



Size, Definition and Facts about the Milky Way Galaxy

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DESCRIPTION

Milky Way Galaxy is a massive spiral system that includes several hundred billion stars, one of which is the Sun. It takes its name from the Milky Way, the irregular luminous band of stars and gas clouds that stretches throughout the sky as visible from Earth. Although Earth lies well in the Milky Way Galaxy (sometimes simply known as the Galaxy), astronomers do not have as an whole understanding of its nature as they do of a few external star systems. A thick layer of interstellar dust obscures a lot of the Galaxy from scrutiny by optical telescopes, and astronomers can decide its massive-scale shape only with the aid of radio and infrared telescopes, which could detect the types of radiation that penetrate the obscuring matter.

Although most stars in the Galaxy exist either as single stars just like the Sun or as double stars, there are numerous conspicuous groups and clusters of stars that include tens to thousands of members. These objects can be subdivided into 3 types: globular clusters, open clusters, and stellar associations. They vary usually in age and in the number of member stars.

The biggest and most massive star clusters are the globular clusters, so-called because of their roughly spherical look. The Galaxy consists of more than a hundred and fifty globular clusters. They are organized in a nearly spherical halo around the Milky Way, with relatively few toward the galactic plane but heavy attention toward the center. The radial distribution, while plotted as a function of distance from the galactic center, fits a mathematical expression of a form the same as the one describing the star distribution in elliptical galaxies.

Globular clusters are extraordinarily luminous objects. They mean luminosity is equal to about 25,000 suns. The most luminous is

50 times brighter. The masses of globular clusters are measured *via* way of means of figuring out the dispersion in the velocities of individual stars, starting from a few thousand to greater than a million solar masses. The clusters are very massive, with diameters measuring from 10 to as much as three hundred light-years. Most globular clusters are incredibly focused at their centers, having stellar distributions that resemble isothermal gas spheres with a cutoff that corresponds to the tidal effects of the Galaxy. A specific model of star distribution within a cluster can be derived from stellar dynamics, which takes into consideration the types of orbits that stars have in the cluster, encounters between these member stars, and the effects of exterior influences.

A key distinguishing characteristic of globular clusters in the Galaxy is their uniformly old age. They are the oldest objects in the Galaxy and so must have been among the first formed. That this was the case is also indicated through the reality that the globular clusters tend to have much smaller quantities of heavy elements than do the stars in the plane of the Galaxy, e.g., the Sun.

Clusters smaller and less huge than the globular clusters are located in the plane of the Galaxy intermixed with the majority of the system's stars, such as the Sun. These objects are the open clusters, so known because they typically have an extra open, unfastened appearance than usual globular clusters.

Open clusters are disbursed in the the Galaxy very in addition to younger stars. They are incredibly focused along the plane of the Galaxy and slowly decrease in number outward from its center. The big-scale distribution of those clusters cannot be learned directly because of their existence in the milky way plane means that dust obscures those that are more than a few thousand light-years from the Sun.

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Received: 25-Feb-2022, Manuscript No. JAO-2022-16054; **Editor assigned:** 01-Mar-2022, Pre QC No. JAO-2022-16054 (PQ); **Reviewed:** 15-Mar-2022, QC No. JAO-2022-16054; **Revised:** 22-Mar-2022, Manuscript No. JAO-2022-16054 (R); **Published:** 29-Mar-2022, DOI: 10.35248/2332-2519.22.10.252.

Citation: Elsa A (2022) Size, Definition and Facts about the Milky Way. *Astrobiol Outreach*. 10:252.

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