



Asteroid 2024 YR4

[Source: TH](#)

The [National Aeronautics and Space Administration \(NASA\)](#) has updated its assessment of [Asteroid 2024 YR4](#), initially considered a potential Earth threat, now indicating a **3.8% chance** of it colliding with the **Moon** on **December 22, 2032**.

- This collision with the Moon could result in the formation of a **large crater** and pose a significant risk to **lunar missions**.
- **Asteroid 2024 YR4**: It was first discovered in December 2024, by the [Asteroid Terrestrial-impact Last Alert System \(ATLAS\) telescope](#) in Chile.
 - It is a [Near-Earth asteroid \(NEA\)](#) with an orbit that brings it within **1.3 Astronomical Units (1 AU is the average distance from Earth to the Sun)** of Earth.
 - It is estimated to be **53-67 meters wide**, about the size of a **15-story building**.

Asteroid:

- **About:** Asteroids are **rocky, airless remnants** from the early solar system, formed about **4.6 billion years ago**.
- **Location & Size:** Mostly found in the **Asteroid Belt between Mars and Jupiter**, some also follow **Earth-crossing orbits**. They range in size from a few meters to hundreds of kilometers.
- **Classification:** They are classified as **Main Belt (between Mars and Jupiter)**, **Trojans** (sharing a planet's orbit at [Lagrangian points](#)), and [Near-Earth Asteroids](#) (whose orbits bring them close to or intersect Earth's path).
- **Initiatives Related to Monitoring of Near-Earth Objects:**
 - [ESA's Hera Mission](#)
 - [NETRA Project & Space Junk](#)

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.



Meteorite

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



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.



Read More: [Asteroid 2024 YR4](#), [Double Asteroid Redirection Test \(DART\) Mission](#)