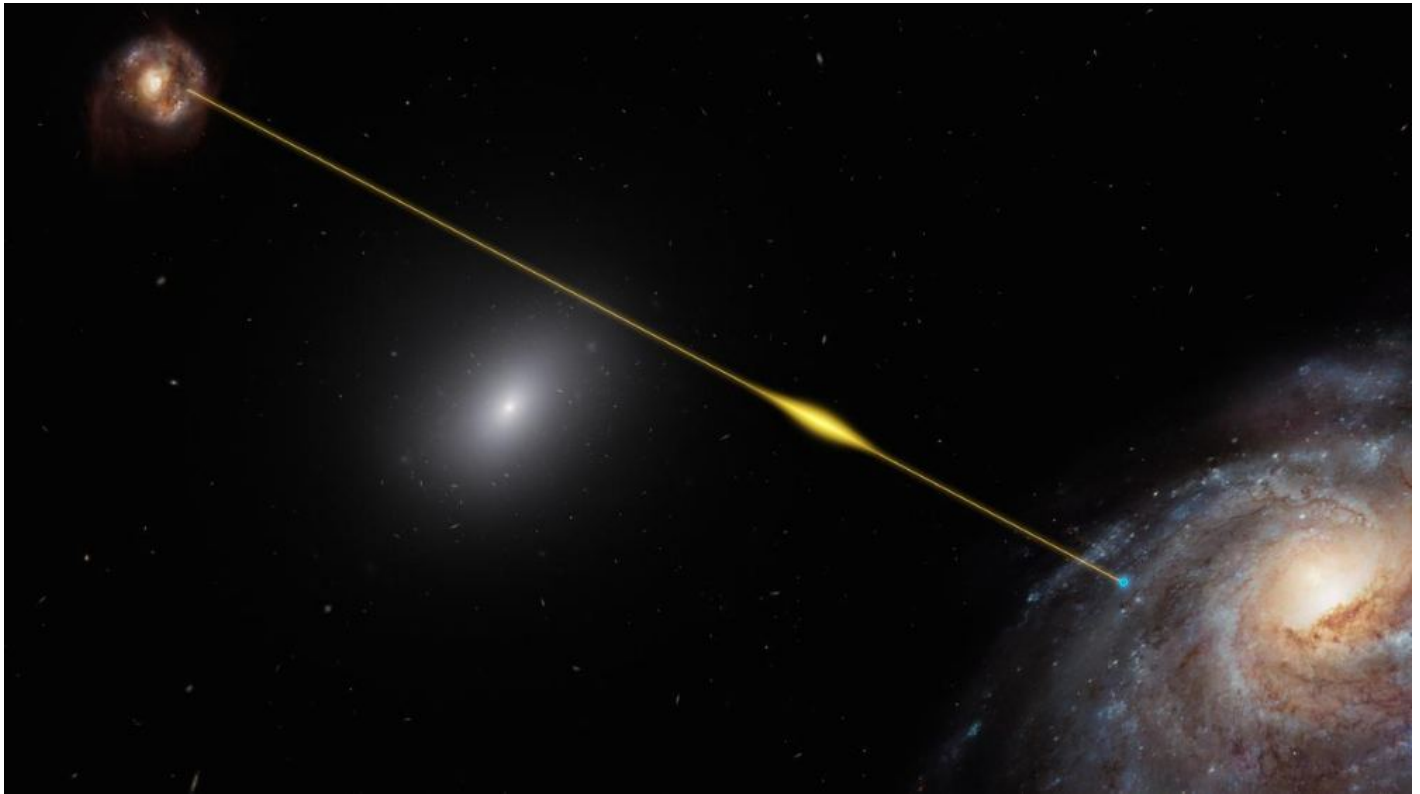


Fast Radio Bursts

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About Fast Radio Bursts:

- A fast radio burst is a **bright and brief burst of electromagnetic radiation** (light) seen in radio-wave frequencies.
- They usually last for **very short period of time**.
- Some FRBs repeat, but the vast majority happen once and disappear forever.
- They reach earth **from faraway galaxies**, emitting as **much energy** in a millisecond as the **sun does over weeks**.
- Scientists don't know for sure what causes fast radio bursts.
- However, the current prevailing theory is that at least some FRBs are emitted by **neutron stars**.
- These stars form when a supergiant star collapses, going from eight times the mass of our sun (on average) to a superdense core only 20-40 kilometers across.
- **Magnetars are neutron** stars with extremely strong magnetic fields, and these have been observed to emit FRBs.

What recent study says?

- Previous studies have **noted broad similarities between** the energy distribution of **repeat FRBs, and that of earthquakes and solar flares.**
 - However, new research at the University of Tokyo has looked at the time and energy of FRBs and found distinct differences between FRBs and solar flares, **but several notable similarities between FRBs and earthquakes.**
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Q1) What are Radio waves?

Radio waves are a type of electromagnetic radiation with wavelengths ranging from about one millimeter to over 100 kilometers. They are part of the electromagnetic spectrum, which includes various forms of electromagnetic radiation, such as visible light, microwaves, and X-rays. Radio waves are characterized by their relatively long wavelengths and low frequencies compared to other types of electromagnetic waves.

Source: [Starquakes: Fast Radio Bursts Have Aftershocks, Like Earthquakes in Space](#)

Source: <https://vajiramandravi.com/current-affairs/fast-radio-bursts/>

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