



EMIR Observing Tools: Optimised Slit Positioner

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Outline

- Presentation of the EMIR-OSP
- When to use ...
- How to use ...
 - With Gaia coordinates
 - With EMIR pre-imaging

Selected image: 1_dss20224 - Selected mask: 1_6 Mask (0.12727272727272726)

Field of View:

- 1_dss20224
 - 1_1_Mask (0.0)
 - 1_2_Mask (0.0)
 - 1_3_Mask (0.0)
 - 1_4_Mask (0.0)
 - 1_5_Mask (0.0)
 - 1_6_Mask (0.12727272727272726)
 - 1_7_Mask (0.0)
 - 1_8_Mask (0.0)
 - 1_9_Mask (0.0)
 - 1_10_Mask (0.0)
 - 1_11_Mask (0.0)
 - 1_12_Mask (0.0)

Slit 1 Go & Zoom x 10

Position (arcsec) Width (arcsec)

120 30

Selected Slit Properties

Position (arcsec) 0.0
Width (arcsec) 0.6
lambdaMin
lambda
lambdaMax
length
Object Pos

Selected Mask Properties

Alpha Center
Delta Center
Omega 35

21:21:16.805, +51:51:40.08 J2000 Fov Size: 714.20 x 498.43 arcsec.

Search Validate Write

num	isRef	from	RA	DEC	RA (recalculated)	DEC (recalculated)	Affected Slit
0	<input type="checkbox"/>	centroid (recalc)	320:11:14.115	+51:53:29.9	320:11:13.998	+51:53:29.94	19
1	<input type="checkbox"/>	centroid (recalc)	320:05:57.965	+51:49:31.62	320:05:58.234	+51:49:31.18	none
2	<input type="checkbox"/>	centroid (recalc)	320:12:26.036	+51:50:16.75	320:12:26.512	+51:50:16.71	5
3	<input type="checkbox"/>	centroid (recalc)	320:08:42.041	+51:53:27.6	320:08:42.436	+51:53:27.62	none
4	<input type="checkbox"/>	centroid (recalc)	320:14:34.939	+51:52:08.21	320:14:34.969	+51:52:08.27	none
5	<input checked="" type="checkbox"/>	centroid (recalc)	320:13:13.094	+51:54:11.15	320:13:13.781	+51:54:11.45	none
6	<input checked="" type="checkbox"/>	centroid (recalc)	320:11:22.271	+51:54:09.01	320:11:22.188	+51:54:08.89	21
7	<input type="checkbox"/>	centroid (recalc)	320:08:42.038	+51:53:27.61	320:08:42.436	+51:53:27.62	27
8	<input checked="" type="checkbox"/>	centroid (recalc)	320:07:19.472	+51:53:02.28	320:07:19.479	+51:53:02.31	30
9	<input type="checkbox"/>	centroid (recalc)	320:04:04.544	+51:54:21.62	320:04:04.719	+51:54:22.13	none
10	<input type="checkbox"/>	centroid (recalc)	320:14:34.94	+51:52:08.21	320:14:34.969	+51:52:08.27	none
11	<input type="checkbox"/>	centroid (recalc)	320:13:13.094	+51:54:11.15	320:13:13.781	+51:54:11.45	none
12	<input type="checkbox"/>	centroid (recalc)	320:14:34.939	+51:52:08.21	320:14:34.969	+51:52:08.27	none
13	<input type="checkbox"/>	centroid (recalc)	320:14:34.939	+51:52:08.21	320:14:34.969	+51:52:08.27	none

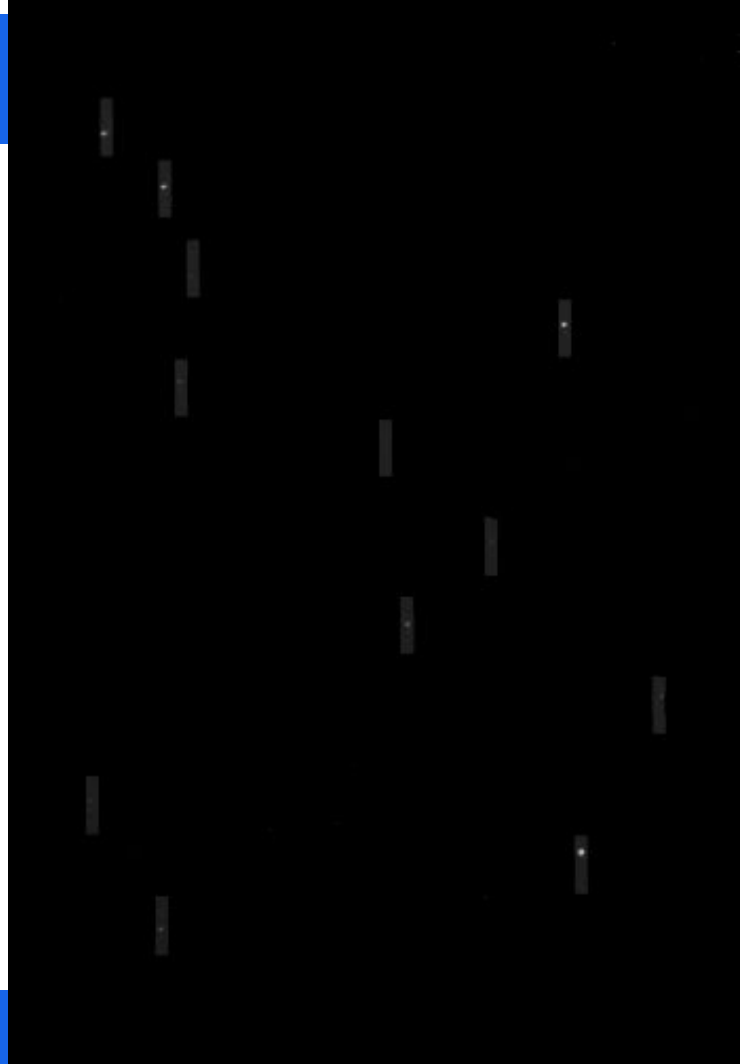
INFO: Project opened

- Developed by software group at Institut de Recherche en Astrophysique et Planétologie
- Simulates MOS observations with EMIR
- Essential for EMIR-MOS mode Phase II



EMIR Optimised Slit Positioner

- Java application that creates masks for EMIR
- Takes in an image and input catalogue and creates a configuration of slits that are used as input for the GTC



Working Example: Gaia astrometry



Go now to the OSP ...

Working Example: Gaia astrometry

ID

```
File Edit Selection Find View Goto Tools Project Preferences F
OSP_testcat.txt x
1 f401 03:55:03.5778 +43:39:44.3393
2 f402 03:55:05.8118 +43:39:06.2576
3 f403 03:55:08.3735 +43:39:39.9636
4 f404 03:55:04.1982 +43:37:18.0055
5 f405 03:55:02.4807 +43:35:48.0999
6 f406 03:55:08.6791 +43:36:53.0466
7 f407 03:55:18.3025 +43:36:58.8878
8 f408 03:55:19.1221 +43:36:35.0399
9 f409 03:55:00.2729 +43:43:53.3603
```

RA DEC

Notes:
String format only!

Other information allowed in file but not used by OSP

Working Example: User catalogue

- Load image and catalogue using the specified format
- Select the position of mask
- Assign targets to slits (manually or using search facility)
- Validate then Save

Notes:

String format only!

Remember the
Reference targets!

Always do both before
exiting! Each adds
information to .XML
file

Working Example: EMIR pre-imaging



Go now to the OSP ...



Working Example: Pre-imaging

- Load image and catalogue using the specified format
- Manually add targets
- Select the position of mask
- Assign targets to slits (manually or using search facility)
- Validate then Save

Notes:

Either use your favourite tool to create the catalogue then load it, or create on fly

Remember the Reference targets!

Always do both before exiting! Each adds information to .XML file

Conclusions

- Presentation of EMIR OSP v2.4.4
- Walkthrough of “How to Use”
 - Gaia astrometry
 - EMIR pre-imaging
- Tutorial and User guide available on web
- Consistent astrometry is vital!

