



LAFAYETTE SCIENCE MUSEUM

MOONS OF OUR SOLAR SYSTEM

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Since there are over 150 known moons in our solar system, all have been given names or designations. The problem of naming is compounded when space pictures are analyzed and new moons are discovered (or on rare occasions when spacecraft images of small, distant moons are found to be imaging flaws, and a moon is removed from the list). This is a list of the planets' known moons, with their names or other designations. If a planet has more than one moon, they are listed from the moon closest to the planet to the moon farthest from the planet. Since the naming systems overlap, many moons have more than one designation; in each case, the first identification listed is the official one.

MERCURY and **VENUS** have no known moons.

EARTH has one known moon. It has no official name.

MARS has two known moons: Phobos and Deimos.

ASTEROIDS (*Small moons have now been found around several asteroids. In addition, a growing number of asteroids are now known to be binary, meaning two asteroids of about the same size orbiting each other. Whether there is a fundamental difference in these situations is uncertain.*)

JUPITER has 69 known moons. Names such as "S/2003 J2" are provisional.

Metis (XVI), Adrastea (XV), Amalthea (V), Thebe (XIV), Io (I), Europa (II), Ganymede (III), Callisto (IV), Themisto (XVIII), Leda (XIII), Himalia (Hestia or VI), Lysithea (Demeter or X), Elara (Hera or VII), S/2000 J11, Carpo (XLVI), S/2003 J3, S/2003 J12, Euporie (XXXIV), S/2011 J1, S/2010 J2, S/2003 J18, S/2016 J1, Orthosie (XXXV), Euanthe (XXXIII), Thyone (XXIX), S/2003 J16, Mneme (XL), Harpalyke (XXII), Hermippe (XXX), Praxidike (XXVII), Thelxinoe (XLII), Helike (XLV), Iocaste (XXIV), Ananke (Adrastea or XII), S/2003 J15, S/2003 J9, S/2003 J19, Eurydome (XXXII), Arche (XLIII), Autonoe (XXVIII), Pasithee (XXXVIII), Herse (L), Chaldene (XXI), Kale (XXXVII), Isonoe (XXVI), Aitne (XXXI), S/2003 J4, Erinome (XXV), S/2010 J1, Taygete (XX), Carme (Pan or XI), S/2011 J2, Sponde (XXXVI), S/2017 J1, Kalyke (XXIII), Pasiphae (Poseidon or VIII), Eukelade (XLVII), Megaclite (XIX), Sinope (Hades or IX), Hegemone (XXXIX), Aoede (XLI), Kallichore (XLIV), S/2003 J23, S/2003 J5, Callirrhoe (XVII), S/2003 J10, Cyllene (XLVIII), Kore (XLIX), S/2003 J2.

SATURN has 62 known moons. Names such as "S/2004 S16" are provisional.

S/2009 S1; Pan (XVIII), Daphnis (XXXV); Atlas (XV); Prometheus (XVI); Pandora (XVII); Epimetheus (XI); Janus (X); S/2008 S1; Mimas (I); Methone (XXXII); S/2007 S4; Pallene (XXXIII); Enceladus (II); Telesto (XIII – co-orbits with Tethys), Tethys (III), Calypso (XIV – co-orbits with Tethys); Dione (IV); Helene (XII – co-orbits with Dione); Polydeuces (XXXIV – co-orbits with Dione); Rhea (V); Titan (VI); Hyperion (VII); Iapetus (VIII); Kiviuq (XXIV); Ijiraq (XXII); Phoebe (IX); Paaliaq (XX); Skathi (XXVII); Albiorix (XXVI); S/2007 S2; Bebhion (XXXVII); Erriapo (XXVIII); Siarnaq (XXIX); Skoll (XLVII); S/2007 S1; Tarvos (XXI); S/2006 S4; Hyrokken (XLIV); S/2004 S13; S/2004 S17; S/2006 S6; Mundilfari (XXV); S/2006 S1; Narvi (XXXI); Bergelmir (XXXVIII); Suttungr (XXIII); S/2004 S12; S/2004 S7; Hati (XLIII); Bestla (XXXIX); Farbauti (XL); Thrymr (XXX); S/2007 S3; Aegir (XXXVI); S/2006 S3; Kari (XLV); Fenrir (XLI); Surtur (XLVIII); Ymir (XIX); Loge (XLVI); and Fornjot (XLII).

URANUS has 27 known moons.

Cordelia (VI), Ophelia (VII), Bianca (VIII), Cressida (IX), Desdemona (X), Juliet (XI), Portia (XII), Rosalind (XIII), Cupid (XXVII), Belinda (XIV), Perdita (XXV), Puck (XV), Mab (XXVI), Miranda (V), Ariel (I), Umbriel (II), Titania (III), Oberon (IV), Francisco (XXII), Caliban (XVI), Stephano (XX), Trinculo (XXI), Sycorax (XVII), Margaret (XXIII), Prospero (XXI), Setebos (IXX), and Ferdinand (XXIV).

NEPTUNE has 14 known moons. Names such as S/2002 N1 are provisional.

Naiad (III), Thalassa (IV), Despina (V), Galatea (VI), Larissa (VII), S/2004 N1, Proteus (VIII), Triton (I), Nereid (II), S/2002 N1, S/2002 N2, S/2002 N3, Psamathe (X), and S/2002 N4.

KUIPER BELT OBJECTS (*The Kuiper Belt is a vast region beyond the orbit of Neptune containing asteroid-sized rocky and icy objects. **Pluto** is now considered to be a "dwarf planet" and one of the largest known members of the Kuiper Belt (at least one Kuiper Belt Object (KBO) is more massive than Pluto, and there may be more). Moons have now been found orbiting over a dozen KBOs, and some KBOs have more than one moon (Pluto, for instance, has five known moons). As with asteroids, it is difficult to tell whether these objects should be considered as moons or as components of binary or multiple objects. Whether there is a fundamental difference in these situations is uncertain.*)