



## Tidal Tail

[Source: PIB](#)

A study led by [Indian Institute of Astrophysics \(IIA\)](#) researchers has revealed the formation of an **ultra-diffuse galaxy** at the end of the **longest tidal tail ever discovered**, associated with the **galaxy NGC 3785**, located 430 million light-years from **Earth in the Leo constellation**.

- **Tidal Tail:** A **tidal tail** is a long, narrow stream of **stars and gas** created when **galaxies interact or merge**.
  - Gravitational forces during these interactions pull material from the outer regions of the galaxies, **stretching it into elongated streams** that extend into space.
  - Tidal tails can persist long after the **merger, serving as a signature of recent galaxy interactions**.
  - These tails provide valuable insights into how galaxies evolve and form stars.
  - Notably, a small portion of a galaxy's stellar formation occurs within tidal tails, highlighting their role in galaxy dynamics and evolution.
- **Galaxy NGC 3785:** It is a **lenticular galaxy** located in the Leo constellation, north of the **celestial equator** (imaginary circle that extends from [Earth's equator](#) into space), making it more visible from the northern hemisphere.
  - A galaxy is a vast collection of gas, dust, stars, and solar systems, held together by [gravity](#). Earth is part of one such galaxy.



Read more: [Dark Matter and Dark Energy](#)

