preamble

There are the notes from Blake Nancarrow's BGO presentation held at the RASC Toronto Centre AP workshop 2018.

what is BGO?

The Burke-Gaffney Observatory is a robotic telescope with CCD cameras in an automated dome in Halifax that is accessible through social media and that anyone may use for free.

meet "Ralph"

BGO was made possible through generous contributions by Shirlee & Dr. Ralph Medjuck. It is managed by Dave Lane (past president of RASC).

It is located atop St Mary's University (SMU) 22-storey residence building. It is used by the Astronomy & Physics students in their courses and for research projects.

The telescope is a Planewave 0.6-metre CDK24 atop an old equatorial mount with an Apogee and SBIG camera, each with a filter wheel.

The dome and roof top have various weather instruments you can query.

using BGO

You can command BGO using Twitter (public or private) and Facebook Messenger*. You can see status information, activity, and updates on social media channels as well as the BGO web pages.

Anyone can use BGO once authorised. Commands with hashtags and parameters allow image requests to be queued and edited. One can lookup objects from catalogues and check the weather conditions.

requesting images

You may indicate subexposure time, number of subexposures, minimum elevation, preferred filter, etc. Depending on privileges, you may have other options you can control.

* Recent Facebook security changes have blocked commands.

getting images

When your image or images are captured, the next day your can review your observer's log and check each completed job. You might immediately see the result in small JPEG image, suitable for sharing.

Image data is also stored in high-quality scientific FITS format. You can download these files for further processing.

If you have elevated privileges and can shoot multiple filters per request, you will be provided a ZIP file. On downloading and opening the archive, you will find a FITS file for each filter requested.

converting images

Assuming you want to work with the best quality data, you will need to examine and manipulate the FITS files. Many use the free FITS Liberator application. While conversion is the end goal, the app allows, flipping, setting of black and white points, basic stretching, etc. Finally, your image is exported to TIFF format where final processing can be performed in your favourite image editor.

why?

While BGO is free and easy to use, you need to remember it is a shared system. Students have the highest priority. Also know you lack direct control of the system. But if you want to stick you toes in the CCD imaging waters with no cost outlay or risk, it is fun way to get started. It is also an excellent means of learning remote operations and acquiring LRGB data so to learn post-processing workflows.

Visit the BGO site: http://www.ap.smu.ca/pr/bgo

colophon

The structure and outline of this document was generated from the extracted content of the associated PowerPoint presentation. The text was embellished using Word.

Created and edited by Blake Nancarrow (astronomy AT computer-ease.com) on 5 Sep 2018. Version 1.0. Please report errors and omissions.