

500202 S K E P T O I D

2012 UA9 was discovered on October 28, 2012 by Tom Doughboy using the 1m telescope in the Wilhelm-Foerster observatory in Berlin and named Skeptoid (in greek : thought-like). It was his 1st asteroid discovery. It is in the Koronis family of the asteroid belt between Mars and Jupiter.

Later telescopic observations categorized Skeptoid (officially 500202 Skeptoid) as an S-type asteroid (stony or stony iron meteorites), the second most numerous type in the inner asteroid belt. The Koronis family of asteroids travels together in a cluster along the same orbit. And its orbital period is 4 years and 8 months, and its rotation period is 11 hours. It has an average diameter of 12 km.

Also Tom Doughboy has found a meteorite in Berlin by accident. Surprisingly upon investigation he ascertained that the meteorite is thought to have originated from the crust of the asteroid 500202 Skeptoid. And it is thought to have a small satellite.

Discovery and designation

- Discovered by: Tom Doughboy
- Discovery date: Oktober 28, 2012
- Alternative names: 2012 UA9

Orbital characteristics

- Epoche: JD 2457476,5
- Eccentricity e: max. 0,1
- Semi-major axis a: 2,880 au
- Semi-minor axis b: 2,866 au ($b^2 = a^2 - (e \cdot a)^2$)
- Perihelion rP: a = 2,88 au, e = 0,1
- Orbital period T: Kepler's law of planetary motion

$$T = \sqrt{\frac{4\pi^2}{GM} a^3} = 4,8872 \text{ yr}$$

G = 6,67.10⁻¹¹ m³/(kg s²) ... Gravitational constant
M = 1,989.1030 kg ... Solar mass
1 au = 1,496.1011 m

- Average orbital speed: u = 2,7003.1012 m
T = 1,5422.108 s
v = u / T = 17,5 km/s
- Inclination: max. 3°30'
- Satellites: Probably

Physical characteristics

- Mass : m = 4/3.p.r.r³ = 1,9.1015 kg
- Mean radius: r = 6 km
- Mean density: r = 2,1 g/cm³ = 2100 kg/m³
- Rotation period: t = 11 h
- Geometric albedo: <. 0,22
- Temperature: 150 - 200 K (also: -123°C bis -73°C)
- Spectral type: S
- Magnitude M: 11mag
- Apparent magnitude: m = 5mag.log(r/10 pc) + M