



Interstellar Comet 3I/ATLAS

[Source: TH](#)

The **NASA-funded ATLAS telescope** in Chile reported the discovery of interstellar comet **3I/ATLAS**, originating from the **constellation Sagittarius**.

3I/ATLAS Comet

- **Discovery & Trajectory:** It is the **third confirmed interstellar object** (denoted by 3I) after **1I/'Oumuamua(2017)** and [2I/Borisov \(2019\)](#).
 - It travels at a speed of **57-68 km/s** in a **hyperbolic orbit**, confirming its **interstellar origin**.
- **Origin and Age:** Likely **originated from the Milky Way's thick disk**, a region of **ancient stars**, making it **distinct from previous interstellar objects**.
 - Simulations using the **Ōtautahi-Oxford model** suggest a **70% probability** that it **predates the Solar System by over 3 billion years**, making it **possibly the oldest comet ever observed**, at over **7 billion years old**.
- **Physical & Chemical Properties:** Shows active **coma** and likely **tail**, with spectral evidence of **water ice and complex organics**.
 - Its estimated nucleus size is **10-30 km**, larger than earlier interstellar comets.
- **Significance:** **3I/ATLAS** is the **first ISO** traced to the **Milky Way's thick disk**, unlike earlier ISOs from the thin disk.
 - It offers rare insight into **primordial galactic material**, aiding study of **planet formation, organic chemistry**, and possibly **panspermia**.

What is a....?

Comet

A comet is a mass of ice, rock, and dust, and often has a tail that is made up of dust and other materials.



Asteroid

An asteroid is made up of metallic or non-metallic rocks, and orbits the sun. They can range in size from a few centimeters wide to almost a thousand kilometers across!



Meteoroid

Meteoroids are usually fragments of asteroids or comets, often smaller than 1 meter wide, that fly through space.



Meteor

A meteor is a meteoroid that enters Earth's atmosphere. It burns up as it travels through the atmosphere, producing a streak of light behind it.



Meteorite

If a meteor doesn't completely burn up in the Earth's atmosphere, the fragment found on Earth is called a meteorite.



Read More: [21/Borisov: An Interstellar Object](#)