Our Solar System

Relative size and interesting facts for all known objects over 1500 km in diameter (and two notable others). Positions not to scale; approximately true color.

Eris

DWARF PLANET—SCATTERED DISK

Eris is covered in ices; it partly thaws when it nears the Sun every 557 years.

Pluto

DWARF PLANET—KUIPER BELT

Valleys carved by nitrogen glaciers and tall mountains of ice border a windswept plain.

Charon, A MOON OF PLUTO,

and Pluto itself mutually orbit a point between the two. (Separation and orbits shown to scale.)

Neptune

GAS GIANT PLANET

Neptune has very active weather systems, including the strongest sustained winds in the solar system: up to 2100 $^{km}/_{h}$.

Triton, A MOON OF NEPTUNE

Orbits backward and has geysers of liquid nitrogen.

Uranus

GAS GIANT PLANET

The axis of rotation of Uranus is tilted sideways, probably due to a collision with an Earth-sized object soon after it formed.

LARGEST MOONS OF URANUS

Titania: Enormous canyons: one goes nearly from equator to pole.

Oberon: Its ancient surface is almost entirely covered with craters.

Saturn

GAS GIANT PLANET

The rings of Saturn consist of innumerable small clumps of ice and dust orbiting the planet together.

LARGEST MOONS OF SATURN

Iapetus: A 13 km high ridge runs halfway around its equator.

Titan: Has rivers, lakes, and rain made of liquified natural gas.

Rhea: Giant ice cliffs from tectonic activity streak its surface.

Sun

MAIN SEQUENCE STAR

The Sun's hot plasma twists its powerful magnetic field into knots, causing sunspots and intense solar flares.

Mercury

TERRESTRIAL PLANET

Mercury rotates so slowly that sunrise to sunset lasts a full Mercury year (about 88 Earth days).

Venus

TERRESTRIAL PLANET

Venus's thick CO_2 atmosphere and sulfuric acid clouds trap heat like a greenhouse: its surface is hot enough to melt lead!

The Moon (OF EARTH)

Probably formed when a Mars-sized object collided with the early Earth.

Earth

TERRESTRIAL PLANET

On this tiny planet, alone in the vastness of space, every person you've ever loved has lived out their lives.

Mars

TERRESTRIAL PLANET

The ice caps of Mars grow a layer of dry ice each winter. In spring it turns back into CO_2 gas, causing 400 $^{km}/_{h}$ winds and global dust storms.

LARGEST MOONS OF JUPITER

Io: Over 400 active volcanoes due to Jupiter's gravity.

Europa: Has an ocean of liquid water under its ice crust.

Ganymede: So large that it creates its own magnetic field.

Callisto: Stable surface and low radiation due to its wide orbit.

Ceres

DWARF PLANET—ASTEROID BELT

Ceres contains ⅓ of the mass of the entire asteroid belt.

Jupiter

GAS GIANT PLANET

Jupiter's ammonia cloud bands include the Great Red Spot, a vast vortex storm that has persisted for hundreds of years.

ALMA COLLEGE

Orbital Distances: Sun | Mercury | Venus | Earth | Mars | ASTEROID BELT | Jupiter | Saturn | Uranus | Neptune | KUIPER BELT

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