

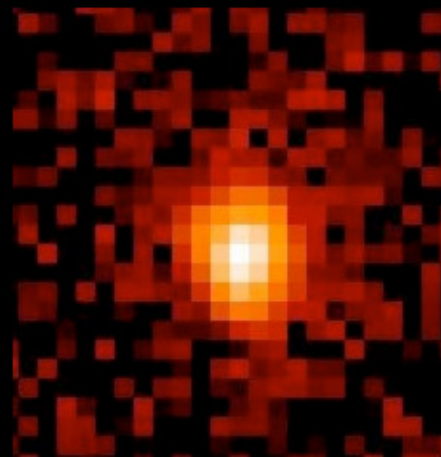
Welcome to a scale model of our solar system.

In the model, this circle shows the **relative size** of the Sun. The distances between panels show the **relative distances** between solar system objects. The panels for the Sun, Earth and other planets are located on the **Keele campus**. The object **Sedna** is so far from the Sun that it is located at Glendon in this scale model.

The false-color image to the right, our best photo of Sedna to date, was taken with the Hubble Space Telescope.

The next generation James Webb Space Telescope should provide a somewhat better photo, but Sedna is too far away to see much detail.

[French]



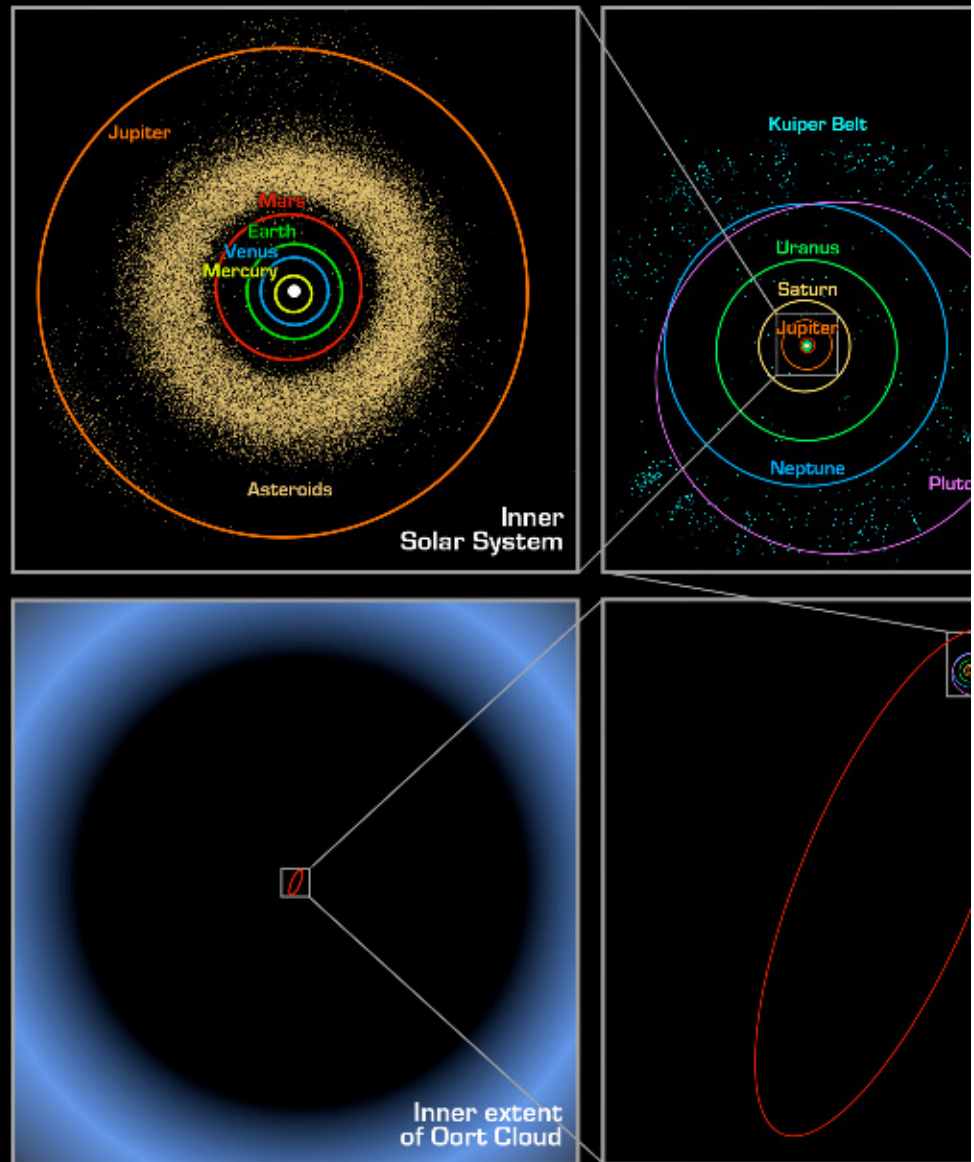
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Sedna

Sedna is a trans-Neptunian object discovered on November 14, 2003 by Michael Brown, Chad Trujillo and David Rabinowitz. It has a very elongated orbit, more like a comet than a planet, and takes over twelve thousand years just to orbit the Sun once. It is composed mostly of ices which for unknown reasons appear most as red as the surface of Mars. The temperature there gets warmer than -240 C (33 degrees above absolute zero) because it is the coldest, most distant place known in the solar system. Sedna was named after the Inuit goddess of the sea, who is thought to live at the bottom of the frigid arctic waters.

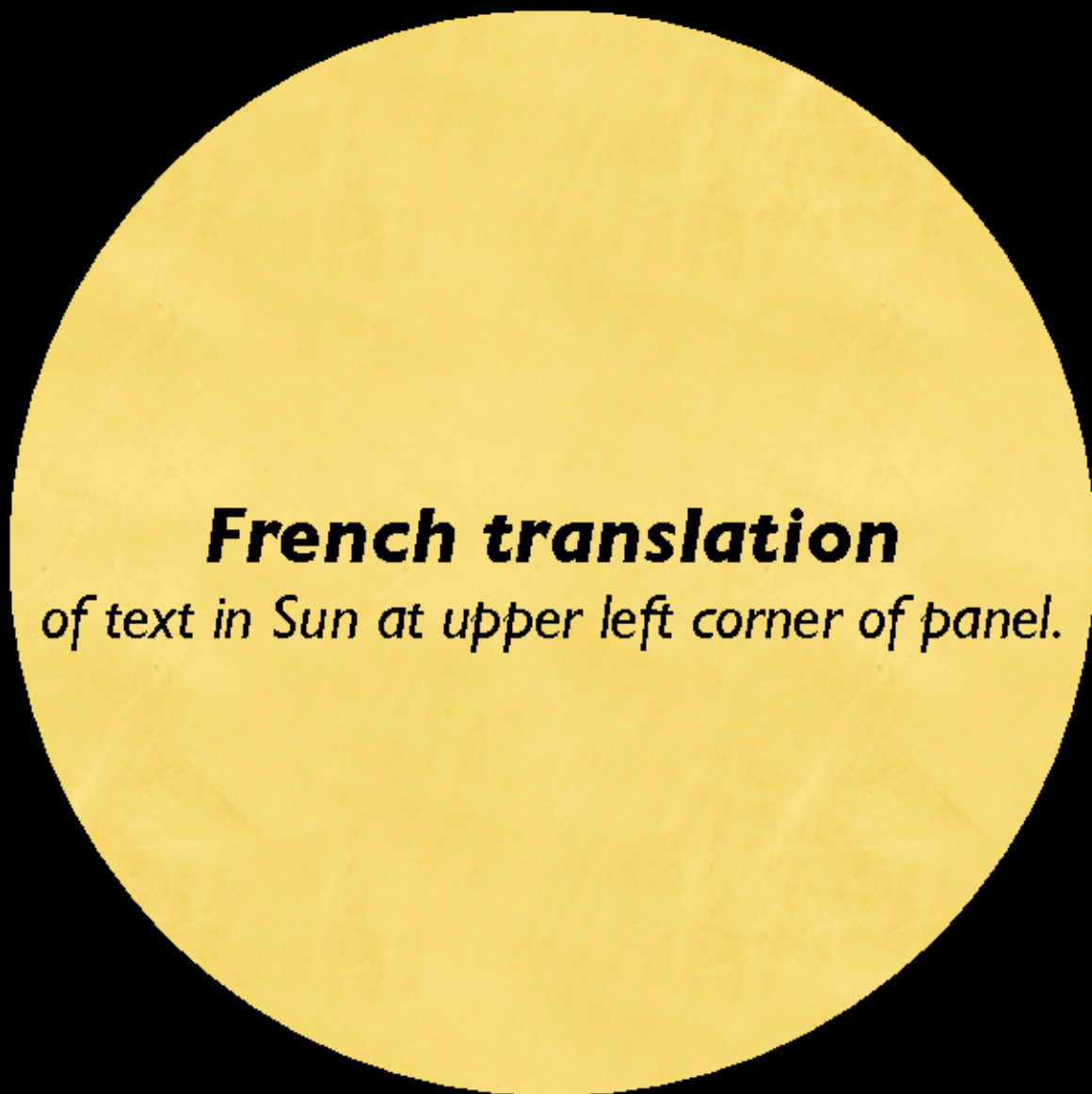
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The four panels above (moving clockwise) place Sedna in context. The first panel shows the inner solar system up to Jupiter. The second panel shows the Kuiper belt objects. The third panel shows Sedna's orbit, just shy of its closest approach to the Sun. The fourth panel shows the inner edge of the Oort cloud of cold, icy cometary bodies lying at the edge of the solar system.

(French)



clockwise from the upper left) repeatedly zoom out to panel shows the orbits of the inner planets and that Sedna lies beyond the orbits of Neptune and the panel shows Sedna's full orbit and its location in 2004, the Sun. The final panel shows that Sedna's elliptical the spherical, transparent Oort Cloud (a distribution at the limits of the Sun's gravitational influence).

1 Sednan day = 10.273 Earth hours
(French)

1 Sednan year = 12,059 Earth years
(French)

Comparaison de la taille de Sedna avec d'autres objets transneptunien

Largest known trans-Neptunian objects (TNOs)



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As seen in the figure at left, Sedna is the largest known trans-Neptunian. It is probably smaller than Pluto but larger than Pluto's largest moon Charon. Sedna may someday be classified as a dwarf planet.

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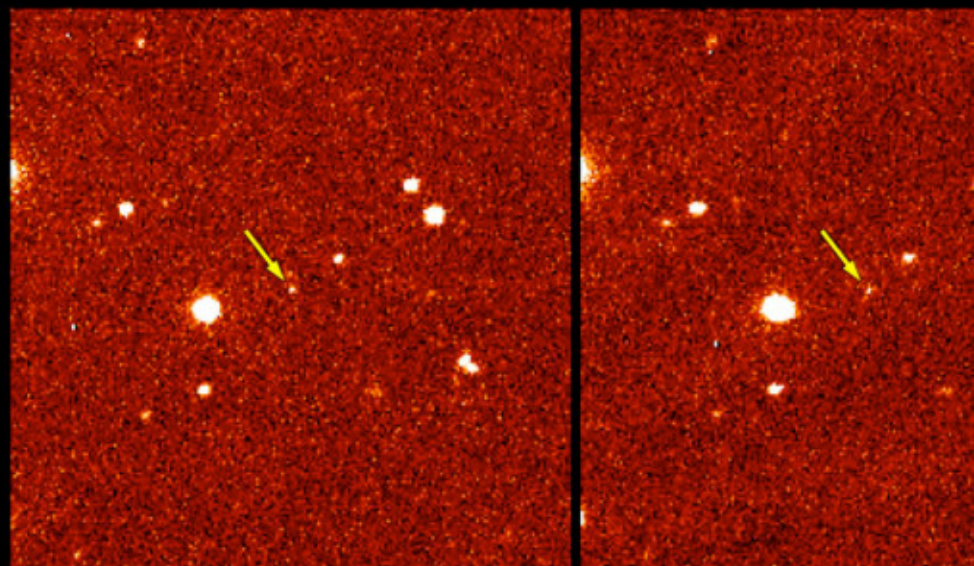
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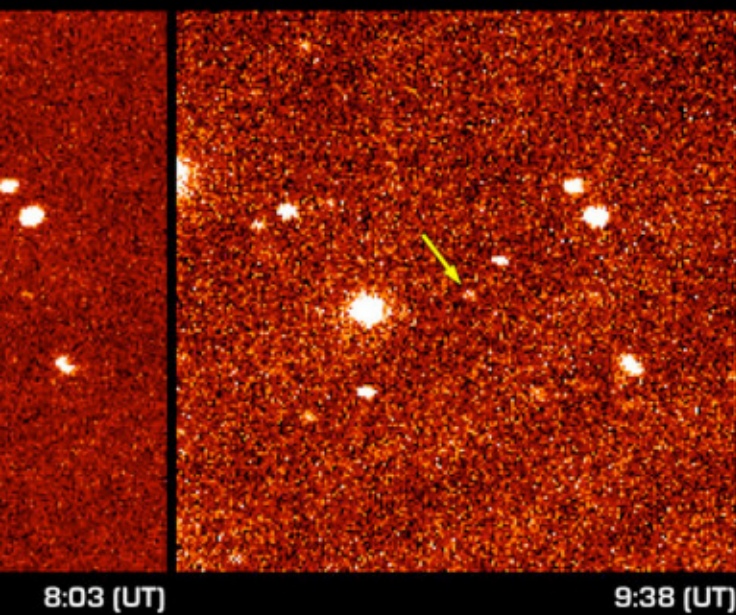
Discovery images of Sedna. Over
moved slowly with respect to
[French]



Nov. 14th, 2003

6:32 (UT)

three hours' time, Sedna
the background stars.



*Logos here,
if needed*