



### **What to study?**

**For Prelims and Mains: AstroSat- objectives, accomplishments and significance.**

**Context:** The Indian multi-wavelength space observatory AstroSat, launched in September 2015, continues to yield exciting results. Using this observatory, astronomers from Thiruvananthapuram and Mumbai have identified a new population of ultraviolet stars in the **globular cluster NGC 2808**.

### **What are globular clusters?**

**Globular clusters are collections of thousands to millions of stars, moving as one unit.** These stars are tightly held together by gravity of the cluster itself, and are believed to have formed together at roughly the same time. Some globular clusters could be among the oldest objects in our Milky Way, which hosts over 150 of them.

### **About ASTROSAT:**

**ASTROSAT is India's first dedicated multi wavelength space observatory.** This scientific satellite mission endeavours for a more detailed understanding of our universe.

- ASTROSAT is designed to observe the universe in the Visible, Ultraviolet, low and high energy X-ray regions of the electromagnetic spectrum simultaneously with the help of its five payloads.
- Astrosat aims at understanding the high energy processes in binary star systems containing neutron stars and black holes, to estimate magnetic fields of neutron stars, to study star birth regions and high energy processes in star systems lying beyond the Milky Way galaxy.
- **This mission has put ISRO in a very exclusive club of nations that have space-based observatories.** Only the United States, European Space Agency, Japan and Russia have such observatories in space.

### **To be looked in UPSC Paper 3 Topic:**

1. Awareness in space.