

This assignment is to be used as **summative** coursework. Please return to the instructor by December 18, 2015.

Instructions:

You are going to use the MicroObservatory Robotic Telescope Network to submit a request for real astronomical observations from a real telescope somewhere in the world. This is a departure from the original assignment, as the guest observer portal seems to have been shut down. The activity detailed below was developed for White House Astronomy Night on October 19th of this year with a small modification for use in this class. More information and instructions can be found here:

<http://mo-www.harvard.edu/OWN/news.html>.

STEP 1: Control a Telescope

MicroObservatory is an online network of robotic telescopes that you can control over the Internet from your own computer.

1. Visit the [Observing With NASA](http://mo-www.harvard.edu/OWN/telescope) (<http://mo-www.harvard.edu/OWN/telescope>) portal and click on [Control Telescope](http://mo-www.harvard.edu/cgi-bin/OWN/Own.pl) (<http://mo-www.harvard.edu/cgi-bin/OWN/Own.pl>)
 2. Choose your target(s) and click "OBSERVE" to take an image of that object.
 3. Choose your field of view, exposure time, and filters; then click "CONTINUE".
 4. Enter your (confidential) information and "SUBMIT" your request to the telescopes.
 5. Look for an email the next day containing a link to download your requested image(s).
- See more at: <http://mo-www.harvard.edu/OWN/news.html#sthash.QoKiCLaE.dpuf>

STEP 2: Enhance & Colorize Your Images

[MicroObservatoryImage](http://mo-www.harvard.edu/OWN/software.html) (<http://mo-www.harvard.edu/OWN/software.html>) is a free easy-to-use software program that helps you turn your telescope images into cool astrophotographs.

1. Download the image processing [software](http://mo-www.cfa.harvard.edu/OWN/software.html) (<http://mo-www.cfa.harvard.edu/OWN/software.html>) to your computer. *[Special note for Mac OS X users: you'll need to go to your Security & Privacy System Preferences and check "Allow apps downloaded from: Anywhere"]*
2. Check out the [Tools & Training](http://mo-www.harvard.edu/OWN/training.html) (<http://mo-www.harvard.edu/OWN/training.html>) page to view short video tutorials on how to download and process the special astronomical FITS image files that come from the telescope.

3. Use the MicroObservatory software processing tools to bring out detail and colorize your image(s), and then save each image as a GIF file.

OR –

Load the GIF format MicroObservatory image into your favorite online image editing software.

- See more at: <http://mo-www.harvard.edu/OWN/news.html#sthash.QoKiCLaE.dpuf>

STEP 3: Analyse your image

1. Find a NASA or professional astronomical image to compare with your astrophotography, we recommend looking at the Great Observatories [Hubble](#), [Chandra](#), and [Spitzer](#) websites, as well as the [WISE](#) website.

- See more at:

<http://mo-www.harvard.edu/OWN/news.html#sthash.QoKiCLaE.cFGLL6s.dpuf>

2. Provide a short (500 words or less) analysis of your image.

To be turned in:

1. this cover sheet,
2. your printed image that you get back from the observatory
3. your short (500 words) analysis of your image or images.