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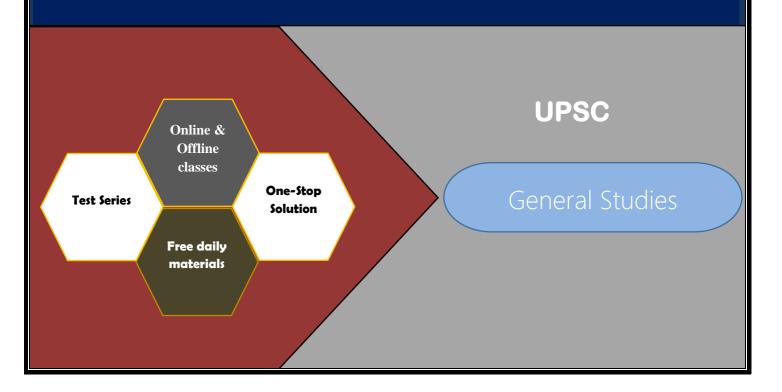


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NASA's IXPE Mission

Notes for civil services preparation





NASA's IXPE Mission

Recently, National Aeronautics and Space Administration (NASA) launched anew mission named Imaging X-ray Polarimetry Explorer (IXPE).

Key Points

About:

- IXPE observatory is a joint effort of NASA and the Italian Space Agency.
- It will study "the most extreme and mysterious objects in the universe

 supernova remnants, supermassive black holes, anddozens of other
 high-energy objects."
- Its primary length is two years and the observatory will be at 600 kilometers altitude, orbiting around Earth's equator.
- o It is expected to **study about 40 celestial objects** in its first year inspace.
- It will complement other X-ray telescopes such as the Chandra X-ray
 Observatory and the European Space Agency's X-ray observatory, XMM Newton.

Significance:

- o It will help observe **polarized X-rays from neutron stars and supermassive black holes**. By measuring the polarization of these X-rays, we can study where the light came from and understand the geometry and inner workings of the light source.
- o It will help scientists understand how black holes spin and their location in the past.
- o It will help unravel how **pulsars** shine so brightly in X-rays.
- o It will help learn what powers the jets of energetic particles that are ejected from the region around the supermassive black holes at the centers of galaxies.

NASA's Other Recent Missions:

- o Double Asteroid Redirection Test (DART).
- o **Mission Lucy** (Jupiter Trojan Asteroids).
- Near-Earth Asteroid Scout

