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Deep Chandra observations of double relic cluster ZwCl 2341+0000

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Deep *Chandra* observations of double relic cluster ZwCl 2341+0000

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SRON

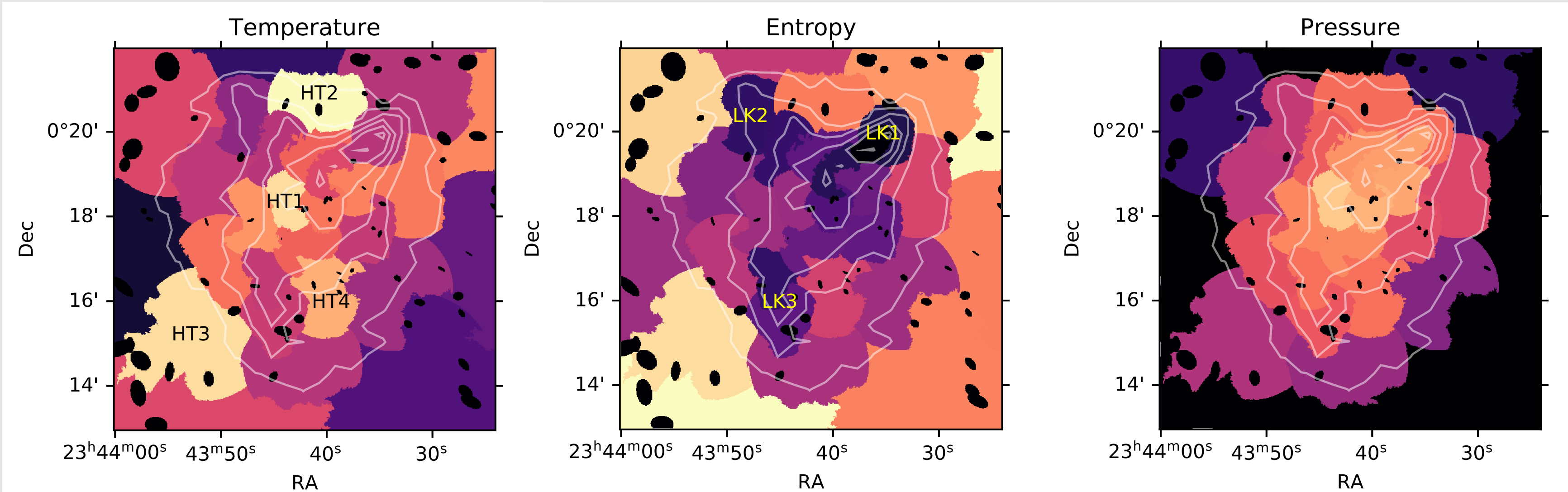
Netherlands Institute for Space Research



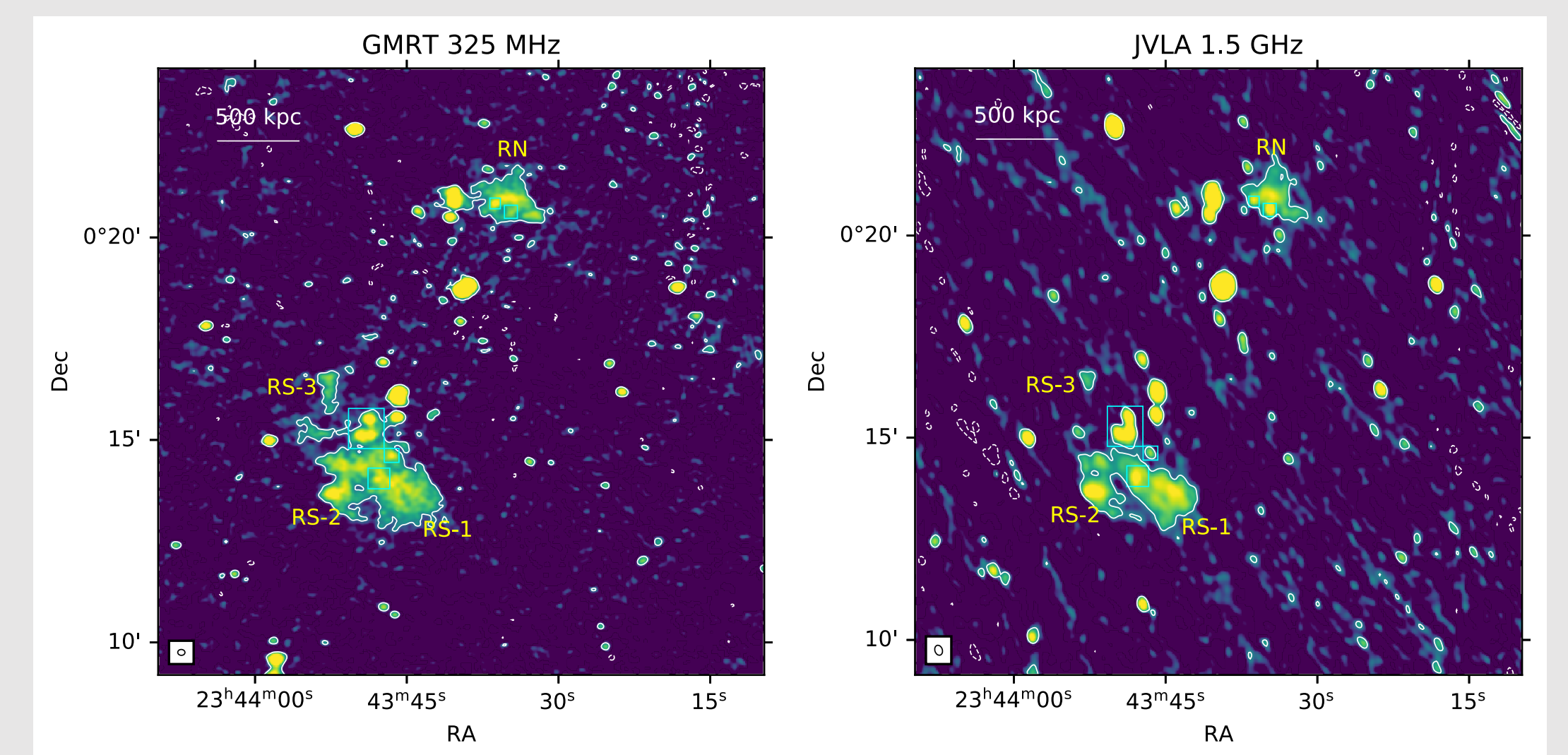
Universiteit Leiden

Leiden Observatory

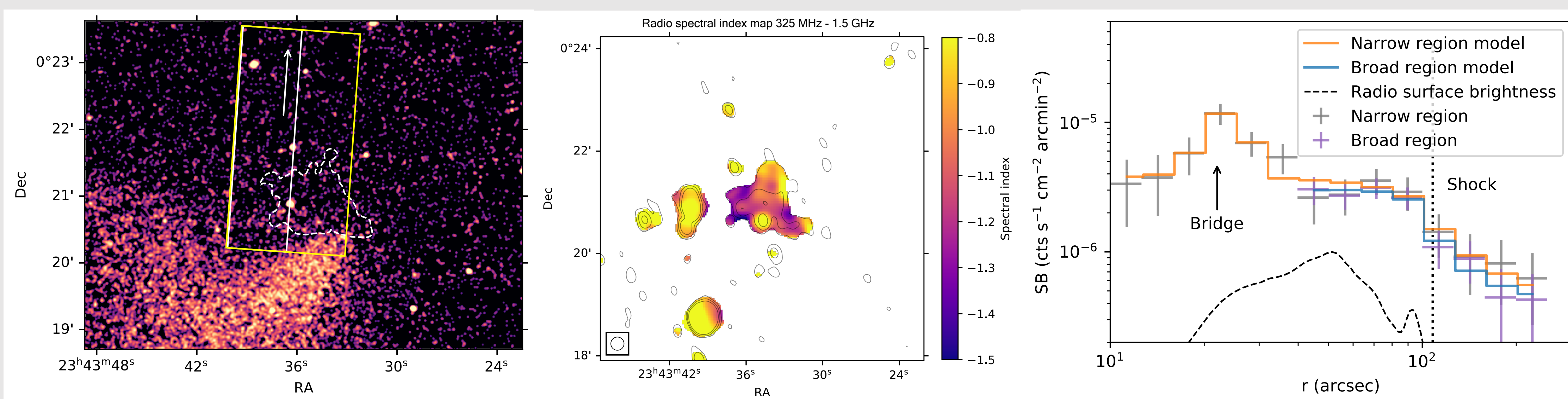
X-ray thermodynamic maps



Radio maps

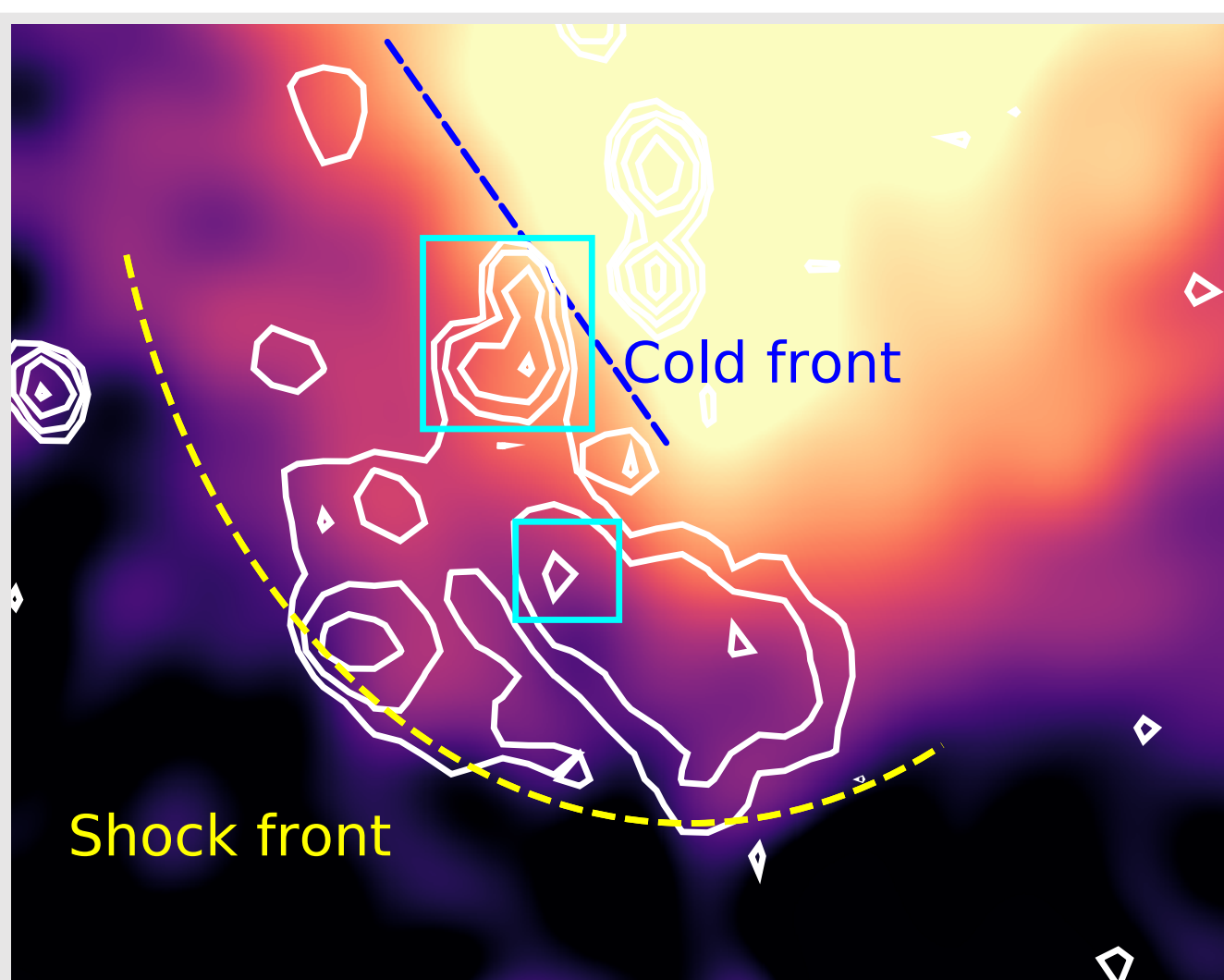
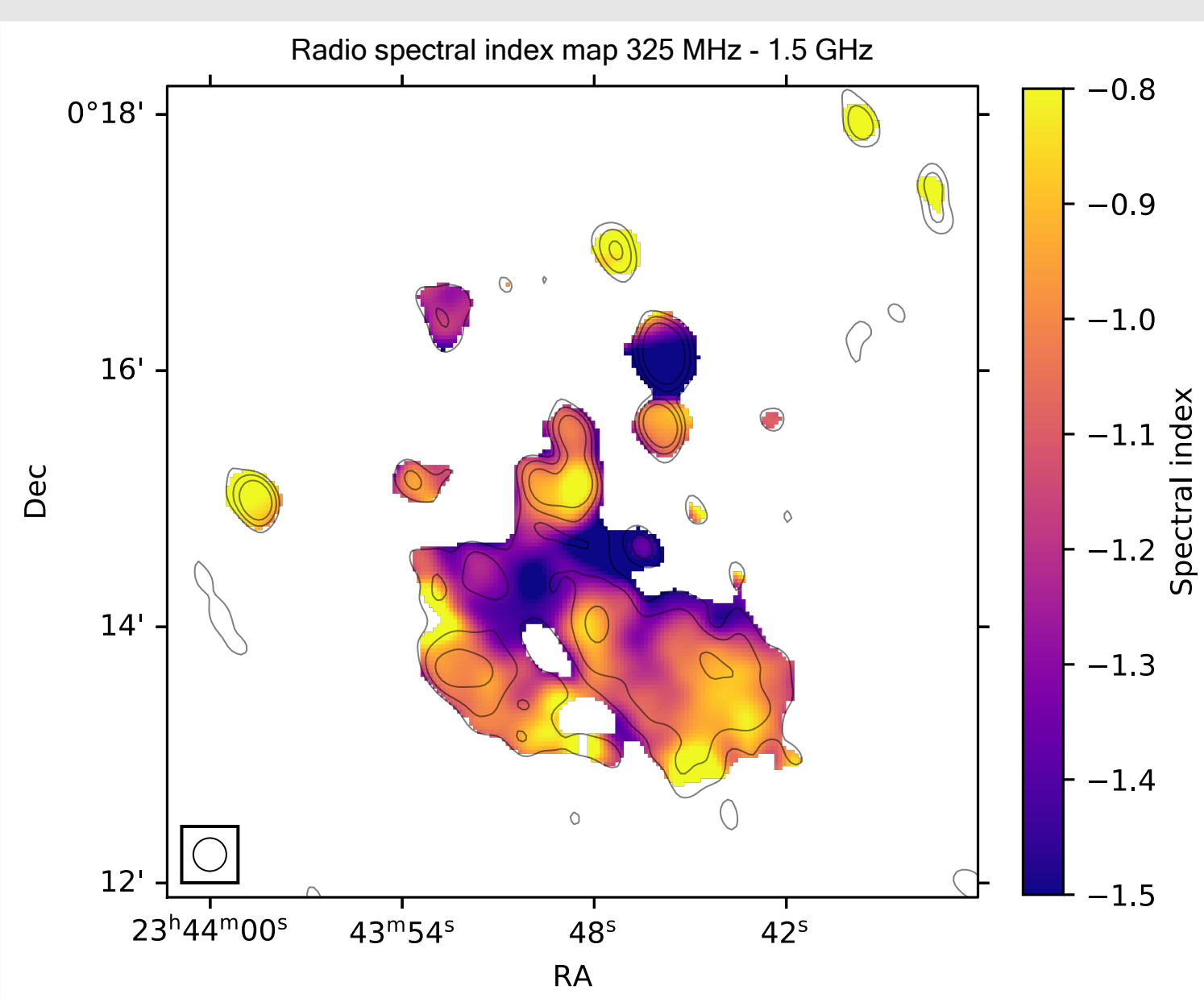


N relic/shock



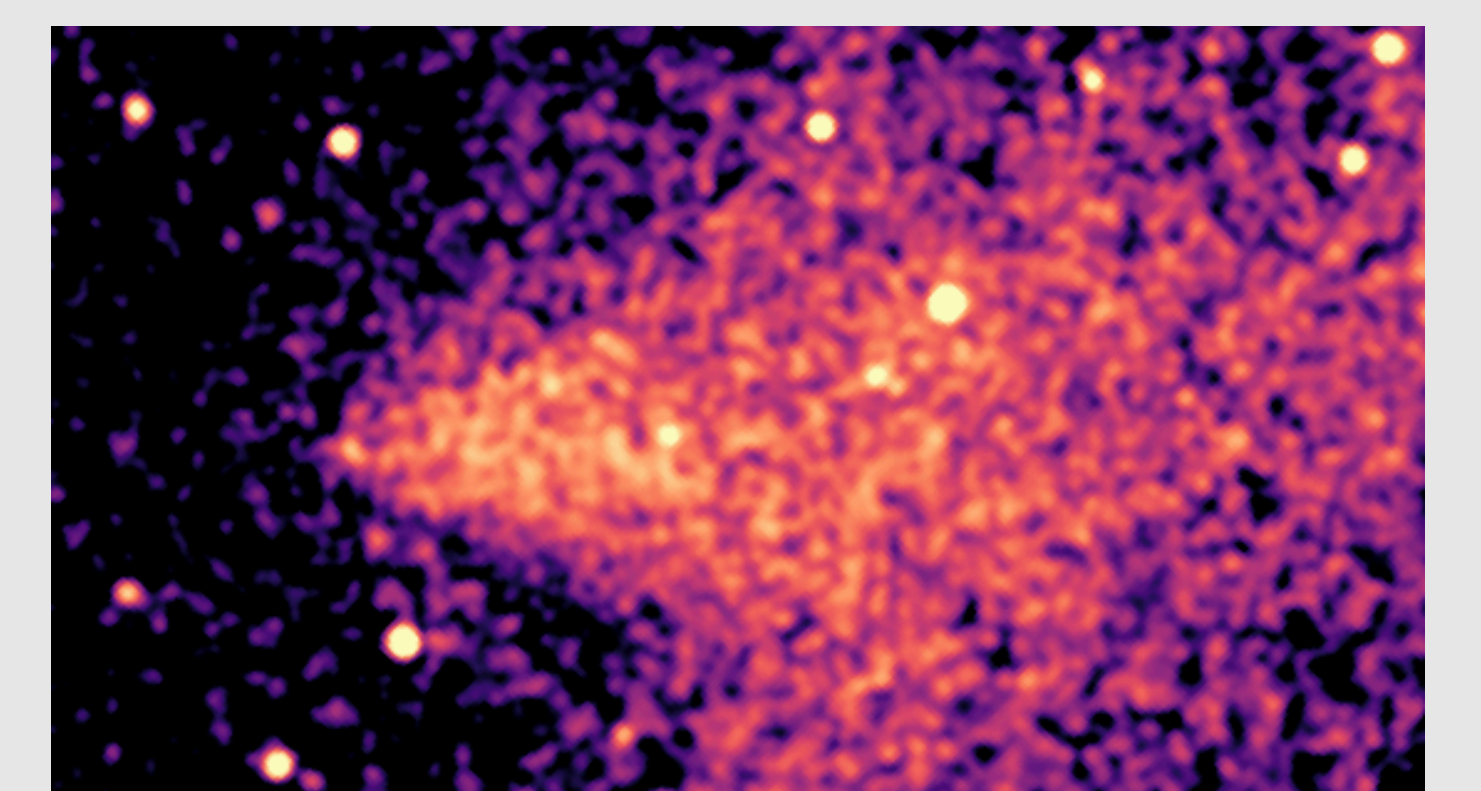
- A gas bridge with 3σ significance
- Possible shock location: outer edge of the relic
- $\mathcal{M}_{inj} = 2.4 \pm 0.4$

S relic/shock

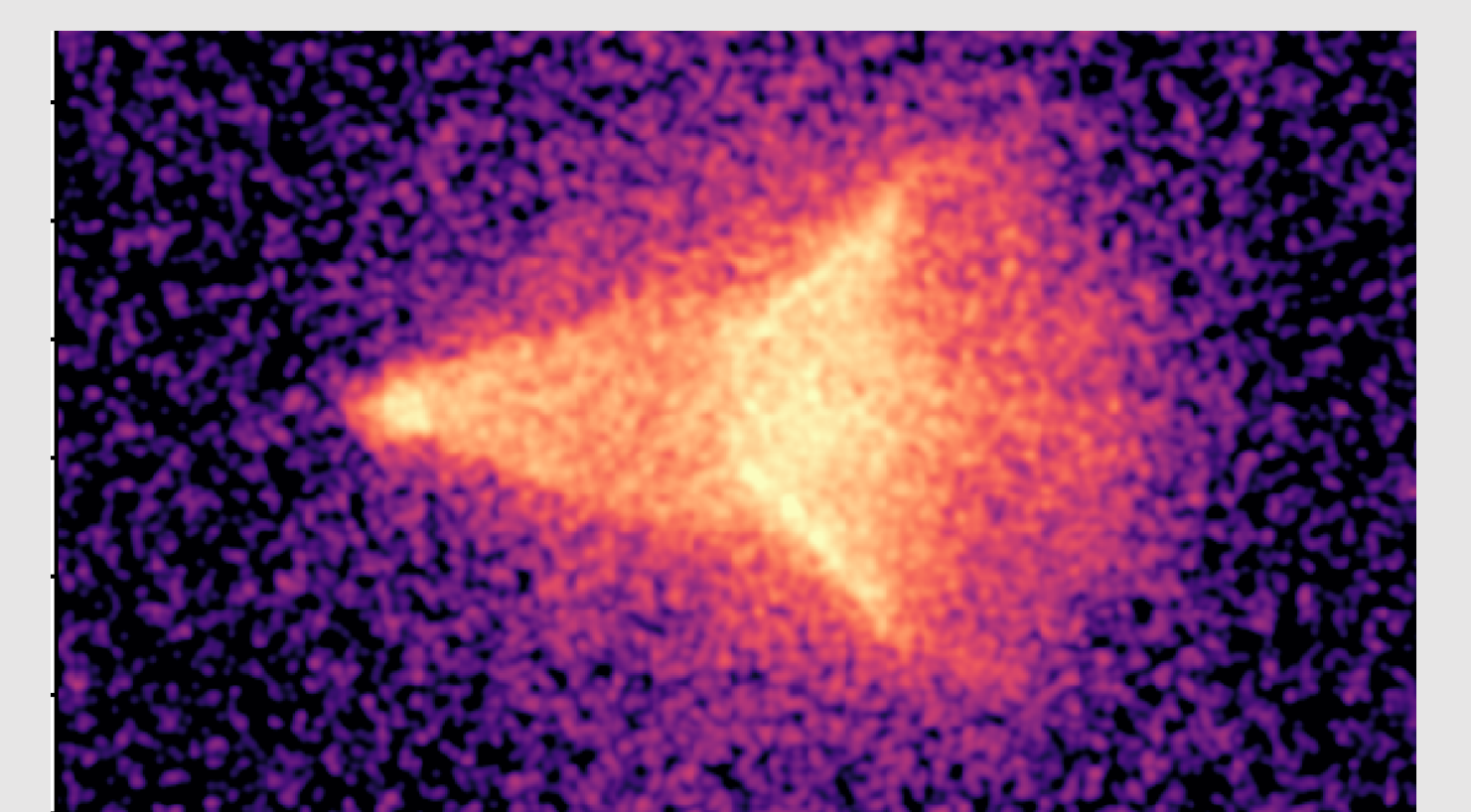


- Linear SB jump: cold front
- Possible shock location: the flat edge of the S relic
- $\mathcal{M}_{inj} = 2.2 \pm 0.1$

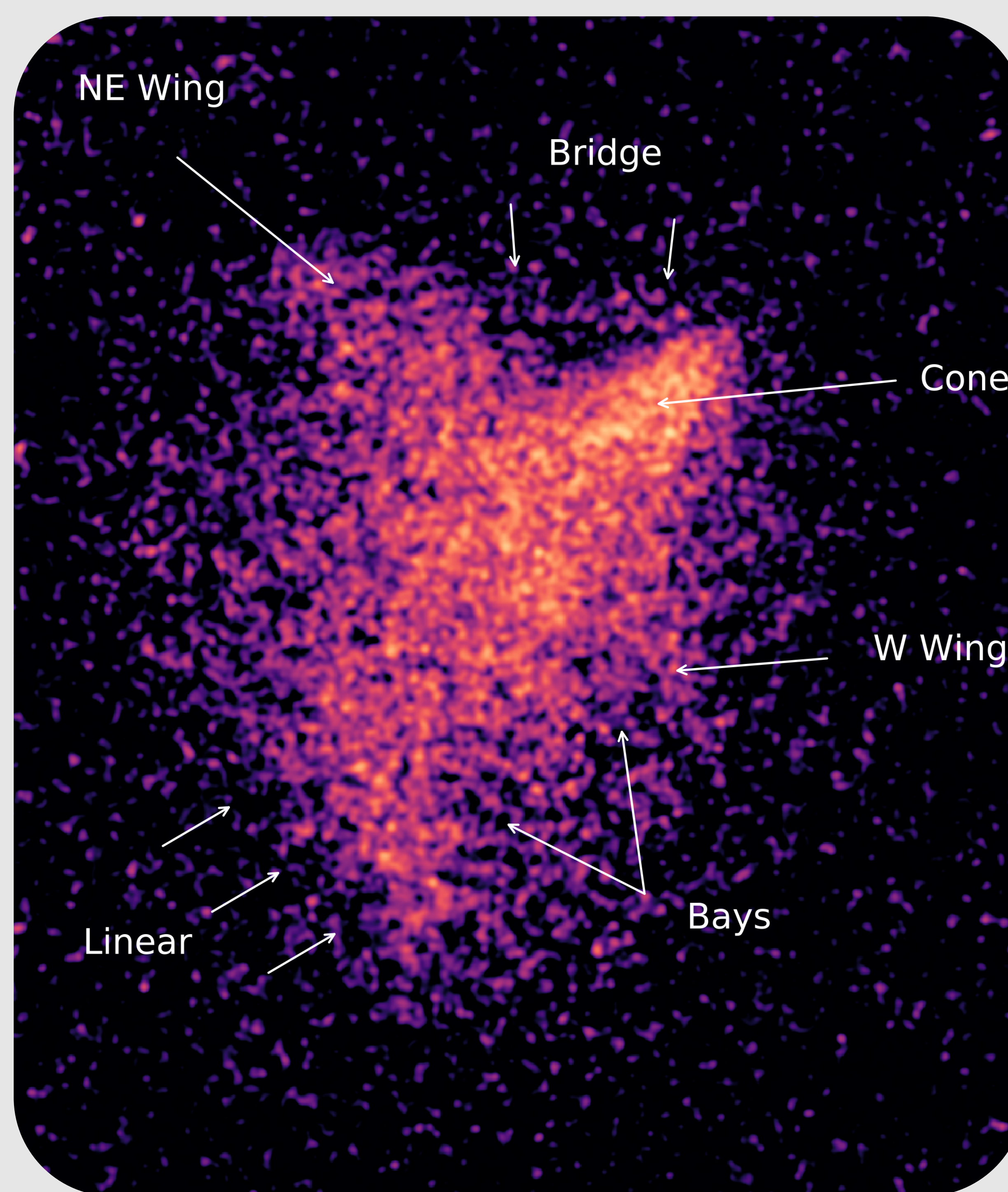
Cone-shaped subcluster



Rotated image of the subcluster

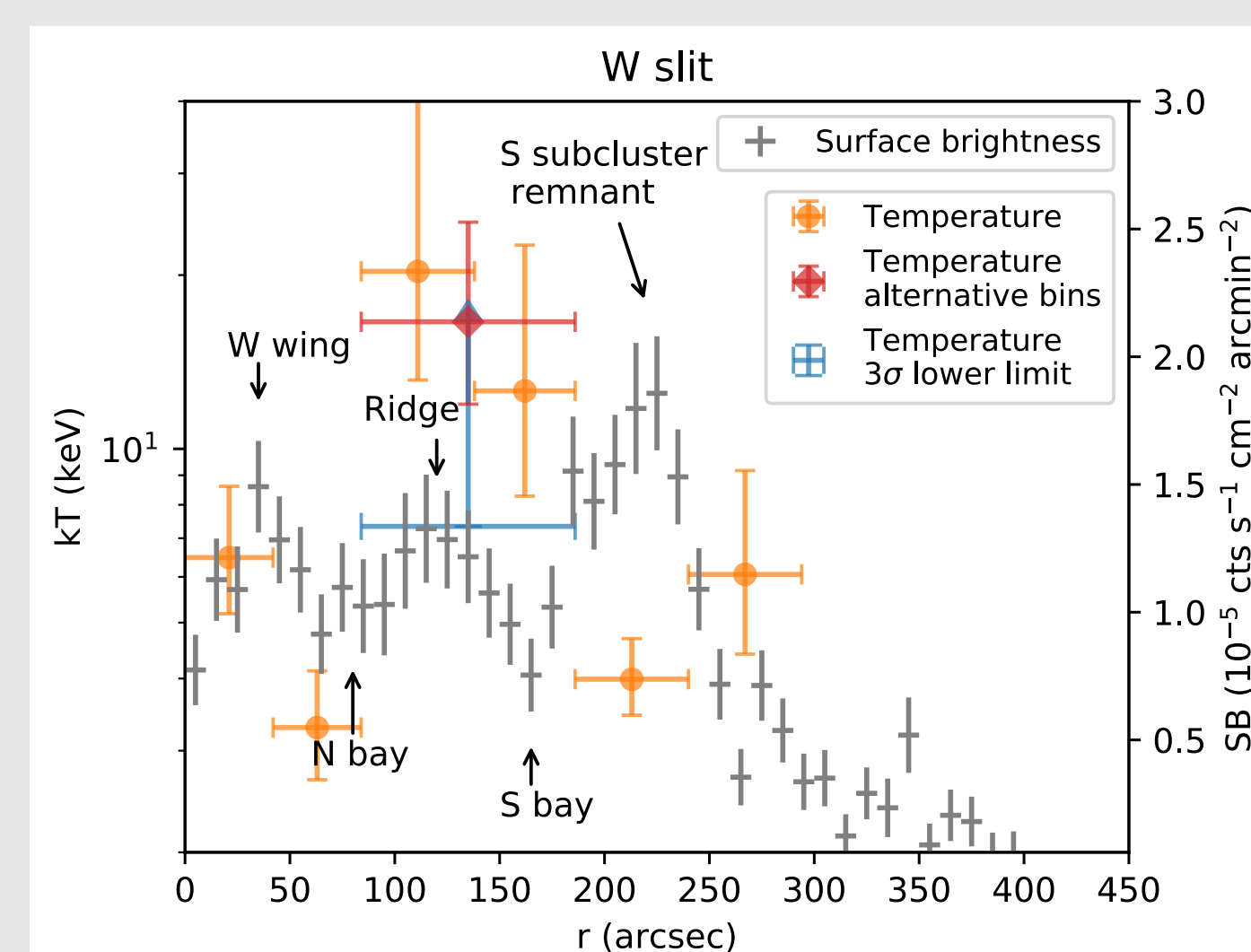
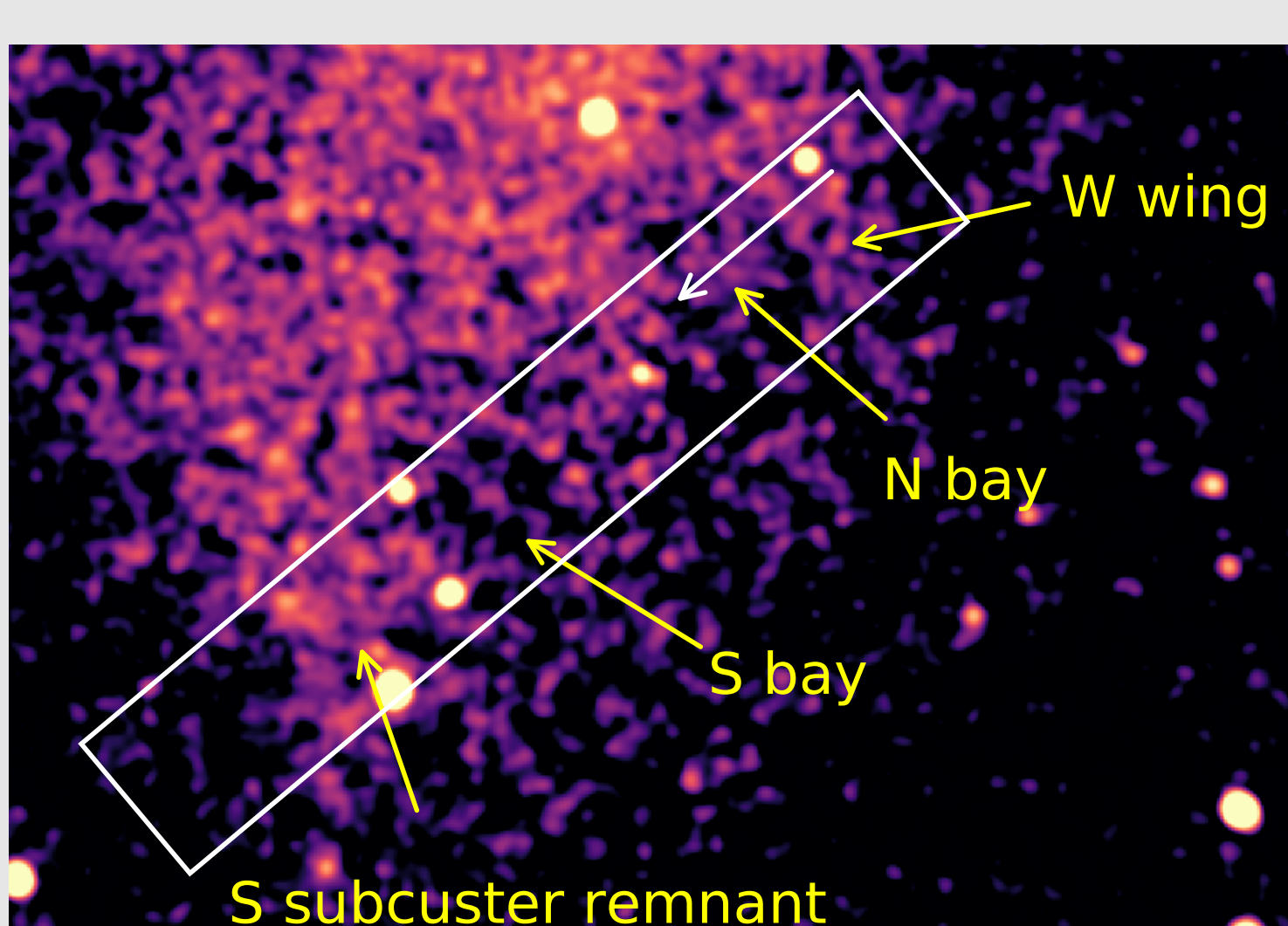


An analogy in a 1:3 mass ratio simulation (ZuHone 2011, Bryzcki & ZuHone 2019)



206 ks *Chandra* flux image

Pressure jump across the bays



N bay: low kT & low n
Ridge: high kT & high n
S bay: high kT & low n

A pressure jump between N bay and ridge

References

- ZuHone 2011, ApJ, 728, 54
- Bryzcki & ZuHone 2019, ApJ, 883, 118