

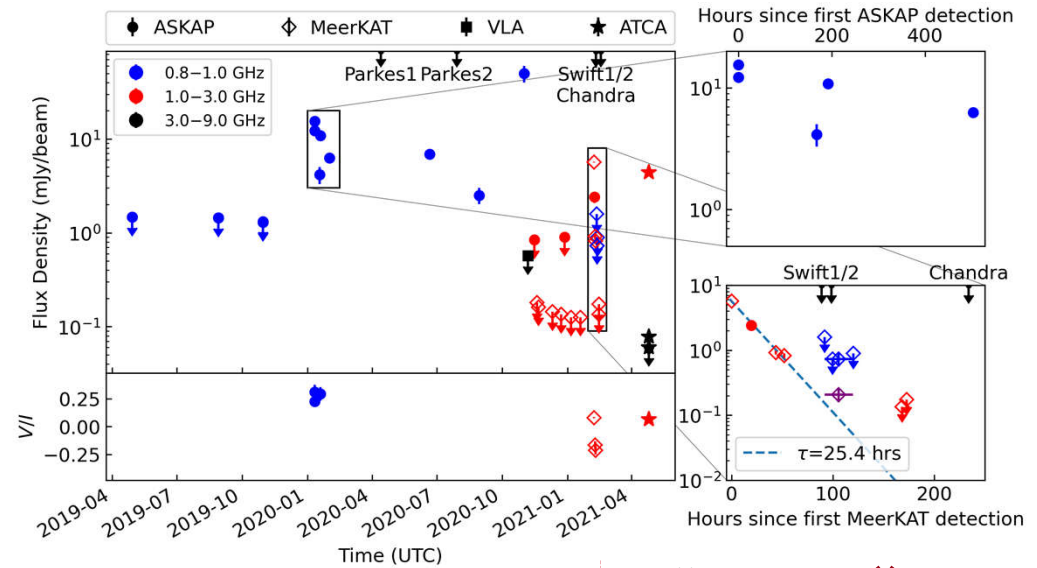


An **Unknown** Polarized Transient Radio Source Towards the **Galactic Centre**

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We discovered a **highly polarised, highly variable, steep-spectrum** radio source towards the Galactic centre with the data from an ASKAP Survey for **Variables and Slow Transients (VAST)**.



Radio:

peak at ~ 10 mJy, non-detections below ~ 0.1 mJy

Variability: $> \sim 100$, \sim days timescale (not shorter)

Steep radio spectrum ($\alpha \sim$ from -2.7 to -5.6)

Polarisation: ~ 4 - 30% circular, up to $\sim 80\%$ linear

Pulsation: no pulses found in Parkes and MeerKAT

Optical/IR: no counterpart $F_{\text{IR}}/F_{\text{rad}} < \sim 10^{-3}$

X-ray: no detection $L_{\text{X}}/L_{\text{rad}} < \sim 10^6$

Stellar origin? ✘

Too bright in radio

pulsar origin? ?

No pulses found, but maybe pulses are smeared out or the source is an aligned rotator?

External effect? ✘

High variability

GCRT? ?

This source shared some properties with Galactic Centre Radio Transients; same detection rates

Read the full paper here - <https://arxiv.org/abs/2109.00652> or scan the QR code! 😊

