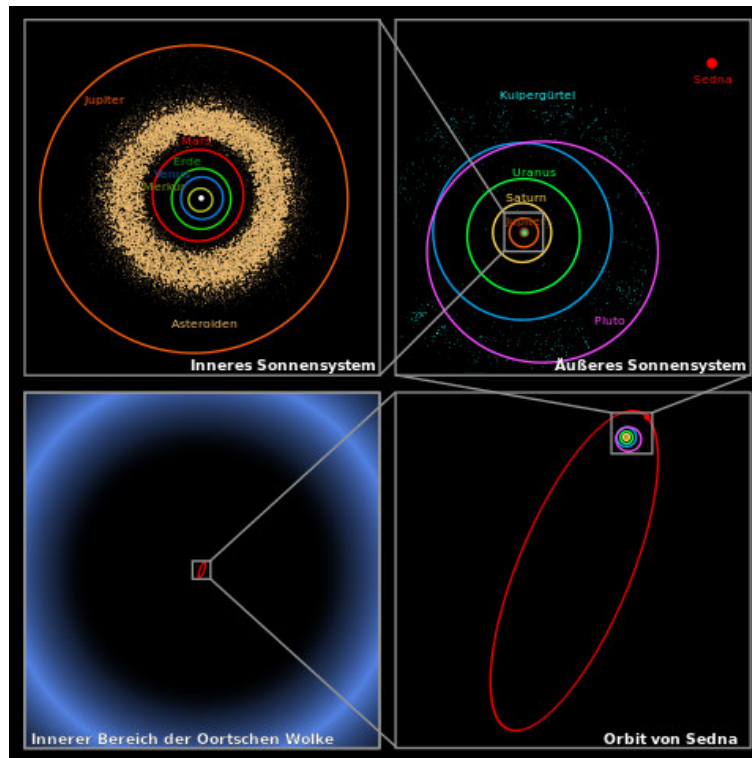


Oort Cloud



Picture: The presumed distance of the Oort cloud compared to the rest of the Solar System
Author: Image courtesy of NASA / JPL-Caltech / R. Hurt, Original text courtesy of NASA / JPL-Caltech, SVG conversion by Holek

https://en.wikipedia.org/wiki/Oort_cloud#/media/File:Oort_cloud_Sedna_orbit.svg

Oort's Cloud is a hypothetical assumption of a collection of astromic objects. It is said to be spherical in shape, with its objects orbiting the sun at a very large distance. The thesis for the existence of this cloud comes from the astronomers Jan Hendrik Oort and Ernst Öpik. Based on investigations of long-period comet orbits and their origin, which was not in the previously known solar system, the theory of comets settling in an orbit beyond the known orbits arose. It is estimated that the orbits of the objects in Oort's Cloud are about 1.5 light years (100,000 AU equals 13 trillion km) from the Sun. According to initial estimates, the cloud consists of 100 billion to 1 trillion objects. The gravitational influence of passing stars forced the objects of Oort's Cloud into their current orbits. However, they are still subject to the sun's gravitation. The objects consist of ice, rock and dust. According to the current view, they are partly remnants from the time of the formation of the solar system and its planets. Another source for the Oort cloud is assumed to be in interstellar space, from which the sun has captured objects thanks to its gravity. However, due to the influence of passing stars or the galactic tidal forces, objects could also be ejected from the cloud and then become long-period comets or even leave the solar system again. This would mean that there is an intensive exchange of smaller objects between the stars.

Direct detection of Oort's Cloud is currently not possible. The necessary observation equipment is still lacking. However, observations of long-period comets point to a possible single source, which could then be Oort's Cloud. Certainly, investigations in the coming years or decades will bring clarity about the Oort Cloud and its exist.

Link: https://en.wikipedia.org/wiki/Oort_cloud