

THE STAR DIAGONAL

THE JOURNAL OF THE OGDEN ASTRONOMICAL SOCIETY

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Meeting Announcement

This month's meeting will be held on June 12th at the Ott Planetarium at 7:30. The topic of the meeting is not yet confirmed.

OAS Minutes, May 2008

The monthly meeting of the Ogden Astronomical Society was held at the Ott Planetarium on the campus of Weber State University on May 8, 2008. It was called to order by President Mike Klein at 7:30pm.

Announcements:

- We still have copies of the Star Diagonals available on DVD. We also have OAS window stickers available. You can pick these up at meetings and most star parties.
- Thanks for all the support at the star parties last month.
- May 15 – Adams Elementary star party.
- June 7 – Antelope Island.
- June 26 – YW group at North Fork.
- July 25 – Wolf Creek star party.
- Kay Hargis still has a couple of Green Laser pointers for sale. They are \$35.

As many of us know from the news, Lee and Carol Priest had their house and RV destroyed by a fire. Mike went over and visited them. They are doing well. They plan to rent the house next door while they rebuild their house. They did have good insurance. Lee's 10" Dob was destroyed in the RV. His 16" was in his SUV and was not damaged. Many of the members present wanted to do a little something for the Priests. Donations were collected. Mike took the donations and purchased a Snack basket that Lee and Carol could enjoy. He also purchased a Laundry basket, some towels and some

hangers. He gave them the two gift baskets and about \$100 in cash that they could use as they see fit.

Mike checked with his insurance and found that most insurance companies treat telescopes as special equipment and don't cover them in a normal home-owners policy. The club should probably investigate purchasing some insurance for some of our equipment in case something like the fire happens and destroys one of our telescopes.

For the remainder of the meeting we have planned to watch a couple of videos from "My Favorite Universe". Dr. Sohl was present at the meeting and asked if he could take some of the meeting to tell us about "Project Harbor". Harbor ("High Altitude Reconnaissance Balloon for Outreach and Research") is a project that Weber State is doing that involves sending a 12 lb. payload to a high altitude using a balloon. For more information please see their website at <http://space.weber.edu/harbor/index.shtml>

Following Dr. Sohl's presentation, we watched the next video, Coming Attractions, from "My Favorite Universe".

The meeting then adjourned and some of the members met at Village Inn for some refreshments and further conversation.

David Dunn

Star Party Schedule

The proposed dates for the public star parties are as follows.

Jun. 7	Antelope Island
Jul. 19	Snowbasin

Aug. 16	Snowbasin
Aug. 23	Antelope Island
Sep. 6	Antelope Island
Sep. 13	Snowbasin
Oct. 4	Antelope Island

Requested Star Parties

Jun. 24	YW group at North Fork
July 2	Wolf Creek

Our Private Star Parties are as follows.

Jul. 30-Aug. 2	Monte Cristo
Aug. 27-30	Monte Cristo
Oct. 24-25	Messier Marathon (TBD)

Thanks from the Priest family

As many of you know, we lost our house, motor home, and my car to a fire on May 12th. Carol and I would like to thank everyone that helped us; your kindness and support are greatly appreciated. It is really great to have such good friends be there for us when we needed help.

We are getting things back a little closer to normal; we are renting the house next door and starting to replace some things we lost. Insurance will cover the cost to rebuild the house, which should start in the next few weeks. I lost my 10" Discovery telescope, it was in the motor home but my 16" and my eye peace case survived.

Thanks again,

Lee and Carol Priest

Nominating Committee

It is time for us to begin gathering a Nominating Committee for our September elections. Those interested in serving on the committee, please contact Mike Klein. .

Ceres (dwarf planet)

From Wikipedia, the free encyclopedia

Ceres (pronounced /sɪˈrɪrɪz/^[14] or as **Latin**: *Cerēs*), also designated **1 Ceres** (see *minor planet names*), is the smallest identified **dwarf planet** in the **Solar System** and the only one in the **asteroid belt**. It was discovered on **January 1, 1801**, by **Giuseppe Piazzi**,^[15] and is named after the **Roman goddess Ceres**—the goddess of growing plants, the harvest, and of motherly love.

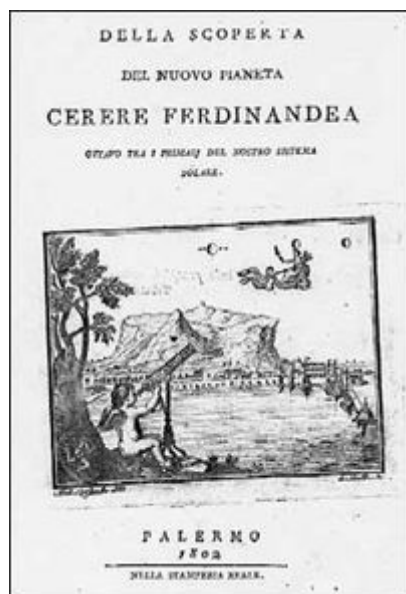
With a diameter of about 950 km, Ceres is by far the **largest** and most massive body in the **asteroid belt**, and contains approximately a third of the belt's total mass.^[16] Recent observations have revealed that it is spherical, unlike the irregular shapes of smaller bodies with lower **gravity**.^[8] The surface of Ceres is probably made of a mixture of water ice and various **hydrated minerals** like **carbonates** and **clays**.^[9] Ceres appears to be differentiated into a **rocky core** and ice **mantle**.^[3] It may harbour an **ocean** of liquid water, which makes it a target of current searches for **extraterrestrial life**.^[16] Ceres may be surrounded by a tenuous atmosphere containing water vapour.^[17]


Ceres' **apparent magnitude** ranges from 6.7 to 9.3, hence at its brightest is still too dim to be seen with the naked eye.^[10] On **September 27, 2007**, **NASA** launched the **Dawn Mission** space probe to explore **Vesta** (2011-2012) and Ceres (2015).^[18]

Discovery

The idea that an unknown planet could exist between the orbits of **Mars** and **Jupiter** was first suggested by **Johann Elert Bode** in 1768.^[15] His considerations were based on the so called **Titius-Bode law**, a now-abandoned theory which had been proposed by **Johann Daniel Titius** in 1766.^{[19][15]} According to this law the semi-major axis of the planet should be near 2.8 **AU**.^[19] **William Herschel**'s discovery of **Uranus** in 1781^[15] increased faith in the law of Titius and Bode, and in 1800, twenty-four experienced astronomers combined their efforts and began a methodical search for the proposed planet.^{[15][19]} The group was headed by **Franz Xaver von Zach**, editor

of the *Monatliche Correspondenz*.. While they did not discover Ceres, they later found several large [asteroids](#).^[19]



 Piazzi's Book "*Della scoperta del nuovo pianeta Cerere Ferdinandea*" outlining the discovery of Ceres

Ceres was discovered on 1 January 1801, by [Giuseppe Piazzi](#), who was searching for a star listed by [Francis Wollaston](#) as Mayer 87 because it was not in [Mayer's](#) zodiacal catalogue in the position given.^[15] Instead of a star, Piazzi found a moving star-like object, which he first thought was a [comet](#).^[20] Piazzi observed Ceres a total of 24 times, the final time on [February 11](#), when illness interrupted his observations. He announced his discovery on [January 24, 1801](#) in letters to fellow astronomers, among them his compatriot [Barnaba Oriani](#) of [Milan](#). He reported it as a comet but "since its movement is so slow and rather uniform, it has occurred to me several times that it might be something better than a comet".^[15] In April, Piazzi sent his complete observations to Oriani, [Bode](#), and [Lalande](#) in [Paris](#). The information was published in the September 1801 issue of the *Monatliche Correspondenz*.^[20]

Soon after this, Ceres' apparent position had changed (mostly due to the Earth's orbital motion). It then appeared too close to the Sun's glare, so other astronomers could not confirm the observations of Piazzi until the end of the year. However after such a

long time it was difficult to predict its exact position. To recover Ceres [Carl Friedrich Gauss](#), then only 24 years old, developed an efficient method of orbit determination.^[20] In only a few weeks, he predicted its path, and sent his results to von Zach. On [December 31, 1801](#), von Zach and [Heinrich W. M. Olbers](#) found Ceres near the predicted position and thus recovered it.^[20]

Name

Piazzi originally suggested the name *Ceres Ferdinandea* (Italian, *Cerere Ferdinandea*) for this body, after both the mythological figure [Ceres](#) ([Roman goddess](#) of plants) and [King Ferdinand III of Sicily](#).^{[15][20]} "Ferdinandea" was not acceptable to other nations of the world and was thus dropped. Ceres was also called [Hera](#) for a short time in [Germany](#).^[21] In Greece, it is called [Δήμητρα](#) ([Demeter](#)), after the goddess Ceres' Greek equivalent; in English usage, Demeter is the name of an asteroid ([1108 Demeter](#)). Due to its uncommon usage, there is no consensus as to the proper adjectival form of the name, although the [nonce forms](#) *Cerian* and *Cerean*^[16] have been used in fiction. Grammatically, the form *Cererean* would be correct, derived from its [Latin genitive](#), *Cereris*.^[22] Ceres' [astronomical symbol](#) is a [sickle](#), (☾), similar to [Venus'](#) symbol (♀) which is the female gender symbol and Venus' hand mirror.^{[20][23]} The element [Cerium](#) was named after Ceres.^[24] The element [Palladium](#) was originally also named after Ceres, but the discoverer changed its name after Cerium was named. Palladium is named after asteroid [2 Pallas](#).^[25]

Status



 Ceres, the Moon and the Earth.

The classification of Ceres has changed more than once and has been the subject of some disagreement.

[Johann Elert Bode](#) believed Ceres to be the "missing planet" he had proposed to exist between [Mars](#) and [Jupiter](#), at a distance of 419 million km (2.8 [AU](#)) from the Sun.^[15] Ceres was assigned a planetary symbol, and [remained listed as a planet](#) in astronomy books and tables (along with [2 Pallas](#), [3 Juno](#) and [4 Vesta](#)) for about half a century until further asteroids were discovered.^{[15][20]}

However as other objects were discovered in the area it was realised that Ceres represented the first of a class of many similar bodies.^[15] Sir [William Herschel](#) coined in 1802 the term *asteroid* ("star-like") for such bodies,^[26] writing "they resemble small stars so much as hardly to be distinguished from them, even by very good telescopes".^[27] As the first such body to be discovered, it was given the designation 1 Ceres under the modern system of [asteroid numbering](#).^[26]

The 2006 debate surrounding [Pluto](#) and what constitutes a 'planet' led to Ceres being considered for reclassification as a planet.^{[28][29]} A proposal before the [International Astronomical Union](#) for the

[definition of a planet](#) would have defined a planet as "a celestial body that (a) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, and (b) is in orbit around a star, and is neither a star nor a satellite of a planet".^[30] Had this resolution been adopted, it would have made Ceres the fifth planet in order from the Sun.^[31] However, it was not accepted, and in its place an alternate definition of "planet" came into effect as of [August 24, 2006](#): A planet is "a celestial body that is in orbit around the sun, has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a ... nearly round shape, and has [cleared the neighborhood](#) around its orbit." By this definition, Ceres is not a planet (because it shares its orbit with the thousands of other asteroids in the [main asteroid belt](#)), and is now classified as a "[dwarf planet](#)" (along with Pluto and [Eris](#)). The issue of whether Ceres remains an asteroid was not addressed.^[32] Dual classifications such as [Main-belt comets](#) do exist, and being a dwarf planet does not preclude having dual designations.^[33]