



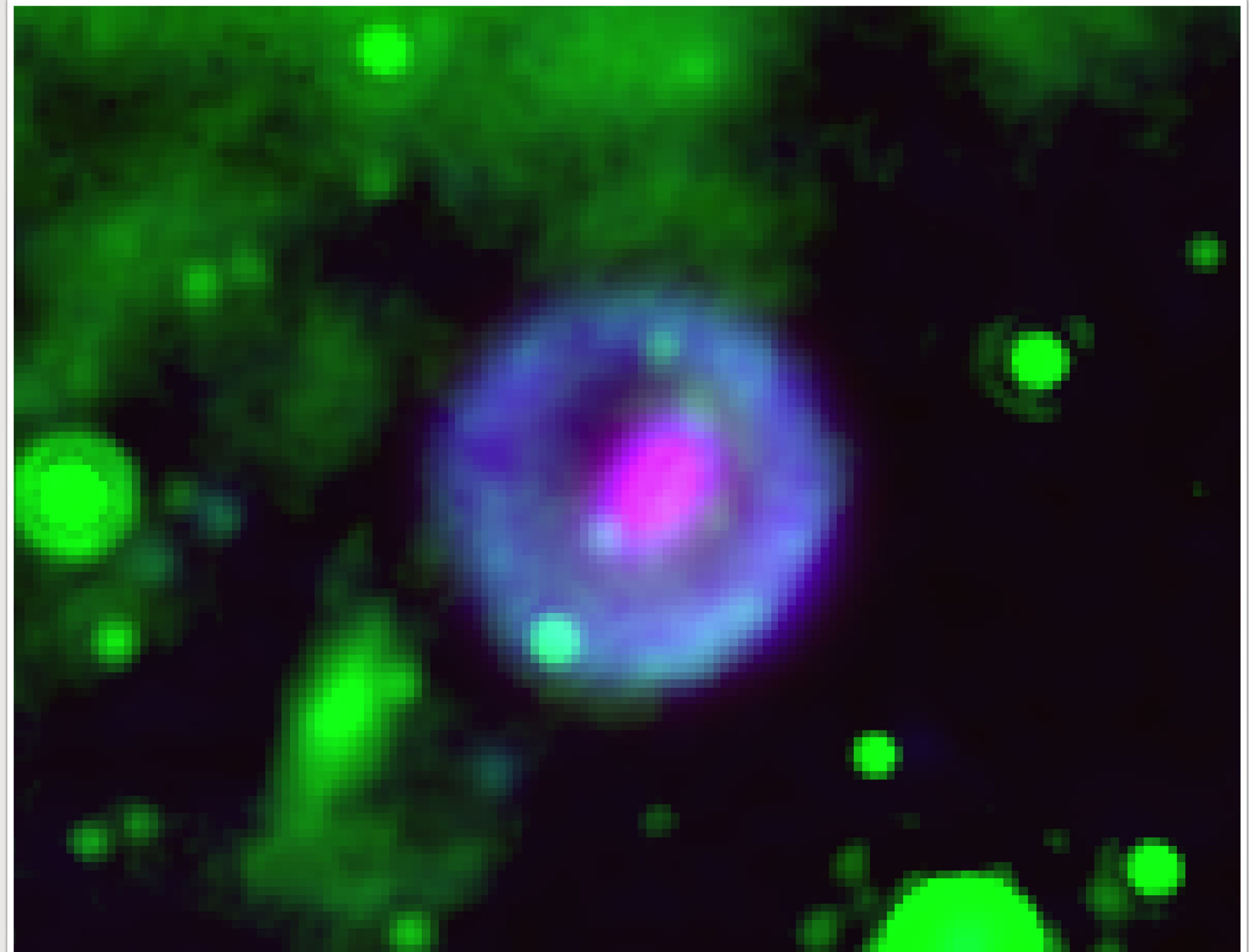
# Discovery of new, young Galactic SNR: Perun (G329.9 -0.5)

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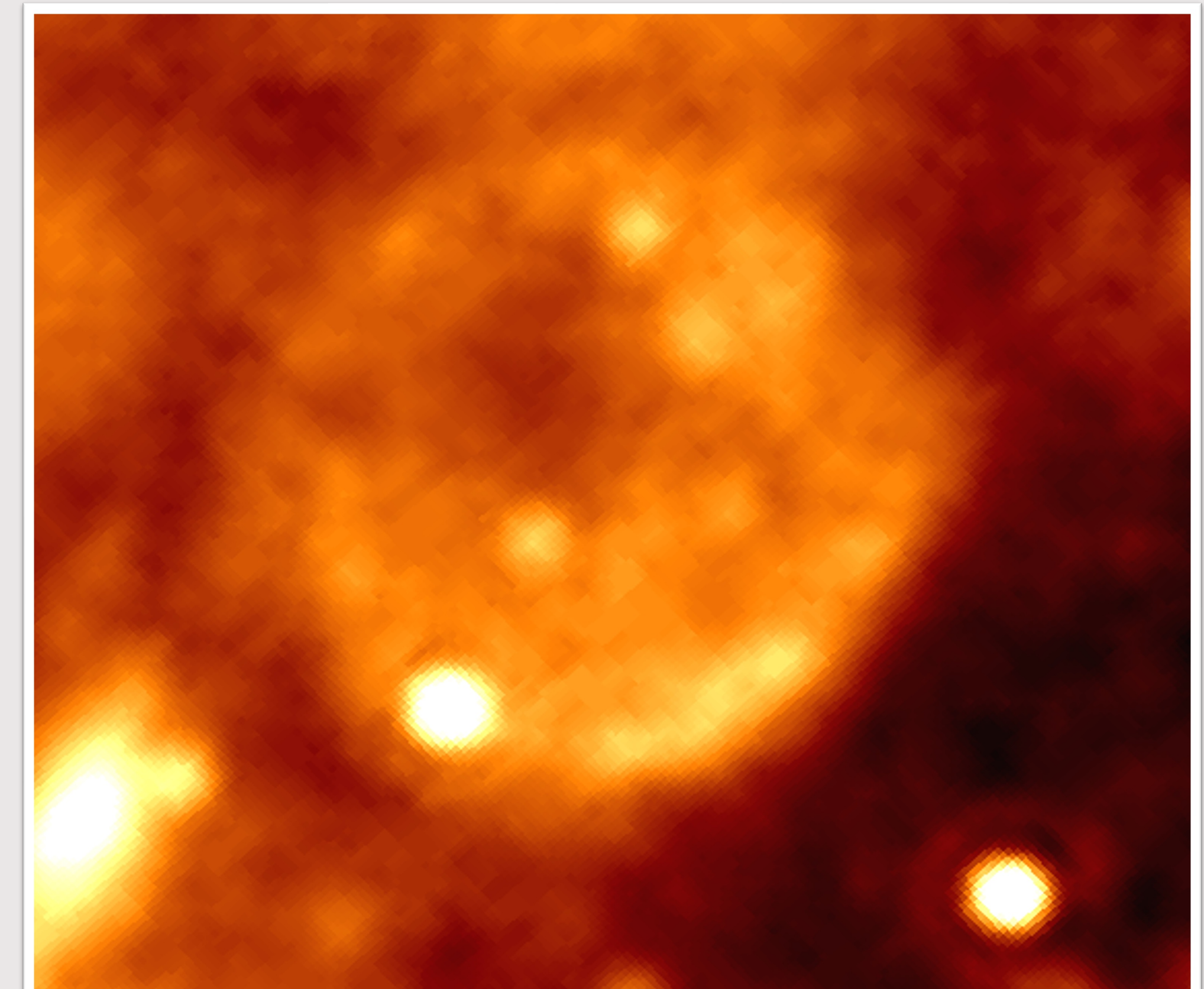
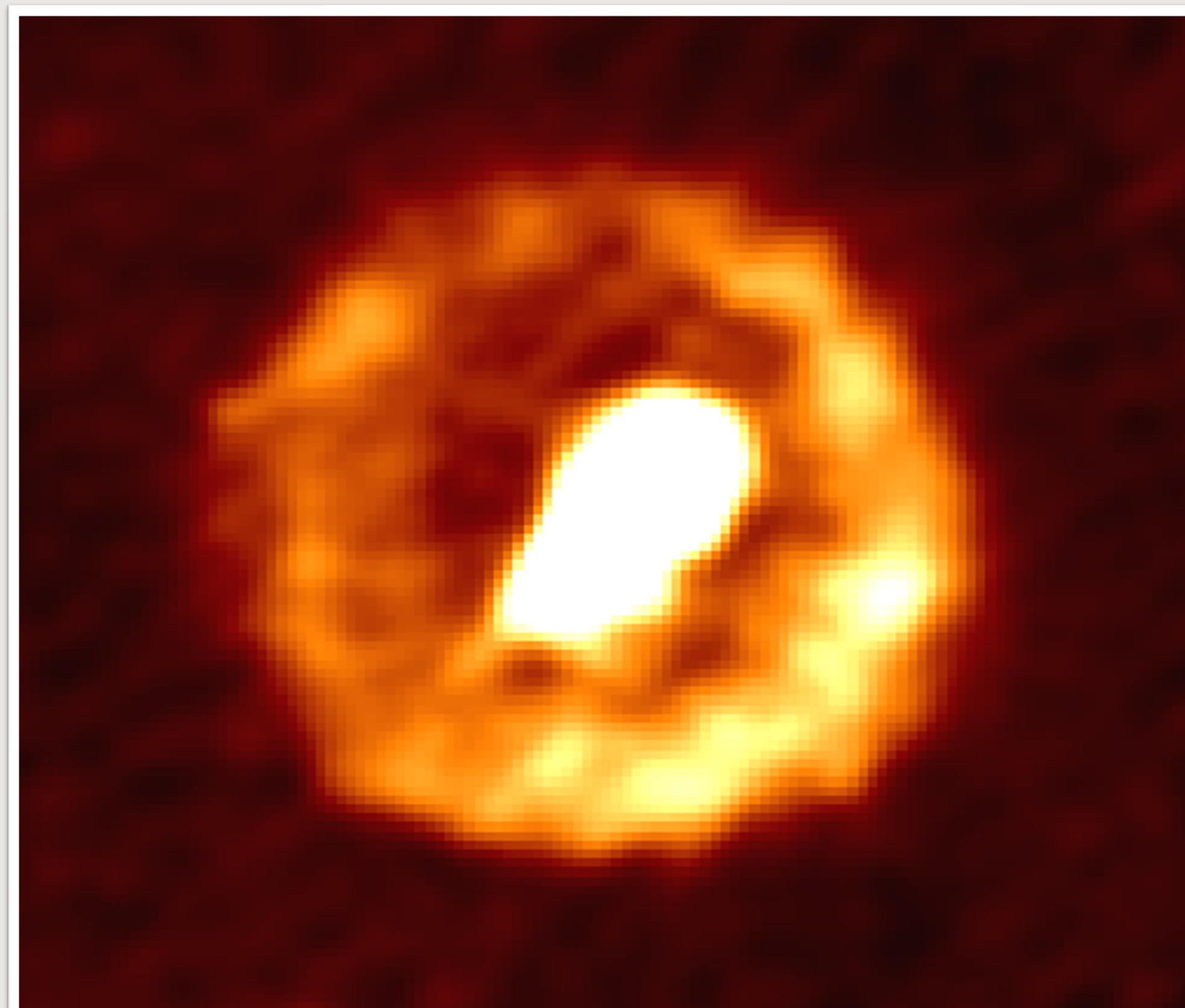
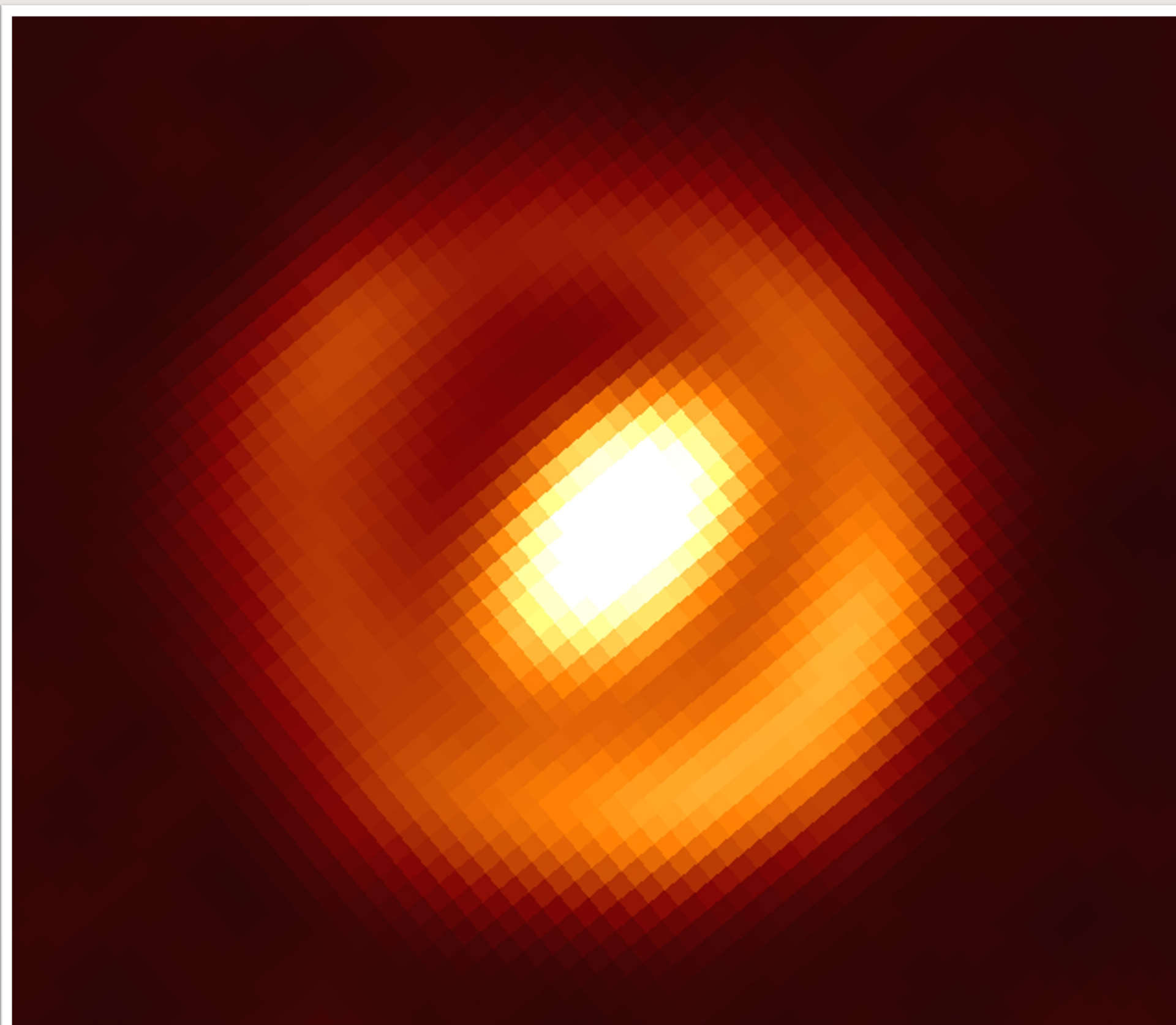
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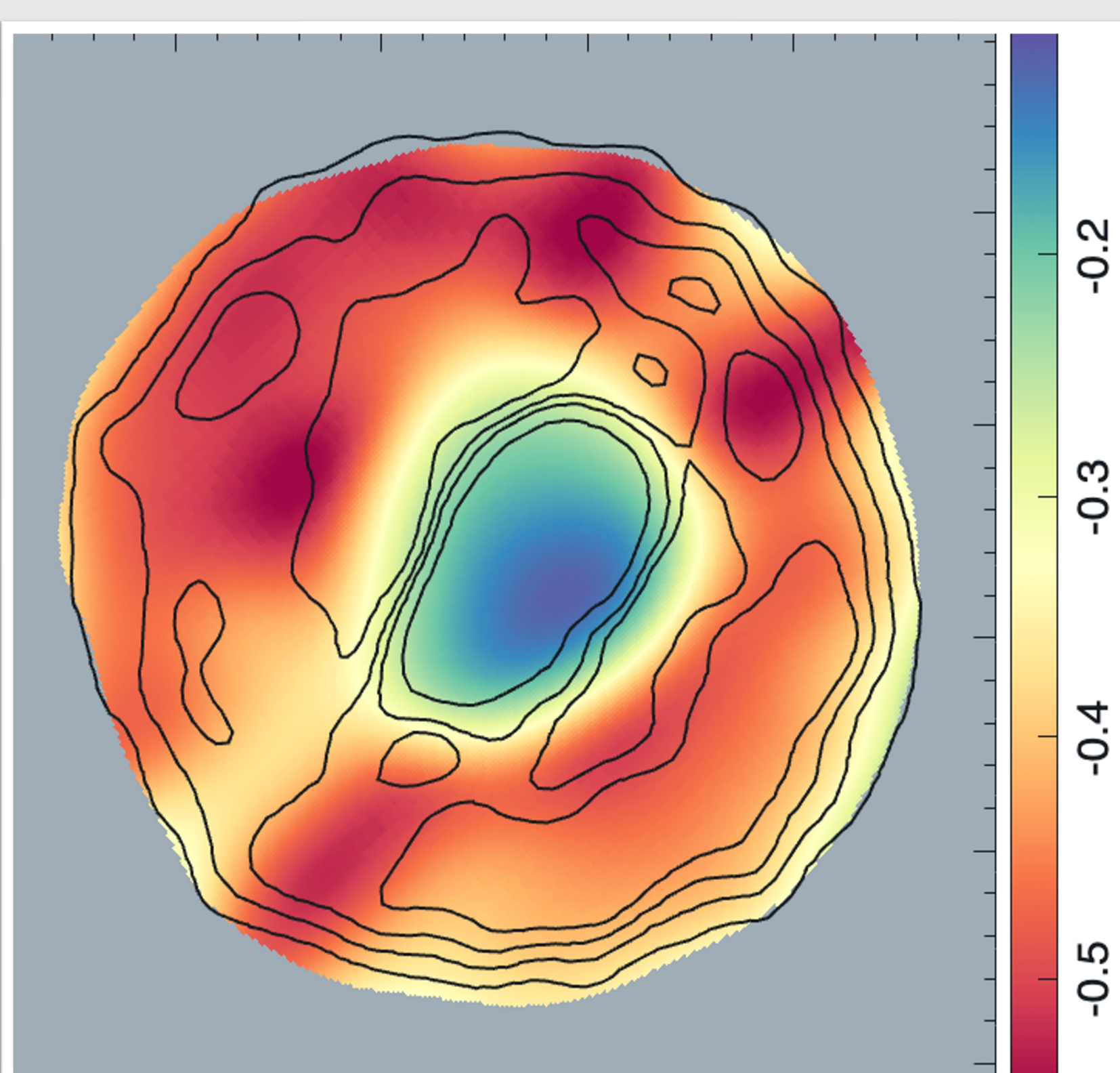
- Modern all-sky radio surveys, (e.g. ASKAP, MeerKAT) have found several new Galactic SNRs
- Recent discovery of young Galactic SNR, Perun (G329.9 -0.5), with associated PWN (Figs 1 and 2)
- Identified in ASKAP-EMU survey at 944 MHz
- Additional data from ATCA, MeerKAT, and Spitzer



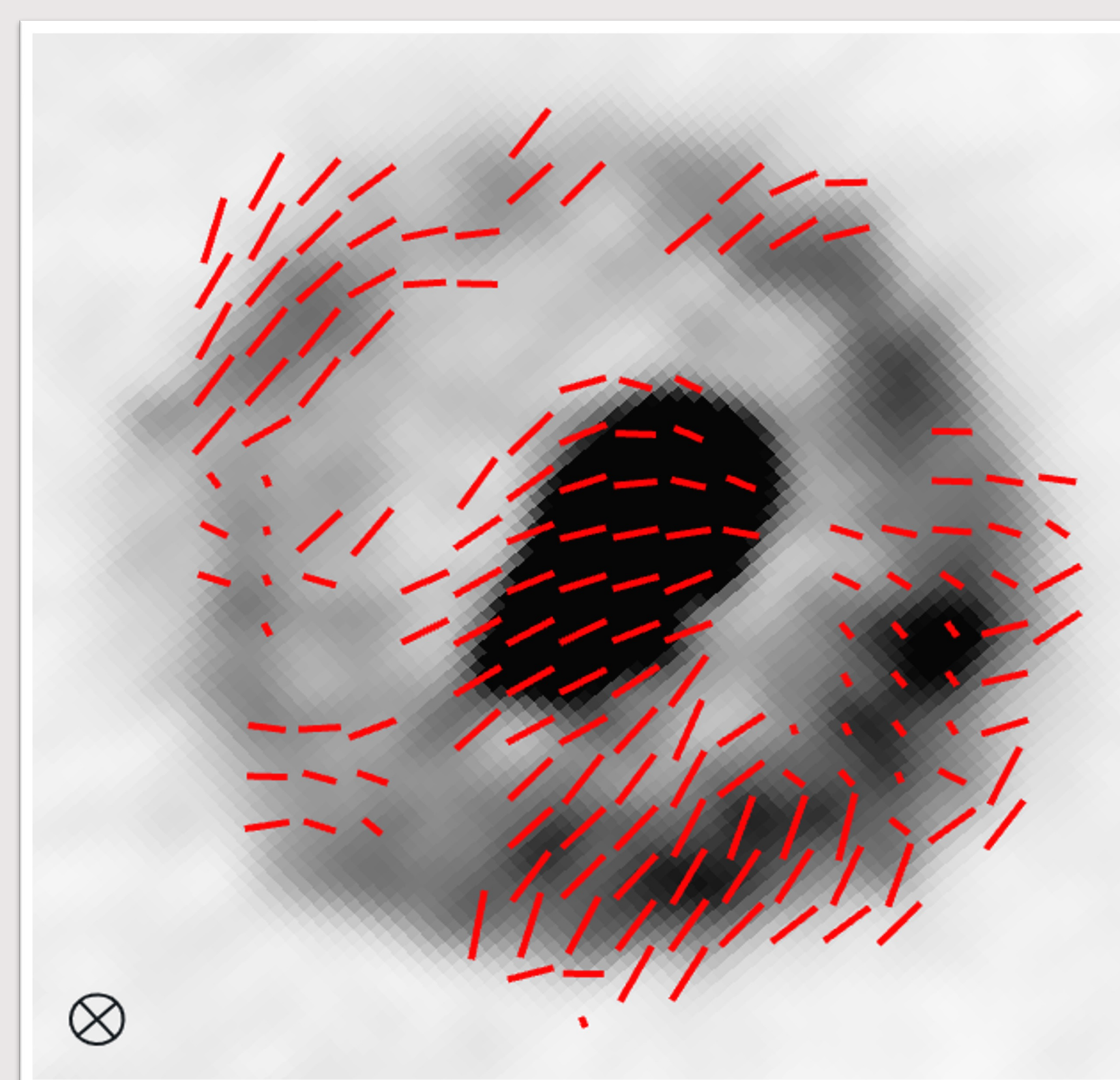
**Figure 1:** RGB image of Perun. Red and blue is ASKAP at 944 MHz and green is Spitzer 24  $\mu$ m



**Figure 2:** Perun images: ASKAP 944 MHz (left), ATCA 5500 MHz (middle), Spitzer 24  $\mu$ m (right)



**Figure 3:** Spectral index map from radio frequencies



**Figure 4:** ATCA 5500 MHz radio image with magnetic field vectors

- Small size SNR ( $D = 70''$ )
- Spectral index: steep shell, flat PWN (Fig 3)
- Linear radio polarization and magnetic field (Fig 4)
- Possible HI cavity at distance of 6 – 9 kpc
- Possible age range of 70 – 500 years

- Demonstrates effectiveness of modern all-sky radio surveys in finding new SNRs
- Helps fill gaps in catalogues of Galactic SNRs
- Good target for further observations (e.g. X-ray)

## REFERENCES

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