



Starting up with Stellarium

Jupiter

Material List:

A computer




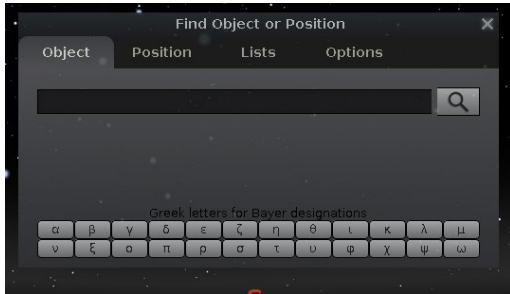
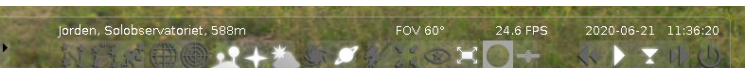
If available: a chording mouse with a scroller wheel.

Stellarium (download and install, <https://stellarium.org/>)

Outline

In this activity, you are taught the basics in how to operate Stellarium. This activity comes together with several others, where you are given instructions on how to simulate given phenomena, complete selected tasks or just to find specific objects.

Procedure

1	<h3>Getting started</h3> <p>Follow the instructions in our “Getting started with Stellarium guide” on onlineobservatory.eu</p>
2	<h3>Find Jupiter</h3> <p>Open the search panel () and type Jupiter. You might experience that Jupiter is not visible since it is below the horizon or close to the sun. If so, you can disable both the terrain () and atmosphere () in the program at the bottom menu.</p>   <p>Use your scroller wheel or PgUp/PgDn buttons to zoom.</p>



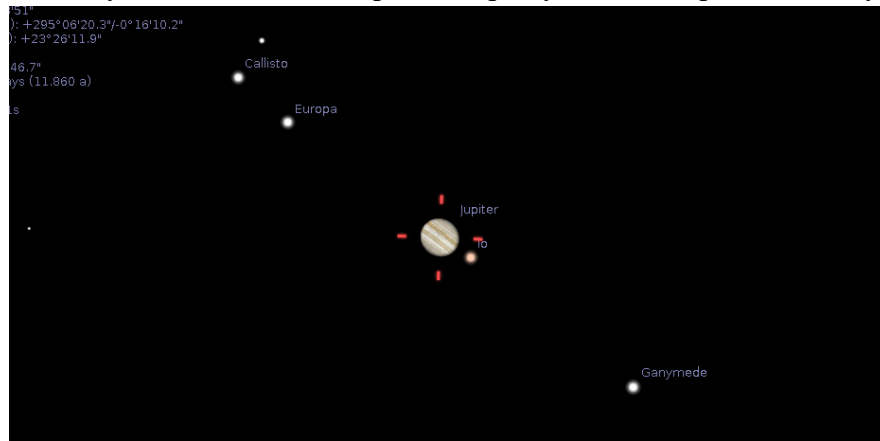
3

Adjust time

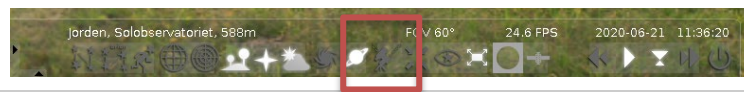
Play around with the time control panel:



As long as Jupiter has red marker on itself, Jupiter will stay in your field of view. If you lose track of Jupiter, reopen your search panel and retype Jupiter.



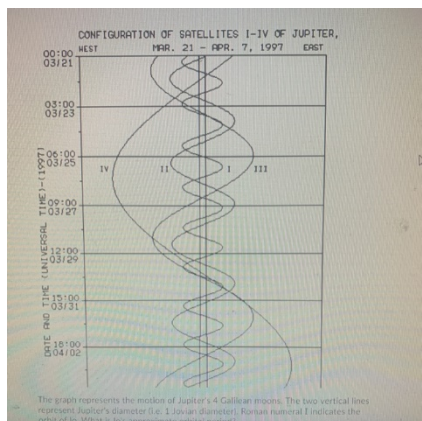
You will notice that the display wobbles back and forth if you play time fast forward. If this happens, you can “put your telescope” on an equatorial mount and stabilize the image. The button is on your bottom menu (right of the planet icon):



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Observe the motions of the Galilean moons

If you can find a suitable pace when you are playing time fast forward, in which the motions of Jupiter's moons is observable without too many other disturbances happening in the background/foreground, we can continue to repeat the observations of Galileo Galilei.



Galileo Galilei spent a few weeks observing the positions of these moons every night he had clear skies. He could clearly see a difference in their position from one night to the other. Even some moons had moved during a few hours during one night! He used this observation to prove that the geocentric model was wrong, as it proclaimed that the earth had to be in the centre of all planetary motions.

From this, these four moons are now called the Galilean moons.



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Have fun!

Play around in Stellarium and see if you can discover something new. All the planets are there, and maybe if you remember the time and date of an eclipse, you can see it again in Stellarium. You can also find satellites, and even the International Space Station. And yes, they are there for real, so if you have clear skies outside you could go out and see these objects in real life as well.

Enjoy!

Further Resources/Activities:

Assessment:

1. Are you able to adjust time both ways, and also go from fast forward/backwards back to normal pace?
2. Can you find any constellations you know, and how to enable or disable the constellation graphics in Stellarium?
3. Can you set the time and date to the day you were born, and see where all the planets (and sun) were then?
4. Search up several Messier objects, by writing M followed by a number between 1 and 104. Zoom in on each one and tell your fellow students which is your favourite.