VIRT DATA ACQUISITION SEQUENCE
CHECKLIST

1. Check the time of sunset, nautical twilight and astronomical twilight:
   https://www.timeanddate.com/sun/us-virgin/saint-thomas

2. Create a datalog sheet in Google docs:
   https://docs.google.com/spreadsheets/d/1NU8ptyGkJk4urayvzjj6Gq4hhrAT0Lqn-B4nephSnow/edit?usp=sharing

3. **Take BIAS images**: 1 hour before sunset take a series of **10 images with zero seconds** exposures (and shutter closed). Unless specifically requested these should be good enough for the rest of the night

4. **Take Sky FLAT images:** around sunset make sure there is a part of the sky free of clouds and open the dome. Make sure the start from U-band and move redder once you are happy of the images taken. You should be able to do 0.2s images and obtain 34,000 counts or so on average if the sky is still bright. Take 5 images of that type before moving to the next filter.
   Sequence: U-B-V-R-C (once you get to V you may want to expose for a few seconds).
   If you see stars in the flats it means that those are not good and it is too late.
   (In the future we will use DOME flats that will make flats easier to take). If no sky flats can be taken or are not good, it is OK, it is indeed an "art" (cit. Morris).

5. **Take FOCUS images:** Take FOCUS images: using xepehm identify an "open cluster" and point to it. Take a few second image (2-5s) at the specified, expected "best" focus position for the first filter you wish to focus. With the "paddle" in xobs, move the focus 20-30 micron in one direction and take a second image. Repeat, moving another 20-30 micron in the same direction until you have 5 images. Move the focus back to the original expected "best" focus position. Move 20-30 microns in the opposite direction and take an image. Repeat moving another 20-30 micron in this direction until you have 5 more images (10 images total). Repeat the procedure for all filters that will be used on the evening. **Similarly do it for all filters.**

6. Use Hanley/Difo-Cheri's python code to find the best focus in all filters and make a note of the numbers (if there is no parabola, then we are out of focus still, so take more images in one or the other direction).
   ATTENTION: if for whatever reason xobs shuts down or you have to re-launch it, make sure your values are still the best focus

7. **Science observations:** look at the first target in the list, move the telescope and take an image (or more) in one filter (or more)

8. **Repeat FOCUS:** after a couple of hours of observations repeat the focus (step 5+6)