

What is the Einstein Probe (EP)?

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About Einstein Probe (EP)

- The EP is a mission of the Chinese Academy of Sciences (CAS) dedicated to time-domain high-energy astrophysics.
- The primary scientific goal of the EP is to explore the transient and variable X-ray sky, capturing powerful bursts of high-energy light emanating from objects such as merging neutron stars and black holes.
- It was successfully launched on January 9, 2024, from the Xichang Satellite Launch Center in China with a “Long March-2C” rocket.
- It is equipped with state-of-the-art X-ray mirrors and detectors.
- Unlike conventional X-ray telescopes, Einstein Probe’s unique design allows it to monitor almost a tenth of the sky simultaneously, discovering new sources as they light up in X-rays and enabling in-depth studies of known and new celestial phenomena over extended periods.
- It will also detect light from gamma-ray bursts, supernovae, flares from other stars, and events within the Solar System, such as emissions from comets.
- The satellite has a weight of ≈ 1450 kg and an average power of ≈ 1212 W in total.

Q1) What are neutron stars?

Neutron stars are formed when a massive star runs out of fuel and collapses. The very central region of the star – the core – collapses, crushing together every proton and electron into a neutron.

Source: [China launches new satellite 'Einstein Probe' shaped like a lotus to observe violent cosmic phenomena](#)

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