Simulator tools demo

Solohery Randriamampandry

SALT Workshop: 14 -15 November 2022

https://astronomers.salt.ac.za/software/

HOME PROPOSALS DATA **SOFTWARE** INSTRUMENTS STATUS JOBS CONTACT US PUBLIC

SOFTWARE

- Visibility Calculator
- PIPT
- HRS Simulator
- RSS Simulator
- SALTICAM Simulator
- PySlitMask
- RSMT
- Data Reduction
- Finder Chart Tool
- BVIT

Simulators and other Tools

These mostly Java programs are made available by the instrument PIs and the SALT team to aid astronomers in the planning of their proposals.

The versions for other operating systems should work on any operating system, as long as Java is installed. You can launch the application by running

```
java -jar MyApplication.jar
```

where `MyApplication.jar` is the downloaded application file.

Java 8 or higher is required. Most of the macOS versions include Java already. (If you have Java on your machine already and want to avoid the additional file size caused by this, use the version for other operating systems instead.)

macOS Users: If you get an error “Unable to load Java Runtime Environment”, please use the file for other operating systems. Assuming the file is called `application.jar` and you are in the directory where it is stored, you can launch it with `java -jar application.jar`.

macOS Users: Please see https://astronomers.salt.ac.za/proposals/faq/#phase1_14 if you get an error about a corrupt file.

Simulators and other Tools:

~~1. Visibility Calculator~~

~~2. PIPT~~

3. Simulators

   a. RSS

   b. HRS

   c. SALTICAM

~~4. RSS MOS:~~

   ~~i. PySlitMask~~

   ~~ii. RSMT~~

~~5. Finder Chart Tool~~

https://astronomers.salt.ac.za/software/

Simulators:

HRS Simulator

Calculate signal-to-noise (S/N) ratios and other info.

Documentation | Download v1.7

macOS Users: Please see the macOS installation page, and please try the jar file if you cannot launch the application (see top of this page). Also note that double-clicking .hsim files will not automatically open the Simulator any longer.

RSS Simulator

Calculate signal-to-noise (S/N) ratios and other info.

Documentation | Download v4.7

macOS Users: Please see the macOS installation page, and please try the jar file if you cannot launch the application (see top of this page). Also note that double-clicking .rsim files will not automatically open the Simulator any longer.

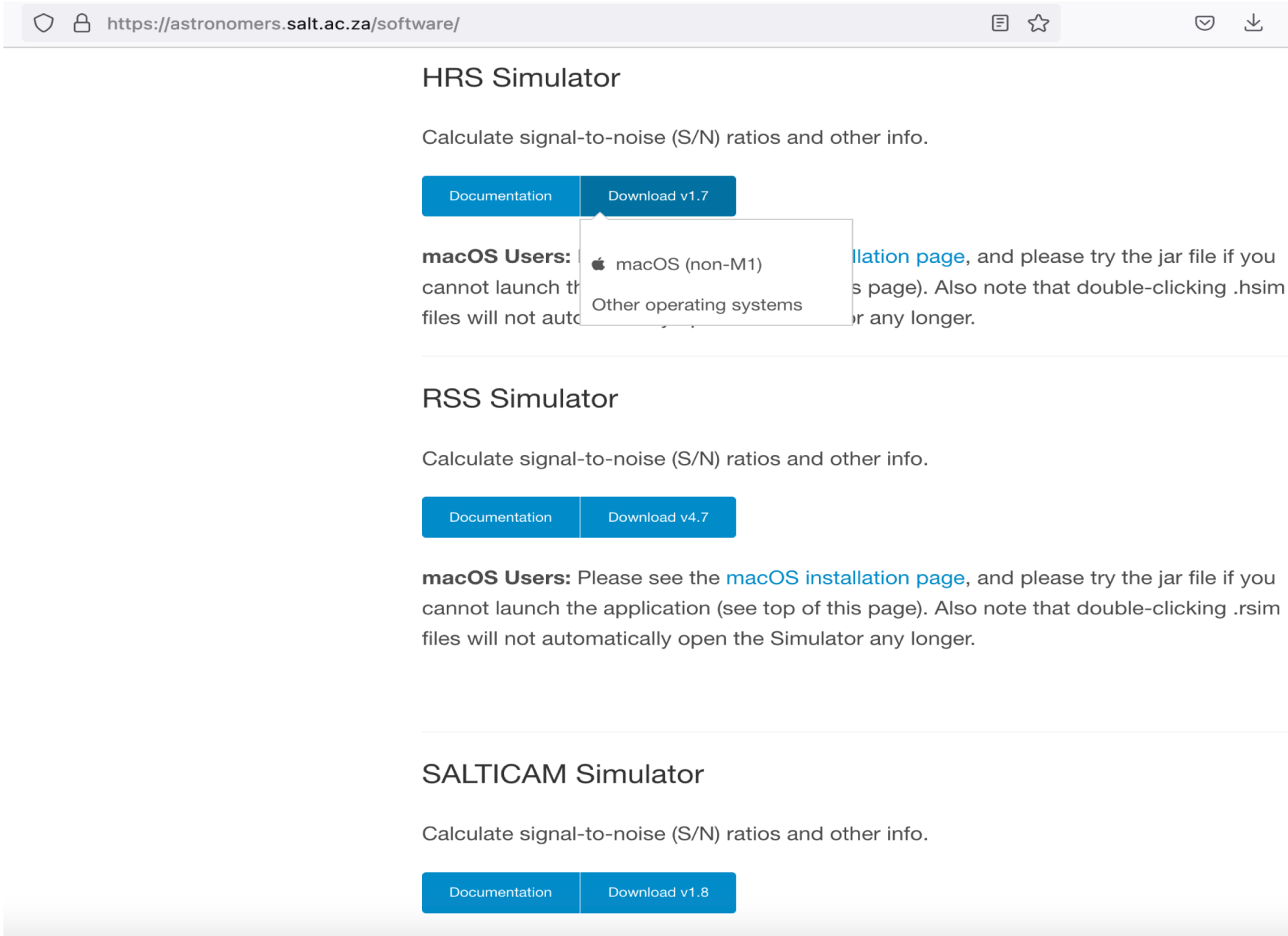
SALTICAM Simulator

Calculate signal-to-noise (S/N) ratios and other info.

Documentation | Download v1.8

macOS Users: Please see the macOS installation page, and please try the jar file if you cannot launch the application (see top of this page). Also note that double-clicking .ssim files will not automatically open the Simulator any longer.

Download the application:



- ❑ Have got science project (scientific justification)
  - Have decided to use SALT
  - Have chosen which SALT instruments suits the project
  - Have a requirement of data quality for the project
- ❑ Use SALT simulators to check if the proposal is feasible (total time to be requested from TAC?)
  - Screenshots for all tab in the simulators
  - Demo: a practical example (S/N -> time or vice versa)

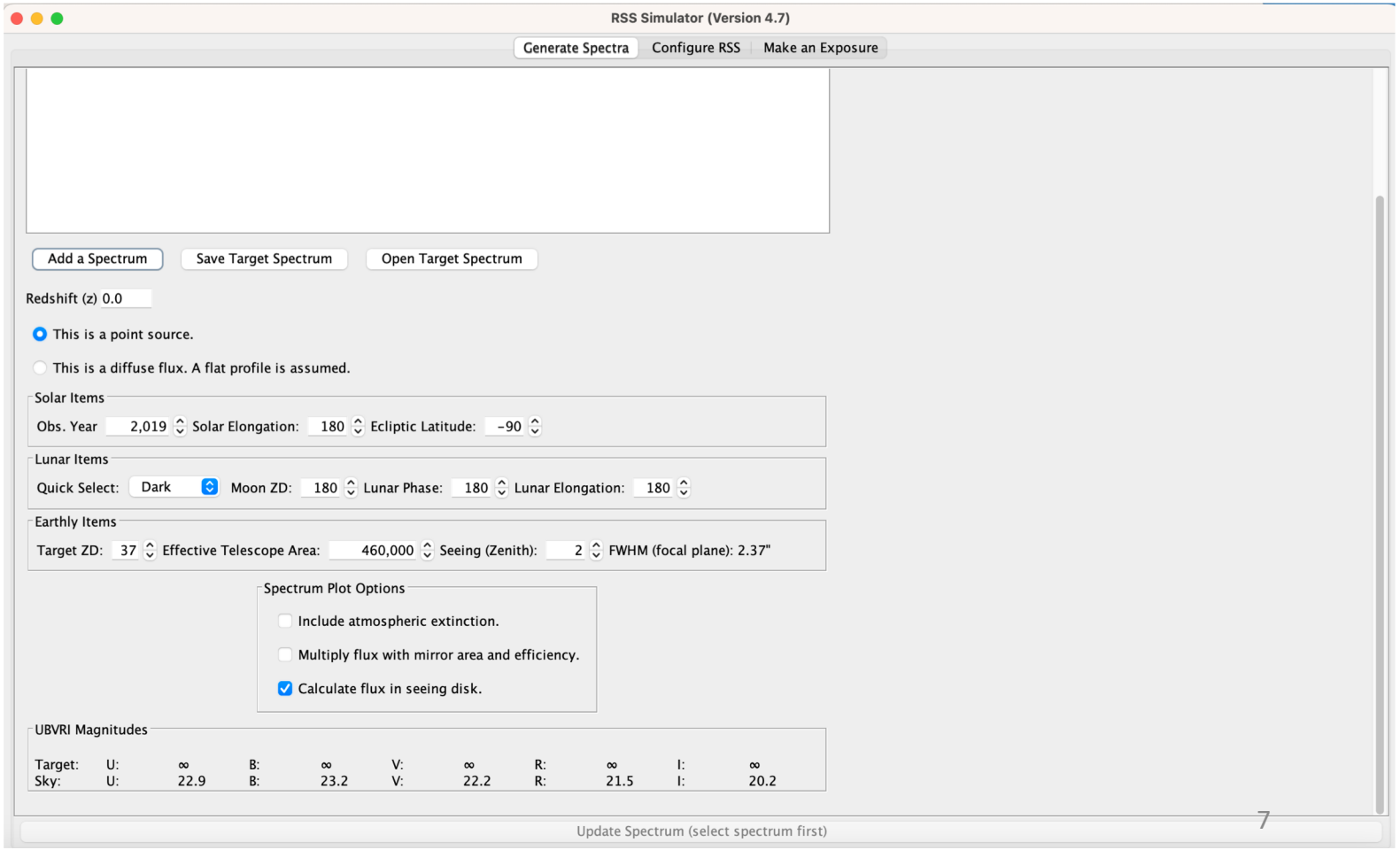
Launch the application:

SALT_sim_tools — -bash ▸ java — 161×15

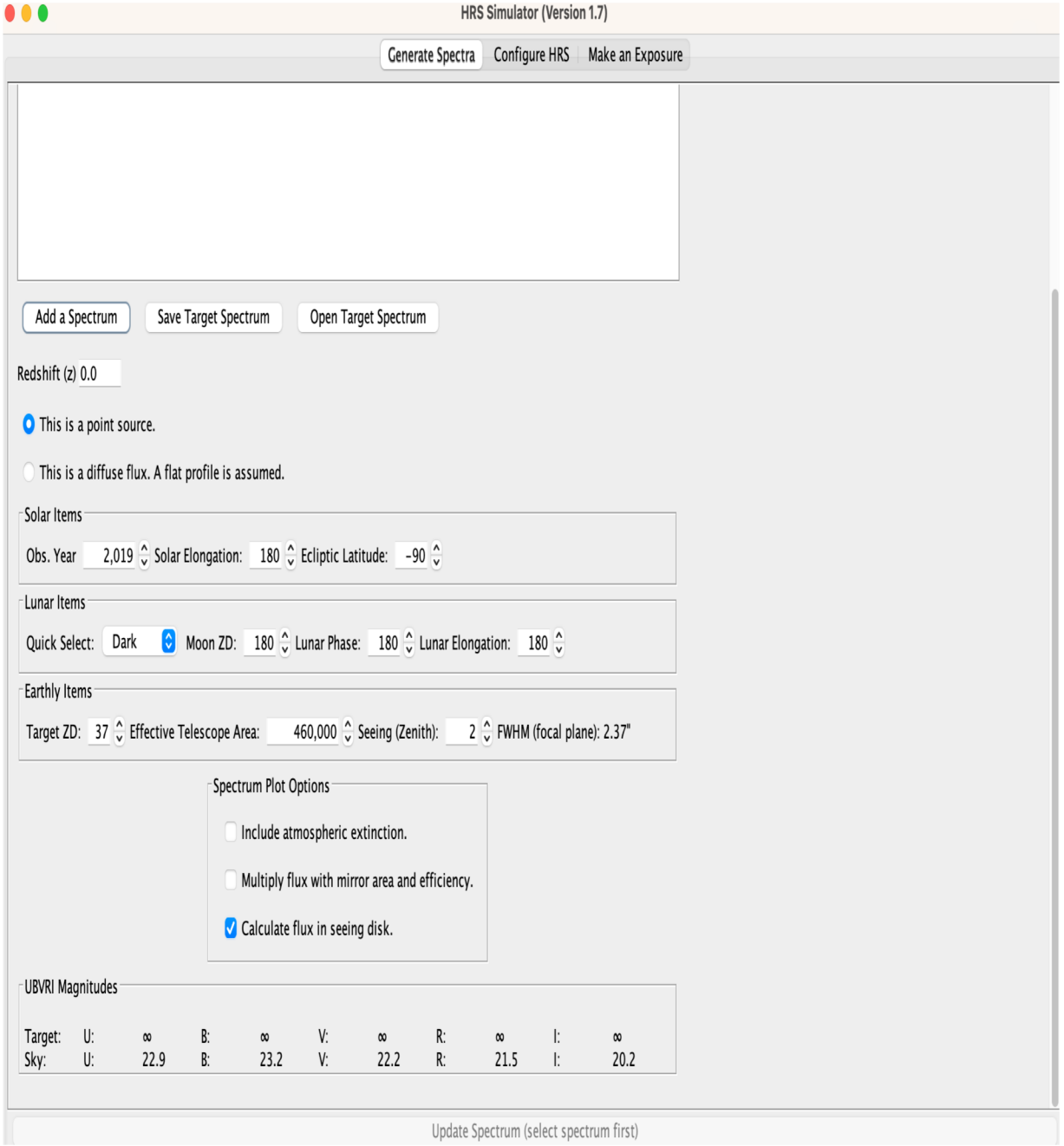
~/Desktop/SALT_sim_tools — -bash ▸ java | ~/Desktop/SALT_sim_tools — -bash

```
[solohery@soloheryNewMac:~/Desktop/SALT_sim_tools$ pwd
/Users/solohery/Desktop/SALT_sim_tools
[solohery@soloheryNewMac:~/Desktop/SALT_sim_tools$ ls -ltr *.jar
-rw-r--r--@ 1 solohery  staff    61M Jul  7 14:44 VisibilityTool-4.1.jar
-rw-r--r--@ 1 solohery  staff    61M Nov  7 20:13 PIPT-5.8.jar
-rw-r--r--@ 1 solohery  staff    61M Nov  7 20:18 HrsSimulator-1.7.jar
-rw-r--r--@ 1 solohery  staff    61M Nov  7 20:31 RssSimulator-4.7.jar
-rw-r--r--@ 1 solohery  staff    61M Nov  7 20:38 SalticamSimulator-1.9.jar
-rw-r--r--@ 1 solohery  staff    44M Nov  7 20:44 RSMT-1.99.jar
[solohery@soloheryNewMac:~/Desktop/SALT_sim_tools$ java -jar RssSimulator-4.7.jar &
[1] 11754
solohery@soloheryNewMac:~/Desktop/SALT_sim_tools$
```

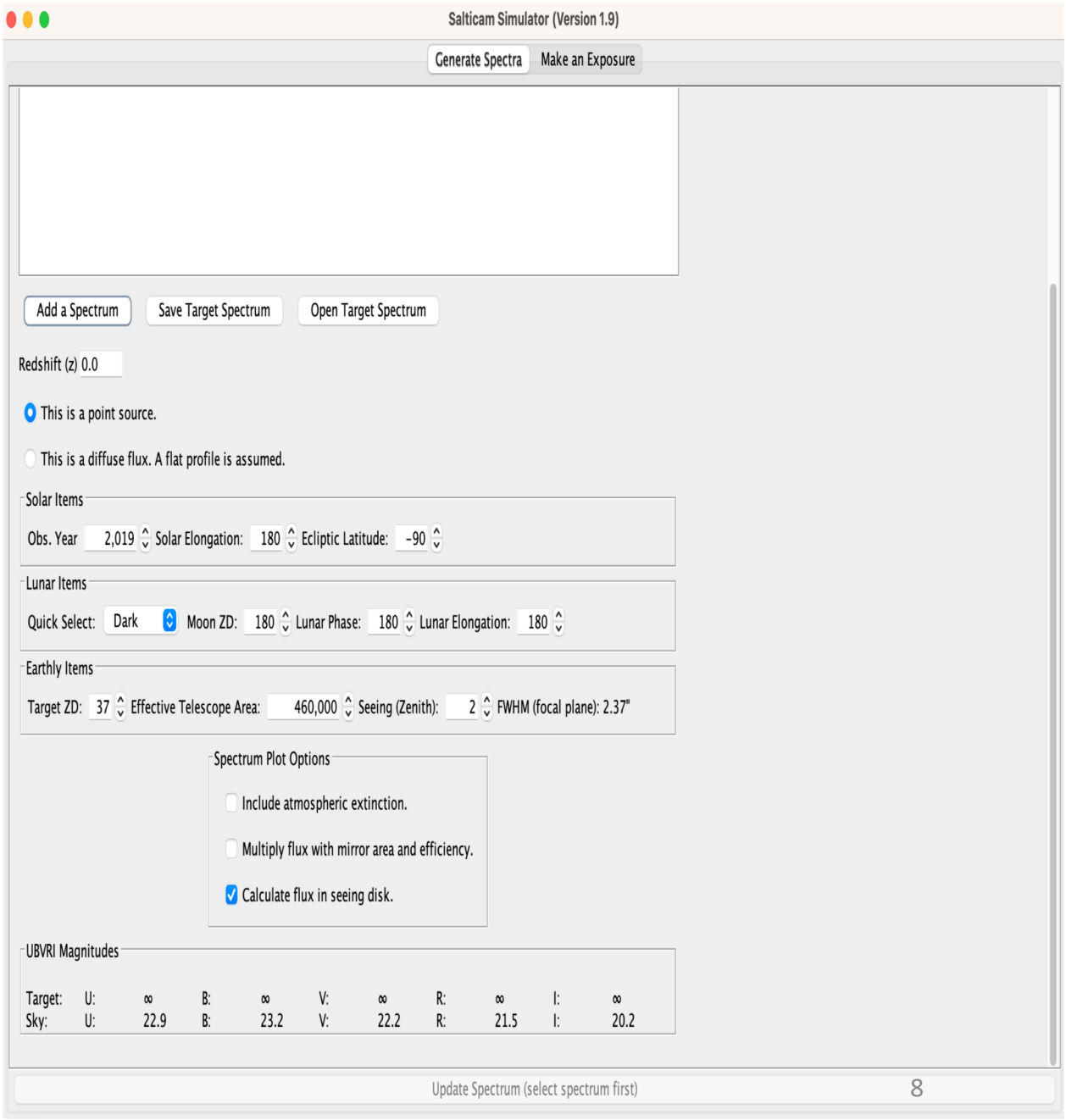
RSS Simulator: Generate Spectra



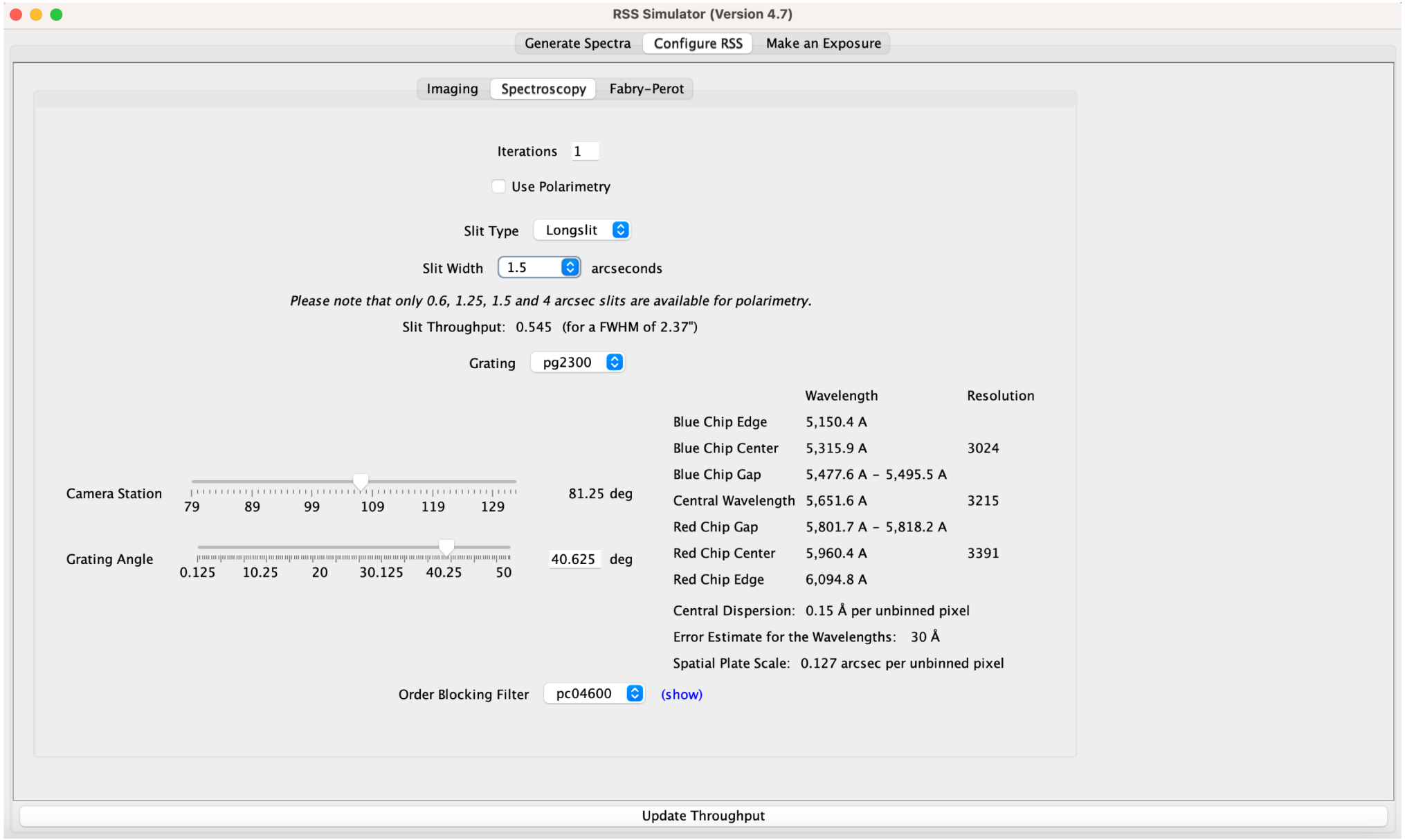
HRS: Generate Spectra



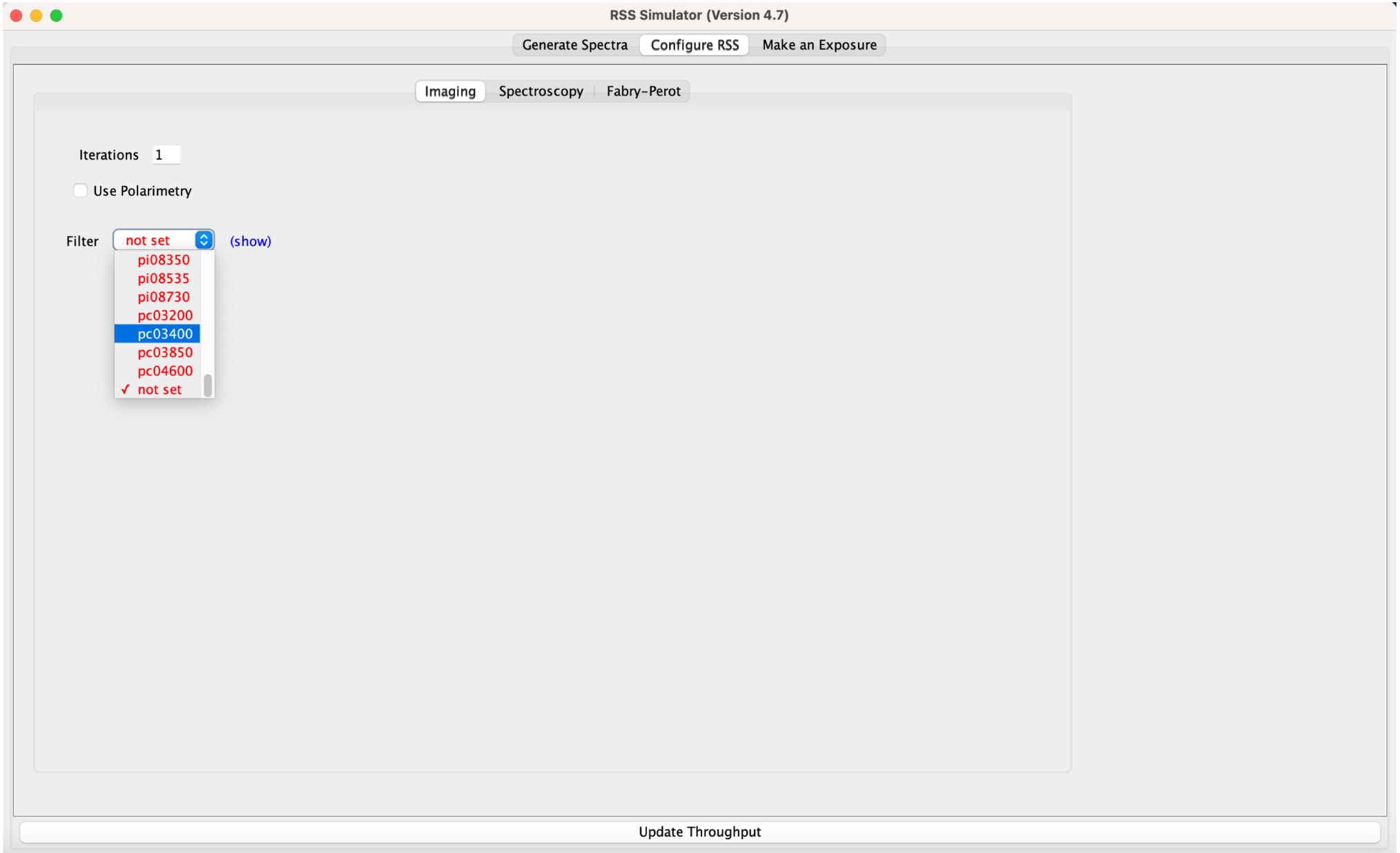
SALTICAM: Generate Spectra



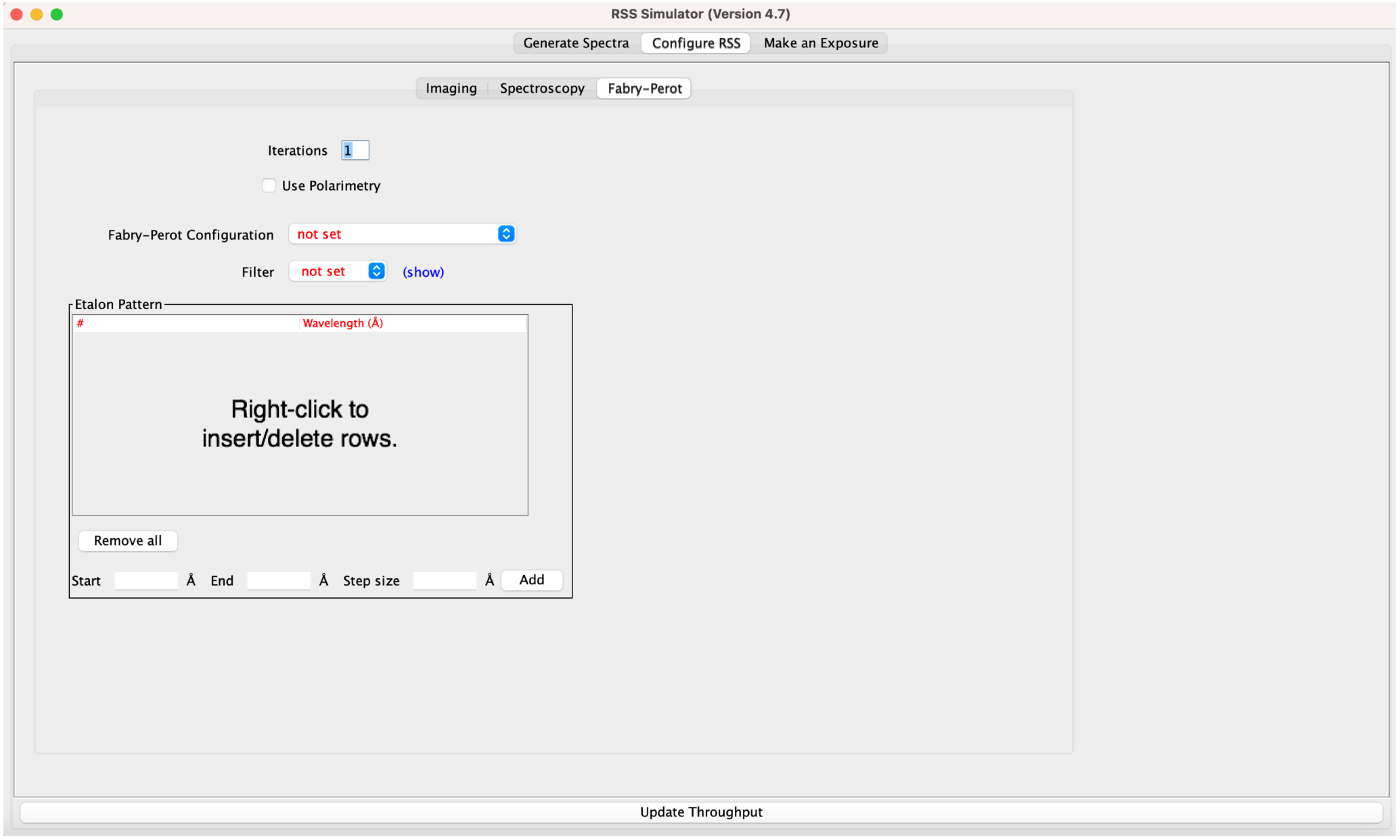
RSS Configure: Spectroscopy



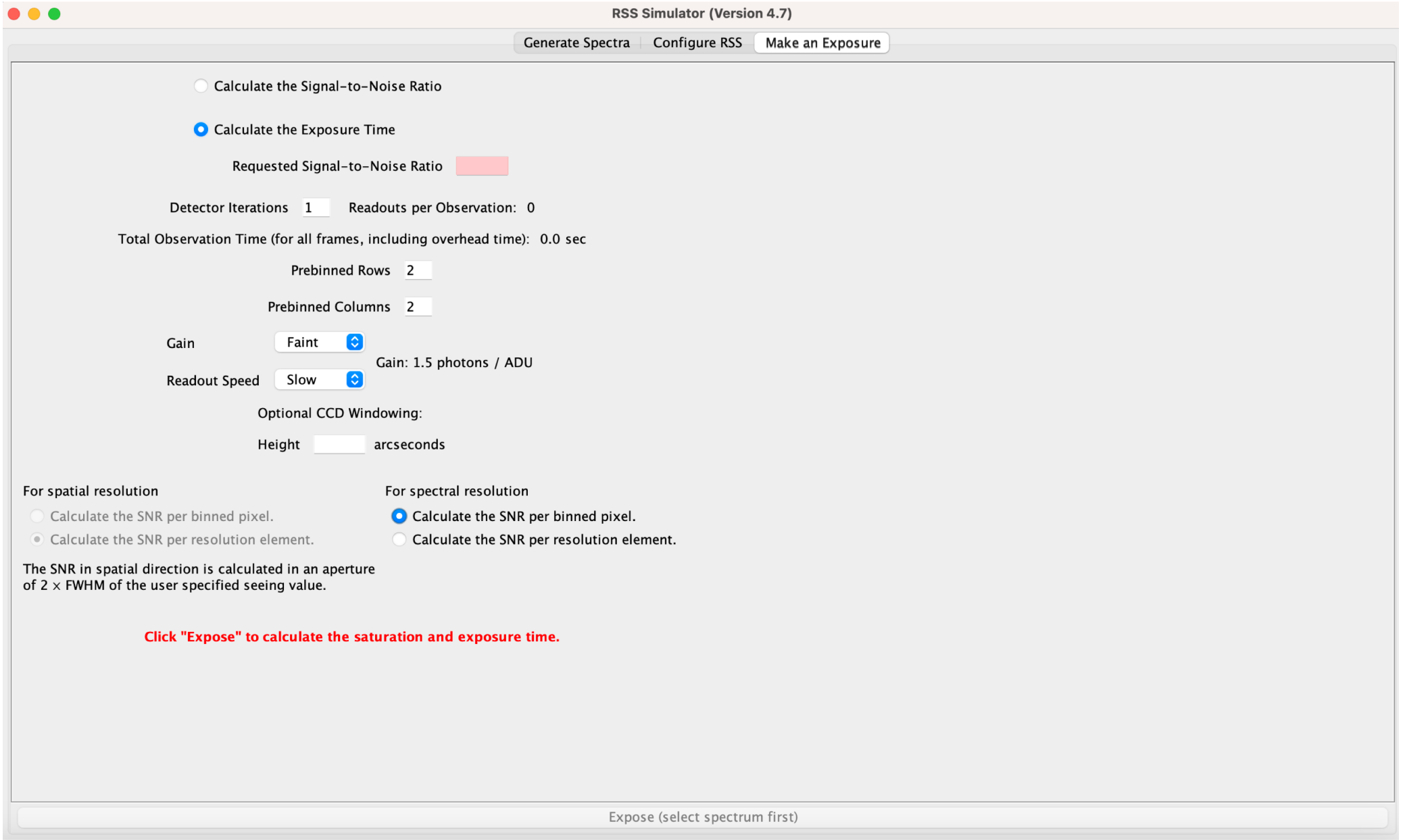
RSS Configure: Imaging



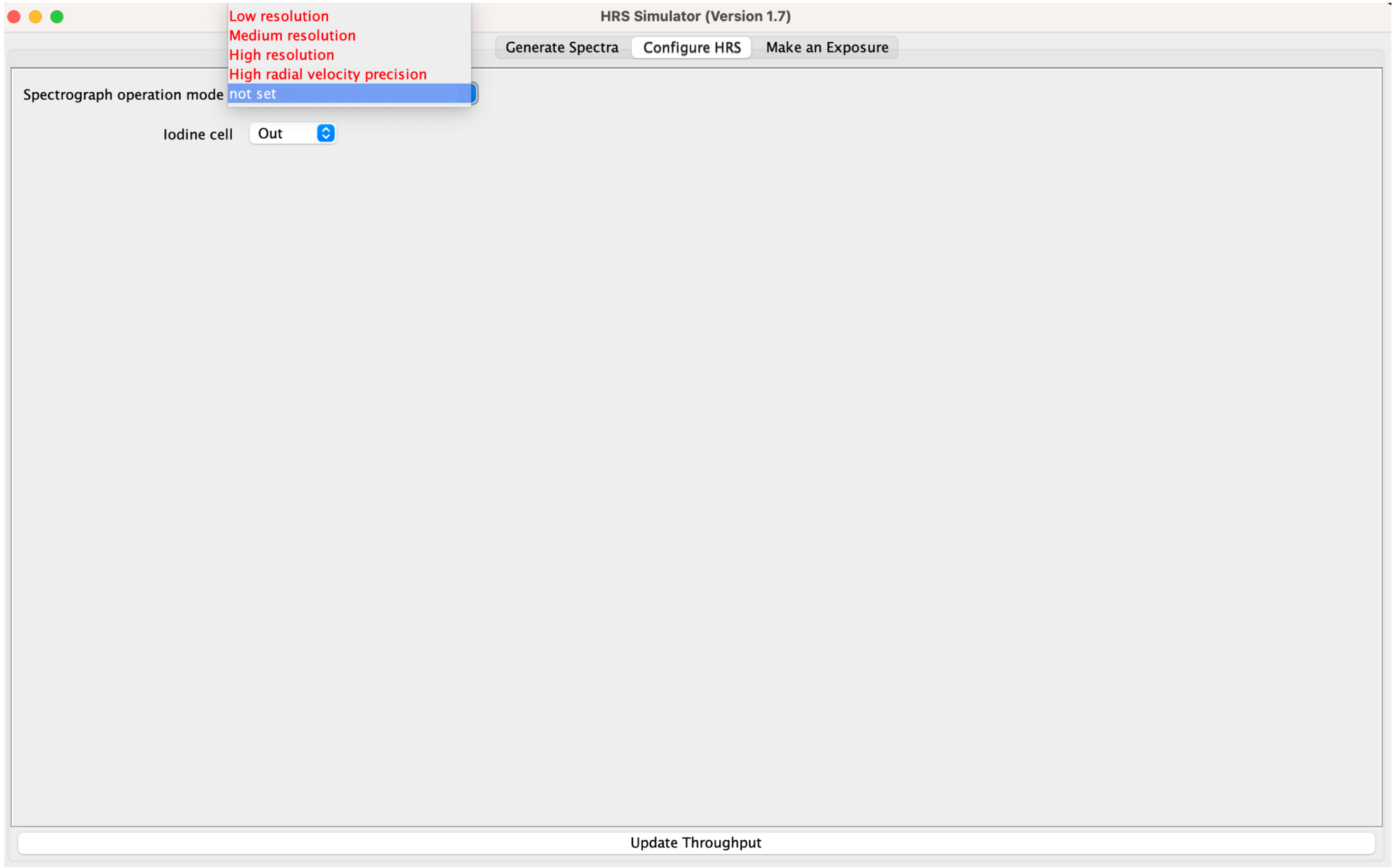
RSS Configure: Fabry-Perot



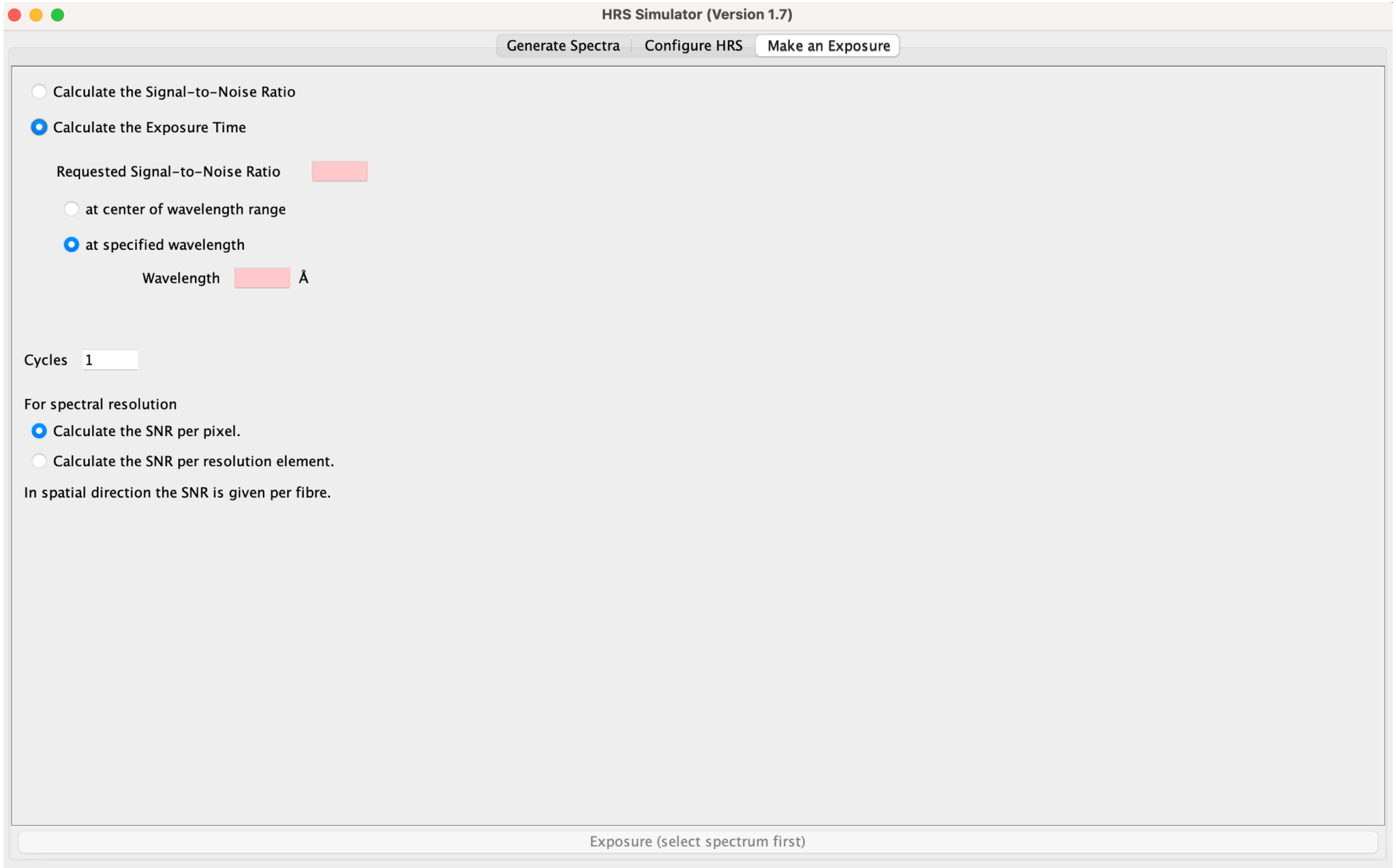
RSS: Make an Exposure



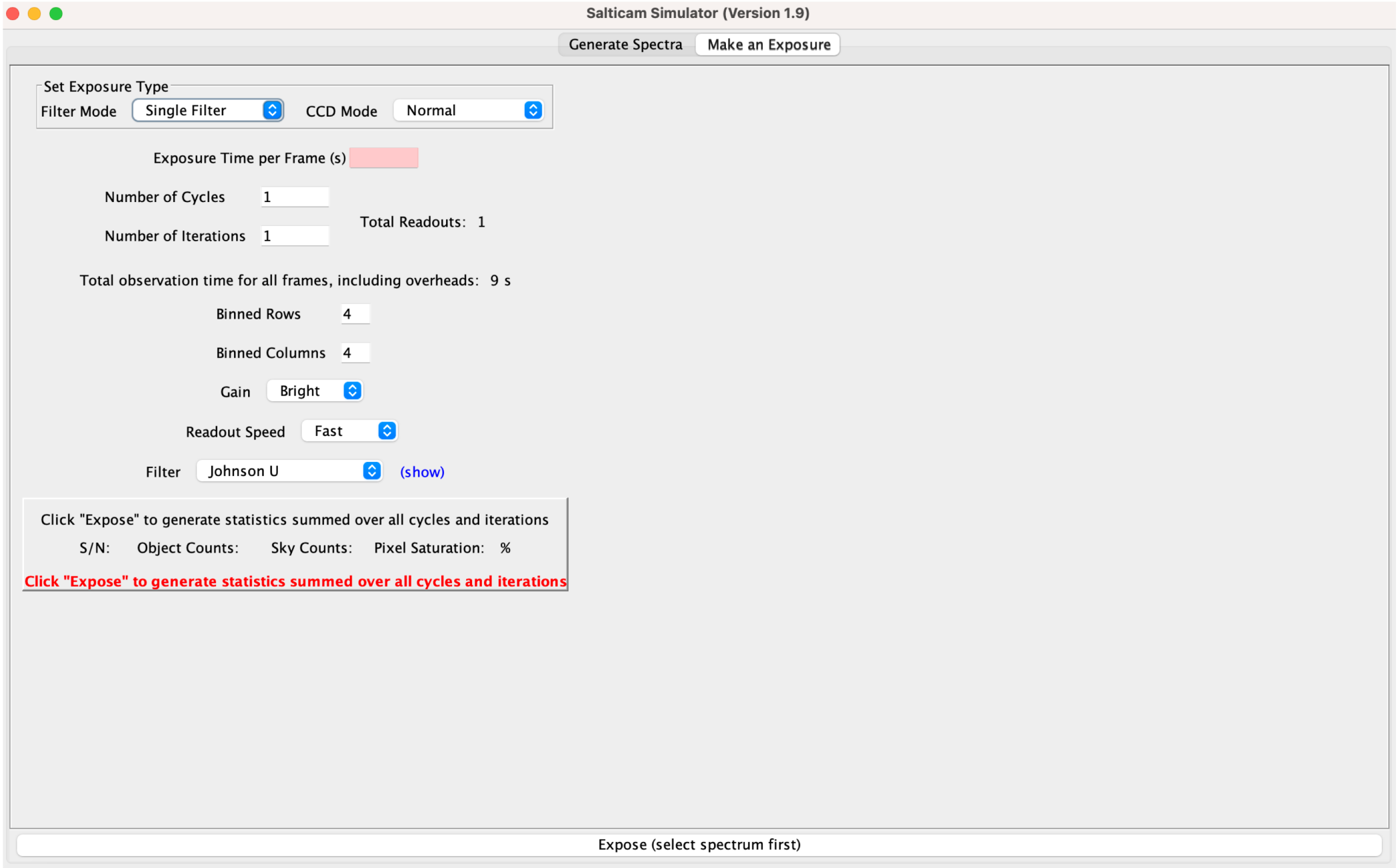
HRS Configure



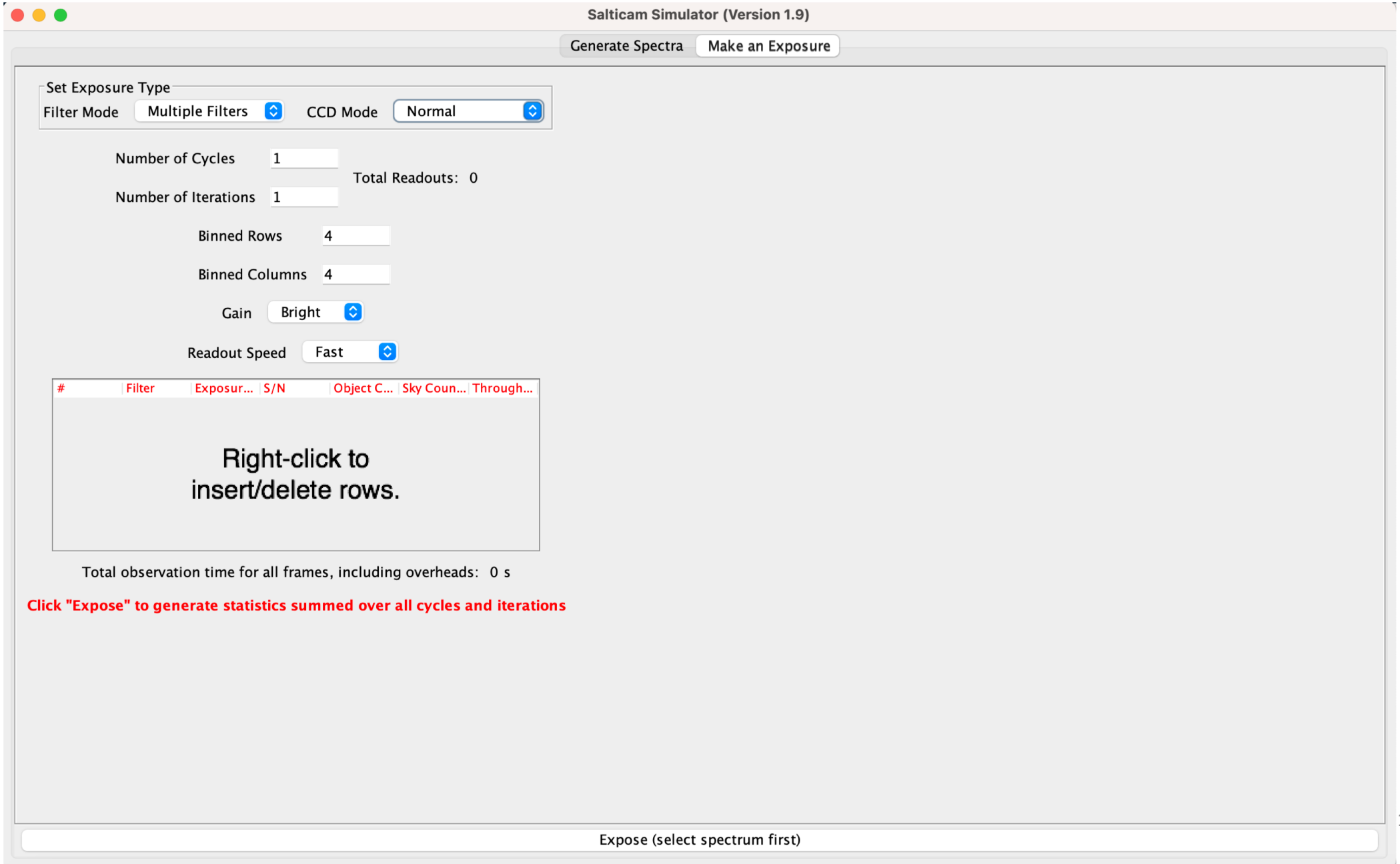
HRS: Make an Exposure



SALTICAM: Make an Exposure



SALTICAM: Make an Exposure



Demo