## **RELEVANT THEORY**

## **Enigma**

The **orbital eccentricity** of an <u>astronomical object</u> is a parameter that determines the amount by which its <u>orbit</u> around another body deviates from a perfect <u>circle</u>. A value of 0 is a circular orbit, values between 0 and 1 form an <u>elliptic orbit</u>, 1 is a <u>parabolic escape orbit</u>, and greater than 1 is a <u>hyperbola</u>.

The **right ascension** symbol  $\alpha$ , (lower case "alpha", abbreviated RA) measures the angular distance of an object eastward along the <u>celestial equator</u> from the vernal <u>equinox</u> to the <u>hour circle</u> passing through the object.

The **declination** symbol  $\delta$ , (lower case "delta", abbreviated dec) measures the angular distance of an object perpendicular to the celestial equator, positive to the north, negative to the south.

The **perihelion** is the point in the <u>orbit</u> of a <u>planet</u>, <u>asteroid</u> or <u>comet</u> that is nearest to the <u>sun</u>.

The **aphelion** is the point in the <u>orbit</u> of an object where it is farthest from the <u>Sun</u>.

The **Galactic Center**, or **Galactic Centre**, is the rotational center of the Milky Way. It is  $8,122 \pm 31$  parsecs ( $26,490 \pm 100$  ly) away from Earth in the direction of the constellations Sagittarius, Ophiuchus, and Scorpius. It coincides with the compact radio source Sagittarius A\*.

Source: Internet