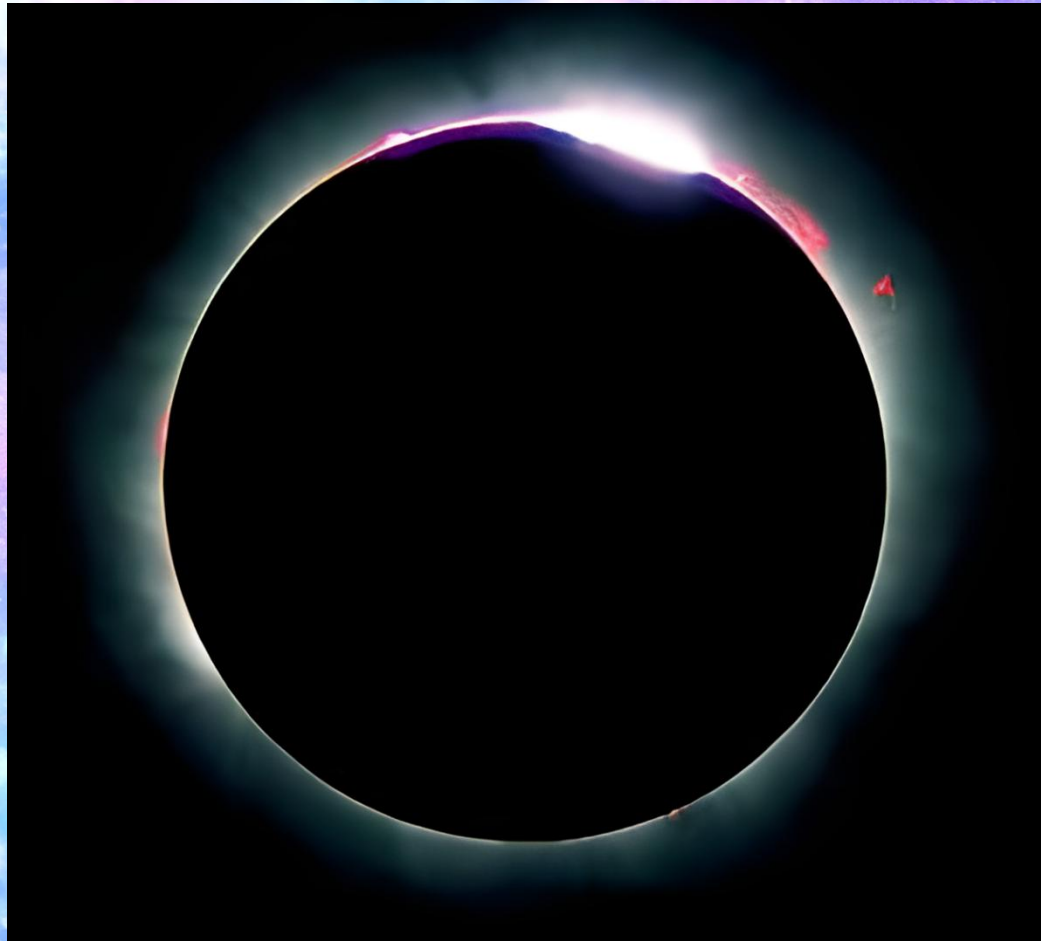


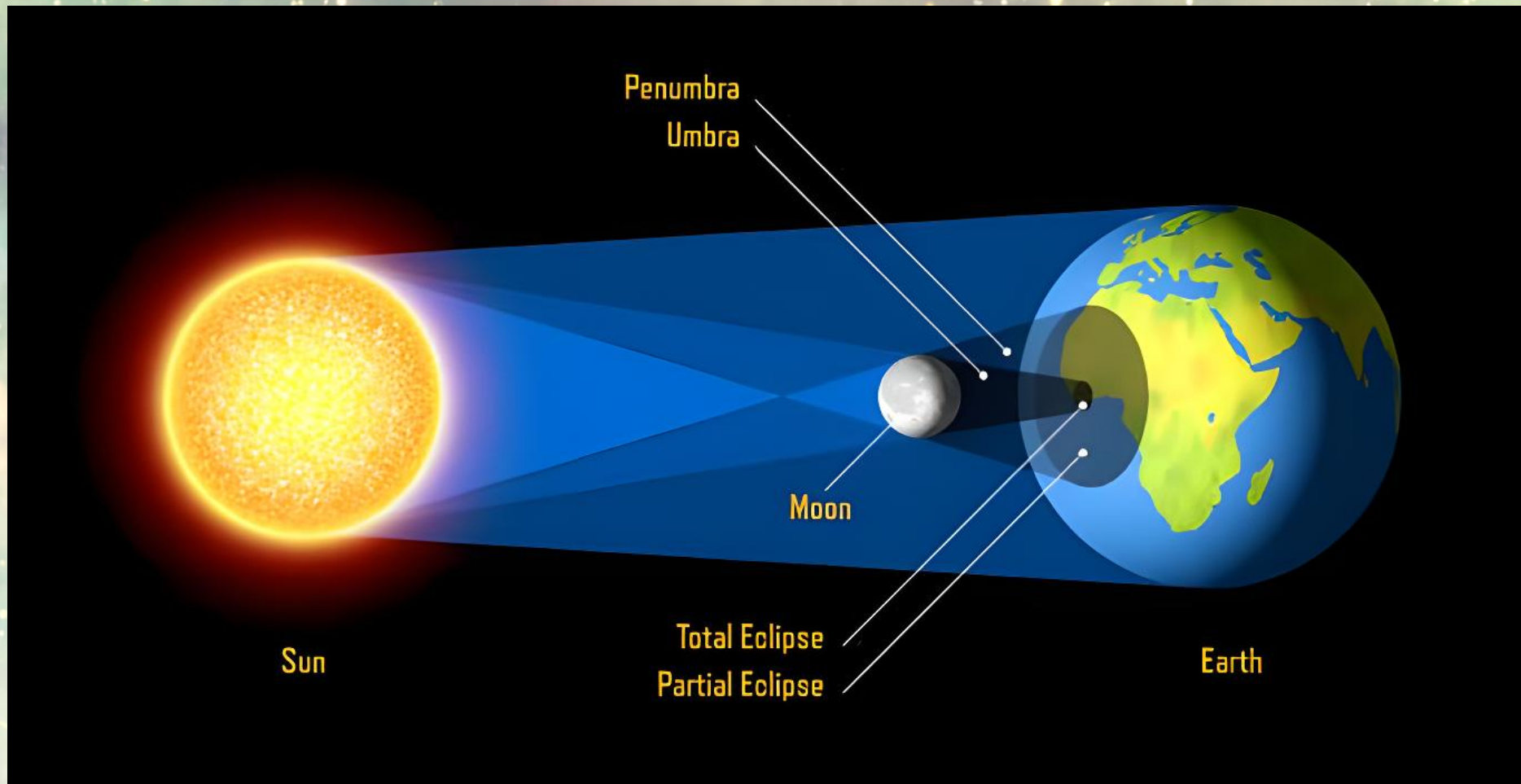
The sun and everything that orbits it make up the solar system, including the eight planets, and five named dwarf planets. Distances are not to scale; Asteroid and Keiper Belts are mostly empty space.

OUR GALAXY: THE MILKY WAY

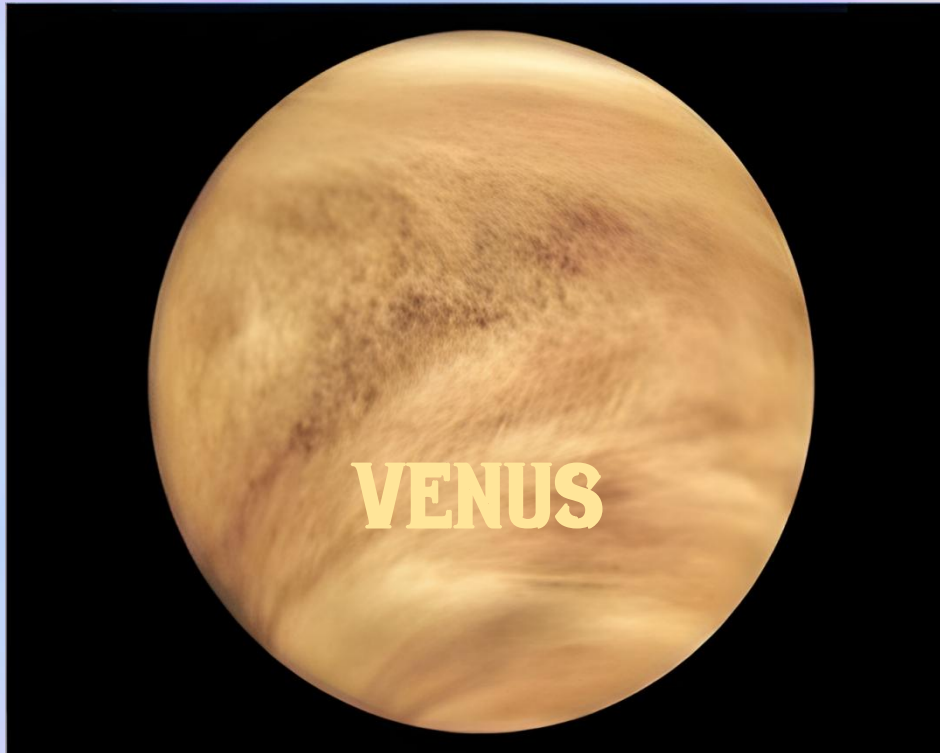




For a few seconds near the beginning and again at the end of a total solar eclipse the sun shines through valleys in the moon's mountainous surface causing beads of light to be seen; they are named after English astronomer Francis Baily (1774-1884) who first deduced what caused them. When just one Baily's bead is left or appears, it and the corona look like a diamond ring. This artist's impression combines these effects.



The region of complete shadow on Earth during a solar eclipse is called the moon's 'umbra' (from Latin for 'shadow'); observers within this area see a total eclipse of the sun. The region of partial shadow is called the penumbra (from Latin *paene* for 'almost' or 'nearly'); observers here see a partial eclipse. The earth's surface outside the penumbra is fully lit by the sun, so no eclipse is seen here.



The atmosphere of Venus is mostly carbon dioxide.

Traces of sulfur dioxide and water vapour in this atmosphere combine to form thick hot opaque clouds of sulfuric acid, which completely cover the planet, including the poles.

Surface images of a hot Venus are obtained by using radar to penetrate these clouds.



**Earth is in the 'Goldilocks Zone':
not too hot, not too cold, just right for life.**

MOON PHASES

Phases of the moon, as seen looking southward from the northern hemisphere.

