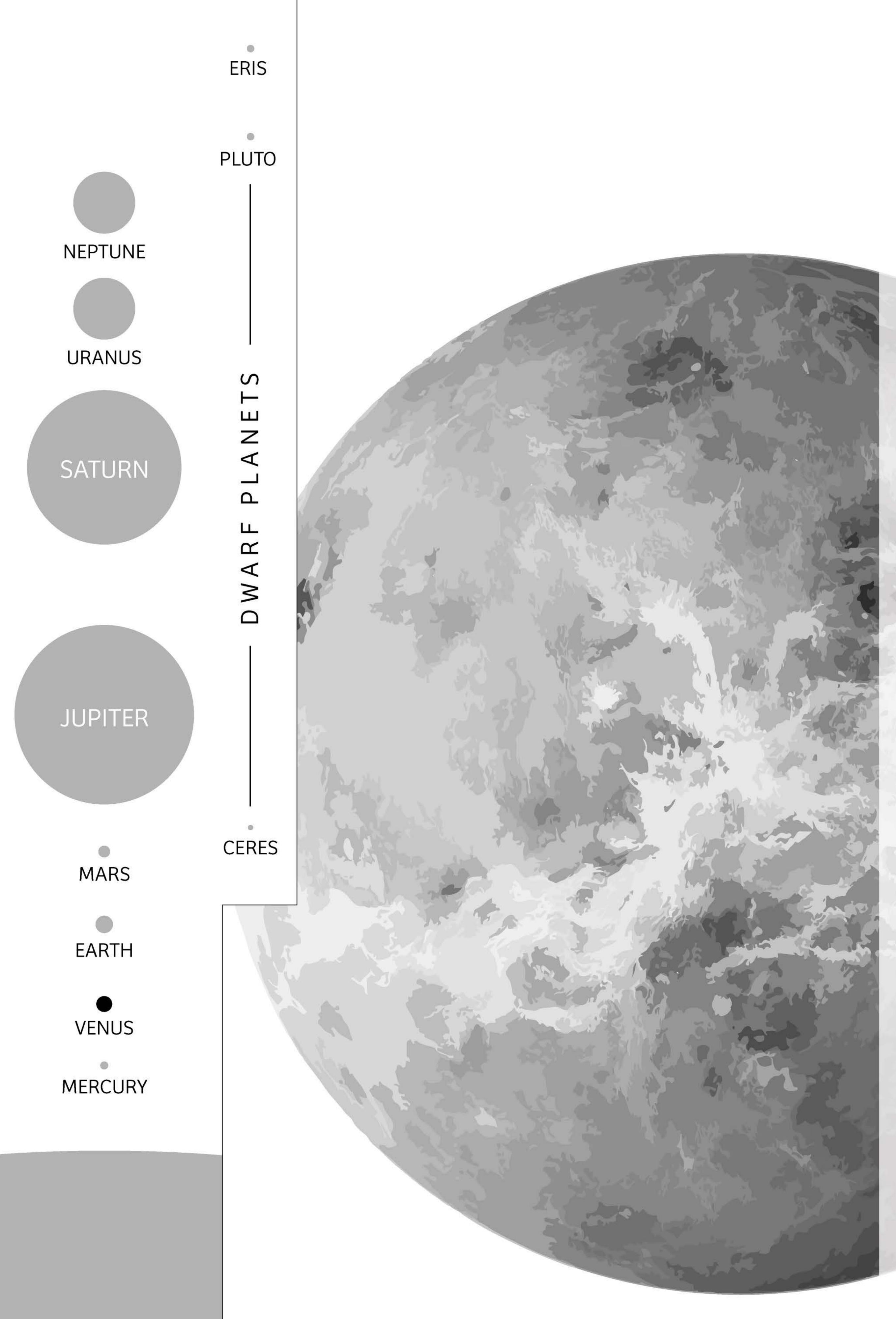


VENUS: THE SECOND PLANET FROM THE SUN: A ROCKY (TERRESTRIAL) PLANET



Venus is similar to the Earth in size and mass, but has a very thick atmosphere mainly of carbon dioxide and nitrogen which conceals the surface from view. The image on the left is from a real-colour image of Venus taken by Mariner 10 an American robotic space probe launched by NASA on November 3, 1973, to fly by the planets Mercury and Venus. The surface is obscured by thick sulphur dioxide clouds. Drops of sulphuric acid are found in the clouds, and the atmospheric pressure at the planet's surface is 90 times that on Earth. The greenhouse effect makes Venus the hottest planet with an average surface temperature of about 465 C (740 K). Underneath the cloud the planet's surface shows extinct volcanoes, craters, plains and mountain ranges.

Venus is unusual in that it rotates in the opposite direction it orbital motion: to an observer on the surface, the Sun rises in the west and sets in the east.

Occasionally the planet passes across the face of the Sun when viewed from Earth, known as a transit of Venus. Observations of transits were first attempted in 1761 and 1769 to establish the distance to Venus and the scale of the solar system. Recent transits occurred in June 2004 and 2012.

VENUS STATISTICS

Diameter: 12,104 km (0.949 x Earth)

Mass: 0.82 x Earth

Mean distance from the Sun: 0.72 AU*

(108 million km)

Orbital period (sidereal**): 224.7 Earth days

Rotational period: 243 Earth days

Moons: 0

Inclination of equator to orbit: 177 degrees Composition: Iron core, molten mantle, crust

FASCINATING FACT: Venus rotates in the opposite direction to its orbital motion: the Sun rises in the west and the Venusian day lasts 116¾ Earth days.

SUN

^{*} One Astronomical Unit (AU) = mean distance of the Earth from the Sun.

^{**} Sidereal time is time kept with respect to distant stars.