

JCMT Observing Tool



Introduction

Tips and Tricks

JCMT OT Introduction

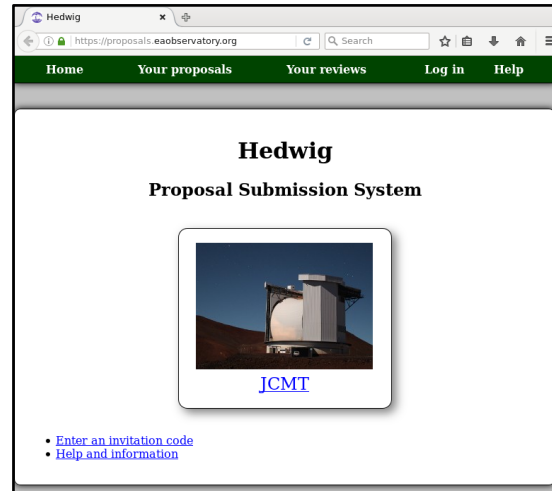
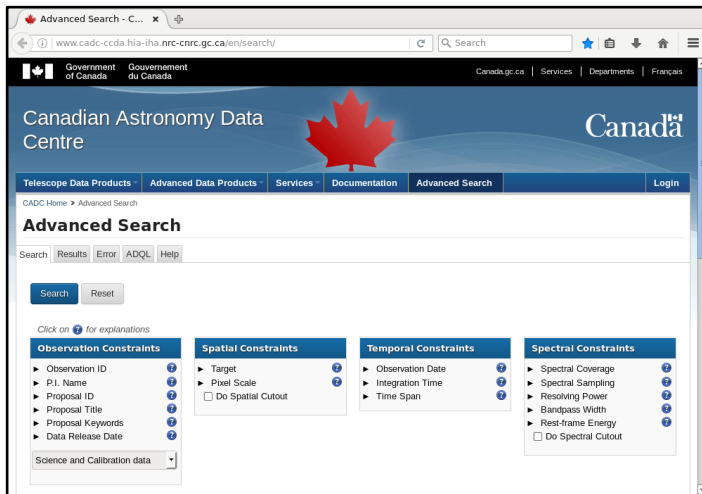
- The MSB life cycle.
- Introduction to the OT.
- The MSB libraries.
- Creating an MSB.
- Target information.
- The position editor.

MSB life cycle — what is an MSB?

- “Minimum schedulable block”.
- Smallest useful observing unit.
 - One or more observations.
 - Typically 30 – 60 minutes.
 - Always observed in its entirety.

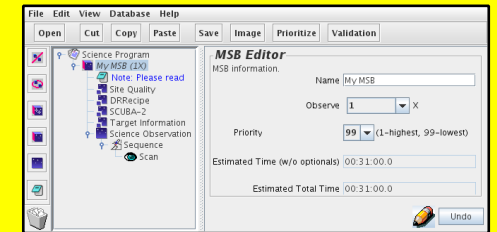
MSB life cycle — role of the OT

CADC

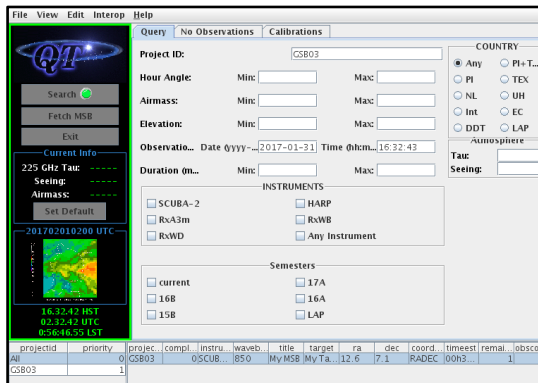


Hedwig

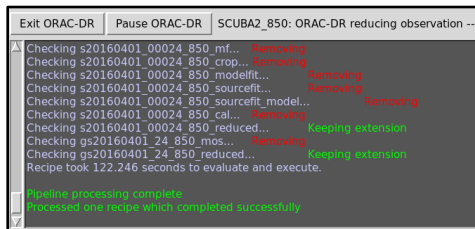
OT



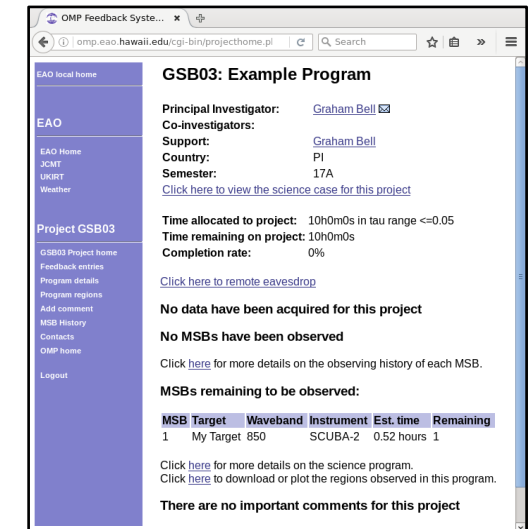
QT



ORAC-DR



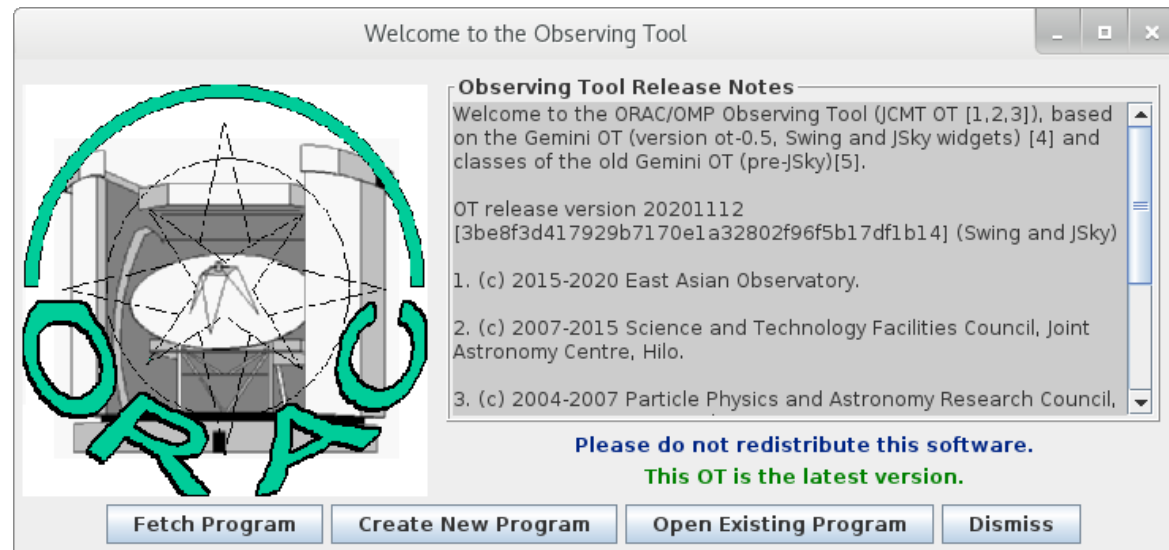
OMP



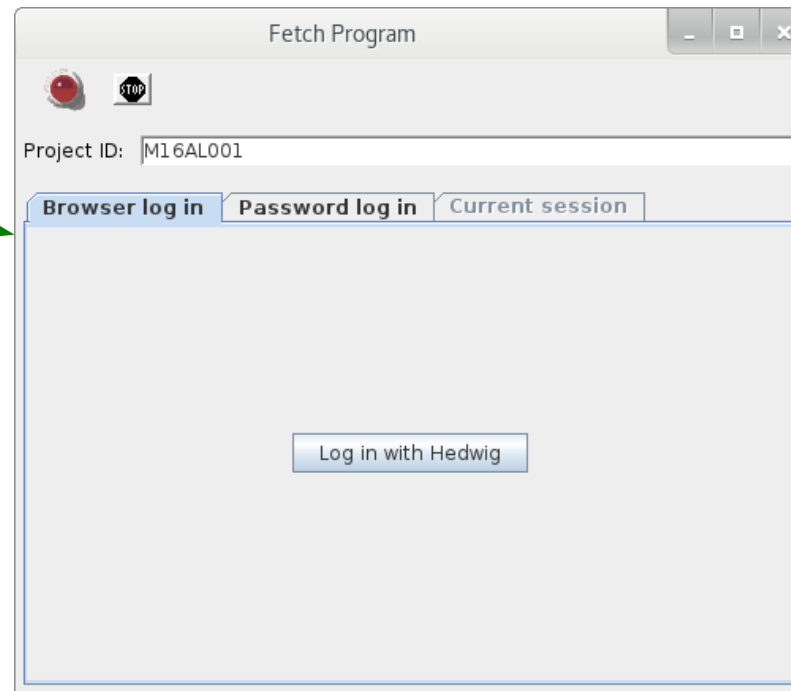
Introduction — starting the OT

```
$ wget https://ftp.eao.hawaii.edu/ot/jcmtot.jar
```

```
$ java -jar jcmtot.jar
```



Introduction — fetching a program



To fetch an existing program: enter project ID and log in with Hedwig.

Introduction — components

MSB

Observation

Component

Iterator

“Eye”

A Transient Search for Variable Protostars: How do stars gain their mass?

File Edit View Database Help

Open Cut Copy Paste Save Image Prioritize Validation

MSB Editor

MSB information.

Name NGC1333

Observe 72 X

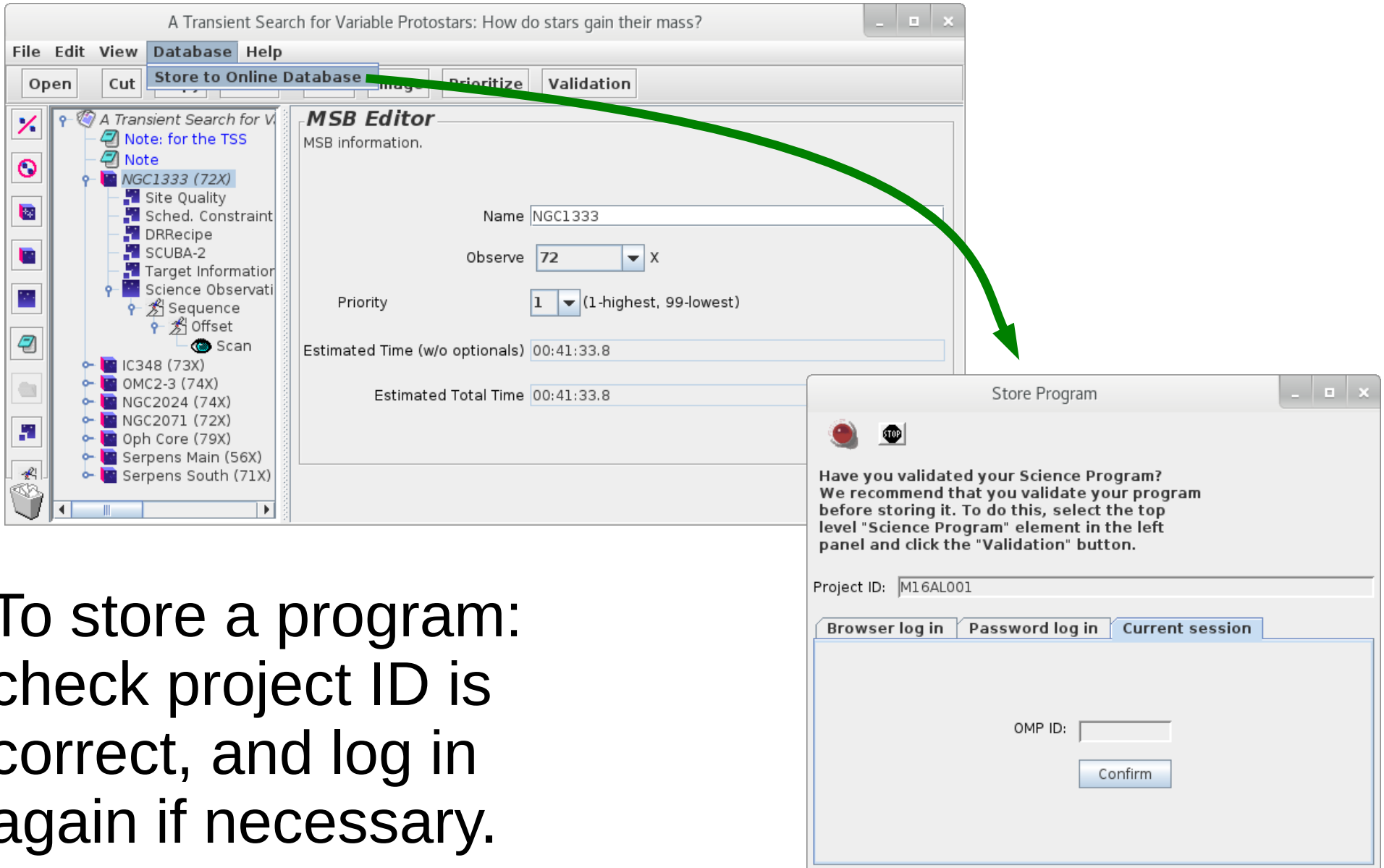
Priority 1 (1-highest, 99-lowest)

Estimated Time (w/o option...) 00:41:33.8

Estimated Total Time 00:41:33.8

Undo

Introduction — storing a program



The image shows a software interface for managing astronomical programs. The main window is titled "A Transient Search for Variable Protostars: How do stars gain their mass?". It has a menu bar with "File", "Edit", "View", "Database", and "Help". Below the menu bar are buttons for "Open", "Cut", "Store to Online Database", "Image", "Prioritize", and "Validation". The "Store to Online Database" button is highlighted with a green arrow pointing to a "Store Program" dialog box. The "MSB Editor" panel shows fields for "Name" (NGC1333), "Observe" (72 X), "Priority" (1), "Estimated Time (w/o optionals)" (00:41:33.8), and "Estimated Total Time" (00:41:33.8). The left panel shows a tree view of programs, including "NGC1333 (72X)", "IC348 (73X)", "OMC2-3 (74X)", "NGC2024 (74X)", "NGC2071 (72X)", "Oph Core (79X)", "Serpens Main (56X)", and "Serpens South (71X)".

Store Program

Have you validated your Science Program?
We recommend that you validate your program before storing it. To do this, select the top level "Science Program" element in the left panel and click the "Validation" button.

Project ID: M16AL001

Browser log in Password log in Current session

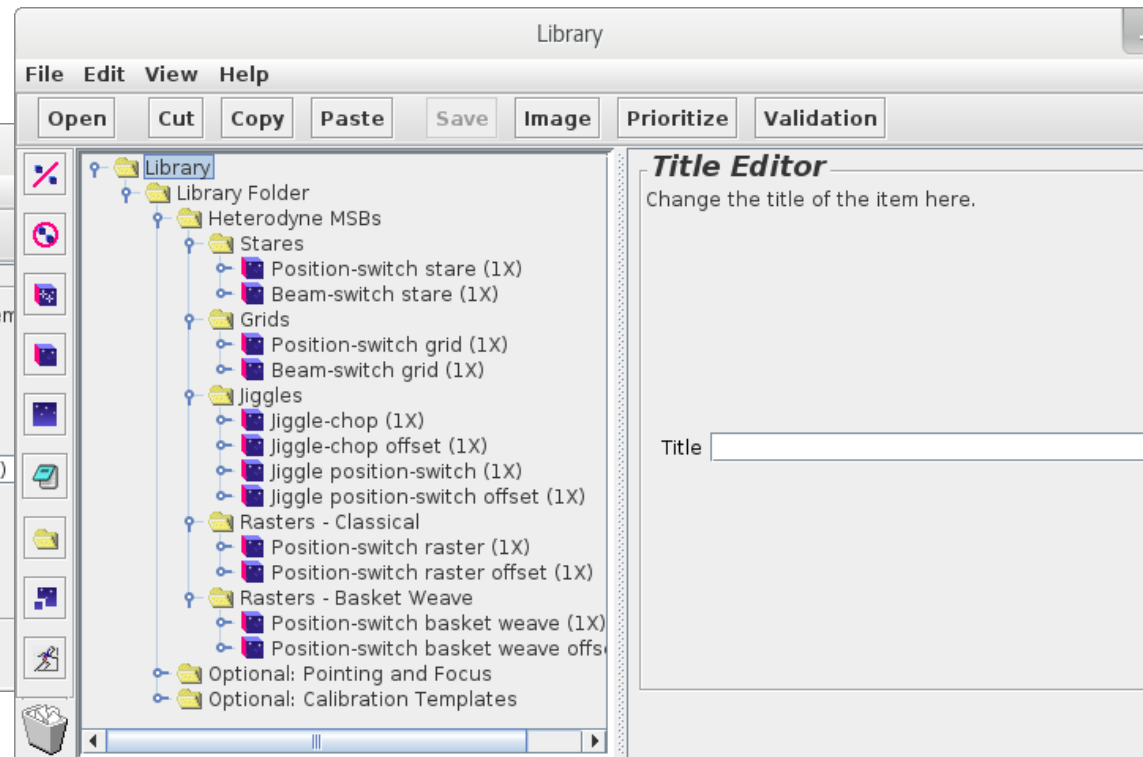
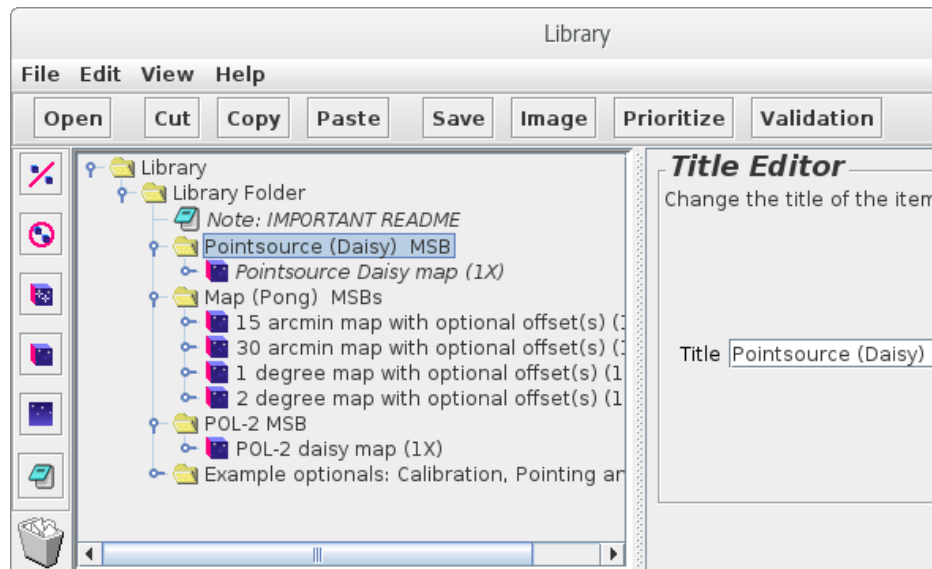
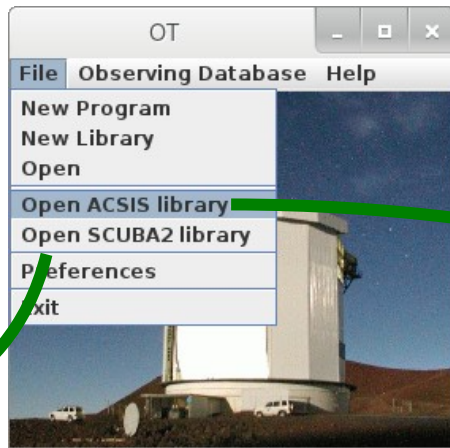
OMP ID:

Confirm

To store a program:
check project ID is
correct, and log in
again if necessary.

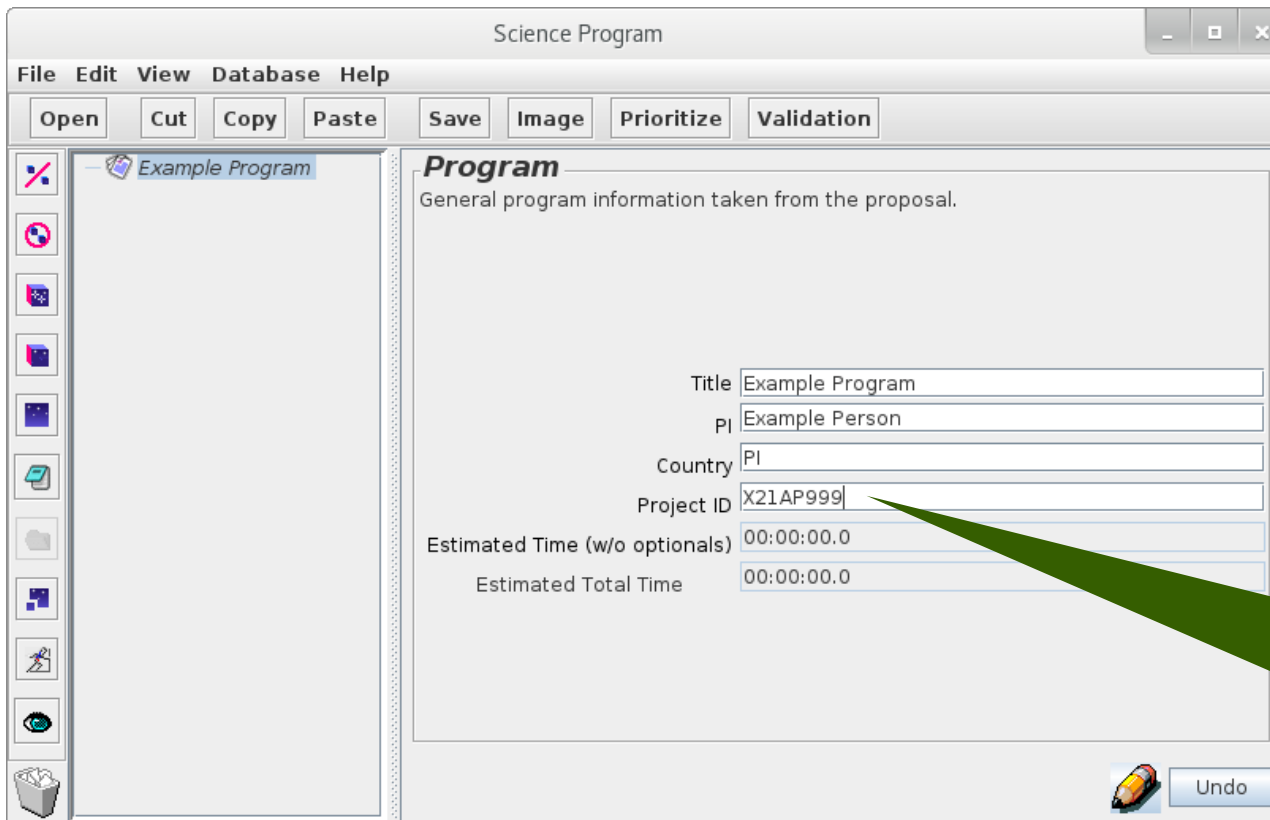
Introduction — the MSB libraries

There are libraries of examples for ACSIS and SCUBA-2.



Creating an MSB — the project

- A new project contains just the “program” entry.



The screenshot shows a window titled "Science Program" with a menu bar (File, Edit, View, Database, Help) and a toolbar (Open, Cut, Copy, Paste, Save, Image, Prioritize, Validation). The main area is divided into a left sidebar with icons and a right pane titled "Program". The "Program" pane contains the text "General program information taken from the proposal." and a form with the following fields:

Title	Example Program
PI	Example Person
Country	PI
Project ID	X21AP999
Estimated Time (w/o optionals)	00:00:00.0
Estimated Total Time	00:00:00.0

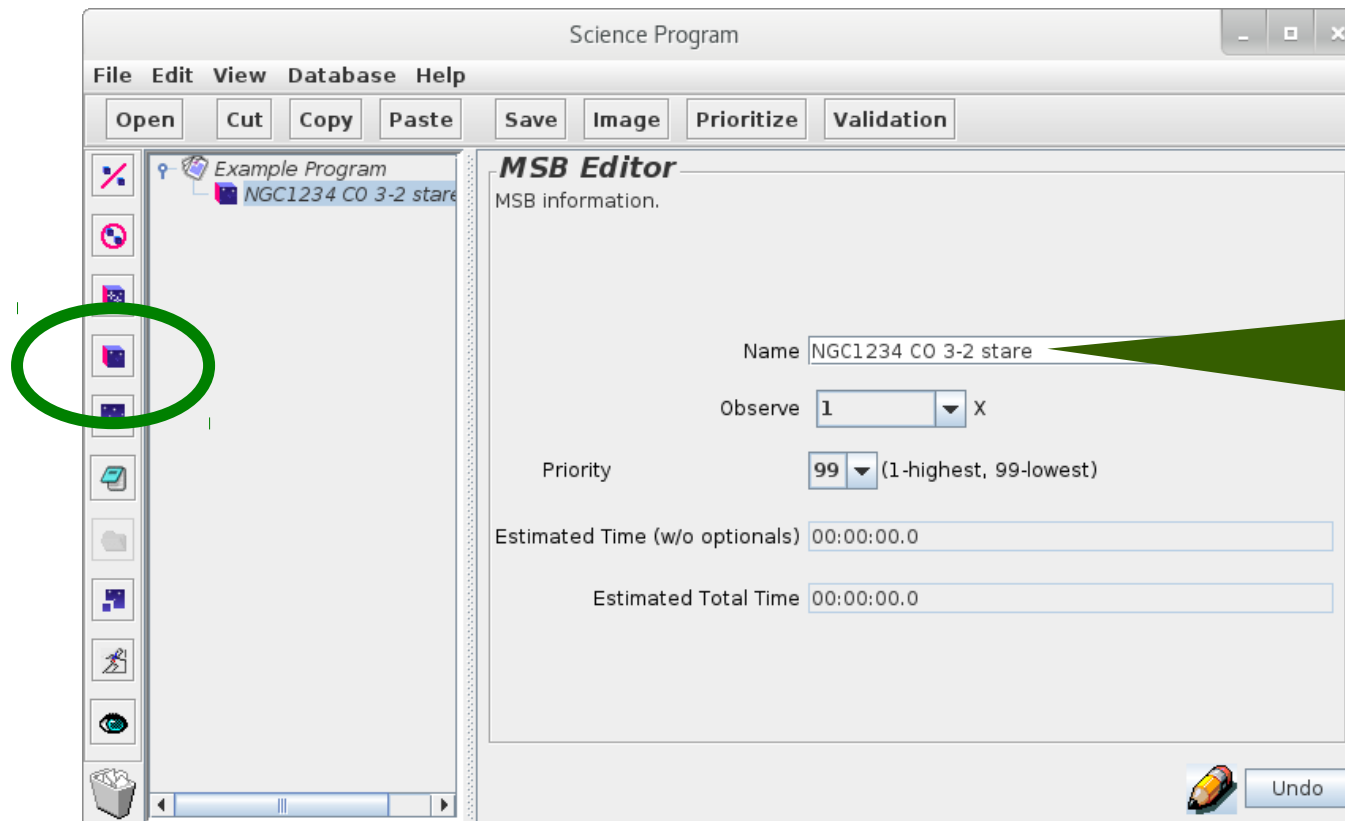
An "Undo" button is located at the bottom right of the form area. A green arrow points from the "Project ID" field to a callout box on the right.

Project ID

Used to identify project when uploaded to the OMP.

Creating an MSB — the MSB folder

- An MSB can be added from the toolbar.



Name

Allows you to identify
your project's MSBs.

Creating an MSB — the target

Science Program

File Edit View Database Help

Open Cut Copy Paste Save Image Prioritize Validation

Example Program

- NGC1234 CO 3-2 stars
- Target Information

Target Information

Use this editor to enter the target information.

Name NGC1234 TargetType RA/Dec

RA/Dec Orbital Elements Named Planets TLE

Object

SIMBAD Names ESO Resolve Name Resolved Name: NGC 1234

System FK5 (J2000) Ra 03:09:39.000 Dec -07:50:43.39

Radial Vel/Tracking Proper Motion Chop Settings

Velocity (km/s or redshift) redshift 0.0125

Frame LSRK

Tag	Name	X Axis	Y Axis	System
SCIENCE	NGC1234	03:09:39.000	-07:50:43.39	FK5 (J2000)

Plot... Set SCIENC... Remove Add REFERE... Undo

Name

Ideally the common name of the target.

Coordinates

Redshift or radial velocity

Additional coordinates

Some types of observations require a reference position.

Creating an MSB — the instrument

Instrument

Bandwidth

Number of
spectra
required

Line selection

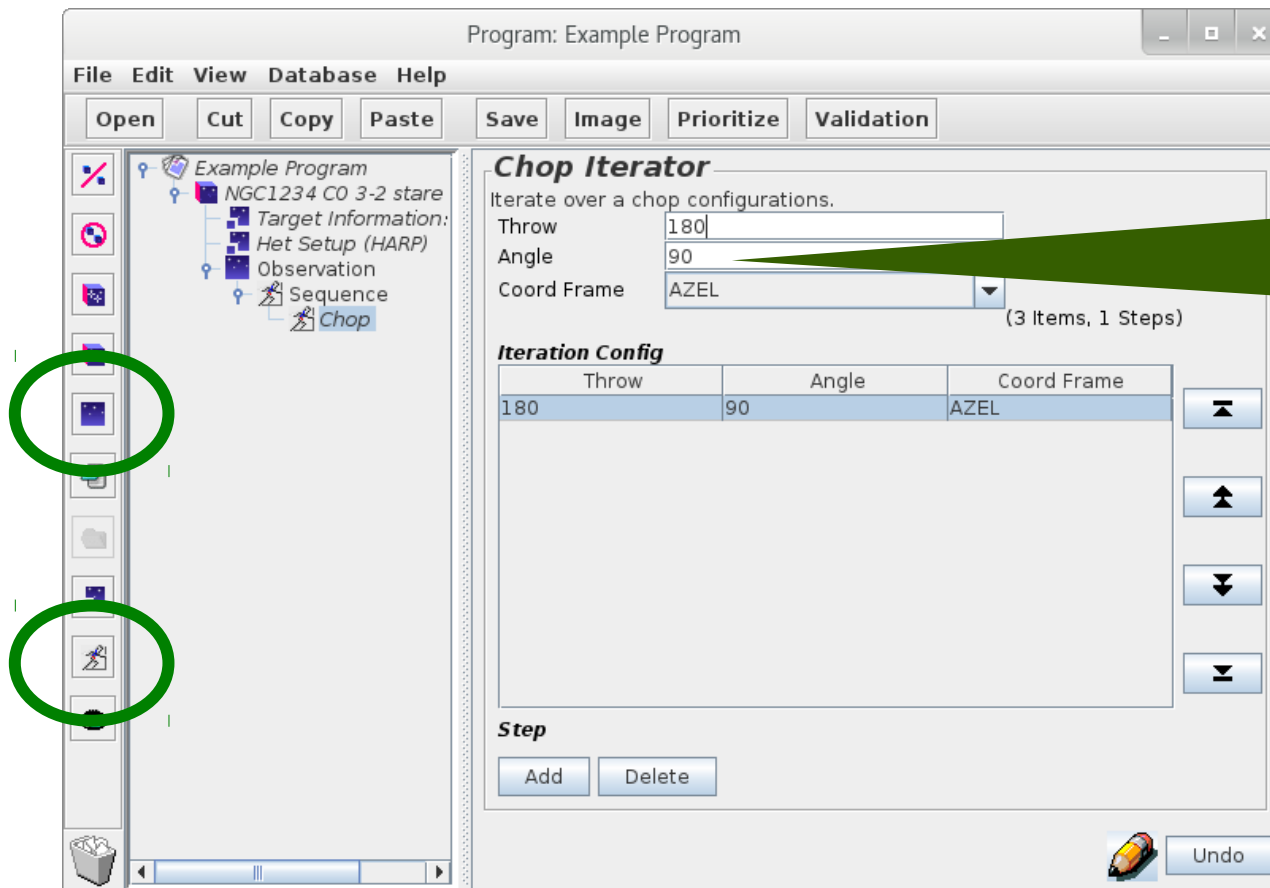
(For first spectrum.)

The screenshot shows the 'JCMT Heterodyne' configuration window. The 'Front End Configuration' section has radio buttons for 'Uu', 'Aweowe', 'A3m', 'A3', 'WB', 'WD', and 'HARP' (selected). The 'Sp. R...' section has radio buttons for '1', '2', '3', and '4' (selected '1'). The 'Mode' section has radio buttons for 'ssb', 'dsb', and '2sb' (selected 'ssb'). The 'Side...' section has radio buttons for 'best', 'usb', and 'lsb' (selected 'best'). The 'Frequency Setup' section has a checked box for 'Default tuning velocity to target radial velocity'. The 'Redshift' is set to '0.0125', 'Definition' is 'redshift', and 'Frame' is 'BARYCENT'. The 'CO' section shows '3 - 2' and '345.7959899 GHz'. The 'Sky freq.' is '341.5 GHz'. The 'Frequency Configuration' table is shown below.

Region	Species	Trans.	Rest. F...	Centre...	BW	res	overlap	chann...
0	CO	3 - 2	345.79...	5.0E9	1.0E9	488	0.0	2048

Creating an MSB — chop iterator

- This MSB will use beam-switching (“chopping”).
- A chop iterator is added configure chopping.



Chop settings

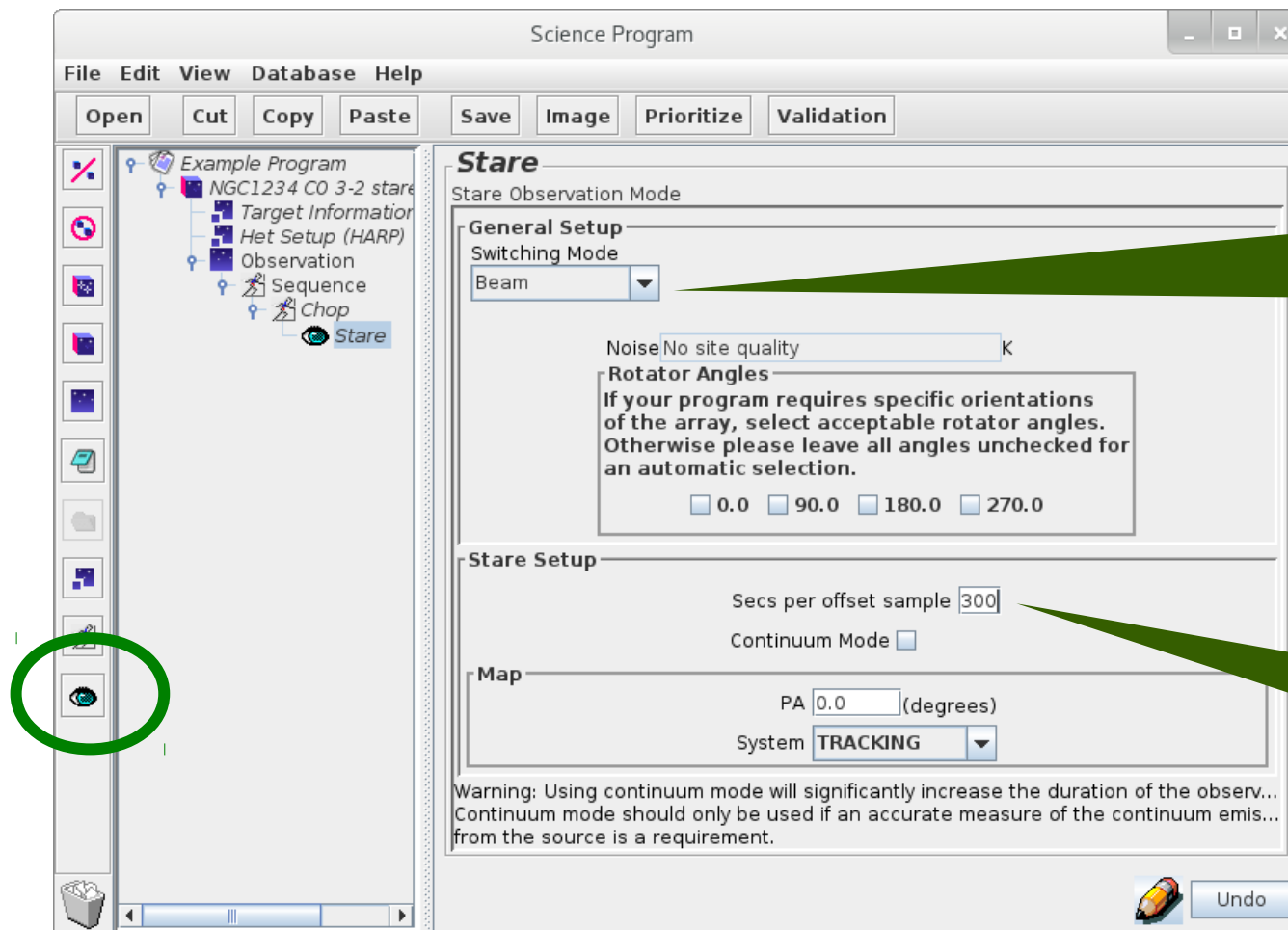
90° in Az. / El.



Chop in azimuth.

Creating an MSB — stare eye

- An “eye” instructs the telescope to take data.



Switching mode

“Beam” switching to match use of chopping.

Time

300 seconds
(5 minutes)

The completed MSB

Additional Components

- Site Quality
- DR Recipe
- Note

The screenshot shows the 'MSB Editor' window for a program named 'Example Program'. The left sidebar displays a tree view of the project components: 'NGC1234 CO 3-2 stare' (selected), 'Site Quality', 'DRRecipe', 'Note: Please read', 'Target Information: Het Setup (HARP)', 'Observation', 'Sequence', 'Chop', and 'Stare'. The main panel, titled 'MSB Editor', contains the following fields:

- Name: NGC1234 CO 3-2 stare
- Observe: 1 (dropdown menu with 'X' next to it)
- Priority: 99 (dropdown menu with '(1-highest, 99-lowest)' next to it)
- Estimated Time (w/o optionals): 00:13:10.0
- Estimated Total Time: 00:13:10.0

At the bottom right, there is an 'Undo' button with a pencil icon.

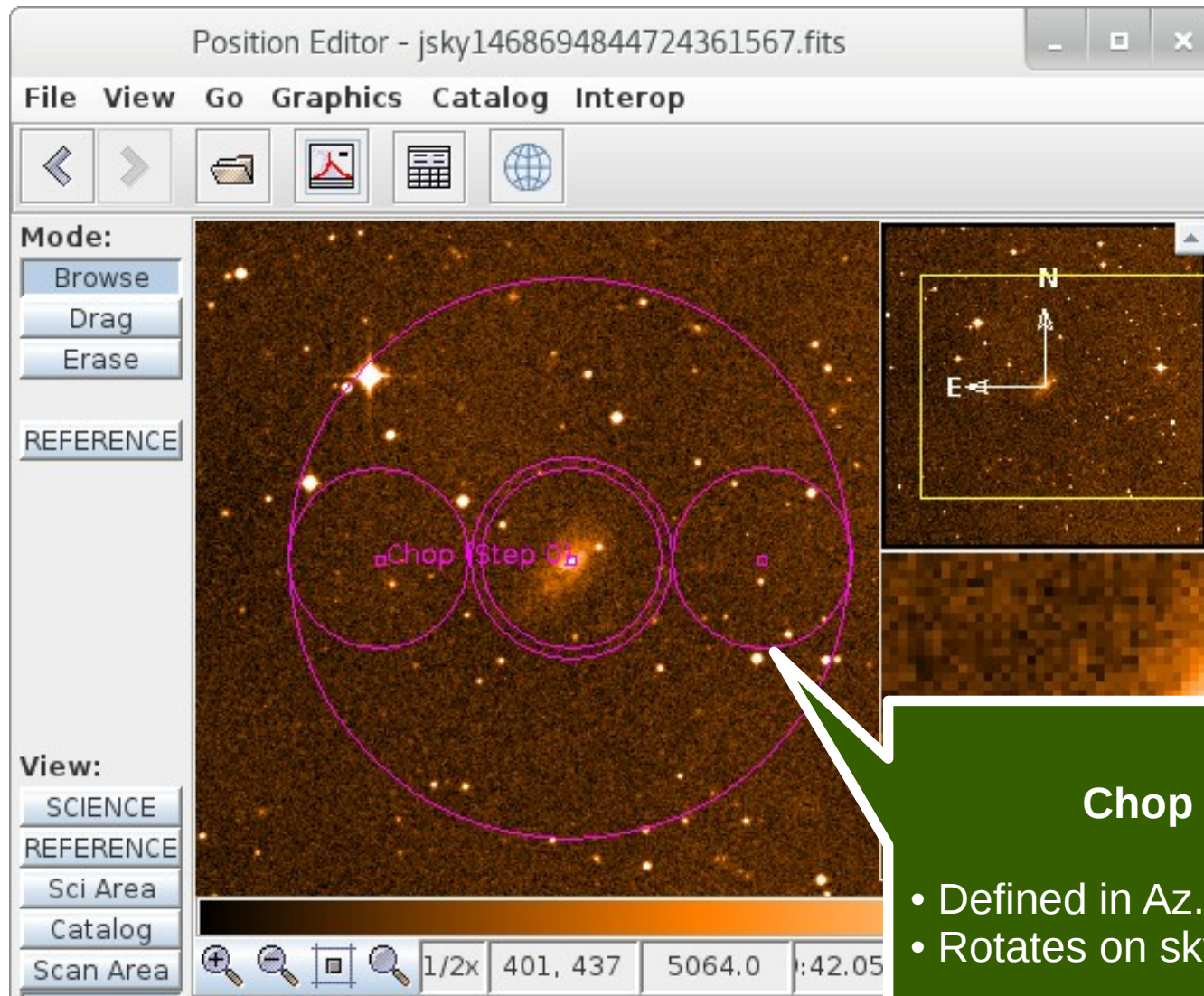
Total Time

2×5 minutes
+ overhead estimate

Position editor — tips

- This can be used to visualize part of an MSB.
 - Scan areas.
 - Reference and offset positions.
- Common pitfalls.
 - Only shows the currently selected component.
 - Plotting tool only supports some projections.

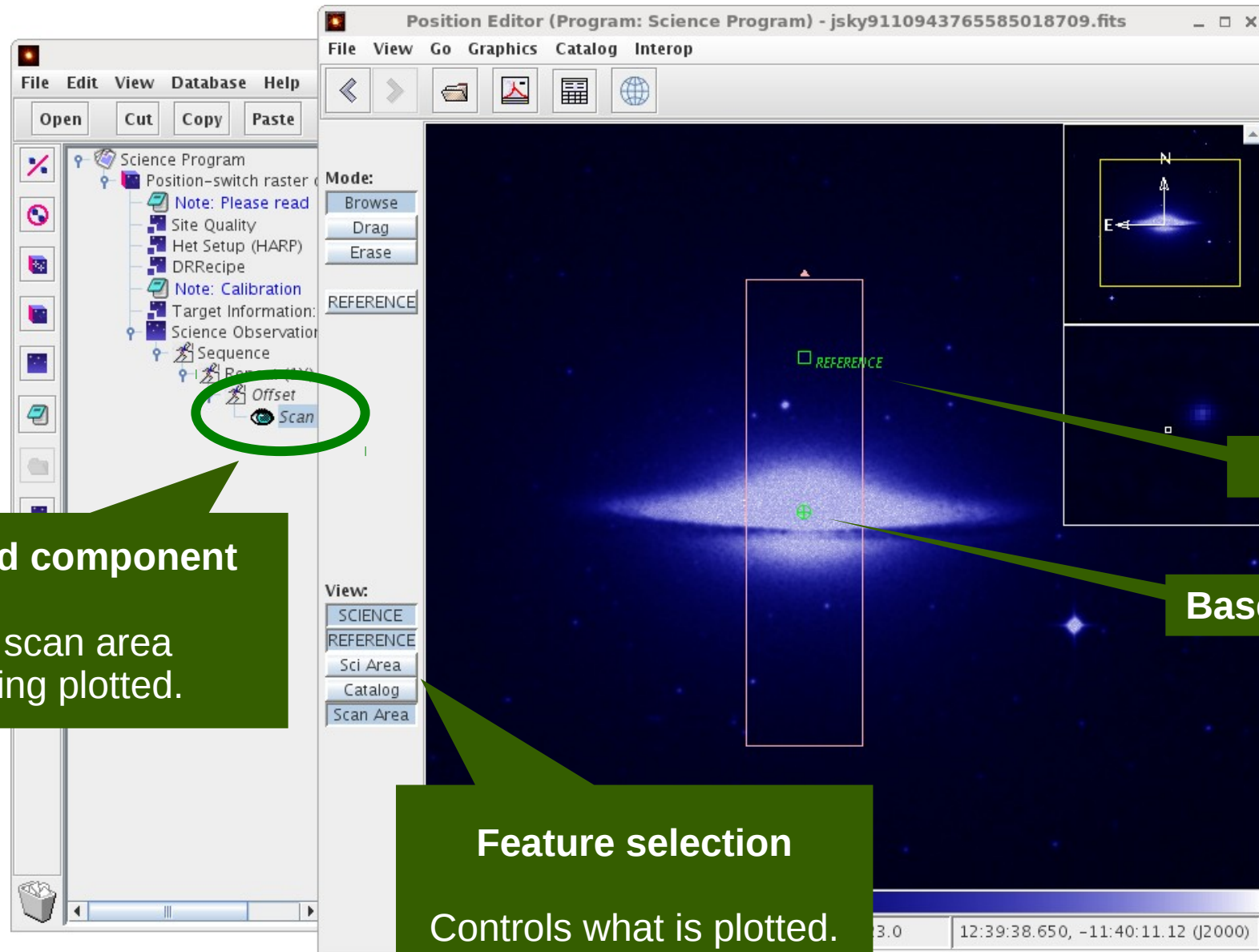
Position editor — chop position



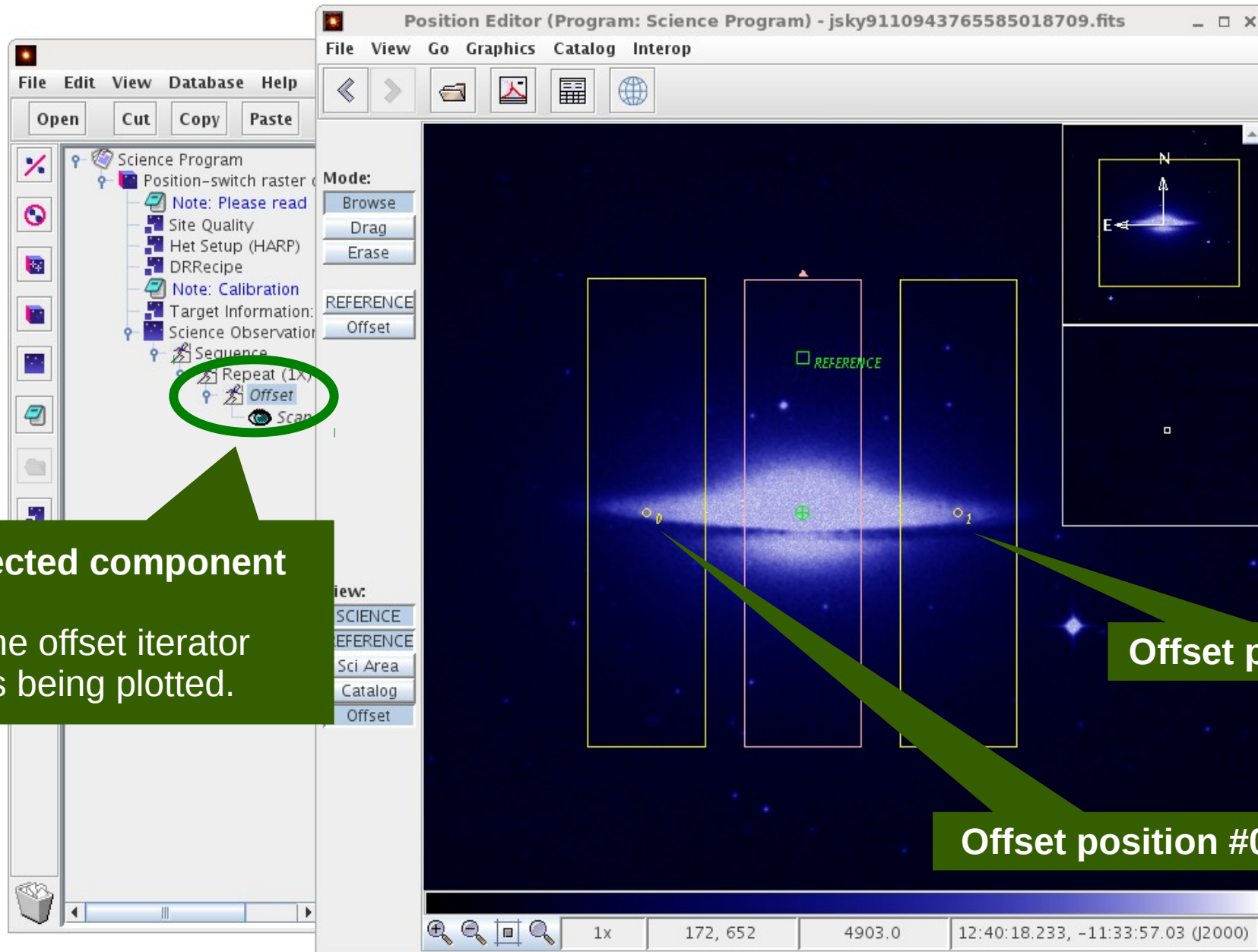
Chop position

- Defined in Az. / El. coordinates.
- Rotates on sky.

Position editor — scan area



Position editor — offset iterator



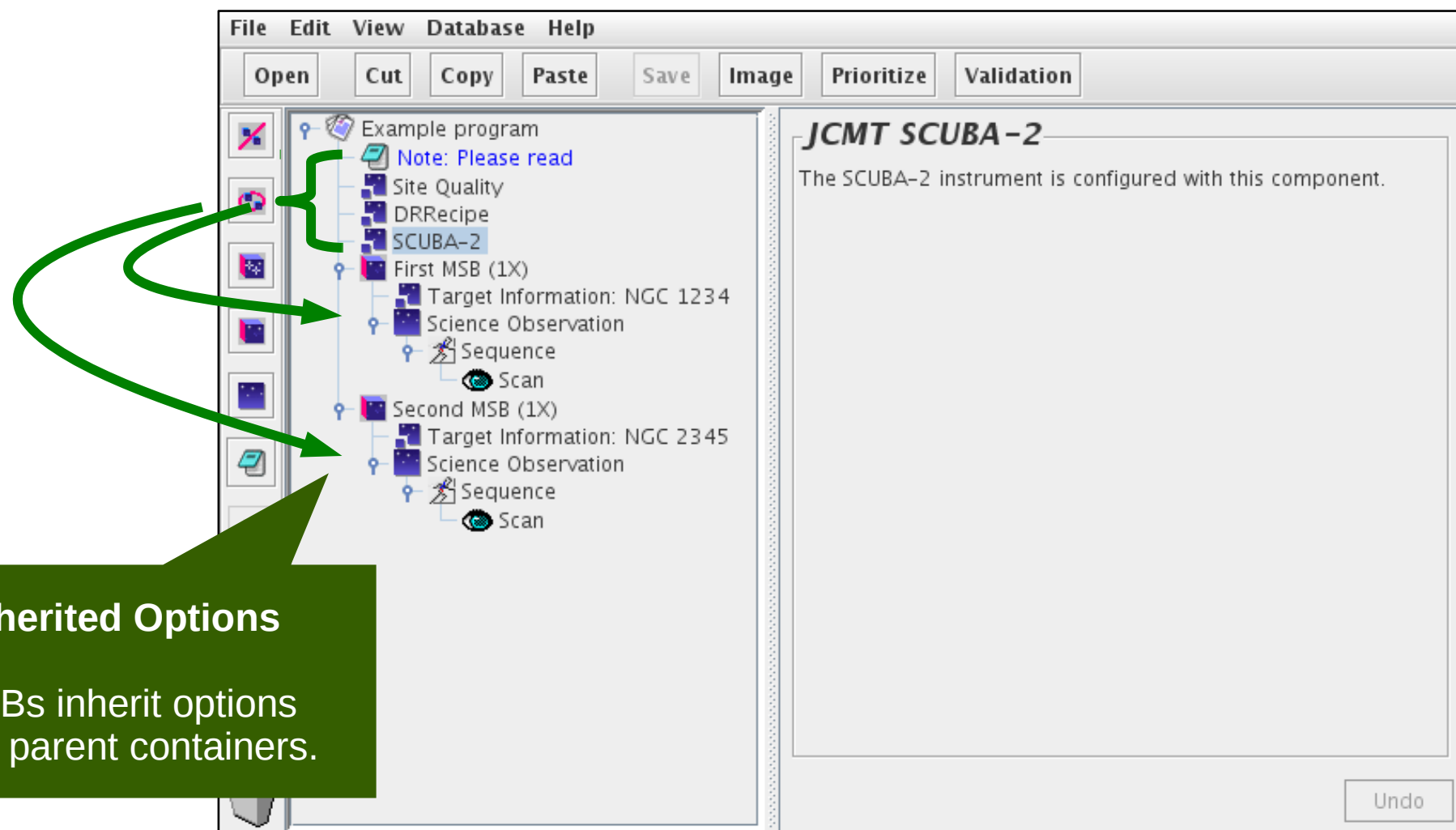
JCMT OT Tips and Tricks

- Aims
 - Simplify science programs.
 - Avoid mistakes, e.g. copy & paste errors.
- OT features
 - Inheritance.
 - Folders.
 - Survey containers.
 - Validation.

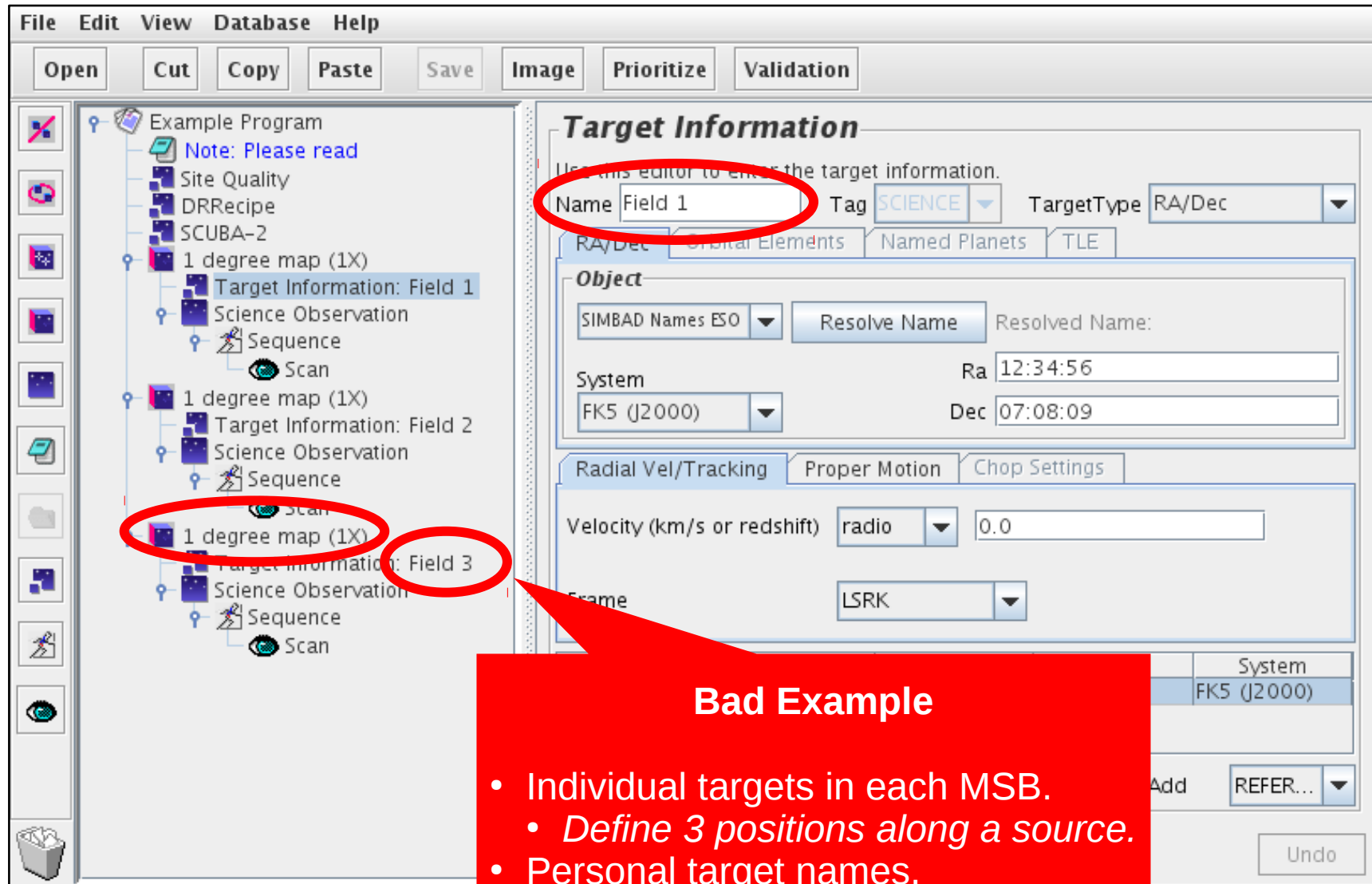
Inheritance — tips

- Science programs are hierarchical:
 - ◆ Top level
 - ➔ Folder
 - ➔ MSB
 - ➔ Observation
- Observations inherit options from parents.
 - Instrument, target, site quality, DR recipe, notes.

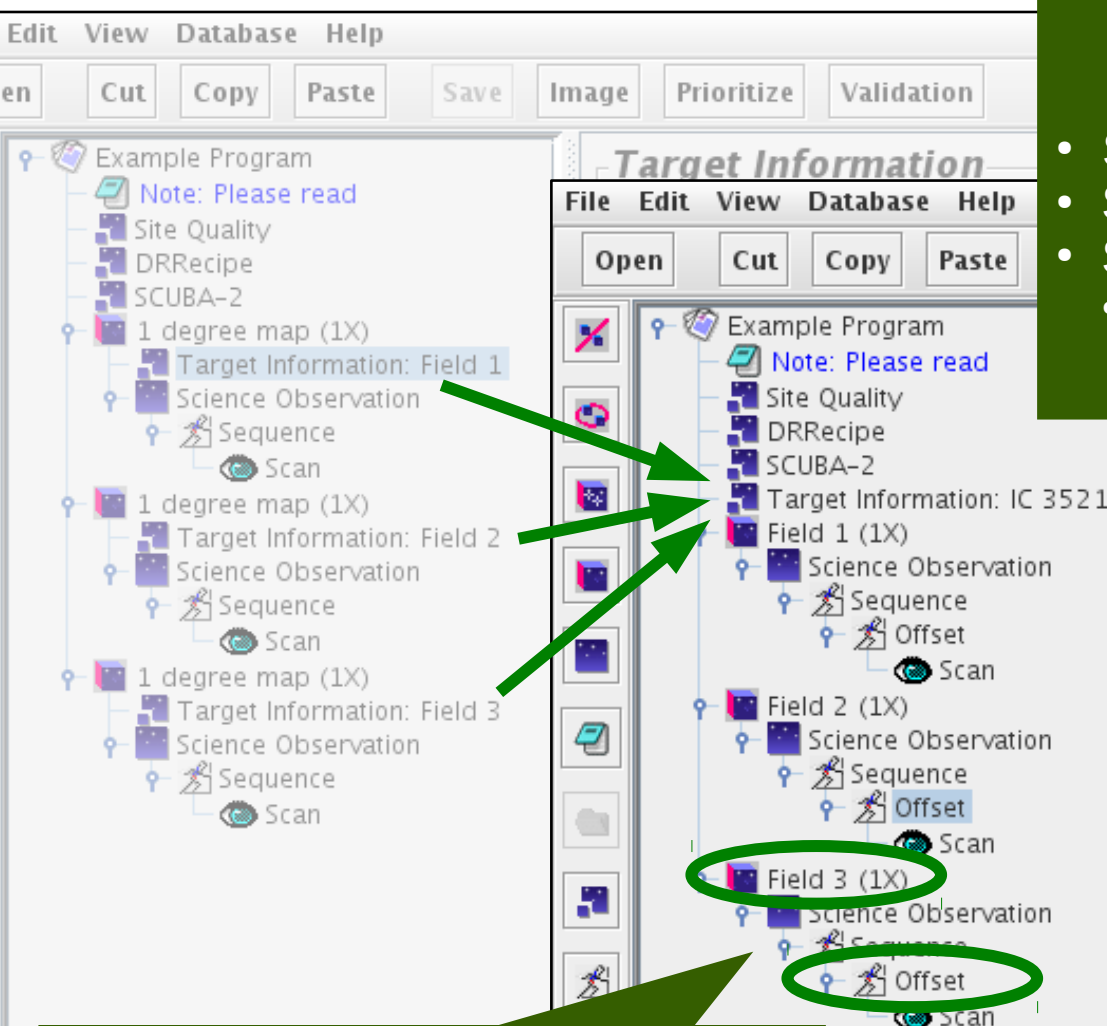
Inheritance — example



Target information without inheritance



Inheritance — target information



- Personalized MSB titles.
- Offsets for position of each MSB.
 - **Avoid having to manually compute offset positions.**

Better Example

- Standard target name.
- Shared target component.
- Same base position for each MSB:
 - **ORAC-DR should automatically co-add maps.**

(arcsec)

p 0.0

q 3600.0

PA 0.0

New

Rm. All

Remove

#	p Offset	q Offset
0	0.0	3600.0

Display Derotated Offsets

Grid Pattern

☒ Overwrite ☐ Append

Initial Offset (arcsec)

p 0

q 0

Spacing (arcsec)

p 60

q 60

Rows

Cols

Create/Centre On Base

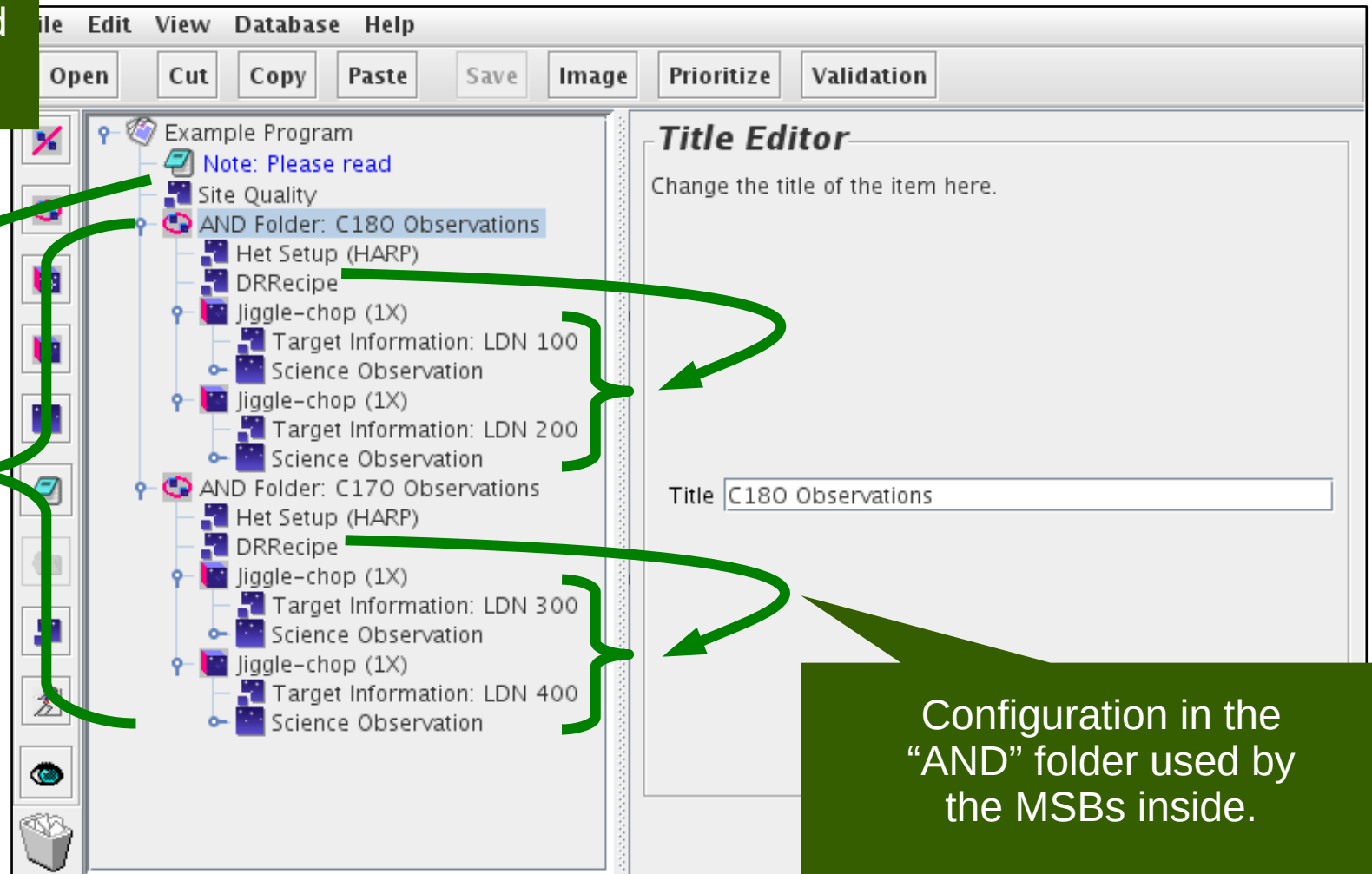
Set Spacing from Scan

Folders

- “AND” folders
 - Organize MSBs into groups.
- “OR” folders
 - Select from alternative MSBs.

“AND” folders

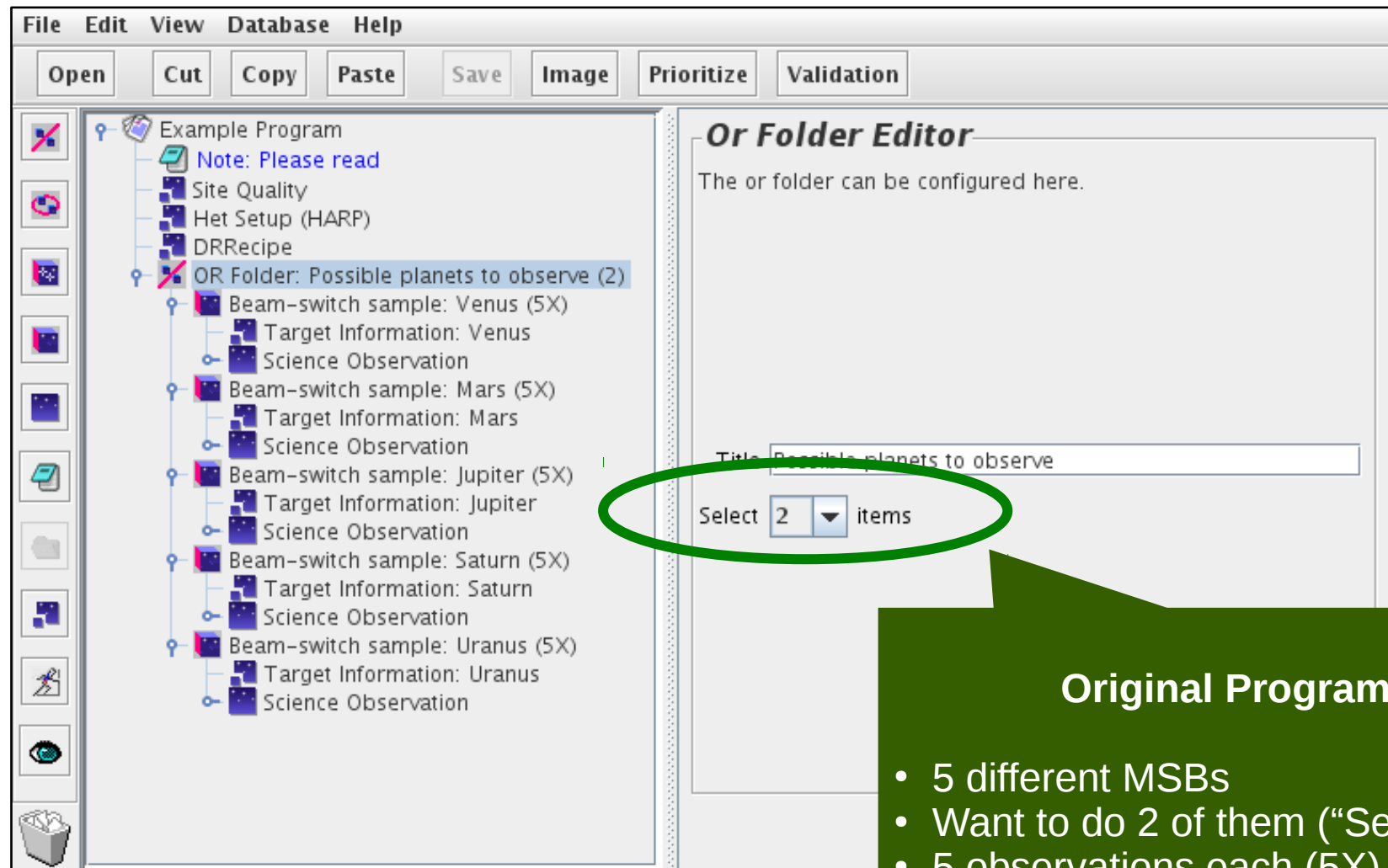
Configuration at the top level used by all MSBs.



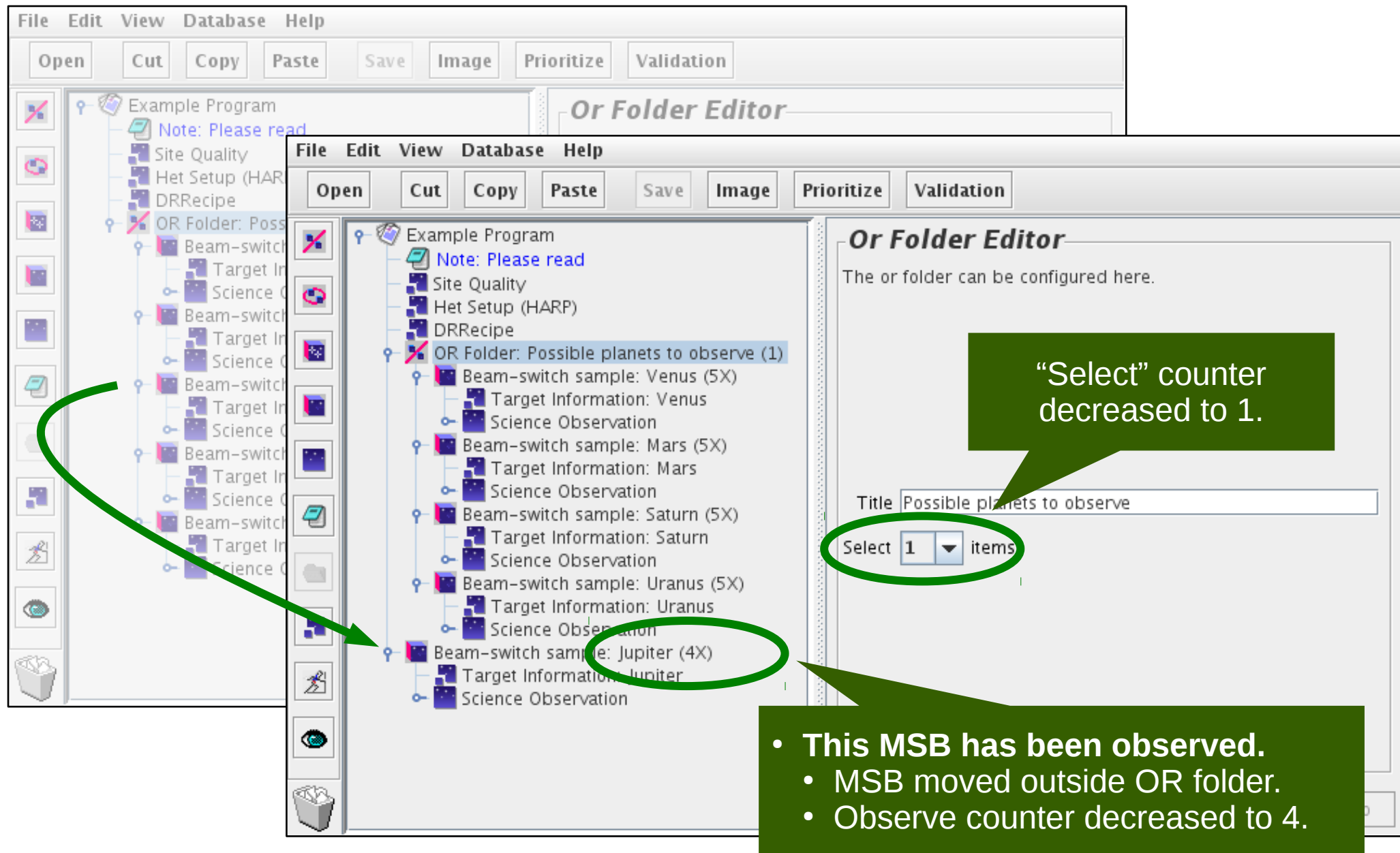
Configuration in the “AND” folder used by the MSBs inside.

“AND” folders do not affect when MSBs are observed.

“OR” folders



“OR” folders — during selection



The screenshot displays the 'Or Folder Editor' interface. The left pane shows a tree view of folders under 'Example Program'. The right pane shows the configuration for the selected folder, 'OR Folder: Possible planets to observe (1)'. The 'Select' counter is set to 1. A green arrow points from the left window to the right window. A green circle highlights the 'Beam-switch sample: Jupiter (4X)' folder in the tree view. A green speech bubble points to the 'Select' counter, which is set to 1. A green box contains a list of actions.

“Select” counter decreased to 1.

- This MSB has been observed.
- MSB moved outside OR folder.
- Observe counter decreased to 4.

“OR” folders — after selection

The screenshot displays the 'Or Folder Editor' window, which is used to configure an 'OR' folder. The window has a menu bar (File, Edit, View, Database, Help) and a toolbar (Open, Cut, Copy, Paste, Save, Image, Prioritize, Validation). The main area is divided into two panes. The left pane shows a tree view of the project structure, including folders like 'Example Program', 'Site Quality', 'Het Setup (HARP)', 'DRRecipe', and 'OR Folder: Possible planets to observe (0)'. The right pane shows the configuration for the selected folder, titled 'Possible planets to observe'. It includes a 'Select' counter set to 0 and a list of items. A green arrow points from the 'OR Folder: Possible planets to observe (0)' folder in the left pane to the right pane. A green speech bubble points to the 'Select' counter, and another green speech bubble points to the list of items.

File Edit View Database Help

Open Cut Copy Paste Save Image Prioritize Validation

Example Program

Note: Please read

Site Quality

Het Setup (HARP)

DRRecipe

OR Folder: Possible planets to observe (0)

Beam-switch sample: Venus (REMOVED)

Target Information: Venus

Science Observation

Beam-switch sample: Mars (REMOVED)

Target Information: Mars

Science Observation

Beam-switch sample: Uranus (REMOVED)

Target Information: Uranus

Science Observation

Beam-switch sample: Saturn (4X)

Target Information: Saturn

Science Observation

Beam-switch sample: Jupiter (4X)

Target Information: Jupiter

Science Observation

Or Folder Editor

The or folder can be configured here.

Title Possible planets to observe

Select 0 items

- “Select” counter now at 0.
- No more MSBs will be chosen.

- 2 MSBs have now been observed.
- Selected MSBs outside folder.
- They will be completed (4X more each).

Survey containers

- Repeat an observation for multiple sources.
- Source list can be loaded from a file.

Survey container — example

The screenshot shows a software window with a menu bar (File, Edit, View, Database, Help) and a toolbar (Open, Cut, Copy, Paste, Save, Image, Prioritize, Validation). On the left is a tree view of a project structure. A green arrow points from a green callout box to the 'Survey Container: Some galaxies' item in the tree. The callout box contains the text: 'MSB inside Survey Container. Means: make a copy of this MSB for each target.' The main panel on the right is titled 'Survey Information' and contains a text field for 'Title' with the value 'Some galaxies'. Below this are two tabs: 'Survey Targets' (selected) and 'Target Information'. The 'Survey Targets' tab displays a table of targets. The table has columns: Name, X Axis, Y Axis, Coord System, Rema..., and Priority. The data rows are as follows:

Name	X Axis	Y Axis	Coord System	Rema...	Priority
M31	00:42:44.330	+41:16:07.50	FK5 (J2000)	5	1
M32	00:42:41.825	+40:51:54.61	FK5 (J2000)	5	2
M33	01:33:50.904	+30:39:35.79	FK5 (J2000)	5	3
M49	12:29:46.798	+08:00:01.48	FK5 (J2000)	5	4
M51	13:29:52.698	+47:11:42.93	FK5 (J2000)	5	5
M58	12:37:43.597	+11:49:05.12	FK5 (J2000)	5	6
M59	12:42:02.322	+11:38:48.95	FK5 (J2000)	5	7
M60	12:43:40.008	+11:33:09.40	FK5 (J2000)	5	8
M61	12:21:54.950	+04:28:24.92	FK5 (J2000)	5	9
M63	13:15:49.329	+42:01:45.44	FK5 (J2000)	5	10
M64	12:56:43.696	+21:40:57.57	FK5 (J2000)	5	11
M65	11:18:55.957	+13:05:31.96	FK5 (J2000)	5	12
M66	11:20:15.026	+12:59:28.64	FK5 (J2000)	5	13
M74	01:36:41.772	+15:47:00.46	FK5 (J2000)	5	14

Below the table are two dropdown menus: 'Remaining' with the value '5' and 'Priority' with the value '1'. To the right of these is a checkbox labeled 'Select' which is unchecked. At the bottom of the panel are five buttons: 'Add', 'Duplicate', 'Remove', 'Remove all', and 'Load'. In the bottom right corner of the window is an 'Undo' button with a pencil icon.

Survey container — in the OMP

Help

Save Image Prioritize Validation

Survey Information

Use this editor to enter the survey information.

Title:

Survey Targets Target Information

Name	X Axis	Y Axis	Coord System
M31	00:42:44.330	+41:16:07.50	FK5 (J2000)
M32	00:42:41.825	+40:51:54.61	FK5 (J2000)
M33	01:33:50.904	+30:39:35.79	FK5 (J2000)
M49	12:29:46.798	+08:00:01.48	FK5 (J2000)
M51	13:29:52.698	+47:11:42.93	FK5 (J2000)
M58	12:37:43.597	+11:49:05.12	FK5 (J2000)
M59	12:42:02.322	+11:38:48.95	FK5 (J2000)
M60	12:43:40.008	+11:33:09.40	FK5 (J2000)
M61	12:21:54.950	+04:28:24.92	FK5 (J2000)
M63	13:15:49.329	+42:01:45.44	FK5 (J2000)
M64	12:56:43.696	+21:40:57.57	FK5 (J2000)
M65	11:18:55.957	+13:05:31.96	FK5 (J2000)
M66	11:20:15.026	+12:59:28.64	FK5 (J2000)
M74	01:36:41.772	+15:47:00.46	FK5 (J2000)

Remaining Priority

Add Duplicate Remove Remove

Becomes multiple
MSBs in the OMP.

MSBs remaining to be observed:

MSB	Target	Waveband	Instrument	Est. time	Remaining
1	M31	850	SCUBA-2	0.52 hours	5
2	M32	850	SCUBA-2	0.52 hours	5
3	M33	850	SCUBA-2	0.52 hours	5
4	M49	850	SCUBA-2	0.52 hours	5
5	M51	850	SCUBA-2	0.52 hours	5
6	M58	850	SCUBA-2	0.52 hours	5
7	M59	850	SCUBA-2	0.52 hours	5
8	M60	850	SCUBA-2	0.52 hours	5
9	M61	850	SCUBA-2	0.52 hours	5
10	M63	850	SCUBA-2	0.52 hours	5
11	M64	850	SCUBA-2	0.52 hours	5
12	M65	850	SCUBA-2	0.52 hours	5
13	M66	850	SCUBA-2	0.52 hours	5
14	M74	850	SCUBA-2	0.52 hours	5
15	M77	850	SCUBA-2	0.52 hours	5
16	M81	850	SCUBA-2	0.52 hours	5
17	M82	850	SCUBA-2	0.52 hours	5
18	M84	850	SCUBA-2	0.52 hours	5
19	M85	850	SCUBA-2	0.52 hours	5
20	M86	850	SCUBA-2	0.52 hours	5

Click [here](#) for more details on the science program.

Click [here](#) to download or plot the regions observed in this program.

Survey container — fetched MSB

The screenshot displays a software interface with two main windows. The background window shows a hierarchical tree of survey components: Example Program, SCUBA-2, Site Quality, Survey Container: Some ga..., Pointsource Daisy map, DRRecipe, Note: Please read, Science Observation, Sequence, and Scan. The foreground window, titled 'Survey Information', contains a 'Target Information' panel. A green oval highlights the 'Note: Please read' item in the background tree, with a green arrow pointing to a green text box. The 'Target Information' panel includes tabs for RA/Dec, Orbital Elements, Named Planets, and TLE. The 'Object' section shows 'SIMBAD Names ESO' and 'Resolve Name' buttons, with 'Resolved Name:' displayed. The 'System' section shows 'FK5 (J2000)' and 'Ra' and 'Dec' coordinates. The 'Radial Vel/Tracking' section shows 'Velocity (km/s or redshift)' and 'Frame' (LSRK). A table at the bottom lists target information.

MSB fetched from the OMP

System inserts a target from the survey container when MSB is observed.

Target Information

Use this editor to enter the target information.

Name: M31 Tag: SCIENCE TargetType: RA/Dec

RA/Dec Orbital Elements Named Planets TLE

Object

SIMBAD Names ESO Resolve Name Resolved Name:

System FK5 (J2000) Ra: 00:42:44.330 Dec: +41:16:07.50

Radial Vel/Tracking Proper Motion Chop Settings

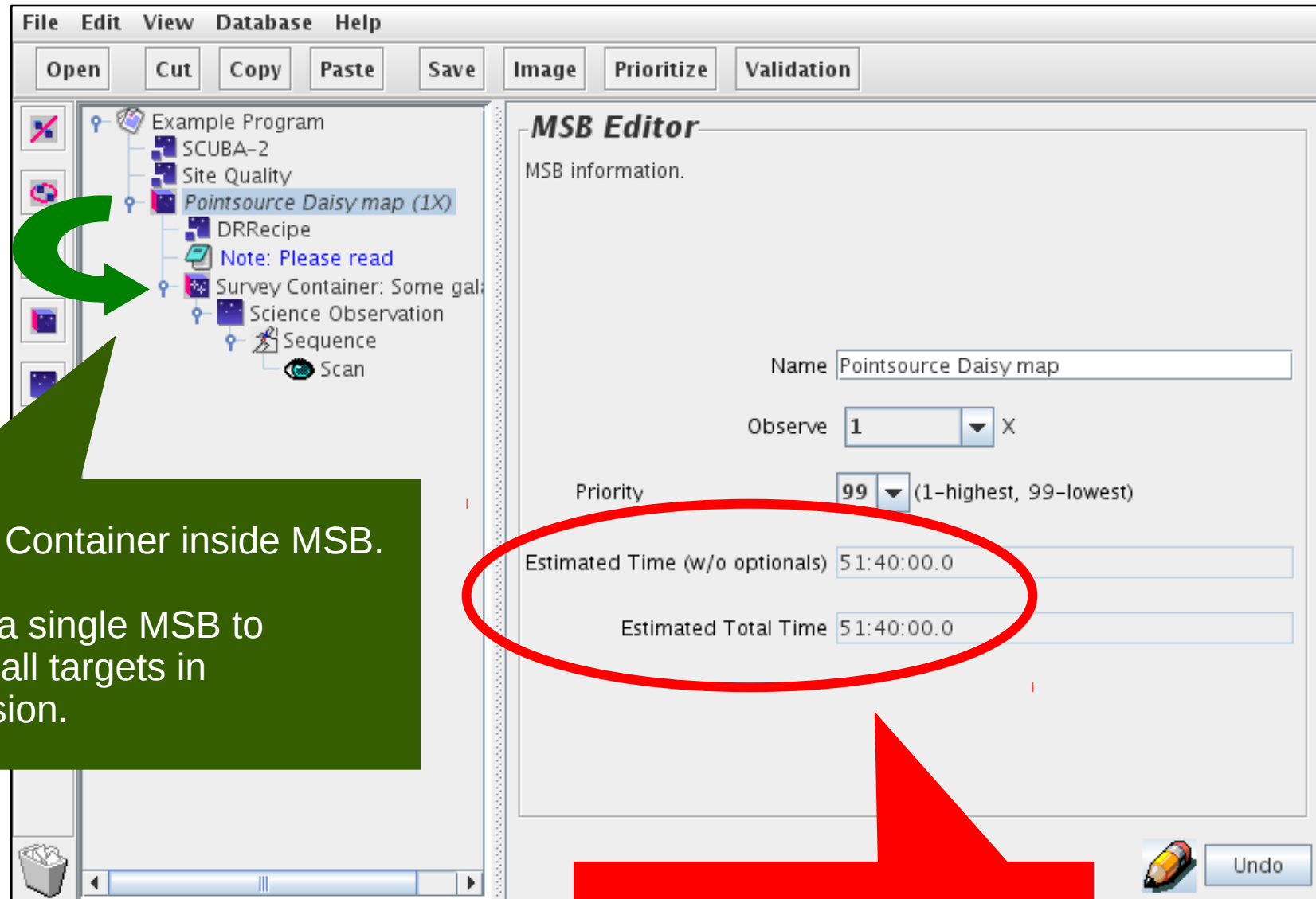
Velocity (km/s or redshift) radio 0.0

Frame LSRK

Tag	Name	X Axis	Y Axis	System
SCIENCE	M31	00:42:44.330	+41:16:07.50	FK5 (J2000)

Plot... Set SCIENC... Remove Add REFER... Undo

Survey container in MSB



Survey Container inside MSB.

Means: a single MSB to observe all targets in one session.

Very long time estimate!

Survey container in MSB — OMP

The screenshot shows the MSB Editor interface. The left pane displays a tree view of the survey container, including 'Example Program', 'SCUBA-2', 'Site Quality', 'Pointsource Daisy map (1X)', 'DRRecipe', 'Note: Please read', 'Survey Container: Some gal...', 'Science Observation', 'Sequence', and 'Scan'. The right pane shows the 'MSB Editor' with 'MSB information.' displayed. A table titled 'MSBs remaining to be observed:' is shown, with columns: MSB, Target, Waveband, Instrument, Est. time, and Remaining. The table contains one row for MSB 1, with a target list, waveband of 850, instrument of SCUBA2, an estimated time of 51.67 hours, and a remaining count of 1. A red circle highlights the 'Est. time' and 'Remaining' columns. A red arrow points from a text box at the bottom left to the table. The text box contains the text: 'Single large MSB in the OMP. Normally not what you want!'. The bottom right of the window shows an 'Undo' button.

MSBs remaining to be observed:

MSB	Target	Waveband	Instrument	Est. time	Remaining
1	M31/M32/M33/M49 /M51/M58/M59/M60 /M61/M63/M64/M65 /M66/M74/M77/M81 /M82/M84/M85/M86	850	SCUBA2	51.67 hours	1

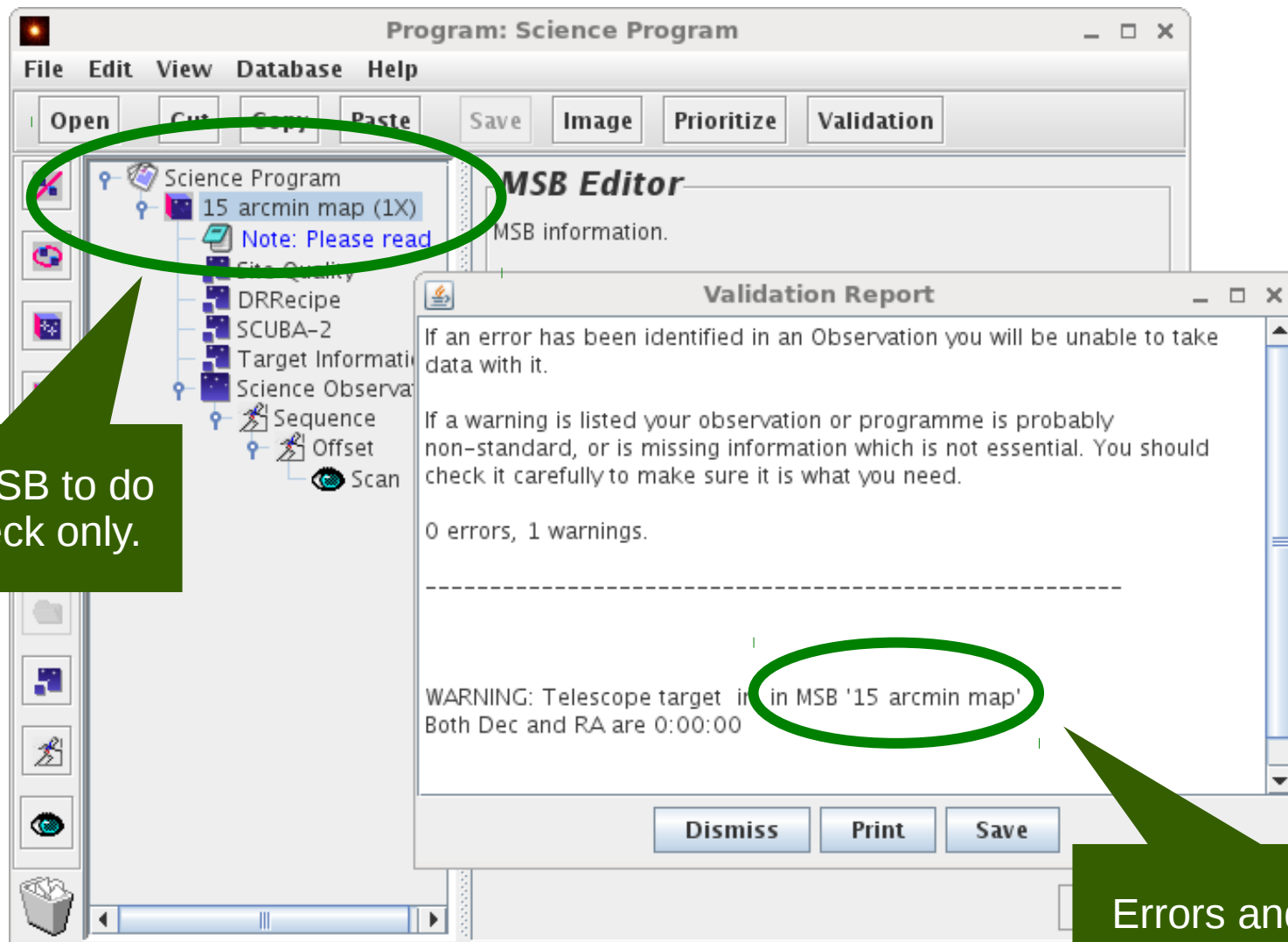
Click [here](#) for more details on the science program.
Click [here](#) to download or plot the regions observed in this program.

Single large MSB in the OMP.
Normally not what you want!

Validation — overview

- Validation of a single MSB:
 - Internal check only.
- Validation of whole program:
 - Internal check of each MSB.
 - XML schema validation of program.

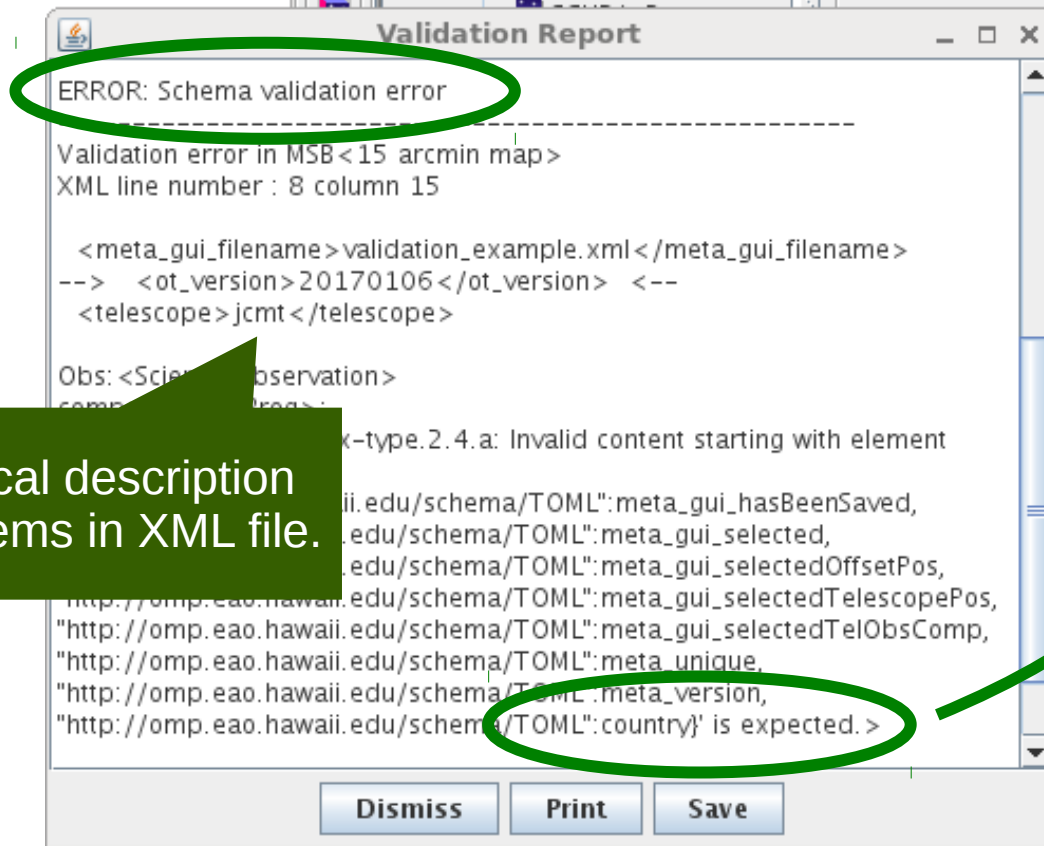
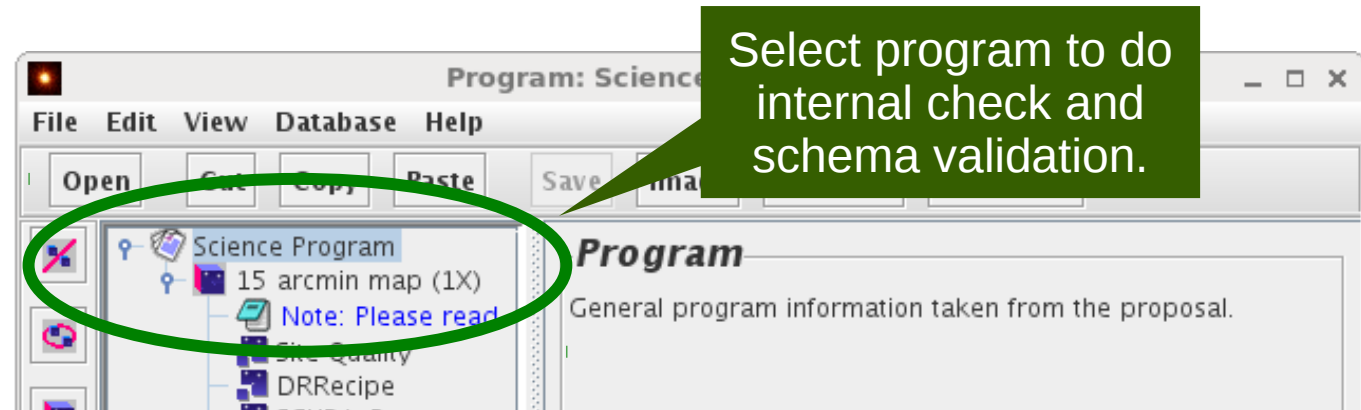
Validation — internal check



Select an MSB to do internal check only.

Errors and warnings generated by the OT.

Validation — XML schema validation



Title

PI

Country

Project ID

w/o optionals) 00:40:50.4

total Time 00:40:50.4

Cause of error: "country" field is empty.

Links

- OT Resources:

- Download:

- <https://www.eaobservatory.org/jcmt/observing/software-installation/#observing-tool>

- Documentation:

- <https://www.eaobservatory.org/JCMT/observing-tool>

Tutorials.

- Basics:

- http://www.eaobservatory.org/JCMT/observing-tool-tutorials/jcmt_ot_basics.html
 - http://www.eaobservatory.org/JCMT/observing-tool-tutorials/ot_basics_tutorial_files.tar.gz

- Tricks:

- http://www.eaobservatory.org/JCMT/observing-tool-tutorials/jcmt_ot_tricks.html
 - http://www.eaobservatory.org/JCMT/observing-tool-tutorials/ot_tricks_tutorial_files.tar.gz

additional slides

Common pitfalls (1/2)

- Some MSBs can be hard to observe:
 - Long time.
 - Strict constraints (e.g. opacity, scheduling).
 - Widely-spaced targets.
- “Observe” counter vs. “Repeat” iterator.
 - MSB “observe” counter: do MSB multiple times.
 - “Repeat” iterator: extends duration of the MSB.

Common pitfalls (2/2)

- Must use Oracle's version of Java.
 - OpenJDK can appear to work at first but problems often occur.
- Sometimes updates only saved on key-press.
 - Information pasted into the OT (e.g. notes) may not be saved.

Target information — tips

- Try to give the target's usual name.
 - Use the name you would want to see in the archive.
- Make use of offset iterators.
 - Define locations relative to a fixed target.

Target information and MSB title

File Edit View Database Help

Open Cut Copy Paste Save Image Prioritize Validation

JCMT Calibration Observations

- AND Folder: SCUBA-2 Setup
- AND Folder: SCUBA-2: Noise & Skydip
- AND Folder: SCUBA-2: Pointing, Focus
- AND Folder: SCUBA-2: Standard Calibration
- Standard: Alp 220 (1X)
- Standard: CRL618 (1X)**
- Target Information: CRL618
- Note: SC parameters
- SCUBA-2
- Site Coordinates
- Observation Parameters

MSB Title

Use this for your own identification of the MSB.

Target Information

Use this editor to enter the target information.

Name **CRL618** Tag **SCIENCE** TargetType **RA/Dec**

Object

SIMBAD Names ESO Resolve Name

System **FK5 (J2000)**

Radial Vel/Tracking Proper Motion

Velocity (km/s or redshift) **radio** **0.0**

Frame **LSRK**

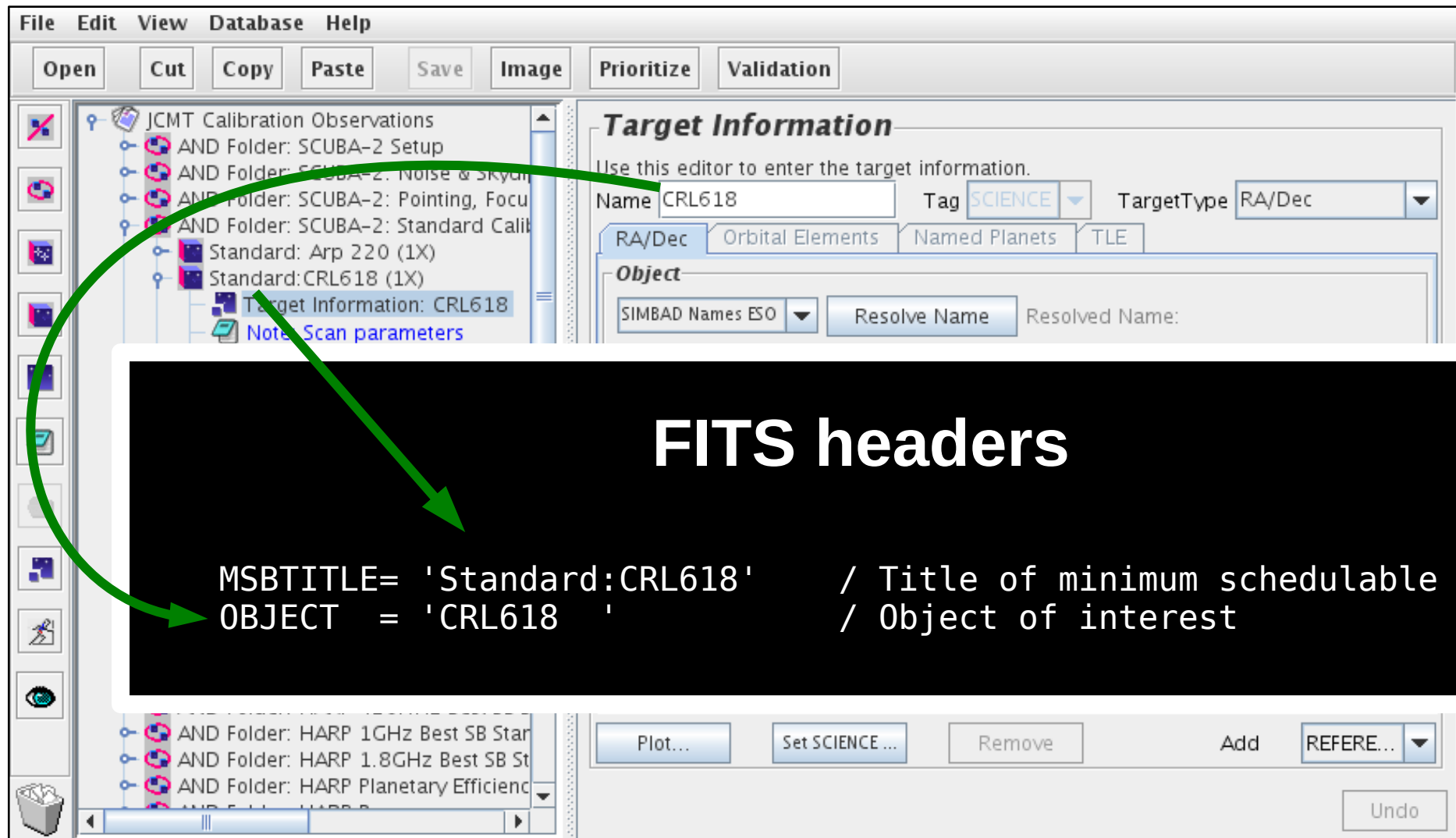
Tag	Name	X Axis	Y Axis	System
SCIENCE	CRL618	04:42:53.672	+36:06:53.17	FK5 (J2000)

Plot... Set SCIENCE... Remove Add REFERE... Undo

Target Name

Give the name you would wish to see used in the archive.

Target information — FITS headers



The screenshot shows the JCMT software interface. On the left is a tree view of observation folders. The right pane is titled 'Target Information' and contains fields for Name, Tag, and TargetType. Below these are tabs for RA/Dec, Orbital Elements, Named Planets, and TLE. The 'Object' section includes a SIMBAD Names ESO dropdown and a Resolve Name button. A green arrow points from the 'Target Information: CRL618' entry in the tree view to a black box containing FITS header information.

Target Information

Use this editor to enter the target information.

Name: CRL618 Tag: SCIENCE TargetType: RA/Dec

RA/Dec Orbital Elements Named Planets TLE

Object

SIMBAD Names ESO Resolve Name Resolved Name:

FITS headers

```
MSBTITLE= 'Standard:CRL618' / Title of minimum schedulable block
OBJECT   = 'CRL618'         / Object of interest
```

Buttons at the bottom: Plot... Set SCIENCE ... Remove Add REFERE... Undo

Target information — CADC

Image Prioritize Validation

Target Information

Use this editor to enter the target information.

Name Tag

RA/Dec Orbital Elements Named Planets

Object

SIMBAD Names Resolve Name

System Ra Dec

Radial Vel/Tracking Proper Motion Chop Settings

Velocity (km/s or redshift) 0.0

Frame

Tag	Name	X Axis
SCIENCE	CRL618	04:42:53.672

Plot... Set SCIENCE... Remove

Canadian Astronomy Data Centre

Telescope Data Products

Advanced Data Products

Services

Documentation

CADC Home > Advanced Search

Advanced Search

Search

Results

Error

ADQL

Help





Download complete query results: [VOTable](#) [CSV](#) [TSV](#)

Download

Showing 47 rows (47 before filtering).

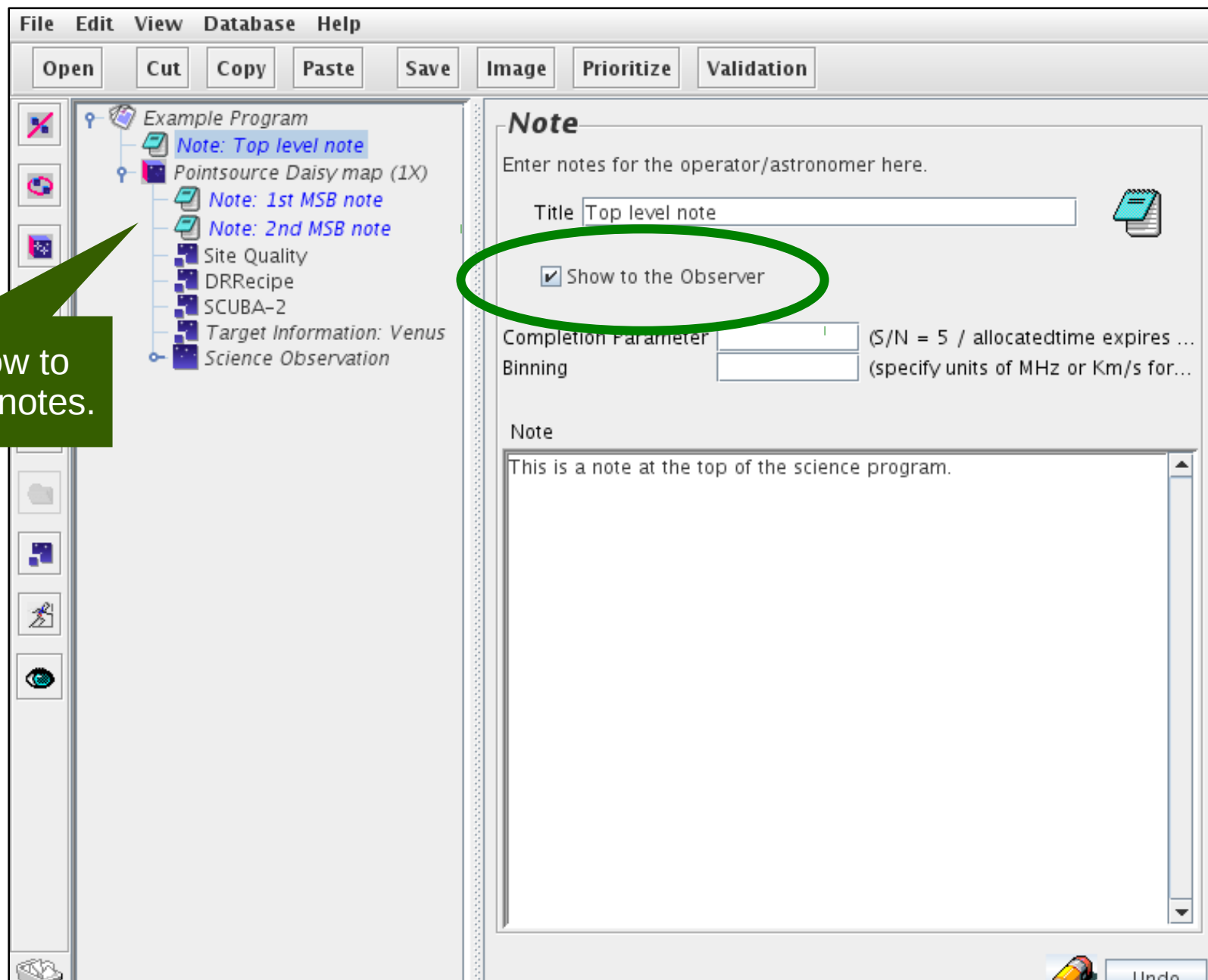
Change Columns

View in sky

Mark <input type="checkbox"/>	Preview	Target Name	RA (J2000.0)	Dec. (J2000.0)	Proposal ID
Filter:	<input type="text"/>	<input type="text"/>	<input type="text"/> H:M:S ▾	<input type="text"/> D:M:S ▾	<input type="text"/>
<input type="checkbox"/> 	Preview	CRL618	04:42:55.98	+36:07:39.2	JCMTCAL
<input type="checkbox"/> 	Preview	CRL618	04:42:57.34	+36:07:31.2	JCMTCAL
<input type="checkbox"/> 	Preview	CRL618	04:42:55.82	+36:07:46.7	JCMTCAL
<input type="checkbox"/> 	Preview	CRL618	04:42:56.43	+36:07:37.7	JCMTCAL

This is how the observation will appear in the search interface at CADC.

Inheritance — notes



Multiple "Show to the Observer" notes.

Inheritance — notes in QT

The screenshot displays the OMP Query Tool interface. On the left, a tree view under 'Example Program' shows a hierarchy: 'Pointsource Daisy map (1X)' containing 'Note: Top level note', 'Note: 1st MSB note', and 'Note: 2nd MSB note', followed by 'Site Quality', 'DRRecipe', 'SCUBA-2', 'Target Information: Venus', and 'Science Observation'. The main window has tabs for 'Query', 'Pointsource Daisy map (1X)', and 'Calibrations'. The 'Query' tab is active, showing 'Retrieved MSBs' with a single entry: 'Science Observation(1,860.0 seconds)'. On the right, the 'Observer Notes' section contains three lines of text: 'This is a note at the top of the science program.', 'This is the 1st note in the MSB.', and 'This is the 2nd note in the MSB.'. Green arrows point from the three notes in the left tree to the three lines of text in the 'Observer Notes' section. A green callout box with white text states: 'The OMP combines all of the notes when they are shown in the Query Tool.' At the bottom, a table with columns like 'ctid', 'priority', 'pro...', 'pri...', 'sch...', etc., is partially visible.

Inheritance — warnings

- Parent options **after** the MSB are included too.
- Some components need to be able to find other components:
 - DR recipe must be at same or lower level than instrument.
 - Heterodyne setup must be at same or lower level than target information when using target's radial velocity.