

## Dark Comets

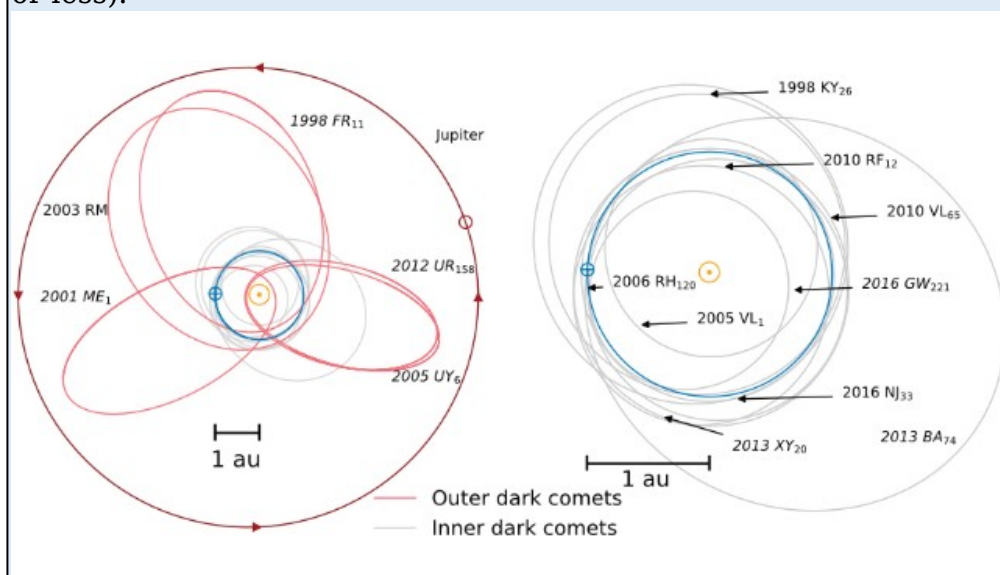
### Why in News?

The National Aeronautics and Space Administration (NASA) researchers are closely studying a new class of celestial objects known as “dark comets”.

- **Dark comets** - A celestial object that looks like an asteroid but moves through space like a comet.
- It appears as faint points of light in space, with no visible signs of gas or dust trails.
- **Discovered in** - The first indication of dark comets came in 2016.
- **Size** - They are *often small*, just a few metres to a few hundred metres wide.
- **Spin** - They often *spin quite rapidly* and disperse escaping gas and dust in all directions, making them less visible.
- **Composition/Age** - It result in weaker or no gas loss, as the materials that go into the tails.

### 2 Types of Dark Comets

- **Outer dark comets** - They have similar characteristics to Jupiter-family comets.
- They reside in the outer solar system and have highly eccentric (or elliptical) orbits and are on the larger side (100s of meters or more across).
- **Inner dark comets** - They reside in the inner solar system (includes Mercury, Venus, Earth, and Mars) travel in nearly circular orbits and are on the smaller side (10s of meters or less).



### Differences

Bright Comets	Dark Comets
Their brilliant tails form as sunlight vaporises their icy surfaces.	They are more elusive than their bright siblings.

They have the glowing tails.

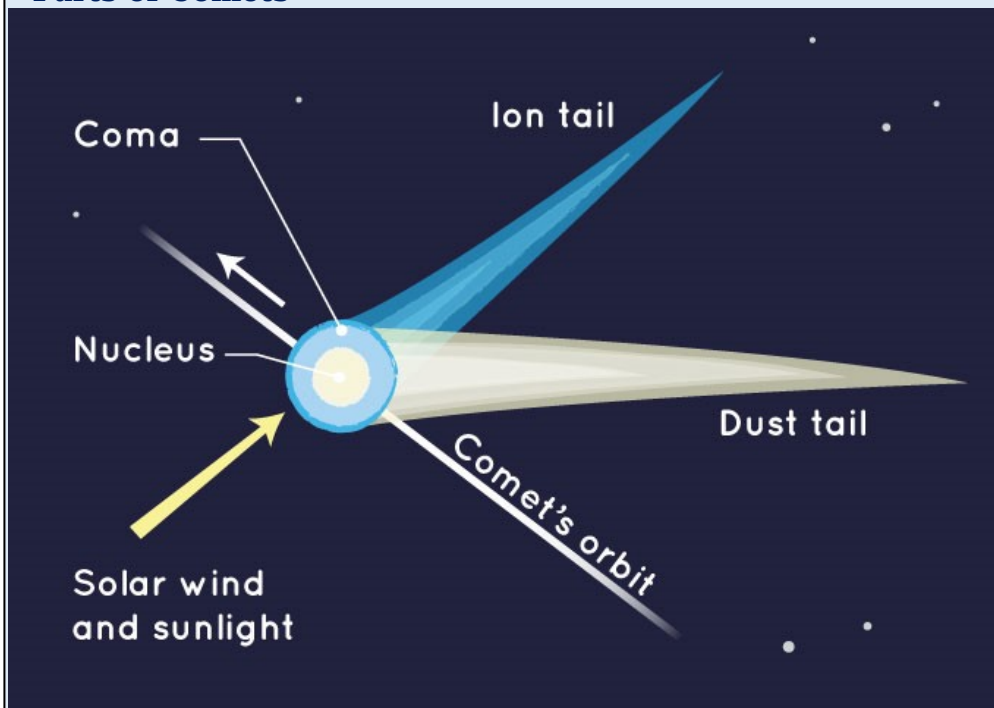
They lack the glowing tails instead resemble asteroids, appearing as a faint point of light against the vast darkness of space.

- **Oumuamua** - Oumuamua is a dark Comet racing toward the outskirts of our solar system in 2017. (*Oumuamua*, The Hawaiian word for scout).
- It is the first interstellar object to pass through our solar system.
- Its speed and path around the Sun don't match a typical asteroid.
- It has no bright tail or nucleus (icy core) normally associate with comets.

## Comets

- These are **large celestial objects made of rock, dust and ice** that orbit the Sun.
- These ancient objects are leftovers from the formation of the solar system 4.6 billion years ago.
- They are mostly found out in the solar system, which is described as "dirty snowballs".
- It is known for its **long-haired stars and streaming tails**.
- **2 Types:**
  - **Short-period comets** - It come from a wide disk beyond the orbit of Neptune called the *Kuiper Belt*.
  - It take less than 200 years to orbit the Sun.
  - **Long-period comets** - It comes from the *Oort Cloud* which is beyond the orbit of Kuiper Belt.
  - It takes more than 250,000 years to orbit the Sun.

### Parts of Comets



## References

1. [The Hindu| Dark Comets](#)
2. [NASA| Types of Dark Comets](#)
3. [NASA Space Place| Comets](#)



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