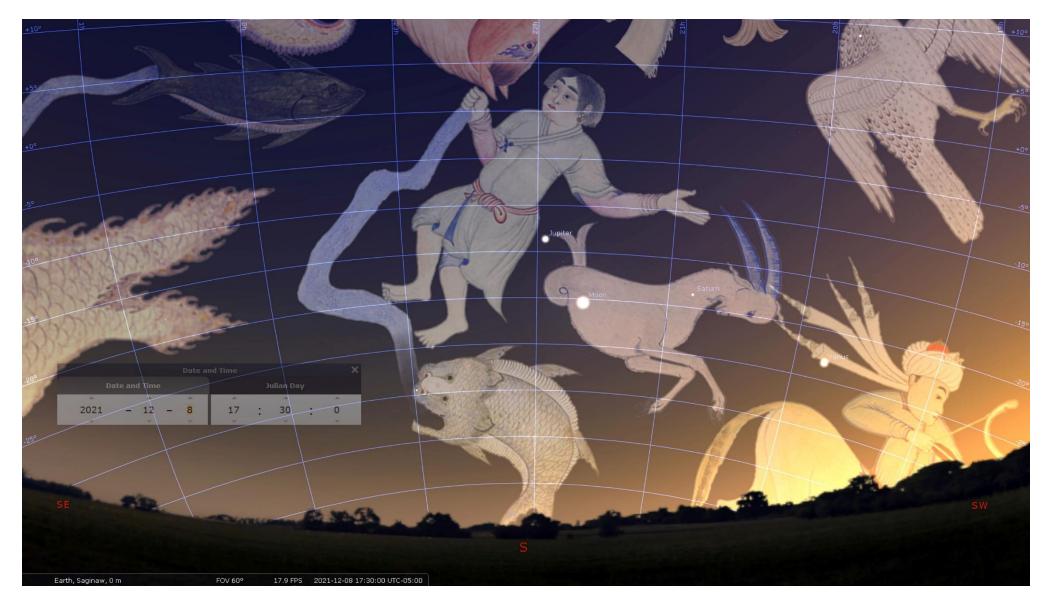


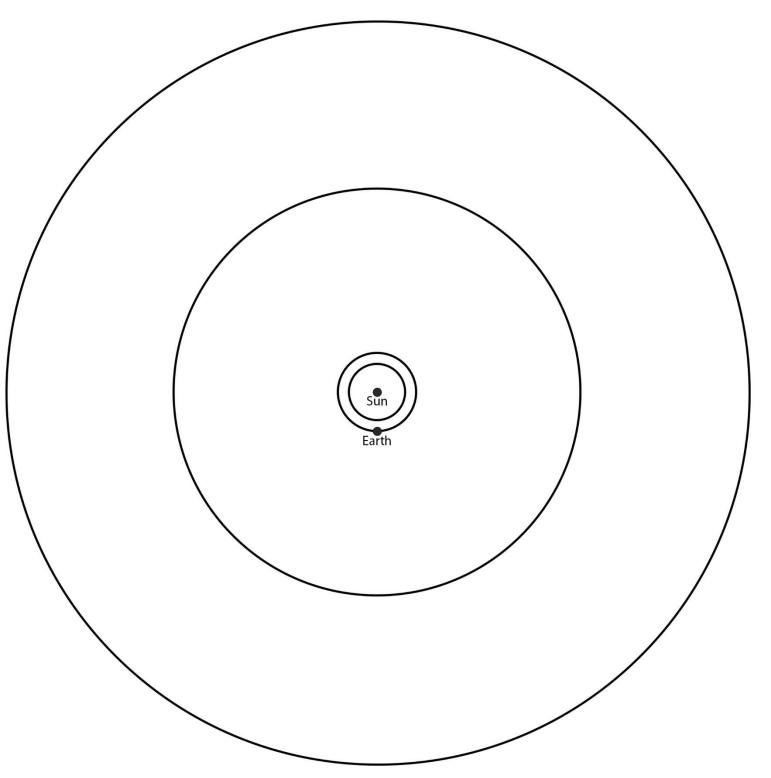
A view from Earth, showing the positions of Saturn, Jupiter, Venus and the Moon. Images in the background are an Arabic interpretation of star constellations. The grid in degrees shows right ascension and declination, the modern astronomical system for locating points among the fixed constellations. The sun has just disappeared below the horizon at the bottom right.

The image was created using **Stellarium**, a free desktop planetarium.



Forty-eight hours later, the constellations and the grid have shifted in unison, while the planets have moved in a slightly different way.

Image created using <u>Stellarium</u>, a free desktop planetarium.



In order from the Sun outward, the circles show the orbits of Saturn, Jupiter, Earth and Venus. Sizes of the Sun and Earth are greatly exaggerated to make them visible, but the orbits are to scale.

The perfectly circular orbits here reflect the initial Copernican theory. Johannes Kepler, would later improve that theory and show that the orbits are actually elliptical, not circular. The orbits of these four planets, however, are very nearly circular, making these diagrams suitable for most educational activities.