

## ASTR100/1 Lab: Stellarium Installation and Usage Guide

You can download Stellarium for your own computer (Mac, Windows, Linux) at <http://www.stellarium.org>

The software is free, and there are links to extensive documentation on the website. After installing it, use the following walk-through to familiarise yourself with the basics of how the program works.

N.B.: If pressing the function keys (F1 – F12) isn't working, press down the Fn key (keyboard lower left corner) and press the function key.

1. Open Stellarium.
2. The default location is Paris (seen in the lower left corner). For observations made from Amherst, we need to change the location.
  - i. Move the cursor to the lower-left side of the window and click on "Location Window", or press F6.
  - ii. In the "Location" window, in the entry field next to the magnifying glass (for searching), type "Amherst". Then, click on "Amherst Center, United States". (**DO NOT** type "Amherst" into Name/City. It will just rename Paris to Amherst, but won't change the location. Also **DO NOT** select "Amherst, United States".)
  - iii. Close the window by clicking on the cross (×) in the upper right corner.
3. Change the Date/Time to a value, e.g. 2015/09/01, 14:00:00.
  - i. Move the cursor to the lower-left side of the window and click on "Date/Time Window", or press F5.
  - ii. Change the date and time either by entering the values directly or using the arrow keys to increase or decrease the values.
  - iii. Close the window by clicking on the cross (×) in the upper right corner.
4. Click and hold the cursor on a spot in the window, and drag it around to look in various directions.
5. Zoom in by scrolling **UP** and zoom out by scrolling **DOWN** (on touchpad, mousepad, mouse, etc.)
6. Zoom out till you see the full sky in your screen. You should see only the Sun.
  - i. To turn on and off the atmosphere visualisation, move the cursor to the bottom of the window on the left side and click on the cloud icon, or press A.
  - ii. To turn on and off the ground visualisation, move the cursor to the bottom of the window on the left side and click on the trees icon, or press G.

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- iii. To turn on and off the constellation lines, move the cursor to the bottom of the window on the left side and click on the “N”-shaped icon, or press C.
    - iv. To turn on and off the constellation names, move the cursor to the bottom of the window on the left side and click on the mirrored “N”-shaped icon, or press V.
    - v. To turn on and off the constellation art, move the cursor to the bottom of the window on the left side and click on the person-shaped icon, or press R.
    - vi. To turn on and off the stars, press S.
  7. Click on Saturn. Notice that some information about Saturn pops up at upper left corner of the window.
    - i. Press the space bar to center the view on the selected object, Saturn.
    - ii. Zoom in until the field of view (FOV at the bottom of screen) is  $0.1^\circ$ . What objects other than Saturn can you see?
    - iii. To start and stop the progression of time, move the cursor to the bottom of the window on the left side, move to the right end of the toolbar, and click on the “play” icon, or press K.
    - iv. To increase the progression of time, move the cursor to the bottom of the window on the left side, move to the right end of the toolbar, and click on the “fast forward” icon, or press L.
    - v. To decrease the progression of time, move the cursor to the bottom of the window on the left side, move to the right end of the toolbar, and click on the “rewind” icon, or press J.
    - vi. To return to the present time, move the cursor to the bottom of the window on the left side, move to the right end of the toolbar, and click on the “hourglass” (2 triangles vertically stacked, points facing each other) icon, or press 8.
  8. Search for an object, e.g. the Sun.
    - i. Move the cursor to the lower-left side of the window and click on “Search Window”, or press F3.
    - ii. Enter the name of the object you are searching for.
    - iii. Close the window by clicking on the cross (×) in the upper right corner.
  9. Play around and familiarise yourself with the software. For help, press F1.