposal type.

Proposal code. The unique identifier for your proposal. If the proposal hasn't been submitted yet, the code will be of the form *Unsubmitted-....* If you are resubmitting an existing proposal, you should make sure that the proposal code isn't of this form, as otherwise your submission will result in a brand-new proposal being created.

In case you have any queries regarding your (submitted) proposal, you should always include the proposal code in the subject of your email to salthelp@salt.ac.za.

Year. The year when the proposal semester starts.

Semester. Whether the proposal semester is a summer or winter semester. The allowed values are 1 (from 1 May to 31 October) or 2 (from 1 November to 31 March).

You can change the semester using the menu item *Proposal > Change Semester*.

Phase. Notes that this proposal is for phase 1.

Time critical observation. Tick this checkbox if there is a time constraint for your observations.

Target of Opportunity. Tick this checkbox if you don't know the targets yet, for example because you are requesting time for supernova observations. Note that you still have to define a (dummy) target for the proposal (see the section on the target form).

This is a Priority 4 proposal. Tick this checkbox if you are requesting priority 4 time.

Total requested time. The total requested time for your proposal must include all the overheads, in particular the acquisition times. Please refer to the [call for proposals document](#) for a list of overhead times. (You can also create a (bogus) DDT proposal in the PIPT, define your observations and have the PIPT calculate the required overheads.)

Minimum useful time. The minimum time you need for obtaining useful results. This must include all overheads, and it may be equal to the total requested time if you want to request an "all-or-nothing" time allocation from your TAC.

Comments. Any information regarding the time request which the TAC should be aware of. An example would be to point out the Moon conditions you need for the minimum useful time.

Please keep the comments short and to the point. Longer comments should be included in the scientific justification.

Add time request for Semester ... If you require observations in more than one semester, you may add time requests for future semesters. When doing so, you should bear two things in mind:

1. You will have to (re)submit a phase 2 proposal at the beginning of each semester for which you have been allocated observing time.
2. Your TAC may require that you submit a progress report (along with an updated time request) during the phase 1 call of the semesters you are requesting time for. This can be done on your proposal's page in the Web Manager.

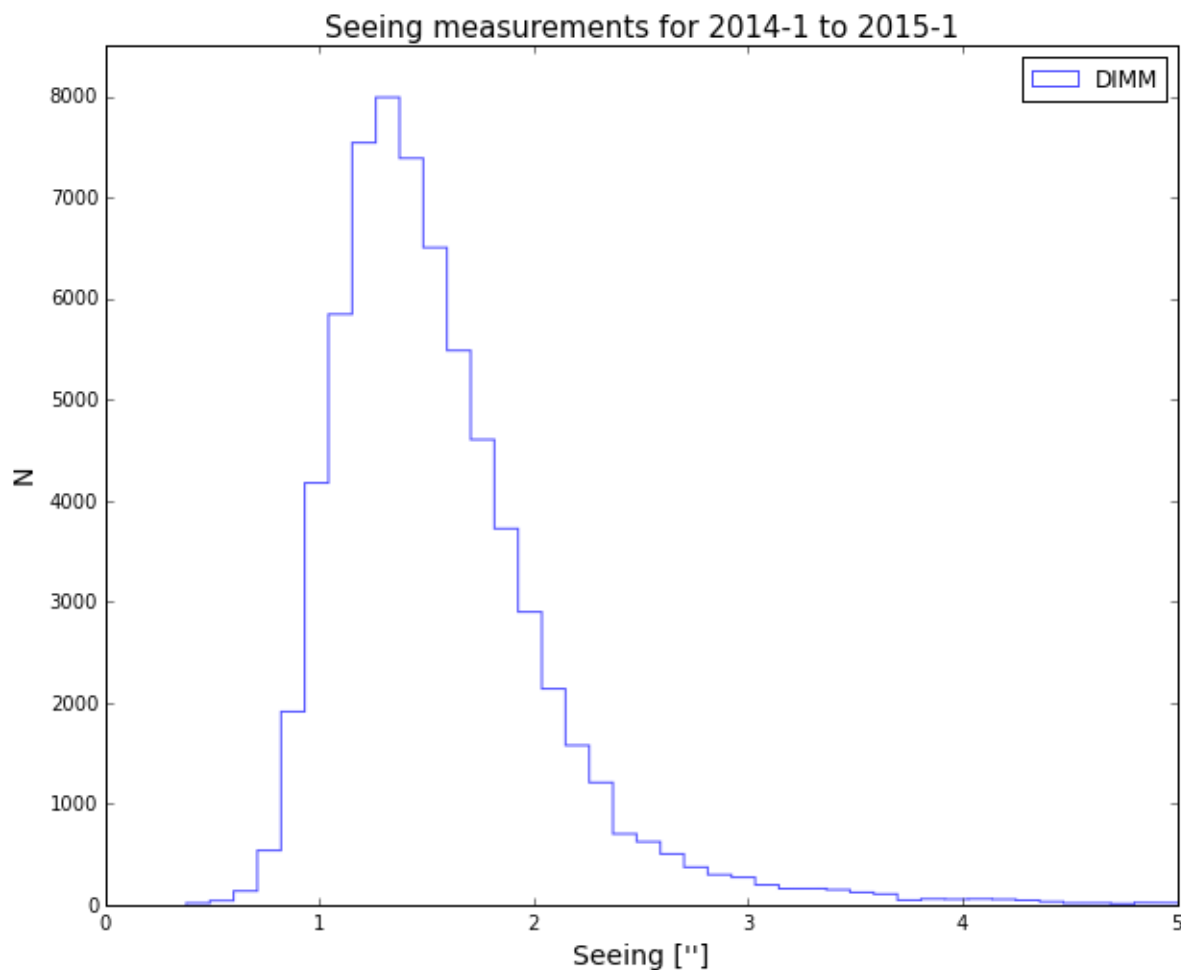
Whereas the proposal code of "normal" proposals contains the string *-SCI-*, that of proposals

requesting time for several semesters contains the string *-MLT-*. This stands short for "multi-semester".

Scientific Rationale. You can drop your scientific justification pdf onto the "Drop PDF file here" icon. Alternatively you can select the pdf by clicking on the *Choose* button underneath the icon.

The templates for the scientific justification are available from <http://astronomers.salt.ac.za/proposals/proposal-templates/>. Please ensure that you use the latest template and that you fill in all required sections. Also note there are special templates for key science project proposals.

Maximum seeing. The maximum allowed seeing for your observations, in arcseconds. The plot below shows seeing histogram from the SAAO DIMM. The data are taken from the period from 1 May 2014 through 31 October 2015.



The following table indicates the expected best image quality performance of SALT (in terms of the FWHM and enclosed energy diameters (50% and 80%) of the PSF for different DIMM seeing values (all V-band). The PSF is basically described by a modified Moffat function.

DIMM zenith seeing	Seeing at average telescope airmass	FWHM	EE50	EE80
1.0"	1.2"	1.4"	1.6"	2.6"
1.5"	1.7"	1.8"	2.0"	3.3"
2.0"	2.3"	2.4"	2.7"	4.2"

The value in the first column is the value to be inserted in the PIPT and used in the Simulator Tools. However, you should use the other values for planning the SNR. All the values assume a perfectly aligned primary mirror.

Please refer to the [call for proposals](#) for more details.

Transparency. The tightest weather conditions required for your proposal.

Brief description of observing constraints. You may provide further details regarding your observing conditions. Please don't use more than 20 words. An example might be

Reasonable image quality is needed for spatial resolution over the rings, seeing can be relaxed to 2.0". Gray is fine.

The research of this proposal is externally funded. If you want to acknowledge external funding you should tick this checkbox and supply the name of the funding agency.

Role of the South African investigators. In case you are requesting time from the South African TAC you need to outline the roles and responsibilities of the South African investigators. If you want to include a detailed description you might want to put it into the scientific justification.

Previous proposals for the last four semesters. If you are requesting time from the South African TAC you have to supply status information of all proposals for the last four semesters with the same Principal Investigator (PI) .

In case you are the PI of the proposal you are working on, you can request the list of proposals by clicking on the *Get info from server* button. Otherwise you'll have to add the proposals by means of the *Add previous proposal info* button.

The status should give the TAC an idea of how far the proposal has progressed and what science has come out of it so far. An example might be

The final semester of a large RSS program. All data reduced and analysed and several papers (still) in preparation as part of Ram Robukwe's PhD thesis. One related spin-off paper published: Prestov et al. 2042, ApJ, 623, L10. Project presented in several conferences and proceedings.

The names and reference in this example are fictitious.

If there are referred publications resulting from a previous proposal, you should add their [Astrophysics Data System \(ADS\)](#) bibcodes in the respective text field. You may enter one bibcode per line, or separate the bibcodes with a comma. Examples of ADS bibcodes are 2013MNRAS.430.2302T or 2015A&A...576A.119T.

You may include the status of proposals with a different PI, as long as they are of relevance. Use the *Add proposal info* button for this.

If you have status information in another proposal in the PIPT, you may use the *Add info from other proposal* button to import it into the current proposal.

Short summary for the general public. A brief explanation of the scientific justification, which is aimed at non-astronomers. While this is required only for proposals requesting time from the South African TAC, you are strongly encouraged to always provide it in order to increase the public awareness of SALT.

May the title, partners, PI and summary be displayed to the general public during an observation? There are plans to show the image of the all sky camera during SALT observations. The title, partners, Principal Investigator and (if supplied) summary for the general public can be displayed along with this image, if you consent.

Investigators

Investigators

#	Investigator
1	Petri Vaisanen
2	Alexei Kniazev
3	Noah Brosch
4	Alexei Moiseev
5	Peter H. Johansson

The investigators form just contains the table of investigators, which you may use to add or remove investigators from the proposal.

Investigator







Investigator

☒ This is the Principal Investigator.

☒ This is the Principal Contact.

Each investigator must be a registered SALT user with the Web Manager, and you must use an email address linked to their Web Manager account.

You will only be able to submit if you choose the contact details from the database for the given email address. You may import these by clicking on the "Query Database" button. Please use the Web Manager to change the contact details, if required.

Email	<input type="text" value="petri@sao.ac.za"/>	<input type="button" value="Query Database"/>
First Name	<input type="text" value="Petri"/>	
Surname	<input type="text" value="Vaisanen"/>	
Phone	<input type="text" value="+27 21 447 0025"/>	
Partner	<input type="text" value="South Africa"/>	 
Time requested from South Africa for Semester 2015-2	<input type="text" value="100"/> %	
Time requested from South Africa for Semester 2016-1	<input type="text" value="100"/> %	
Institute	<input type="text" value="South African Astronomical Observatory"/>	 
Update Partner information		
<input type="checkbox"/> The proposal will form part of a postgraduate thesis by this investigator.		

The investigator form lets you specify an investigator's contact details as well as their role and the share of time requested from their partner.

Each investigator in a proposal must have a Web Manager account. As investigators are identified by email address, you should make sure that the email address in the proposal and in the Web Manager match.

You won't be able to submit a proposal if any investigator doesn't have a Web Manager account.

This is the Principal Investigator. Tick this checkbox if this investigator is the Principal Investigator (PI) for the proposal. There can only be one PI.

This is the Principal Contact. Tick this checkbox if this investigator is the Principal Contact (PC) for the proposal. There can only be one PC.

E-Mail. The investigator's email address. This must match the email address used for the Web Manager account.

You may use the *Query Database* button for populating the investigator's contact details from the science database. Using it has the additional benefit that it checks whether the investigator already has a Web Manager account with the given email address.

First Name. The investigator's given name(s).

Surname. The investigator's surname.

Phone. The investigator's phone number.

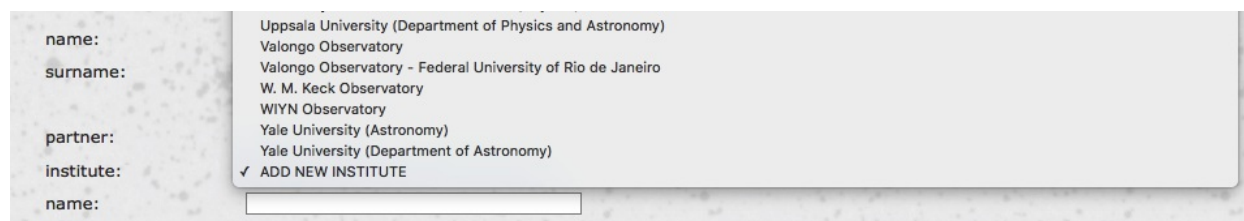
Partner. The SALT partner which the investigator is affiliated to. If the investigator doesn't belong to any SALT partner, you should select *Other* from the dropdown list.

Time requested from ... The percentage of time requested from the investigator's partner. The percentages for all partners must add up to 100 %. The percentage must always be 0 for the partner *Other* as only SALT partners may allocate time.

A percentage has to be supplied for all semesters you are requesting time for.

Institute. The institute you are affiliated to. What to do if your institute isn't in the list depends on the partner. If the partner is a SALT partner, you should contact salthelp@salt.ac.za. Please include the name, department, website URL and address of the institute in your mail.

If, on the other hand, the partner is *Other*, you may add the institute to the science database when registering for the Web Manager account or when adding contact details to your account. Choose *ADD NEW INSTITUTE* from the institute dropdown list on the respective Web Manager form, as shown below.



Once you've added the missing institute to the database you'll have to update the partner information in the PIPT. This can be achieved by clicking on the *Update Partner information* link underneath the institute dropdown list.

The proposal will form part of a postgraduate thesis by this investigator. If you tick this checkbox, you'll be asked for more details, as described in the following.

Type of degree. The type of degree towards which the investigator is studying.

Year of completion. The (estimated) year when the investigator's thesis will be submitted.

Importance and contribution to the thesis. A brief explanation of the role this proposal will play in the thesis. An example might be

"Ram Robukwe is using the RSS spectra to analyse the stellar populations in the target galaxies for his PhD thesis. He developed an automated pipeline to reduce and analyse RSS data as part of his MSc project. "

The name in this example is fictitious.

Targets [targets_form]

Targets

Check Feasibility

Mandatory targets ?

#	Target	Moon	Ranking	Observing Ti...
Right-click to insert/delete rows.				

Bulk action for selected rows

Please select

Apply

Please click on the first column to select a row.
Multiple selections are allowed.

Add Targets from File

? (What format is required?)

Optional targets ?

Requested number of optional targets

8

#	Target	Moon	Ranking	Observing Ti...
1	NGC 1211	60.0	High	3300
2	NGC 1211 ima	60.0	High	1600
3	NGC 985	50.0	High	3300
4	NGC 985 ima	50.0	High	1600
5	SDSS J21021...	25.0	High	3300
6	SDSS J21021...	25.0	High	1600
7	SPRC-261	25.0	High	3300
8	SPRC-261 ima	25.0	High	1600
9	UGC 3258	60.0	High	3300
10	UGC 3258 ima	60.0	High	1600
11	IC 753	50.0	High	3300
12	IC 753 ima	50.0	High	1600
13	CGCG 1448....	40.0	High	3200
14	CGCG 1448....	40.0	High	1600
15	AM 0644-741	50.0	High	3500

1b	AM 0644-7... 50.0	High	1600
----	-------------------	------	------

The targets form lists the mandatory and optional targets. A target is *mandatory* if you want to have this particular target observed. It is *optional* if it belongs to a set of targets out of which only a subset is supposed to be observed. So optional targets will mostly be used in survey proposals.

Check Feasibility. The feasibility check shows the number of tracks for the targets, assuming a given observing time. You should make sure that your targets are visible for a sufficient number of nights.

Feasibility				
Observing time		900	seconds	
Target	Moon	Tracks	Observable from	Observable until
NGC 1211	60.0	61	Nov 01 2015 UT	Jan 28 2016 UT
NGC 1211 ima	60.0	61	Nov 01 2015 UT	Jan 28 2016 UT
NGC 985	50.0	73	Nov 01 2015 UT	Jan 28 2016 UT
NGC 985 ima	50.0	73	Nov 01 2015 UT	Jan 28 2016 UT
SDSS J210213.55-011152.5	25.0	6	Nov 01 2015 UT	Nov 06 2015 UT
		1	Apr 20 2016 UT	Apr 20 2016 UT
SDSS J210213.55-011152.5 ima	25.0	6	Nov 01 2015 UT	Nov 06 2015 UT
		1	Apr 20 2016 UT	Apr 20 2016 UT
SPRC-261	25.0	72	Jan 05 2016 UT	Apr 30 2016 UT
SPRC-261 ima	25.0	72	Jan 05 2016 UT	Apr 30 2016 UT
UGC 3258	60.0	97	Nov 02 2015 UT	Mar 12 2016 UT
UGC 3258 ima	60.0	97	Nov 02 2015 UT	Mar 12 2016 UT
IC 753	50.0	77	Jan 04 2016 UT	Apr 30 2016 UT
IC 753 ima	50.0	77	Jan 04 2016 UT	Apr 30 2016 UT
CGCG 1448.9+0700	40.0	44	Feb 13 2016 UT	Apr 30 2016 UT
CGCG 1448.9+0700 ima	40.0	44	Feb 13 2016 UT	Apr 30 2016 UT
AM 0644-741	50.0	110	Nov 04 2015 UT	Apr 10 2016 UT
AM 0644-741 ima	50.0	110	Nov 04 2015 UT	Apr 10 2016 UT

Mandatory targets. The table of mandatory targets lets you add and remove (mandatory) targets from the proposal.

Bulk action for selected rows. You may select targets by clicking on the first table column, and you may then apply either of two bulk actions:

- Add the selected targets to the clipboard
- Remove the selected targets from the proposal and clipboard

Add Targets from File. You may add (mandatory) targets from a csv file, as explained in more

detail elsewhere.

Optional targets. The table of optional targets lets you add and remove (optional) targets from the proposal. The same bulk actions as for mandatory targets are available, and you may also import targets from file.

Show clipboard. Opens a window with the clipboard content.

Target

Target

Name

NGC 1211

Get from Catalog

☐ This target is mandatory.

☒ This target is optional.

Number of visits

4

Observing time

3300

seconds per visit (including overheads)

Maximum lunar phase

60.0

%

Dark

Gray

Bright

Ranking

High

Enter the data for a

Sidereal target

Please choose "Dummy Target" for a dummy target.

Co-ordinates

RA

3

h

6

m

52.404

s

Dec

-

0

°

47

'

39.990

"

Equinox

J 2000.0

Proper Motion (optional for Phase 1)

Δ RA/ Δ t

arcseconds/year

Δ Dec/ Δ t

arcseconds/year

Epoch (UT)

Check Feasibility...

Launch Visibility Tool...

Target Type: galaxy

Change...

Magnitude Range

Bandpass

V

Minimum Magnitude (bright)

15.0

Maximum Magnitude (faint)

15.0

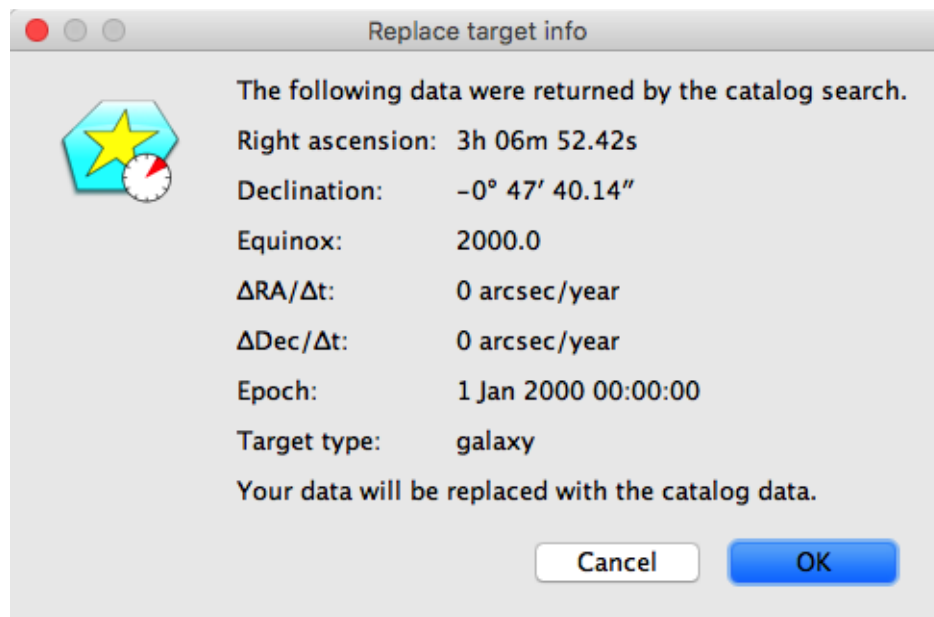
Periodic Target Ephemeris (optional for Phase 1)

(show)

The target form records all the nitty-gritty details for a target.

Name. The target name. You can choose any name you like, but the name must be unique within the proposal.

Get from Catalog. If your target name is included in SIMBAD, NED or VizieR, you may use this button to look up the target details in these catalogs. If the target is found, you'll be shown the details, and you can decide whether to use them.



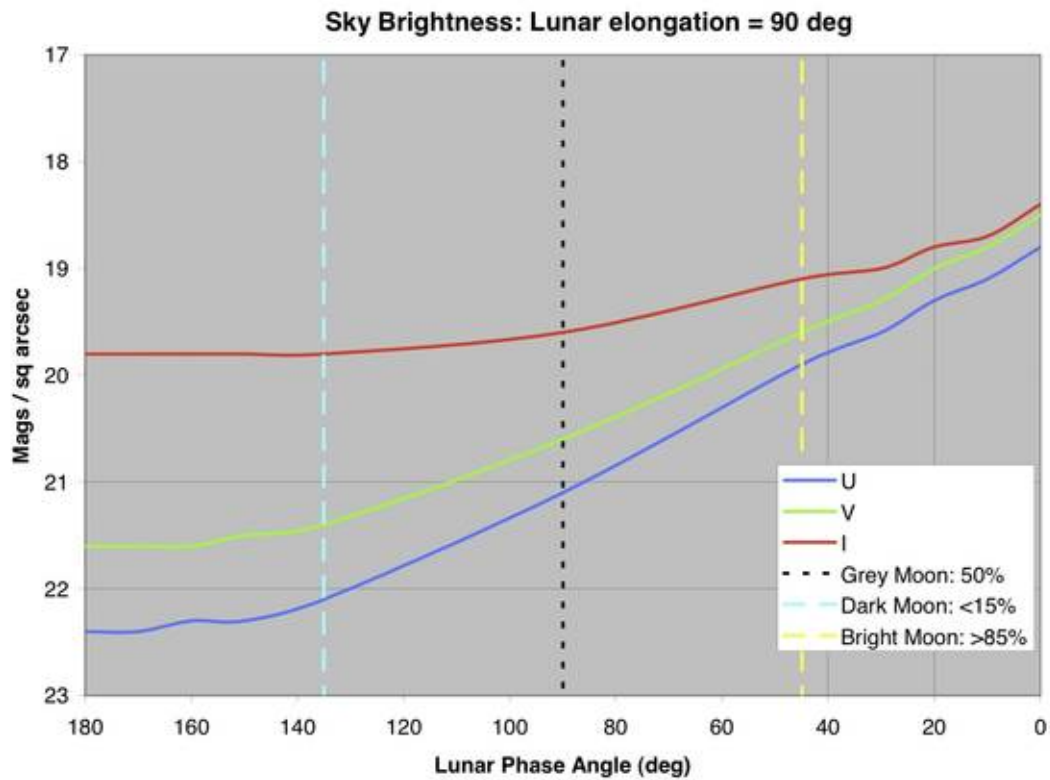
This target is mandatory. / This target is optional. Choose whether the target is mandatory or optional. See the [section on the Targets form][targets_form] for an explanation of what this means.

Number of visits. The number of times you want the target to be observed.

Observing time. The observing time per visit, including all overheads (and in particular including acquisition times) . The value is used when checking the feasibility of your observation. Refer to the [call for proposals](#) for a list of overheads. Alternatively, you may create a "fake" phase 2 proposal (by choosing *Commissioning* as proposal type) - just make sure you don't submit that proposal.

Maximum lunar phase. The maximum percentage of the illuminated lunar disk for which your observation can be done. For convenience, there are buttons for setting the value to dark (14.6 %), grey (85.4 %) and bright (100 %).

An estimate of the sky background as a function of the lunar phase is shown in the plot below.



Ranking. The importance of this observation relative to the other observations in your proposal. If all the observations in your proposal are of equal importance, you should choose *High* as the ranking.

Enter the data for a ... This dropdown menu lets you choose the target type.

- A *sidereal target* is a target which at most has a constant proper motion.
- A *non-sidereal target* is a target with a non-constant proper motion.
- A *NASA JPL Horizons target* is a target which is included in the Horizons database.
- A *dummy target* is a placeholder if you don't know the targets to observe yet, for example because you are planning to observe supernovae.

The various target types require you to provide different details, and these will be covered below.

Target type. The type of your target. Click on the *Change* button to get a popup window with the available types.

The screenshot shows a window titled "Select target type". It contains two lists. The "Target type" list on the left includes: object of unknown nature, radio-source, X-ray source, gamma-ray source, inexistent objects, gravitational source, candidate objects, composite object, interstellar matter, **star** (highlighted), galaxy, solar system object, and calibration. The "Subtype" list on the right includes: star, star in cluster, star in nebula, star in association, **star in double system** (highlighted), star suspected of variability, peculiar star, horizontal branch star, young stellar object, emission-line star, Be star, blue straggler star, red giant branch star, asymptotic giant branch star (He-b), carbon star, S star, and red supergiant star. An "OK" button is located at the bottom right of the window.

Choose a target type and then a subtype from the list of subtypes for this type.

Magnitude range. The magnitude range of your target. You have to choose the bandpass for which the magnitudes are given, as well as the minimum ("brightest") and maximum ("faintest") magnitude. Of course the minimum and maximum magnitude may be the same.

Periodic target ephemeris. If your target is periodic (for example because it is an eclipsing binary) and you want to limit observations to a certain phase range, you need to specify the periodicity. To do so, click on the *show* link. You can then enter T_0 , the time base, the period and the period change, as described in the following.

T_0 . A time (in the chosen time base) for which your target's phase is 0.

Time base. The time base for T_0 . You may choose from the following options.

BJD

Barycentric Julian Date

HJD

Heliocentric Julian Date

JD

Julian Date

While both BJD and HJD are offered, they are treated as the same internally. Hence there may be an inaccuracy of a few seconds.

Period. The length of the period (at T_0).

Pdot. The difference in period length between one period and the next. For example, if $T_0 = 2457378$, Period = 1 day and Pdot = 0.5 days/day, then the first period (from T_0) runs from 2457378 to 2457379, the second from 2457379 to 2457380.5 and the third from 2457380.5 to 2457382.5.

Let us finally turn to the details specific to the various target types.

Sidereal target

RA. The right ascension of the target, given in hours, minutes and seconds. If the target has a proper motion, this value refers to the specified epoch (see below).

Dec. The declination of the target, given in degrees, arcminutes and arcseconds. If the target has a proper motion, this value refers to the specified epoch (see below).

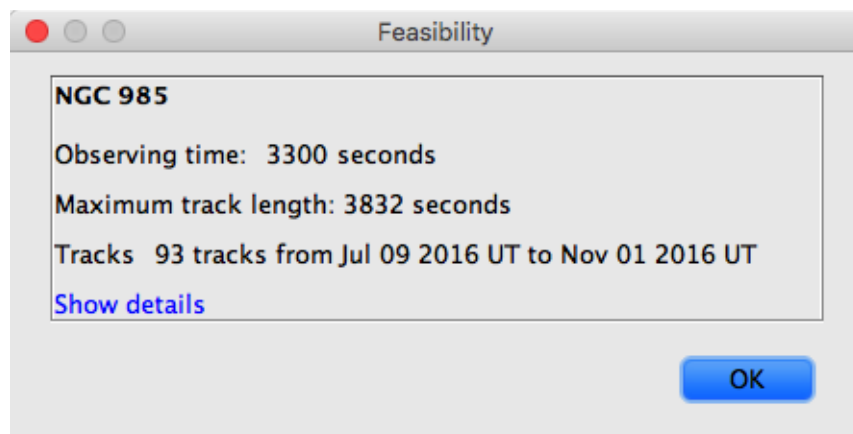
Equinox. The equinox for which the right ascension and declination are given. This must be an integer or float such as 2000 or 2000.0. It is supposed to be a Julian year.

$\Delta RA/\Delta t$. The proper motion in right ascension. It must be given in arcseconds per year (not in seconds per year).

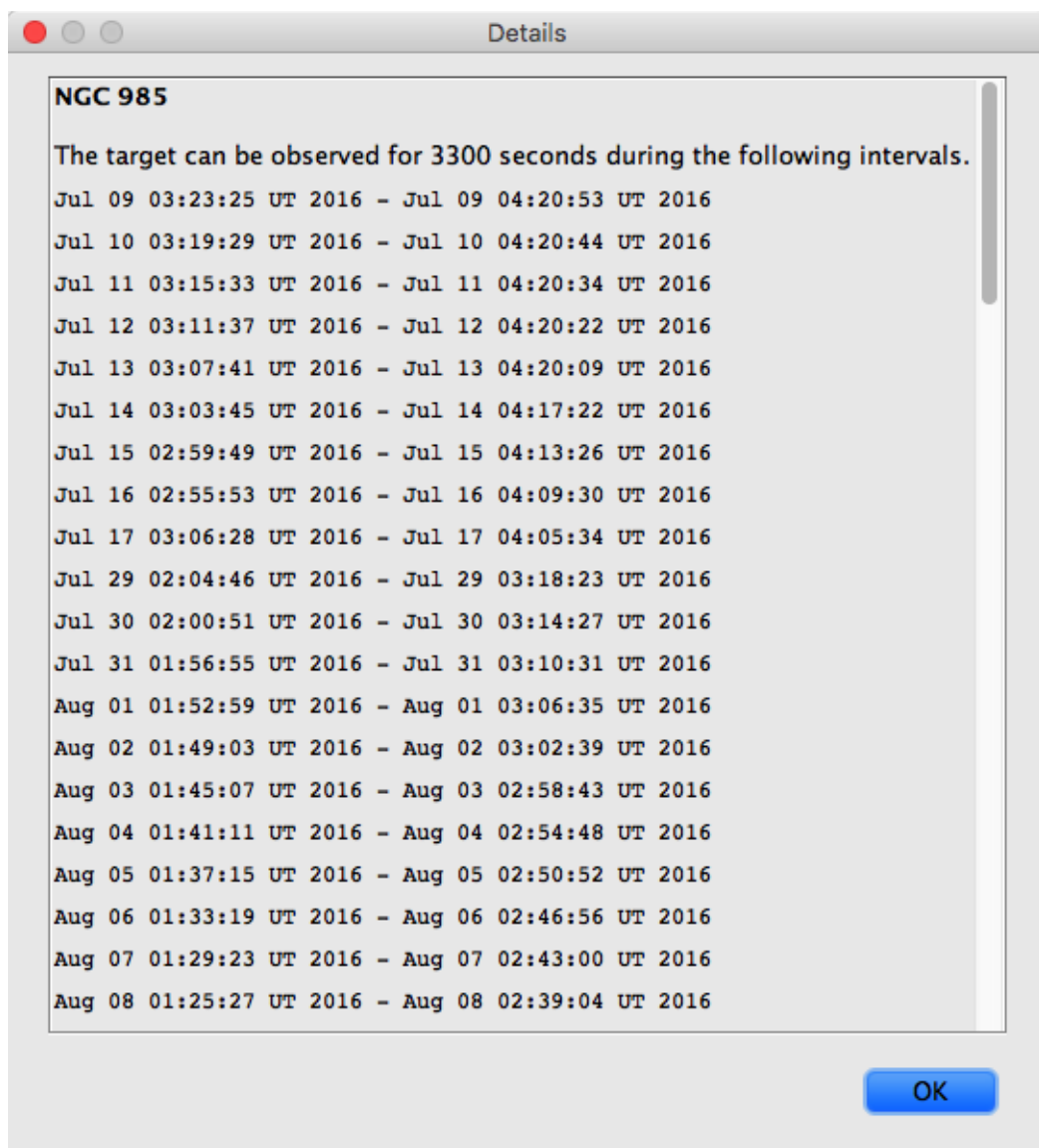
$\Delta Dec/\Delta t$. The proper motion in declination. It must be given in arcseconds per year.

Epoch (UT). The datetime (in Universal Time) when the target had the position specified above.

Feasibility. Once you have specified the target position and observing time, this button lets you check how many tracks will be available for your target.



The *Details* link on the feasibility window lets you view the full details of the available tracks.



Launch Visibility Tool. This button launches the Visibility Tool, using the target position you've specified.

Non-sidereal target

If your target is included in the HORIZONS database (see below), you should define a NASA JPL Horizons target rather than a non-sidereal target.

Choose Target Data. This button lets you choose the file from which to read in the positional data for your target. If afterwards you load another file, the existing data will be overwritten in the proposal.

The file to load must be of the following form.

```
equinox: year
proper motion units: units
line for time and position 1
line for time and position 2
line for time and position 3
...
```

Empty lines, as well as leading and trailing white space, are ignored. Text following a pound sign (#) is interpreted as a comment. UTF-8 should be used as encoding.

The first (non-empty, non-comment) line in the file must define the equinox. It must start with the keyword "equinox", followed by a colon and the equinox as an integer or float value, such as 2000 or 2000.0. The case of the "equinox" keyword doesn't matter, so "equinox", "Equinox" or even "eQUInox" all work fine.

The second line must define the units for the proper motions. It must start with the string "proper motion units", followed by a colon and the units. The units can be either "arcsec/hour" or "arcsec/day". The case of the "proper motion units" string doesn't matter, so that for example you may use "Proper Motion Units" as well.

Each line defining a target position must have the format

```
Datetime RA\_h RA\_m RA\_s Dec\_deg Dec\_arcmin Dec\_arcsec PM\_RA PM\_Dec
```

or the format

```
Datetime RA\_angle Dec\_angle PM\_RA PM\_Dec}
```

The datetime must be specified as

```
CCYY-MM-DDThh:mm:ss.s
```

(or, more precisely, the format expected by the xs:dateTime type in an XML Schema has to be used). Example values for the datetime are 2010-11-03T08:17:56 and 2009-05-30T23:12:18.9435.

The other quantities in each line are listed in the table below.

Quantity	Explanation
Datetime	date and time (see main text for format)
RA_h	right ascension hours (an integer between 0 and 23)
RA_m	right ascension minutes (an integer between 0 and 59)
RA_s	right ascension seconds (a float value between 0 (inclusive) and 60 (exclusive))
Dec_deg	declination degrees ('+' or '-' followed by an integer between 0 and 89)
Dec_arcmin	declination arcminutes (an integer between 0 and 59)
Dec_arcsec	declination arcseconds (a float value between 0 (inclusive) and 60 (exclusive))
PM_RA	proper motion in right ascension
PM_Dec	proper motion in declination
RA_angle	right ascension as an angle between 0 (inclusive) and 360 degrees (exclusive)
Dec_angle	declination as an angle between -90 and 90 degrees (both inclusive)

Here is an example file.

```
# Data for a non-sidereal target.

equinox: 2000.0
proper motion units: arcsec/hour

2009-05-22T17:00:00 16 49 13.81 -13 25 44.9 -28.1 -7.5
2009-05-22T18:00:00 16 49 11.94 -13 25 37.4 -28.1 -7.5
2009-05-22T19:00:00 16 49 10.08 -13 25 29.9 -28.1 -7.5
2009-05-22T20:00:00 16 49 8.21 -13 25 22.4 -28.1 -7.5
2009-05-22T21:00:00 16 49 6.34 -13 25 14.9 -28.1 -7.5
```

```

2009-05-22T22:00:00 16 49 4.48 -13 25 7.4 -28.1 -7.5
2009-05-22T23:00:00 16 49 2.61 -13 24 59.9 -28.1 -7.5
2009-05-23T00:00:00 16 49 0.74 -13 24 52.5 -28.1 -7.5
2009-05-23T01:00:00 16 48 58.87 -13 24 45.0 -28.1 -7.5
2009-05-23T02:00:00 16 48 57.00 -13 24 37.5 -28.2 -7.5
2009-05-23T03:00:00 16 48 55.12 -13 24 30.0 -28.1 -7.5
2009-05-23T04:00:00 16 48 53.25 -13 24 22.5 -28.1 -7.5
2009-05-23T05:00:00 16 48 51.38 -13 24 15.1 -28.1 -7.5
2009-07-24T16:00:00 242.110458333 -11.6422222222 -10.8 -0.4
2009-07-24T17:00:00 242.107458333 -11.6423333333 -10.8 -0.4

```

NASA JPL Horizons target

NASA's [Jet Propulsion Laboratory](#) hosts [HORIZONS](#), a database of solar system objects. If your target is included in this database, you should define a NASA JPL Horizons rather than a non-sidereal target.

Identifier. The identifier for your target in the HORIZONS database. Examples would be *Pluto* or *Ubuntu*.

Output interval. The time between the calculated ephemerides.

Tracking. Whether sidereal or non-sidereal tracking should be used for the observation.

Check daily position. This buttons allows you get a list of daily ephemerides. You should use this to double-check that the calculated ephemerides are indeed what you expect.

Instrument Configurations

#	Name	Detector
1	pg900 config	Rss
2	fp config	Rss

The Instrument Configurations form just contains a table, which you may use to add or remove instrument configurations.

Instrument configuration

When adding a new configuration, you have to choose the instrument to use (Salticam, RSS, HRS or BVIT). While the details you have to supply depend on the instrument, all the instruments require the following details.

Name. A unique name for the configuration. You may choose any name you like, but it is recommended to use a name which makes it easy to identify the configuration, in particular if your proposal contains lots of configurations.

Apart from HRS configurations all the configurations also let you add simulations.

Add Simulation. This button allows you to add simulations generated with the simulator for the chosen instrument.

You are strongly encouraged to add the simulations you've used for planning this configuration.

Instrument simulation

Name

Select simulation file

View

Comments

Remove

Add Simulation

The following table has the download links for the simulators as well as the file extensions of the simulation files.

Simulator	Download	File extension
Salticam Simulator	Download	.ssim
RSS Simulator	Download	.rsim
HRS Simulator	Download	.hsim

In order to create a simulation file, launch the relevant simulator, set up the simulation and then choose *File > Save as...* from the simulator's menu.

When adding a simulation, a few additional form components are shown, as described below.

Name. A name for your simulation. The name should be unique. You may refer to the simulation in your scientific justification by citing this name.

Select simulation file. This button lets you choose a simulation file from disk. Once you've chosen a file, its title changes to *Replace simulation file*, and it lets you replace the file.

View. This button opens the relevant simulator with your simulation.

Comments. If you have some brief comments regarding the simulation, you may add them here. An example might be:

The simulation is based on the measured flux over the H-alpha region from our pilot study, zero-redshift just for convenience. It is based on the lowest H-alpha flux regions to ensure that sufficient signal is gathered from all parts of the ring of interest. The simulation includes 2 visits

with exactly the same setup.

Remove. This link removes the simulation from your proposal.

As mentioned above, different instruments require different additional details, which are outlined in the following.

Salticam Configuration

Salticam Configuration

Name

Detector Mode

Filters

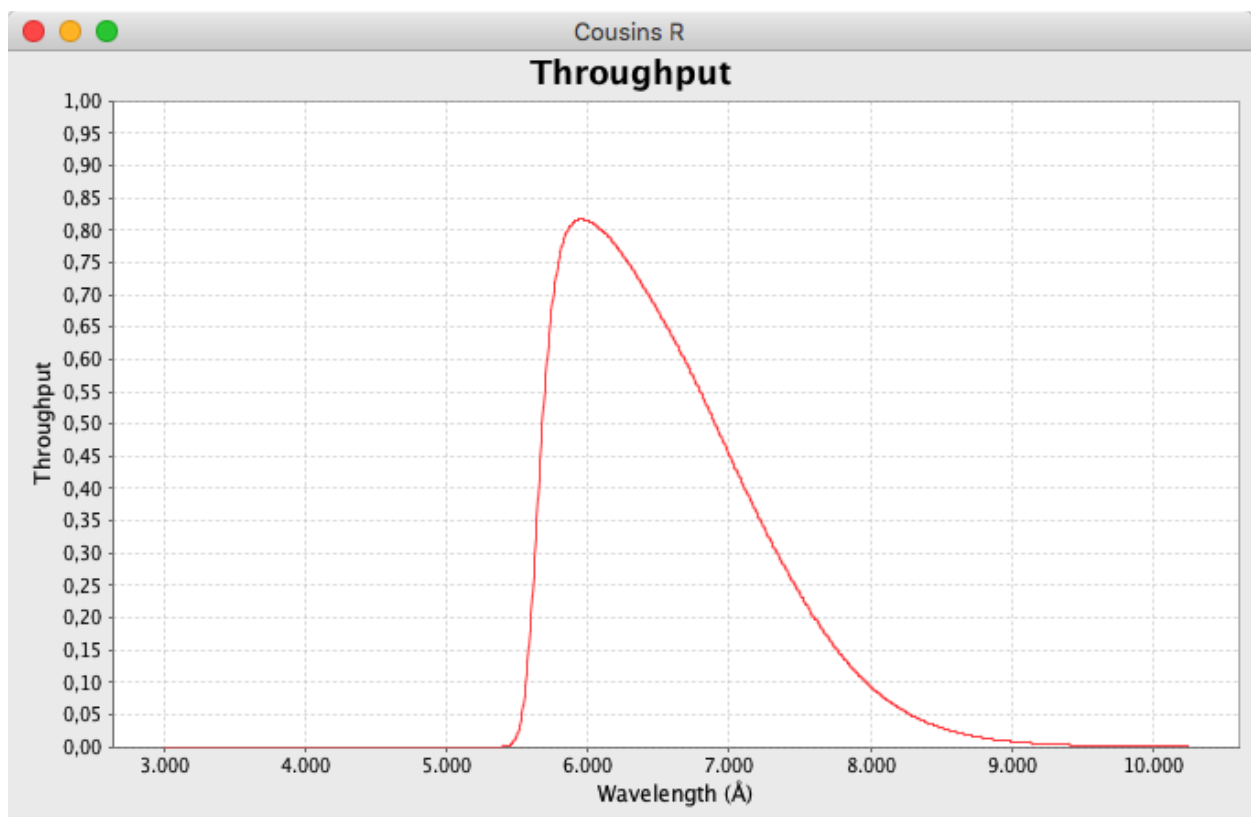
#	Filter	Throughput
1	Cousins R	show

You are strongly encouraged to add the simulations you've used for planning this configuration.

[Add Simulation](#)

Detector mode. The detector mode to use for Salticam. Unless you have special requirements *Normal* should be the correct choice.

Filters. You should add all required filters to this table (which you may do by right-clicking on it). Each row in the table has a *show* link which opens a new window with the throughput curve of the selected filter.



RSS Configuration

RSS Configuration

Name

Detector Mode

RSS Mode

Slit Mask (hide)

Slit Type

Grating

You are strongly encouraged to add the simulations you've used for planning this configuration.

Detector mode. The detector mode to use for RSS. Unless you have special requirements *Normal* should be the correct choice.

RSS mode. The mode to use for RSS. Various choices require further details:

- For spectroscopy you also need to specify a grating.
- For Fabry-Perot you also need to select an etalon configuration.
- For a polarimetric mode you also have to specify the polarimetry type.

Slit mask. The kind of slit mask required for your observation. In case of a MOS mask, you need to supply a brief description of the mask. An example of such a description might be:

About 15 slits, 10" long, 1.0" wide.

Choose *None* if your configuration doesn't require a slit mask.

HRS configuration

Mode. The mode to use for HRS.

BVIT configuration

Filter. The filter to use for BVIT.