

pySlitMask
File Help

Target Name:

Mask Name:

Mode:

 Centroiding: OFF

Coordinates of Mask Centre:

Centre RA:	Centre DEC:	Equinox:	Positional Angle:
<input type="text" value="167.522919"/>	<input type="text" value="-60.971118"/>	<input type="text" value="2000"/>	<input type="text" value="0.0"/>

RSS Setup:

Filter:	Grating:	Camera Ang.:	Grating Ang.:
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Instructions Info Catalogue Slits Refstars Optimize Finalize

pySlitMask:

This is a quick start guide to design a MOS mask for the RSS on SALT. This tool was designed to be used with object catalogues. A full manual mode is not supported yet. It is therefore strongly recommended that a catalogue of target objects be created before using this tool. The tool makes use of a priority based optimization, this should be kept in mind when creating the input catalogue.

Preparation:

1. Check the allowed position angle for the field:
http://www.salt.ac.za/fileadmin/files/observing/documents/SALT_PA_Visibility.pdf
2. Prepare an image of the field with accurate astrometry.
3. Prepare an input catalogue of target objects
The input catalogue should be an ascii file with the following formatting:

id RA DEC epoch magnitude band priority [width]* [length]* [tilt]*

* these are optional and can be updated in the tool. We currently suggest a minimum width of 1.5" and a minimum length of 8".

The priority should have the following values:

- 1 Object that is pre-selected to be in the mask
- 0-1 Objects with increasing priority for the mask
- 1 Alignment star

Step 1: Fill in Mask Details

. Fill in the Target and Mask name on the main window as well as the proposal information in the Info tab.

Step 2: Load Image and Catalogue

. Load the image of the field. *File -> Load Image*

. Load the input catalogue of target objects. *File -> Load Catalogue*

pySlitMask

File

Help

Target Name:

WR042

Mask Name:

WR042_Mask01

Mode:

Catalogue

Centroiding: OFF

Coordinates of Mask Centre:

Centre RA:

167.522919

Centre DEC:

-60.971118

Equinox:

2000

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0.0

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Mode:

☒ Catalogue

☐ Manual

☒ Centroiding On

Mask Info:

Proposal Code:

2018-2-MLT-005

PI:

Nordsieck

Creator:

Nordsieck

RSS Setup:

Filter:

PC03850

☒ Polarimetry

Grating:

NONE

☒ ImPol

Camera Angle:

Grating Angle:

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Input object catalogue. Only needed if Mode is set to Catalogue

	Object Name	catidx	RA	DEC	Width	Length1	Length2	Tilt	Mag	Priority	in FOV	In Mask
1	G5337255429559053824	0	167.51694	-60.97915	4.0	2.0	2.0	90.00	7.92	0.0	1	0
2	G5337256421660314752	1	167.57095	-60.92153	4.0	2.0	2.0	90.00	8.29	0.0	0	0
3	G5337257113186282752	2	167.51353	-60.93067	4.0	2.0	2.0	90.00	8.71	0.0	0	0
4	G5337254295687670016	3	167.62776	-61.03000	4.0	2.0	2.0	90.00	10.11	0.0	0	0
5	G5337249279165188224	4	167.40849	-61.03115	2.0	7.0	7.0	90.00	10.86	1.0	0	0
6	G5337255184705840640	5	167.39151	-60.99807	5.0	2.5	2.5	90.00	11.13	-1.0	0	0
7	G5337256181142147072	6	167.65549	-60.94684	2.0	7.0	7.0	90.00	11.20	1.0	0	0
8	G5337254742364318976	7	167.60281	-60.97505	5.0	2.5	2.5	90.00	11.23	-1.0	0	0
9	G5337256425991539840	8	167.58900	-60.93457	2.0	7.0	7.0	90.00	11.42	1.0	0	0
10	G5337256254192823680	9	167.61336	-60.96238	5.0	2.5	2.5	90.00	11.48	-1.0	1	1
11	G5337257315013512448	10	167.48470	-60.92388	2.0	7.0	7.0	90.00	11.81	1.0	0	0
12	G5337254708004559616	11	167.57712	-60.98585	5.0	2.5	2.5	90.00	12.10	-1.0	1	1
13	G5337255665746071936	12	167.46745	-60.96575	2.0	7.0	7.0	90.00	12.11	1.0	1	1

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Coordinates of Mask Centre:

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Equinox: 2000

Positional Angle: 0.0

RSS Setup:

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Save as file

Import from Catalogue:

Add slits to all catalogue objects

Manually edit slits:

Add slit

Import from image

Add slit

Delete slit

Clear

	Object Name	catidx	RA	DEC	Width	Length1	Length2	Tilt	Mag	Priority	in FOV	in Mask	% XOverlap	% YOverlap	Coll catidx
1	G5337255665746071936	12	167.46745	-60.96575	2.0	7.0	7.0	90.00	12.11	1.0	1	1	0.0	0.0	
2	G5337254738033136384	14	167.58850	-60.97494	2.0	7.0	7.0	90.00	12.17	1.0	1	1	0.0	0.0	
3	G5337254566234445568	16	167.56944	-61.00290	2.0	7.0	7.0	90.00	12.59	1.0	1	1	0.0	0.0	
4	G5337255253426655872	17	167.43469	-60.98264	2.0	7.0	7.0	90.00	12.61	1.0	1	1	0.0	0.0	
5	G5337255189040810752	18	167.40497	-61.00429	2.0	7.0	7.0	90.00	12.78	1.0	1	1	0.0	0.0	
6	G5337255803208690688	21	167.47198	-60.94426	2.0	7.0	7.0	90.00	12.83	1.0	1	1	0.0	0.0	
7	G5337256215502881152	25	167.58557	-60.96308	2.0	7.0	7.0	90.00	13.08	1.0	1	1	0.0	0.0	
8	G5337302261888258176	27	167.39429	-60.97411	2.0	7.0	7.0	90.00	13.11	1.0	1	1	0.0	0.0	
9	G5337254772393860992	29	167.55614	-60.97315	2.0	7.0	7.0	90.00	13.15	1.0	1	1	0.0	0.0	
10	G5337255601357762816	32	167.50362	-60.95728	2.0	7.0	7.0	90.00	13.27	1.0	1	1	0.0	0.0	
11	G5337254742364307712	35	167.59122	-60.98161	2.0	7.0	7.0	90.00	13.40	1.0	1	1	0.0	0.0	
12	G5337255498278540544	37	167.48087	-60.95686	2.0	7.0	7.0	90.00	13.45	1.0	1	1	0.0	0.0	

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Import from Catalogue:

Add refstars from catalogue

Manually edit refstars:

Add refstar

Delete refstar

Import from image

Add refstar

Delete refstar

Clear

	Object Name	catidx	RA	DEC	Width	Length1	Length2	Tilt	Mag	Priority	in FOV	in Mask
1	G5337256254192823680	9	167.61336	-60.96238	5.0	2.5	2.5	90.00	11.48	-1.0	1	1
2	G5337254708004559616	11	167.57712	-60.98585	5.0	2.5	2.5	90.00	12.10	-1.0	1	1
3	G5337255081631488768	24	167.48987	-60.99292	5.0	2.5	2.5	90.00	13.04	-1.0	1	1
4	G5337255459588635392	30	167.47473	-60.96872	5.0	2.5	2.5	90.00	13.16	-1.0	1	1
5	G5337254811083789184	118	167.57832	-60.97318	5.0	2.5	2.5	90.00	14.86	-1.0	1	1

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Optimize

Spacing (arcsec):

1.0

Max %cross shift:

25.0

Max %spec Loss:

5.0

Adopt it

	Count	Step
dPA	1	10d
dX	1	5s
dY	1	10s

P1 Targets

Tot Targets

References

P1 Collision Tot

P1 Shift Tot

	Start	Best

- PA	+PA
-x	+x
-y	+y

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Slitmask:

Validate

Write .rsmt file

file to load into PIPT

XML Source

Write XML Source

Finder Chart:

Create Finder Chart from current image

Create finder chart from DSS image

recommended for deep science images

