Exoplanet Imaging

Select candidate

1. Create a TSX star catalog of potential exoplanets using the Swarthmore exoplanet finder website: <https://astro.swarthmore.edu/transits/transits.cgi>.
2. Set up the search criteria:
3. Target List: NASA Exoplanet Archive
4. Observatory: Closest on dropdown list (Island of Hawaii => Keck)
5. Date Window: 3 days
6. Constraints:
   1. Elevation: 30 in/30 out
   2. Hour Angle: Default
   3. Out-of-Transit baseline: Default
   4. Space Observing: N/A
   5. Depth: 20 parts per thousand
   6. V magnitude: 14
   7. Name: N/A
   8. The rest: default
7. Review and note output for potential Exoplanet targets

Prepare for imaging

1. Power up imaging system
2. Open **TheSky**
3. Open **TSXToolKit** **Variscan**

Create TheSky Star Database Catalog

1. Using **TSXToolKit Transit Search** application, run ExoPlanet Server for Candidate targets. Save to Clipboard.
2. In TSX, select Edit -> Paste Photo -> create database

TSXToolKit VariScan

Create selected ExoPlanet target

1. Open new target list or reuse *single* target list
2. Delete old targets
3. Add exo target by name
4. Set filters (e.g. G,B) and Compile

Configure VariScan for target run

1. Set Autorun to start at lease 30 minutes before transit start and stop at least 30 minutes after transit end.
2. Set Images per Sample and Minimum Time Between Images to keep shooting this target through the occultation period.
3. Start