

Terrestrial planets /Dad



Earth

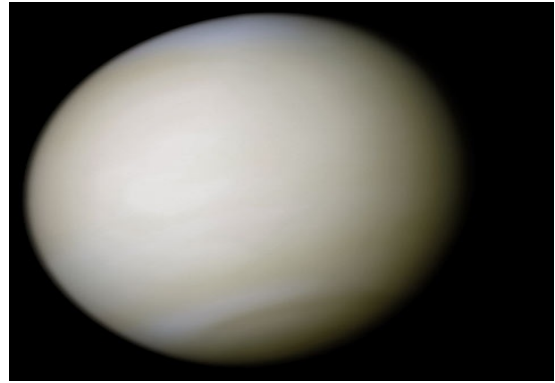
Terrestrial planet

The earliest undisputed life on Earth arose at least 3.5 billion years ago.

71% of Earth's surface is covered with water.

| | |
|------------------------------|--------------------------|
| Albedo | 0.367 |
| Radius (km) | 6371.0 |
| Mass (kg) | $5,973.6 \times 10^{24}$ |
| Density (g/cm ³) | 5.514 |
| Gravity (m/s ²) | 9.807 |
| Orbital period (days) | 365.256 |
| Orbital speed (km/s) | 29.78 |
| Temperature (K) | 288 |
| Discovery date | NA |

Terrestrial planets /Mom



Venus

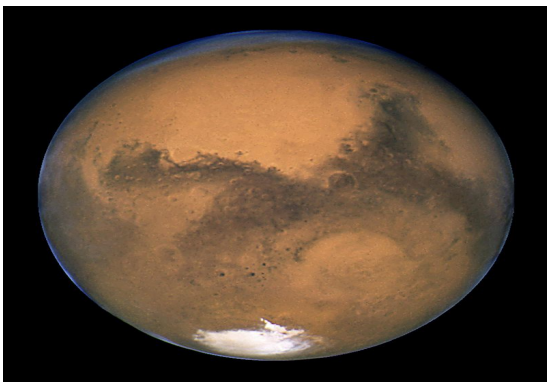
Terrestrial planet

Bright enough to be seen in a midday clear sky.

In 1966 the Venera 3 probe crash-landed on Venus, the 1st spacecraft to reach the surface of another planet

| | |
|------------------------------|--------------------------|
| Albedo | 0.67 |
| Radius (km) | 6051.8 |
| Mass (kg) | $4,868.5 \times 10^{24}$ |
| Density (g/cm ³) | 5.243 |
| Gravity (m/s ²) | 8.872 |
| Orbital period (days) | 224.701 |
| Orbital speed (km/s) | 35.02 |
| Temperature (K) | 737 |
| Discovery date | 1600 BC (Babylon) |

Terrestrial planets /Son



Mars

Terrestrial planet

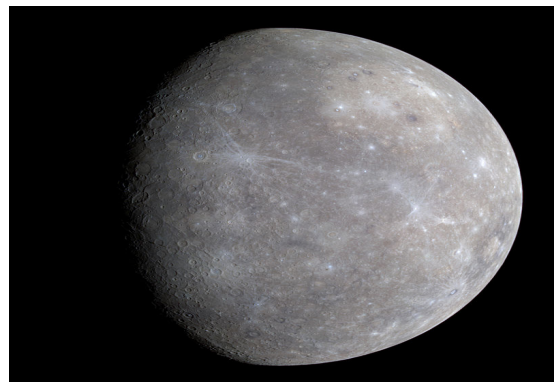
The red-orange appearance is caused by rust

It consists of minerals containing silicon, oxygen...

Olympus Mons is roughly 3x the height of Mt Everest

| | |
|------------------------------|------------------------|
| Albedo | 0.15 |
| Radius (km) | 3389.5 |
| Mass (kg) | 6.417×10^{23} |
| Density (g/cm ³) | 3.9335 |
| Gravity (m/s ²) | 3.7 |
| Orbital period (days) | 686.971 |
| Orbital speed (km/s) | 24.077 |
| Temperature (K) | 210 |
| Discovery date | 1534 BC (Egypt) |

Terrestrial planets /Daughter



Mercury

Terrestrial planet

The smallest planet in the Solar System

An observer on Mercury would see only one day every two years.

| | |
|------------------------------|-------------------------|
| Albedo | 0.142 |
| Radius (km) | 2,439.7 |
| Mass (kg) | 330.11×10^{23} |
| Density (g/cm ³) | 5.427 |
| Gravity (m/s ²) | 3.7 |
| Orbital period (days) | 87.969 |
| Orbital speed (km/s) | 47.362 |
| Temperature (K) | 200->340 |
| Discovery date | 1300 BC (Assyria) |

Terrestrial planets /Dog



Moon

Moon of Earth

The Moon is exceptionally large relative to Earth.

There are estimated to be roughly 300,000 craters wider than 1 km on the Moon's bright side only.

| | |
|------------------------------|------------------------|
| Albedo | 0.12 |
| Radius (km) | 1,737.1 |
| Mass (kg) | 7.342×10^{22} |
| Density (g/cm ³) | 0.0123 |
| Gravity (m/s ²) | 3.3464 |
| Orbital period (days) | 27.322 |
| Orbital speed (km/s) | 1.022 |
| Temperature (K) | 150->220 |
| Discovery date | 1.800.000BC |

Terrestrial planets /Bird



Phobos

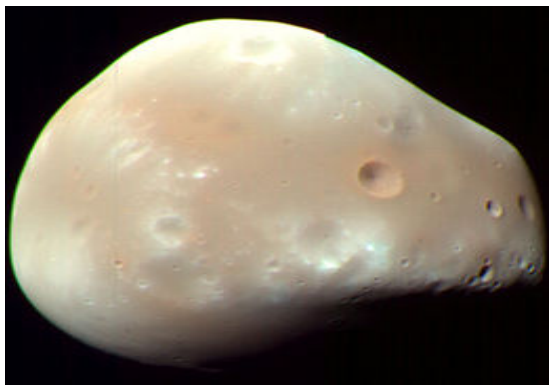
Moon of Mars

It sets and rises 2x each Martian day

It is predicted that in 30 to 50 million years it will collide with the planet or break up into a planetary ring.

| | |
|------------------------------|------------------------|
| Albedo | 0.071 |
| Radius (km) | 11 |
| Mass (kg) | 1.660×10^{16} |
| Density (g/cm ³) | 1.87 |
| Gravity (m/s ²) | 0.006 |
| Orbital period (days) | 0.319 |
| Orbital speed (km/s) | 2.138 |
| Temperature (K) | 233 |
| Discovery date | 1877 (A. Hall) |

Terrestrial planets /Cat



Deimos

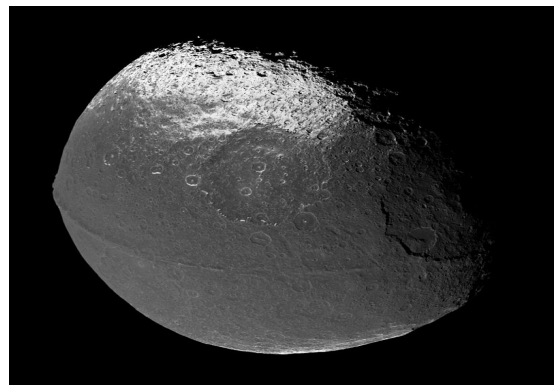
Moon of Mars

In Greek mythology, Deimos was the twin brother of Phobos and personified terror.

No landings on Deimos have been made yet.

| | |
|------------------------------|------------------------|
| Albedo | 0.068 |
| Radius (km) | 6.2 |
| Mass (kg) | 1.476×10^{15} |
| Density (g/cm ³) | 1.471 |
| Gravity (m/s ²) | 0.003 |
| Orbital period (days) | 1.263 |
| Orbital speed (km/s) | 1.351 |
| Temperature (K) | 233 |
| Discovery date | 1877 (A. Hall) |

Gas giants/Dog



Iapetus

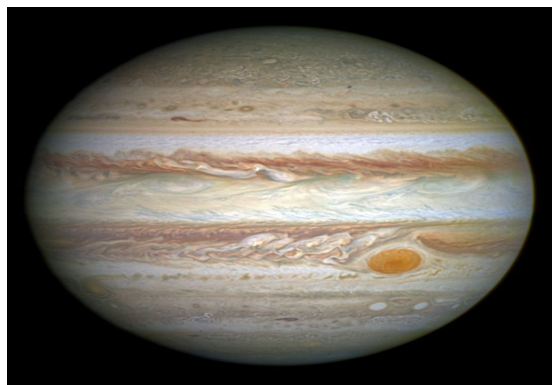
Moon of Saturn

Best known for its dramatic two-tone coloration.

Its equatorial ridge (20km high) give Iapetus a walnut-like appearance.

| | |
|------------------------------|------------------------|
| Albedo | 0.05-0.5 |
| Radius (km) | 734.5 |
| Mass (kg) | 1.805×10^{21} |
| Density (g/cm ³) | 1.088 |
| Gravity (m/s ²) | 0.223 |
| Orbital period (days) | 79.321 |
| Orbital speed (km/s) | 3.26 |
| Temperature (K) | 90->130 |
| Discovery date | 1671 (G. Cassini) |

Gas giants/Mom



Jupiter

Gas giant

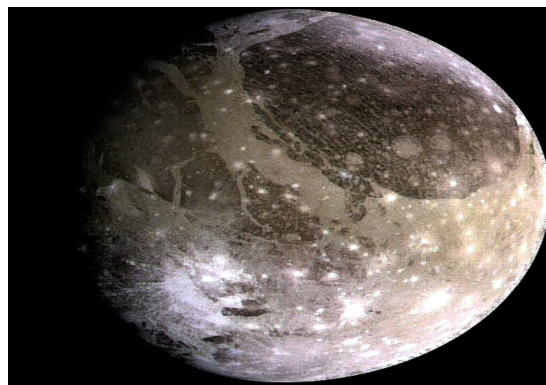
Primarily composed of hydrogen and some helium.

It lacks a well-defined solid surface

Jupiter has at least 67 moons.

| | |
|------------------------------|------------------------|
| Albedo | 0.52 |
| Radius (km) | 69,911 |
| Mass (kg) | 1.899×10^{27} |
| Density (g/cm ³) | 1.326 |
| Gravity (m/s ²) | 24.79 |
| Orbital period (days) | 4,332.59 |
| Orbital speed (km/s) | 13.07 |
| Temperature (K) | 165 |
| Discovery date | 800 BC (Babylon) |

Gas giants/Cat



Ganymede

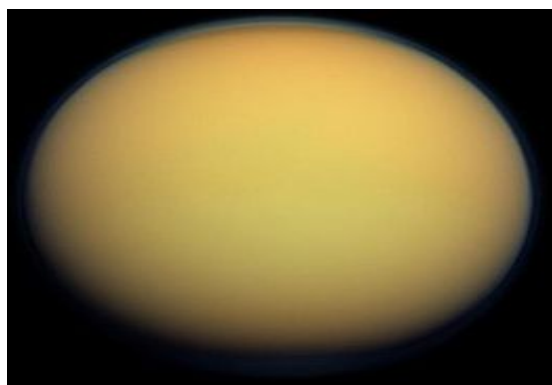
Moon of Jupiter

The most massive planetary satellite.

It is the only moon known to have a magnetosphere.

| | |
|------------------------------|------------------------|
| Albedo | 0.43 |
| Radius (km) | 2634.1 |
| Mass (kg) | 1.481×10^{23} |
| Density (g/cm ³) | 1.936 |
| Gravity (m/s ²) | 1.428 |
| Orbital period (days) | 7.155 |
| Orbital speed (km/s) | 10.880 |
| Temperature (K) | 110 |
| Discovery date | 1610 (G. Galileo) |

Gas giants/Dad



Titan

Moon of Saturn

The only satellite known to have a dense atmosphere.

Primarily composed of water ice and rocky material.

Its surface can rise by up to 10 metres during each orbit

| | |
|------------------------------|------------------------|
| Albedo | 0.22 |
| Radius (km) | 2,576 |
| Mass (kg) | 1.345×10^{23} |
| Density (g/cm ³) | 1.8780 |
| Gravity (m/s ²) | 1.354 |
| Orbital period (days) | 15.945 |
| Orbital speed (km/s) | 5.57 |
| Temperature (K) | 93.7 |
| Discovery date | 1655 (Ch. Huygens) |

Gas giants/Daughter



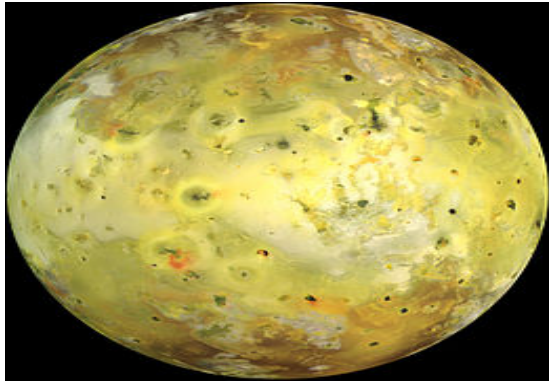
Callisto

Moon of Jupiter

Its surface is the oldest and most heavily cratered in the Solar System. The likely presence of an ocean leaves open the possibility that Callisto could harbor life.

| | |
|------------------------------|------------------------|
| Albedo | 0.22 |
| Radius (km) | 2,410.3 |
| Mass (kg) | 1.075×10^{23} |
| Density (g/cm ³) | 1.8344 |
| Gravity (m/s ²) | 1.236 |
| Orbital period (days) | 16.689 |
| Orbital speed (km/s) | 8.204 |
| Temperature (K) | 134 |
| Discovery date | 1610 (G. Galileo) |

Gas giants/Son



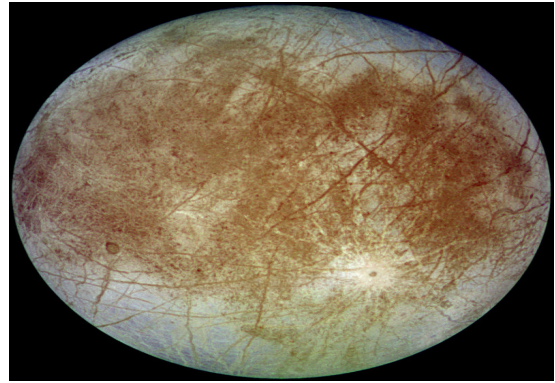
Io

Moon of Jupiter

*The driest known object in the Solar System
With over 400 active volcanoes, Io is the most geologically active object in the Solar System*

| | |
|------------------------------|-----------------------|
| Albedo | 0.63 |
| Radius (km) | 1,821.6 |
| Mass (kg) | 89.3×10^{22} |
| Density (g/cm ³) | 3.528 |
| Gravity (m/s ²) | 1.797 |
| Orbital period (days) | 1.769 |
| Orbital speed (km/s) | 17.334 |
| Temperature (K) | 110 |
| Discovery date | 1610 (G. Galileo) |

Gas giants/Bird



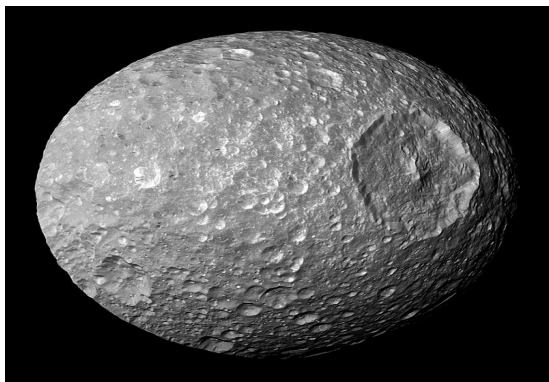
Europa

Moon of Jupiter

*Exploration of Europa began in 1973 (Pioneer).
It has the smoothest surface of any known solid object in the Solar System.*

| | |
|------------------------------|------------------------|
| Albedo | 0.67 |
| Radius (km) | 1560.8 |
| Mass (kg) | 4.799×10^{22} |
| Density (g/cm ³) | 3.013 |
| Gravity (m/s ²) | 1.316 |
| Orbital period (days) | 3.551 |
| Orbital speed (km/s) | 13.740 |
| Temperature (K) | 102 |
| Discovery date | 1610 (G. Galileo) |

Gas giants 2/Son



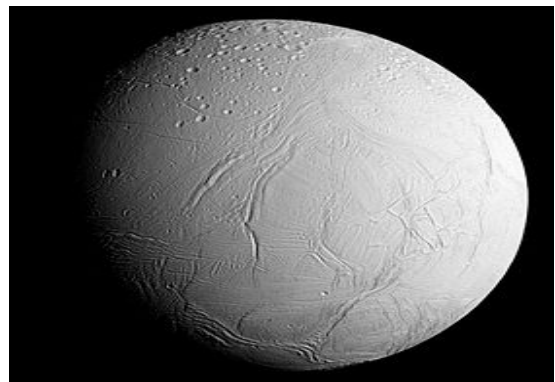
Mimas

Moon of Saturn

*The smallest astronomical body that is known to be rounded in shape because of self-gravitation.
From certain angles, Mimas resembles the Death Star.*

| | |
|------------------------------|------------------------|
| Albedo | 0.962 |
| Radius (km) | 198.2 |
| Mass (kg) | 3.749×10^{19} |
| Density (g/cm ³) | 1.148 |
| Gravity (m/s ²) | 0.064 |
| Orbital period (days) | 0.942 |
| Orbital speed (km/s) | 14.28 |
| Temperature (K) | 64 |
| Discovery date | 1789 (W. Herschel) |

Gas giants 2/Bird



Enceladus

Moon of Saturn

*Enceladus is geologically active today.
Enceladus is the primary source for Saturn's E Ring.
It is losing mass at a rate of 200 kg/second.*

| | |
|------------------------------|------------------------|
| Albedo | 1.375 |
| Radius (km) | 252.1 |
| Mass (kg) | 1.080×10^{20} |
| Density (g/cm ³) | 1.609 |
| Gravity (m/s ²) | 0.113 |
| Orbital period (days) | 1.370 |
| Orbital speed (km/s) | 12.6 |
| Temperature (K) | 75 |
| Discovery date | 1789 (W. Herschel) |

Gas giants 2/Cat



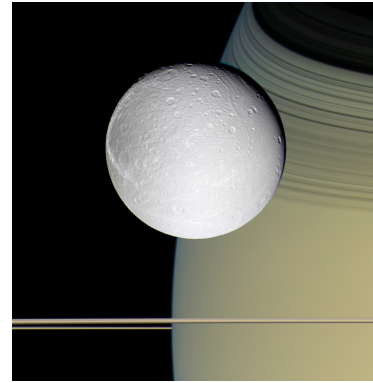
Tethys

Moon of Saturn

Its surface is one of the most reflective in the Solar System. Its extremely water-ice-rich composition remains unexplained.

| | |
|------------------------------|------------------------|
| Albedo | 1.229 |
| Radius (km) | 531.1 |
| Mass (kg) | 6.174×10^{20} |
| Density (g/cm ³) | 0.984 |
| Gravity (m/s ²) | 0.146 |
| Orbital period (days) | 1.887 |
| Orbital speed (km/s) | 11.35 |
| Temperature (K) | 86 |
| Discovery date | 1684 (G. Cassini) |

Gas giants 2/Daughter



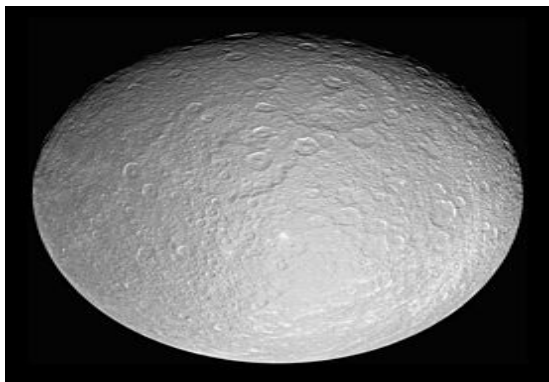
Dione

Moon of Saturn

Originally named Sidera Lodoicea by its discoverer Giovanni Cassini to honor king Louis XIV. Dione has two co-orbital, or trojan, moons.

| | |
|------------------------------|------------------------|
| Albedo | 0.998 |
| Radius (km) | 561.4 |
| Mass (kg) | 1.095×10^{21} |
| Density (g/cm ³) | 1.478 |
| Gravity (m/s ²) | 0.232 |
| Orbital period (days) | 2.737 |
| Orbital speed (km/s) | 10.027 |
| Temperature (K) | 87 |
| Discovery date | 1684 (G. Cassini) |

Gas giants 2/Dad



Rhea

Moon of Saturn

Rhea has a rather typical heavily cratered surface. In 2010, NASA announced the discovery of an atmosphere, an exosphere composed of oxygen and carbon dioxide.

| | |
|------------------------------|------------------------|
| Albedo | 0.949 |
| Radius (km) | 763.8 |
| Mass (kg) | 2.307×10^{21} |
| Density (g/cm ³) | 1.236 |
| Gravity (m/s ²) | 0.264 |
| Orbital period (days) | 4.518 |
| Orbital speed (km/s) | 8.48 |
| Temperature (K) | 53->99 |
| Discovery date | 1672 (G. Cassini) |

Gas giants 2/Dog



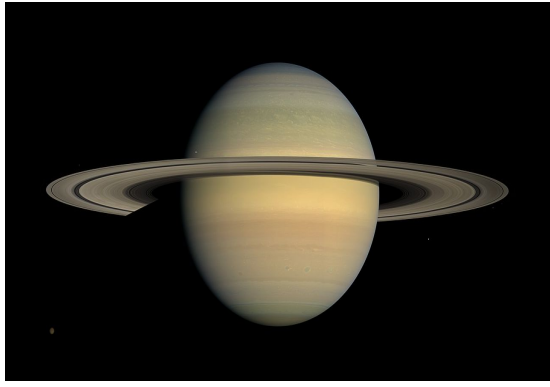
Phoebe

Moon of Saturn

It was the first satellite to be discovered photographically.

| | |
|------------------------------|------------------------|
| Albedo | 0.06 |
| Radius (km) | 106.5 |
| Mass (kg) | 8.292×10^{18} |
| Density (g/cm ³) | 1.638 |
| Gravity (m/s ²) | 0.038 |
| Orbital period (days) | 550.567 |
| Orbital speed (km/s) | -1.71 |
| Temperature (K) | 73 |
| Discovery date | 1899 (W. Pickering) |

Gas giants 2/Mom



Saturn

Gas giant

The ring system consists of 9 continuous main rings and 3 discontinuous arcs. The only planet of the Solar System that is less dense than water.

| | |
|------------------------------|------------------------|
| Albedo | 0.47 |
| Radius (km) | 58,232 |
| Mass (kg) | 5.683×10^{26} |
| Density (g/cm ³) | 0.687 |
| Gravity (m/s ²) | 10.445 |
| Orbital period (days) | 10,759.22 |
| Orbital speed (km/s) | 9.69 |
| Temperature (K) | 134 |
| Discovery date | 1200 BC (Babylon) |

Ice giants/Daughter



Oberon

Moon of Uranus

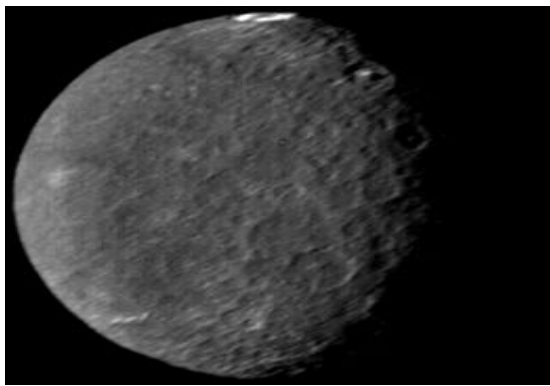
Oberon was discovered by William Herschel

Named after a character created by W. Shakespeare.

No mission to Oberon planned in the foreseeable future.

| | |
|------------------------------|------------------------|
| Albedo | 0.31 |
| Radius (km) | 761.4 |
| Mass (kg) | 3.014×10^{21} |
| Density (g/cm ³) | 1.63 |
| Gravity (m/s ²) | 0.346 |
| Orbital period (days) | 13.463 |
| Orbital speed (km/s) | 3.15 |
| Temperature (K) | 70-80 |
| Discovery date | 1787 (W. Herschel) |

Ice giants/Dad



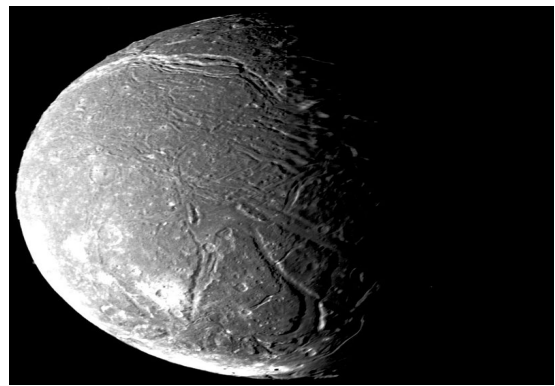
Umbriel

Moon of Uranus

Covered by numerous impact craters reaching 210 km in diameter. Since the Voyager 2 flyby (1986) no other spacecraft has ever visited Uranus or Umbriel.

| | |
|------------------------------|------------------------|
| Albedo | 0.26 |
| Radius (km) | 584.7 |
| Mass (kg) | 1.172×10^{21} |
| Density (g/cm ³) | 1.39 |
| Gravity (m/s ²) | 0.2 |
| Orbital period (days) | 4.144 |
| Orbital speed (km/s) | 4.67 |
| Temperature (K) | 75 |
| Discovery date | 1851 (W. Lassell) |

Ice giants/Dog



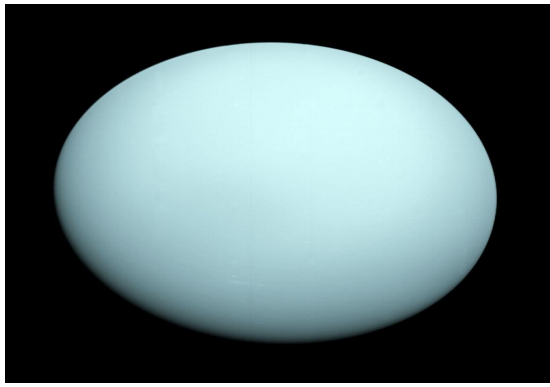
Ariel

moon of Uranus

Except for water, the only other compound identified on the surface of Ariel is carbon-dioxide (CO₂), concentrated mainly on its trailing hemisphere.

| | |
|------------------------------|------------------------|
| Albedo | 0.53 |
| Radius (km) | 578.9 |
| Mass (kg) | 1.353×10^{21} |
| Density (g/cm ³) | 1.592 |
| Gravity (m/s ²) | 0.269 |
| Orbital period (days) | 2.52 |
| Orbital speed (km/s) | 5.51 |
| Temperature (K) | -213 |
| Discovery date | 1851 (W. Lassell) |

Ice giants/Mom



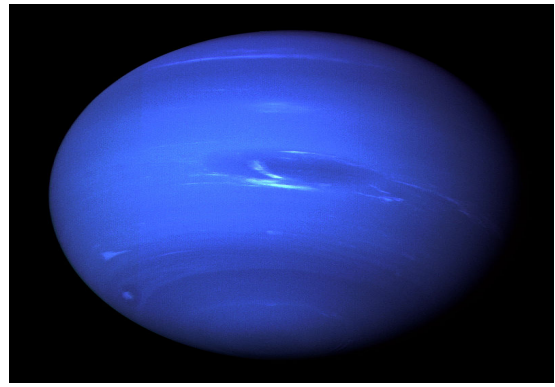
Uranus

Ice giant

*The interior of Uranus is composed of ices and rock.
Wind speeds can reach 250 m/s (900 km/h, 560 mph)
It is the first planet discovered with a telescope.*

| | |
|------------------------------|------------------------|
| Albedo | 0.51 |
| Radius (km) | 25,362 |
| Mass (kg) | 8.681×10^{25} |
| Density (g/cm ³) | 1.27 |
| Gravity (m/s ²) | 8.87 |
| Orbital period (days) | 30,688.5 |
| Orbital speed (km/s) | 6.80 |
| Temperature (K) | 76 |
| Discovery date | 1781 (W. Herschel) |

Ice giants/Son



Neptune

Ice giant

*Only planet in the Solar System found by mathematical prediction rather than by empirical observation.
Recorded wind speeds can be as high as 2100 km/s.*

| | |
|------------------------------|------------------------|
| Albedo | 0.41 |
| Radius (km) | 24,622 |
| Mass (kg) | 1.024×10^{26} |
| Density (g/cm ³) | 1.638 |
| Gravity (m/s ²) | 11.15 |
| Orbital period (days) | 60,182 |
| Orbital speed (km/s) | 5.43 |
| Temperature (K) | 72 |
| Discovery date | 1845 (U. Le Verrier) |

Ice giants/Bird



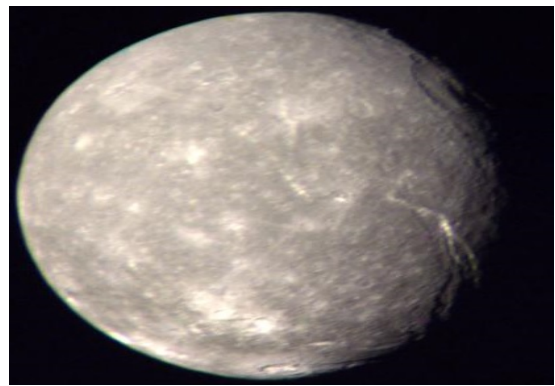
Triton

Moon of Neptune

*Only 40% of Triton's surface has been observed.
Triton's atmosphere has clouds of condensed nitrogen
that lie between 1 and 3 km from its surface.*

| | |
|------------------------------|-----------------------|
| Albedo | 0.76 |
| Radius (km) | 1,353.4 |
| Mass (kg) | 2.14×10^{22} |
| Density (g/cm ³) | 2.061 |
| Gravity (m/s ²) | 0.782 |
| Orbital period (days) | -5.876 |
| Orbital speed (km/s) | 4.39 |
| Temperature (K) | 38 |
| Discovery date | 1846 (W. Lassell) |

Ice giants/Cat



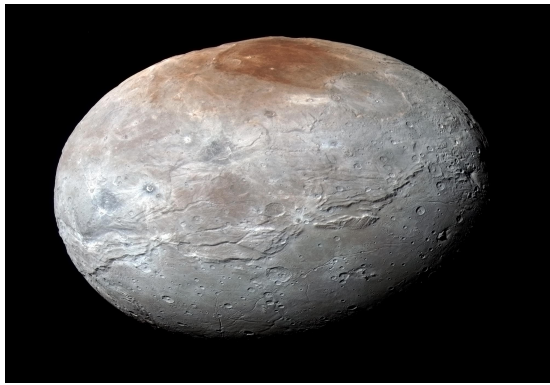
Titania

Moon of Uranus

*It is subject to an extreme seasonal cycle. Both northern
and southern poles spend 42 years in a complete
darkness, and another 42 years in continuous sunlight.*

| | |
|------------------------------|------------------------|
| Albedo | 0.35 |
| Radius (km) | 788.4 |
| Mass (kg) | 3.526×10^{21} |
| Density (g/cm ³) | 1.711 |
| Gravity (m/s ²) | 0.378 |
| Orbital period (days) | 8.706 |
| Orbital speed (km/s) | 3.64 |
| Temperature (K) | 70 |
| Discovery date | 1787 (W. Herschel) |

Dwarf planets/Son



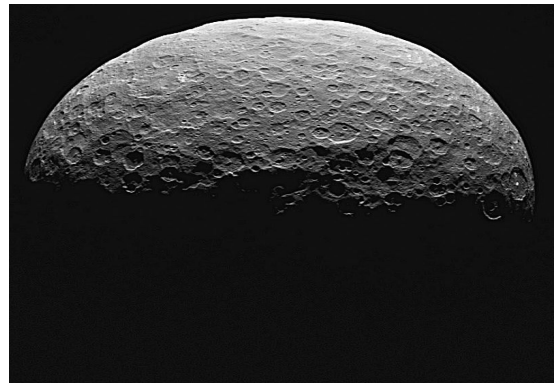
Charon

Moon of Pluto

*a very large moon in comparison to its parent body
Charon is the ferryman of the dead in Greek mythology.*

| | |
|------------------------------|------------------------|
| Albedo | 0.2-0.5 |
| Radius (km) | 606 |
| Mass (kg) | 1.586×10^{21} |
| Density (g/cm ³) | 1.707 |
| Gravity (m/s ²) | 0.288 |
| Orbital period (days) | 6.387 |
| Orbital speed (km/s) | 0.21 |
| Temperature (K) | 53 |
| Discovery date | 1978 (J. W. Christy) |

Dwarf planets/Cat



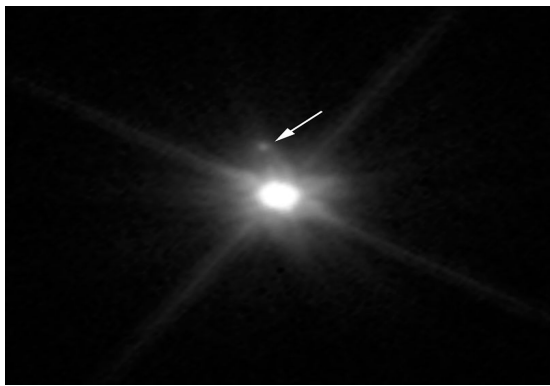
Ceres

Dwarf planet

Ceres is the only object in the asteroid belt known to be rounded by its own gravity. Ceres was the first asteroid discovered.

| | |
|------------------------------|------------------------|
| Albedo | 0.09 |
| Radius (km) | 473 |
| Mass (kg) | 9.393×10^{20} |
| Density (g/cm ³) | 2.161 |
| Gravity (m/s ²) | 0.28 |
| Orbital period (days) | 1678.6 |
| Orbital speed (km/s) | 17.882 |
| Temperature (K) | 168 |
| Discovery date | 1801 (G. Piazzi) |

Dwarf planets/Daughter



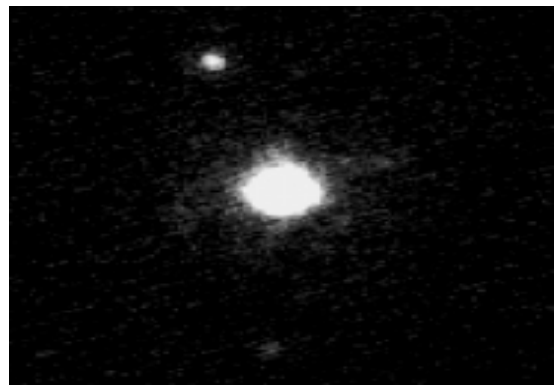
Makemake

Dwarf planet

*Perhaps the largest Kuiper belt object. Its surface is covered with methane, ethane and nitrogen ices
A mission to Makemake could take just over 16 years.*

| | |
|------------------------------|----------------------|
| Albedo | 0.81 |
| Radius (km) | 715 |
| Mass (kg) | 4.4×10^{21} |
| Density (g/cm ³) | 1.4 |
| Gravity (m/s ²) | 0.5 |
| Orbital period (days) | 112,897 |
| Orbital speed (km/s) | 4.419 |
| Temperature (K) | 40 |
| Discovery date | 2005 (Ch. Trujillo) |

Dwarf planets/Dad



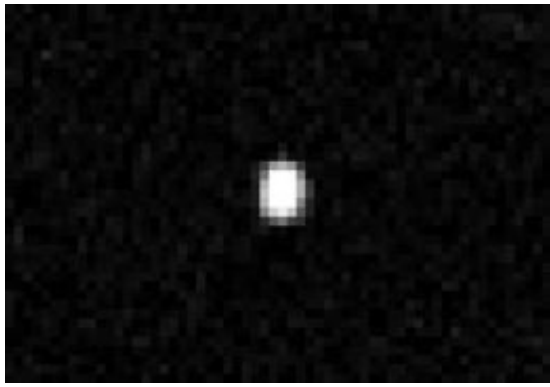
Haumea

Dwarf planet

Haumea is spinning so fast that if it spun much faster its equatorial bulges would distort into a dumbbell shape and split the planet in two.

| | |
|------------------------------|------------------------|
| Albedo | 0.804 |
| Radius (km) | 620 |
| Mass (kg) | 4.006×10^{21} |
| Density (g/cm ³) | 2.6 |
| Gravity (m/s ²) | 0.63 |
| Orbital period (days) | 103,774 |
| Orbital speed (km/s) | 4.531 |
| Temperature (K) | 50 |
| Discovery date | 2004 (M. E. brown) |

Dwarf planets/Dog



Quaoar

Kuiper belt dwarf-planet

Quaoar has one known satellite, Weywot. It was named after the Tongva creator deity. Quaoar is about as massive as Charon.

| | |
|------------------------------|----------------------|
| Albedo | 0.19 |
| Radius (km) | 380 |
| Mass (kg) | 1.4×10^{21} |
| Density (g/cm ³) | 2.2 |
| Gravity (m/s ²) | 0.24 |
| Orbital period (days) | 104,334 |
| Orbital speed (km/s) | 4.52 |
| Temperature (K) | 43 |
| Discovery date | 2002 (Ch. Trujillo) |

Dwarf planets/Mom



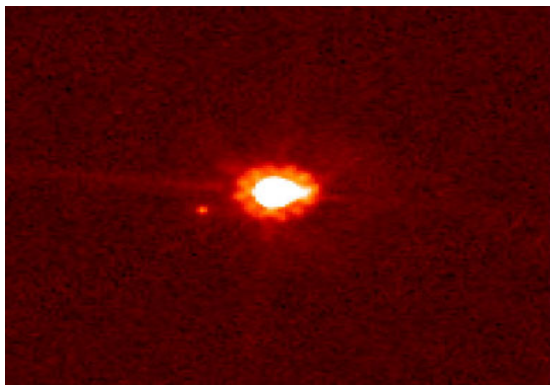
Pluto

Dwarf planet

Originally considered the ninth planet from the Sun. On July 14, 2015, the New Horizons spacecraft became the first spacecraft to fly by Pluto.

| | |
|------------------------------|-------------------------|
| Albedo | 0.44-0.61 |
| Radius (km) | 1,186 |
| Mass (kg) | 13.105×10^{22} |
| Density (g/cm ³) | 1.87 |
| Gravity (m/s ²) | 0.61 |
| Orbital period (days) | 90,581 |
| Orbital speed (km/s) | 4.67 |
| Temperature (K) | 44 |
| Discovery date | 1930 (C. Tombaugh) |

Dwarf planets/Bird



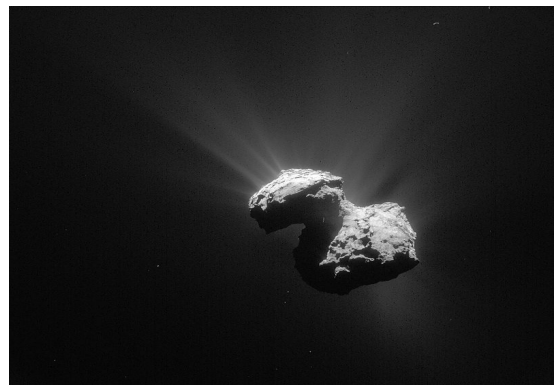
Eris

Dwarf planet

Because Eris appeared to be larger than Pluto, NASA initially described it as the Solar System's tenth planet. Since August 24, 2006, Eris is considered a dwarf planet.

| | |
|------------------------------|-----------------------|
| Albedo | 0.96 |
| Radius (km) | 1,163 |
| Mass (kg) | 1.66×10^{22} |
| Density (g/cm ³) | 2.52 |
| Gravity (m/s ²) | 0.659 |
| Orbital period (days) | 203,830 |
| Orbital speed (km/s) | 3.434 |
| Temperature (K) | 42.5 |
| Discovery date | 2005 (M. E. Brown) |

Others/Son



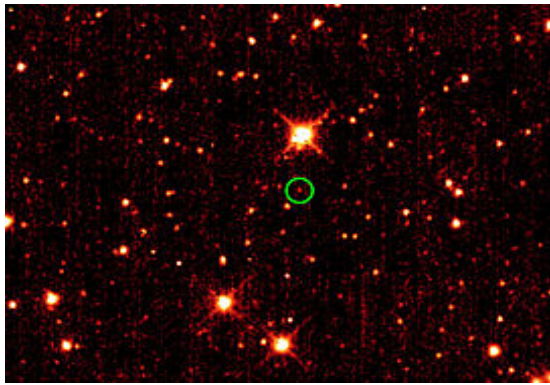
Churyumov-Gerasimenko

Jupiter-family comet

It was the destination of the Rosetta mission, launched in 2004. On 12 November 2014 Philae probe landed on the comet.

| | |
|------------------------------|-----------------------|
| Albedo | 0.06 |
| Radius (km) | 4.3 |
| Mass (kg) | 1.0×10^{13} |
| Density (g/cm ³) | 0.533 |
| Gravity (m/s ²) | 0 |
| Orbital period (days) | 2351 |
| Orbital speed (km/s) | 38 |
| Temperature (K) | 180 |
| Discovery date | 1969 (S. Gerasimenko) |

Others/Bird



2010 TK7

Asteroid

*The first Earth trojan discovered
50 more distant from Earth than the Moon.*

| | |
|------------------------------|-------------|
| Albedo | 0.1 |
| Radius (km) | 0.3 |
| Mass (kg) | Unknown |
| Density (g/cm ³) | Unknown |
| Gravity (m/s ²) | 0.0005 |
| Orbital period (days) | 365.1 |
| Orbital speed (km/s) | 9.1 |
| Temperature (K) | Unkown |
| Discovery date | 2010 (WISE) |

Others/Cat



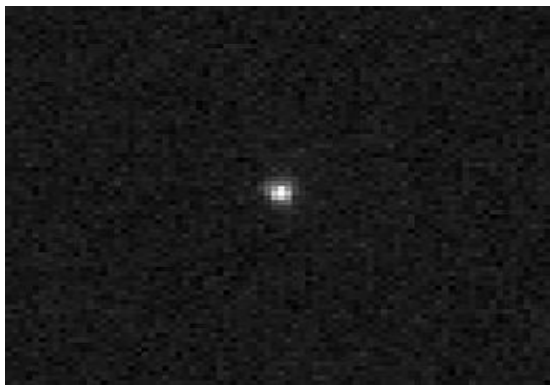
(225088) 2007 OR10

Trans-neptunian object

*Largest known body in the Solar System without a name.
2007 OR10 is among the reddest objects known.*

| | |
|------------------------------|----------------------|
| Albedo | 0.089 |
| Radius (km) | 750 |
| Mass (kg) | 1.3×10^{21} |
| Density (g/cm ³) | Unknown |
| Gravity (m/s ²) | Unknown |
| Orbital period (days) | 199,978 |
| Orbital speed (km/s) | Unknown |
| Temperature (K) | 31 |
| Discovery date | 2007 (D. Rabinowicz) |

Others/Daughter

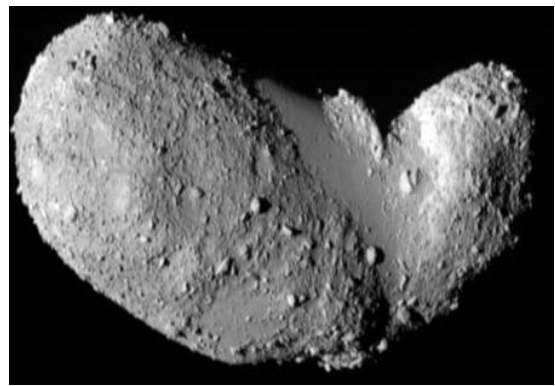


Sedna

Scattered object

| | |
|------------------------------|----------------------|
| Albedo | 0.32 |
| Radius (km) | 480 |
| Mass (kg) | Unknown |
| Density (g/cm ³) | Unknown |
| Gravity (m/s ²) | Unknown |
| Orbital period (days) | 4,162,140 |
| Orbital speed (km/s) | 1.04 |
| Temperature (K) | 12 |
| Discovery date | 2003 (D. Rabinowicz) |

Others/Dad



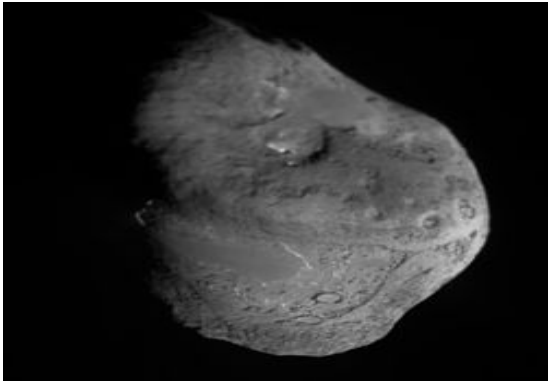
25143 Itokawa

Apollo and Mars-crosser asteroid

The 1st asteroid to be the target of a sample return mission. On 25 November 2005, Hayabusa mission landed on the asteroid and returned a sample to Earth.

| | |
|------------------------------|-----------------------|
| Albedo | 0.53 |
| Radius (km) | 0.5 |
| Mass (kg) | 3.51×10^{10} |
| Density (g/cm ³) | 2.9 |
| Gravity (m/s ²) | 0.00001 |
| Orbital period (days) | 556.355 |
| Orbital speed (km/s) | Unknown |
| Temperature (K) | 206 |
| Discovery date | 1998 (LINEAR) |

Others/Dog



Tempel 1

Periodic Jupiter-family comet

In 2005, Tempel 1 was deliberately struck by one component of the NASA Deep Impact Probe. This was the first landing on a comet.

| | |
|------------------------------|----------------------|
| Albedo | 0.04 |
| Radius (km) | 3.8 |
| Mass (kg) | 7.2×10^{13} |
| Density (g/cm ³) | 0.62 |
| Gravity (m/s ²) | Unknown |
| Orbital period (days) | 2016.85 |
| Orbital speed (km/s) | Unknown |
| Temperature (K) | Unknown |
| Discovery date | 1867 (W. Tempel) |

Others/Mom



Sun

Its mass accounts for about 99.86% of the total mass of the Solar System. The Sun is roughly middle aged and has not changed dramatically for over four billion years.

| | |
|------------------------------|------------------------|
| Albedo | NA |
| Radius (km) | 696,342 |
| Mass (kg) | 1.988×10^{30} |
| Density (g/cm ³) | 1.408 |
| Gravity (m/s ²) | 274.0 |
| Orbital period (days) | NA |
| Orbital speed (km/s) | 251 |
| Temperature (K) | 1,000,000 |
| Discovery date | NA |

