Status of the SALT Proposal Tools

Christian Hettlage SALT Science Day, Mafikeng, 11 November 2013

PIPT

- HRS functionality is included for both phase 1 and 2
- Director's Discretionary Time (DDT) proposals are supported
- Support of DDT (and commissioning) proposals needs tweaking (such as allowing time allocations)

PIPT: Calibrations

- The mapping tool now properly supports Fabry-Perot calibrations, choosing the correct wavelengths and lamps
- Similar changes have been made for arcs.
- Calibration support must be more versatile and must include calibration blocks.

PIPT: Observing Windows

- The calculation of observing windows is working well, but...
- They were a bit too restrictive (which is improved now)
- *However, there needs to be feedback why an observation cannot be done.*
- Preventing the Too-Tight-Track symptom remains an issue.

Preventing TTT

1 Mar 4 Mar 4 1 Mar 40

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Get from Catalog Target: Date: Nov 11 \$ 2013 2456608 Enter JD * The night begins on 11 November. (?) Coordinates: 2h 00m 00s +0° 00' 00" Sun set: 17:11 UT Sun rise: 03:29 UT Evening twilight: 18:44 UT Morning twilight: 01:57 UT Moon set: 00:06 UT Moon rise: -Minimum target distance from Moon: 47° 69% Source Availability: Start: 19:08 UT Stop: 23:17 UT Δt: 14925s Track Time Remaining: Start: 20 : 42 : 05 UT Duration: 3,226s The actually available track time may be about 2 minutes shorter than the value shown here.

The state is the support of manufacture



SALT Visibility Calculator (4.0.0)

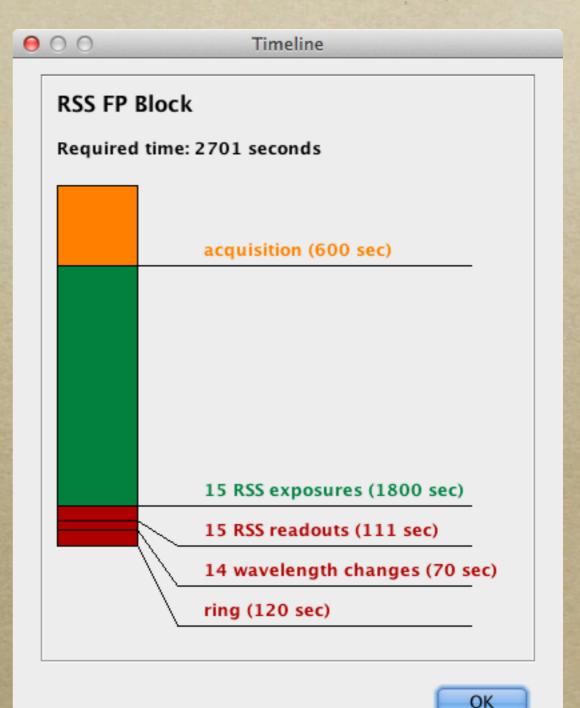
PIPT: Observation Timelines

• You can view timelines in the PIPT

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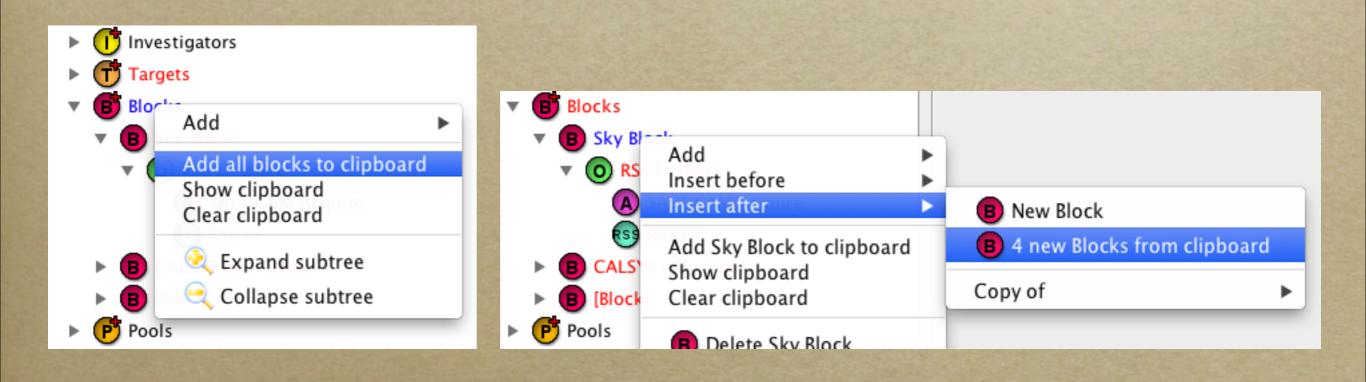


button for viewing the timeline



PIPT: Clipboard

Content of previous proposals can easily be moved with the clipboard



PIPT: Many Blocks

- Having to add more than a couple of blocks to the PIPT by hand is tedious
- However, you can create a template file, which you can use to automatically generate all your blocks
- A long-standing submission issue with large proposals should be fixed now

PIPT: Non-sidereal targets

- Look up ephemerides from the NASA JPL Horizons web service
- A Python script for generating finding charts for a non-sidereal target will be provided
- The PI will only have to select the folder with the relevant finding charts; the observing windows etc. will be generated from these

Who might use this

NEW HORIZONS

Shedding Light on Frontier Worlds

NASA

Requests for observing time related to the New Horizons mission are to be expected next year

PIPT: Challenges

- Errors must be more informative
- Changes between submissions should be marked in the Web Manager
- Should simple changes always require resubmission of the whole proposal?
- Proposals spanning more than one semester should be allowed
- Proposal storage could be overhauled

Web Manager

• PIs can request old data from within the Web Manager

P) Summary of executed observations

Please note that this summary may be incomplete.

BI			Observat	ion details	Download Requests				
Block	Observation time	Priority	Moon	Target(s)	Observation Date	Accepted?	Rejection reason	Edit	Data
									Select/Deselect all
SCAMtoRSSfilters_Field1 (view details)	901 sec	1	Any	SDSS Field 1	2013-05-05	Yes		REJECT	🕞 Request data
						1 1 1	1 1 1		Select/Deselect all
					1	1	1 1 1	1 1 1	Calibrations
	Train the					1. 3. 1. 1			Request spectrophotometric standards
									SUBMIT

Web Manager

- New abstracts page • Login fields in the menu bar • Changes (mostly) for SALT Astronomers: compact block view improved tab for keeping track of
 - MOS masks

Web Manager: TAC Pages

- The TAC pages aren't particularly userfriendly, at least when it comes to entering time allocations
- Input from TACs in this regard would be appreciated

MOS Slit Mask Tool

- A matplotlib window indicating chip gaps, the RSS FoV and spectral coverage using pySpectrograph will be added
- Guide star positions will be available to help PIs tweak mask coordinates to ensure proper guidance during observations

Visibility Tool

• The user now can request target coordinates from SIMBAD/NED/VizieR

000	SALT Visibility Ca	alculator (4.0.0)	
Target: NGC 2134 Get from Catalog Date: Nov ‡ 7 2012 2456604 Enter JD Date: Nov ‡ 7 2012 2456604 Enter JD The night begins on 7 November. The night begins on 7 November. Image: Sh 51m 56s - 71° 05′ 48″ Image: Sh 51m 56s - 71° 05′ 48″ Image: Sun set: 17:07 UT Sun rise: 03:32 UT Sun set: 17:07 UT Sun rise: 03:32 UT Image: Sun set: 21:13 UT Moon rise: 08:09 UT Moon set: 21:13 UT Moon rise: 08:09 UT Image: Sun set: 17:07 UT Sun rise: 08:09 UT	11000 10000 9000 8000	Tr	ack Len
25%	rack Length (seconds)		

Visibility Tool

• You can compute visibility throughout a semester for a whole list of targets

00	Parameters
First night starts on	2013-11-01
Last night ends on	2014-05-01
Time zone	UT ‡
Track limitation	between sunset and sunrise \$
Output separator	comma ‡
🗹 Create one file pe	er target
🗹 Ignore days with	no visibility window
	ОК

Visibility Tool

• Should it be possible to display more than one target at once?

Simulator Tools

- A simulator is available for HRS, based on Luke Tyas' ETC
- The throughput model has been updated in the RSS Simulator
- Background estimate needs to be improved.
 Handling of SNRs could do with improvements
 Need for speed?

Website

 The current telescope status can be viewed on <u>http://salt4scientist.salt.ac.za/</u> <u>telescope-status/</u>

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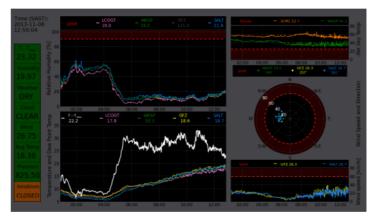
SALT for Scientists Astronomy Operations HQ	9 Search
Home Phase I Phase II PIPT Data and Results Software tools Web Manager I	Instrumentation Miscellaneous

Telescope Status

SALT Astronomer

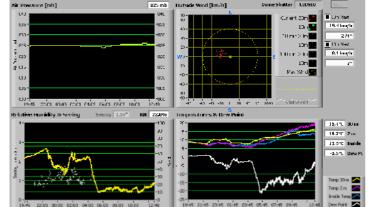
Encarni Romero-Colmenero is the SALT Astronomer at the telescope.

Weather in Sutherland



Update every 10 minutes.

00	Telescope Status SALT for Scientists			
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Update every 10 minutes.

Current RSS Filters

The following RSS filters are currently installed.

SLOT	FILTER
1	(no filter inserted)
2	pi04975
3	pi05145
4	pi05235
5	pi05520
6	pi06530
7	pi06645
8	pi06765
9	pi06885
10	pi07005
11	pi07130
12	pi07260
13	pi07390
14	pi07535
15	pi07685
16	pc04600
17	pc03850
18	pc03400
19	pc00000

Long term challenges

- The world has changed in the last seven to eight years:
 - HTML 5 / Javascript has made inroad (e.g. Google Docs, Gmail)
 - Tablets and smart phones are (almost) ubiquitous
 - The bandwidth in South Africa has improved considerably

Long term challenges

 To what extent should proposal tools (such as the Visibility Tool or Simulators) be available online and/or for tablets?

• Java is not the language of choice for astronomers

Your Turn!

Your suggestions are very welcome!