



## Blanets

[Source: TH](#)

Interstellar, Christopher Nolan's 2014 sci-fi masterpiece, presents three captivating planets orbiting [black holes](#), known as **blanets**, which scientists speculate could exist in reality.

- Scientists in Japan theorized in 2019 that **planets could form near supermassive black holes** from massive dust and gas clouds observed in their vicinity. These planets, termed "**blanets**," are **not anticipated to resemble Earth**.
- Planets are formed when the dust and gas swirling around a young star collide and clump together. A similar process could be in **play near supermassive black holes**, where planets take shape inside the disc and eventually become blanets.
- Blanets are projected to be significantly larger than Earth, approximately 3,000 times its size.
  - To avoid gravitational destruction, **blanets would need to orbit the black hole** at a distance of approximately 100 trillion kilometers.



दार्शनिक  
The Vision

# BLACK HOLES

## ABOUT

- A place in space with **extremely high gravity pull**; even light can't escape (hence, **invisible**)
- The strong gravity is due to matter being squeezed into a tiny space

The term 'black hole' was coined in the mid-1960s by American physicist John Archibald Wheeler

## DETECTION

- By seeing how stars very close to black holes act differently than other stars
- In April 2019, scientists at the **Event Horizon Telescope Project** released the first-ever image of a Black Hole (shadow, more precisely)

## Albert Einstein and Black Hole

- First predicted their existences in **Theory of General Relativity**
- It showed that when a massive star dies, it leaves behind a small, dense remnant core

India's first dedicated satellite, AstroSat observed for the very first-time rapid variability of high energy X-ray emission from a black hole system

## TYPES

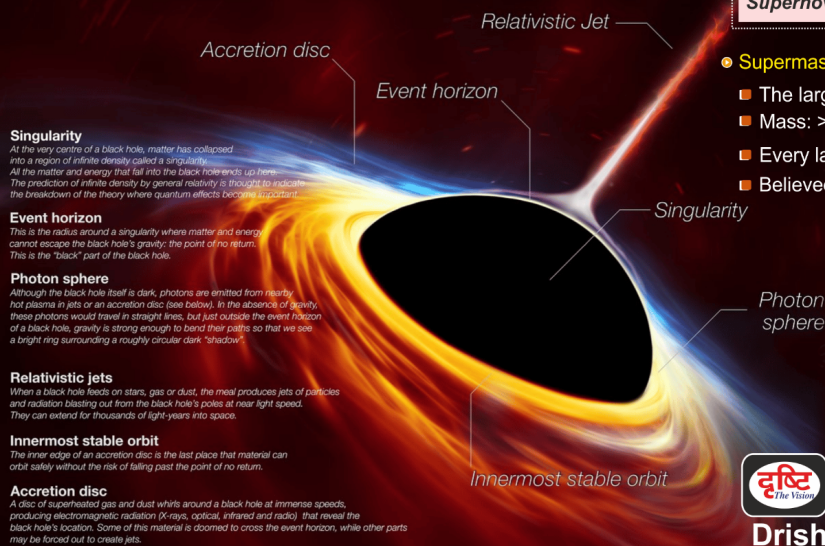
- **Miniature (Hypothetical):**
  - The smallest; size of just 1 atom
  - Mass: varies from 1/100th of a milligram to the mass of a large mountain
  - Believed to be **formed** when universe began
- **Stellar:**
  - Mass: **20x the mass of sun**
  - Believed to be **formed due to Supernovae explosion**

Supernova is an exploding star that has reached the end of its life

- **Supermassive**
  - The largest
  - Mass: >1 million suns together
  - Every large galaxy has a supermassive black hole at its centre
  - Believed to be made at the same time as their home galaxy

Sagittarius A is the supermassive black hole at the centre of Milky Way (mass: ~about 4 mn suns)

The Sun will never turn into a black hole as it is not big enough to make a black hole



Read more: [Black Hole](#)

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