

Basic Navigation Through Stellarium

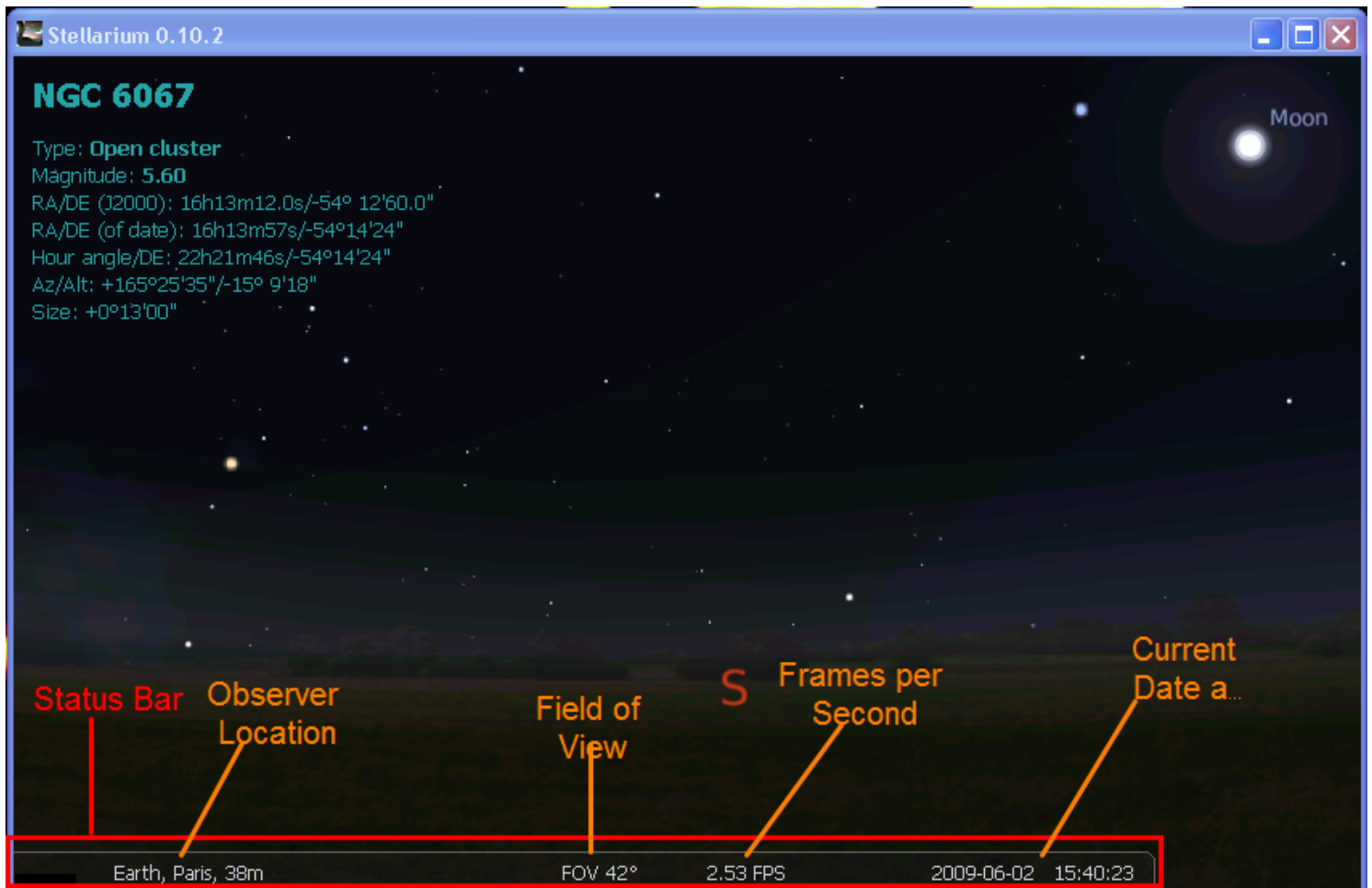
Subject Descriptors: use, toolbar, stellarium, navigate

Application: Stellarium 0.10.2, Windows XP

Task Description: How do I Navigate Through Stellarium?

Tutorial Date: June 3, 2009, By Sarah Zabriskie

Tour



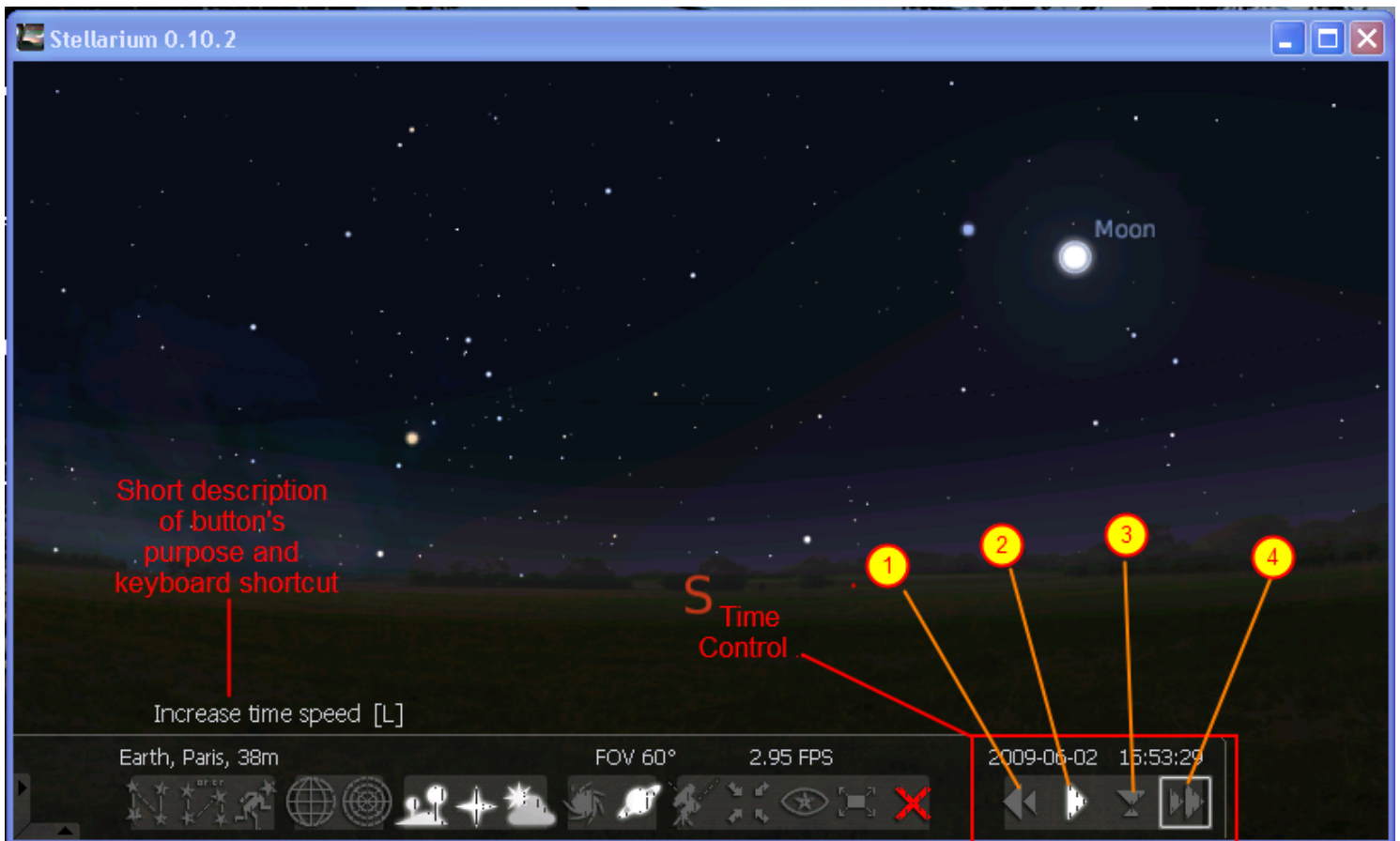
At the bottom left of the screen, you will see the Status Bar. This shows:

- The current observer location
- Field of view (FOV)
- Graphics performance in frames per second (FPS)
- The current simulation date and time.

The rest of the view is devoted to rendering a realistic scene including a panoramic landscape and the

sky. If the simulation time and observer location are such that it is night time, you will see stars, planets and the moon in the sky, all in the correct positions.

Time Travel



When Stellarium starts up, it sets its clock to the same time and date as the system clock. However, Stellarium's clock is not fixed to same time and date as the system clock, or indeed to the same speed. We may tell Stellarium to change how fast time should pass, and even make time go backwards! Let's take a look at the **Time Control Buttons** on the right hand side of the toolbar. The numbers below correspond with the numbers in the diagram above.

- 1) This button will decrease the rate at which time passes. Pressing it several times will make time go backwards. You may also use this control by pressing the letter (J) key
- 2) This button will make time pass as normal. You may also use this control by pressing the letter (K) key.
- 3) This button will return you to the current date and time. You may also use this control by pressing the number (8) key.
- 4) This button will increase the rate at which time passes. You may also use this control by pressing the letter (L) key.

NOTE: If you hover the mouse cursor over the buttons, a short description of the button's purpose and keyboard shortcut will appear.

Moving Around the Sky
















Key	Description
Cursor Keys	Pan the view left, right, up and down
Pageup/pagedown	Zoom in and out
Backslash (\)	Auto-zoom out to original field of view
Left mouse button	Select an object field of view
Right mouse button	Clear selected object
Mouse wheel	Zoom in and out
Space bar	Center view on selected object
Forward-slash (/)	Auto-zoom in to selected object

As well as traveling through time, Stellarium lets you look around the sky freely, and zoom in and out. There are several ways to accomplish this.

- Use the **Cursors Keys** to move around left, right, up and down.
- Zoom in a little using the **Page Up** key, and back out again using the **Page Down**.
- Press the **Backslash** key and see how Stellarium returns to the original field of view, and direction of view.
- It's also possible to move around using the mouse. If you left-click and drag somewhere on the sky, you can pull the view around.
- Another method of moving is to select some object in the sky (left-click on the object), and press the **Space** key to center the view on that object.
- Similarly, selecting an object and pressing the forward-slash key will center on the object and zoom right in on it. The forward-slash and backslash keys auto-zoom in and out to different levels depending on what is selected. If the object selected is a planet or moon in a *sub-system* with a lot of moons (e.g. Jupiter), the initial zoom in will go to an intermediate level where the whole sub-system should be visible. A second zoom will go to the full zoom level on the selected object. Similarly, if you are fully zoomed in on a moon of Jupiter, the first auto-zoom out will go to the sub-system zoom level. Subsequent auto-zoom out will fully zoom out and return the initial direction of view. For objects that are not part of a sub-system, the initial auto-zoom in will zoom right in on the selected object (the exact field

of view depending on the size/type of the selected object), and the initial auto-zoom out will return to the initial FOV and direction of view.








Main Toolbar

<i>Feature</i>	<i>Tool-bar button</i>	<i>Key</i>	<i>Description</i>
Constellations		c	Draws the constellation lines
Constellation Names		v	Draws the name of the constellations
Constellation Art		r	Superimposes artistic representations of the constellations over the stars
Equatorial Grid		e	Draws grid lines for the RA/Dec coordinate system
Azimuth Grid		z	Draws grid lines for the Alt/Azi coordinate system
Toggle Ground		g	Toggles drawing of the ground. Turn this off to see objects that are below the horizon
Toggle Cardinal Points		q	Toggles marking of the North, South, East and West points on the horizon
Toggle Atmosphere		a	Toggles atmospheric effects. Most notably makes the stars visible in the daytime
Nebulae & Galaxies		n	Toggles marking the positions of Nebulae and Galaxies when the FOV is too wide to see them
Planet Hints		p	Toggles indicators to show the position of planets
Coordinate System		Enter	Toggles between Alt/Azi & RA/Dec coordinate systems
Goto		Space	Centres the view on the selected object
Night Mode		[none]	Toggle “night mode”, which changes the coloring of some display elements to be easier on the dark-adapted eye.
Full Screen Mode		F11	Toggle full screen mode.
Flip image (horizontal)		CTRL+SHIFT+h	Flips the image in the horizontal plane. Note this button is not enable by default. See section ??

Stellarium can do a whole lot more than just draw the stars. Some other things Stellarium can do include: constellation line and boundary drawing, constellation art, planet hints, atmospheric fogging around the bright Moon and much more. The **Main Toolbar** allows you to turn on and off these visual effects. To display the **Main Toolbar**, move the mouse to the bottom left corner of the screen. There is

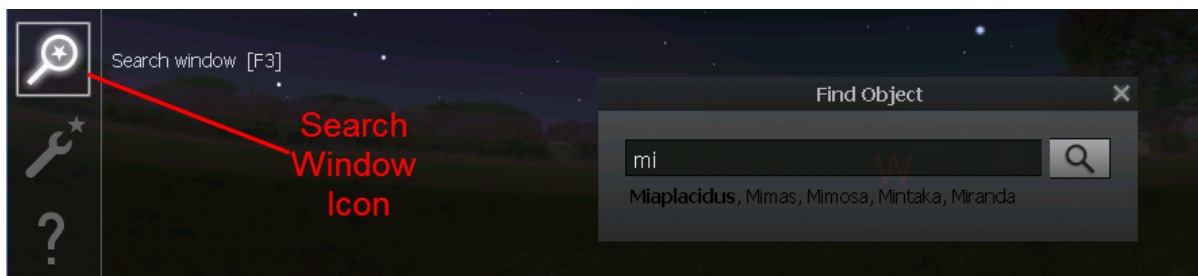
also a **Side Toolbar** which contains controls for further configuration of the program. The diagram above describes the operations of buttons on the **Main Toolbar** and the **Side Toolbar**, and gives their keyboard shortcuts.

Main Toolbar Continued

Flip image (vertical)		CTRL+SHIFT+v	Flips the image in the vertical plane. Note this button is not enable by default. See section ??
Quit Stellarium		CTRL-Q	Close Stellarium. Note: the keyboard shortcut is COMMAND-Q on OSX machines
Help Window		F1	Show the help window, which lists key bindings and other useful information
Configuration Window		F2	Show the display of the configuration window
Search Window		F3 or CTRL+f 12	Show the display of the object search window
View Window		F4	Show the view window
Time Window		F5	Show the display of the help window

The descriptions of the toolbar is continued above.

The Object Search Window



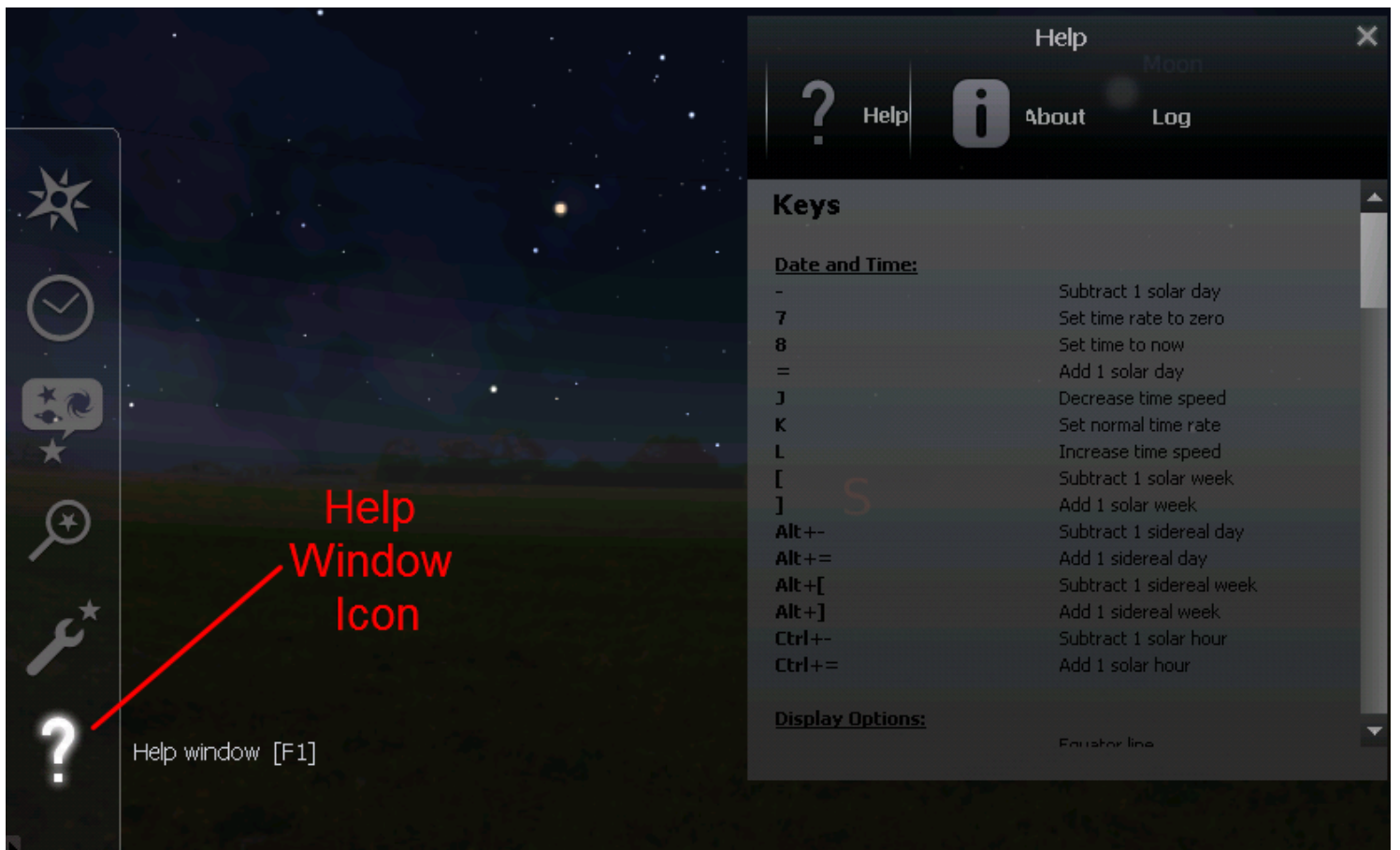
The **Object Search Window** provides a convenient way to locate objects in the sky. Open the **Search Window** by clicking on the search window icon, as shown above, or by hitting F3 on the keyboard. A search box will appear. Simply type in the name of an object to find, and then click the “go” button or

press return. Stellarium will point you at that object in the sky.

As you type, Stellarium will make a list of objects which begin with what you have typed so far. The first of the list of matching objects will be highlighted. If you press the **TAB** key, the selection will change to the next item in the list. Hitting the **RETURN** key will go to the currently highlighted object and close the search dialog.

For example, suppose we want to locate Mimas (a moon of Saturn). After typing the first letter of the name, *m*, Stellarium makes a list of objects whose name begins with M: Mars, Mercury, Mimas, Miranda, Moon. The first item in this list, Mars, is highlighted. Pressing return now would go to Mars, but we want Mimas. We can either press **TAB** twice to highlight Mimas and then hit **RETURN**, or we can continue to type the name until it is the first/only object in the list.

Help Window



The **Help Window** lists all Stellarium's key-strokes. It's a good idea to have a browse of the information in this window. To display the **Help Window**, click on the **Help Window** icon on the left tool bar as shown above.

NOTE: The **About** tab in this window will show licensing information, and a list of people who helped to

produce the program.