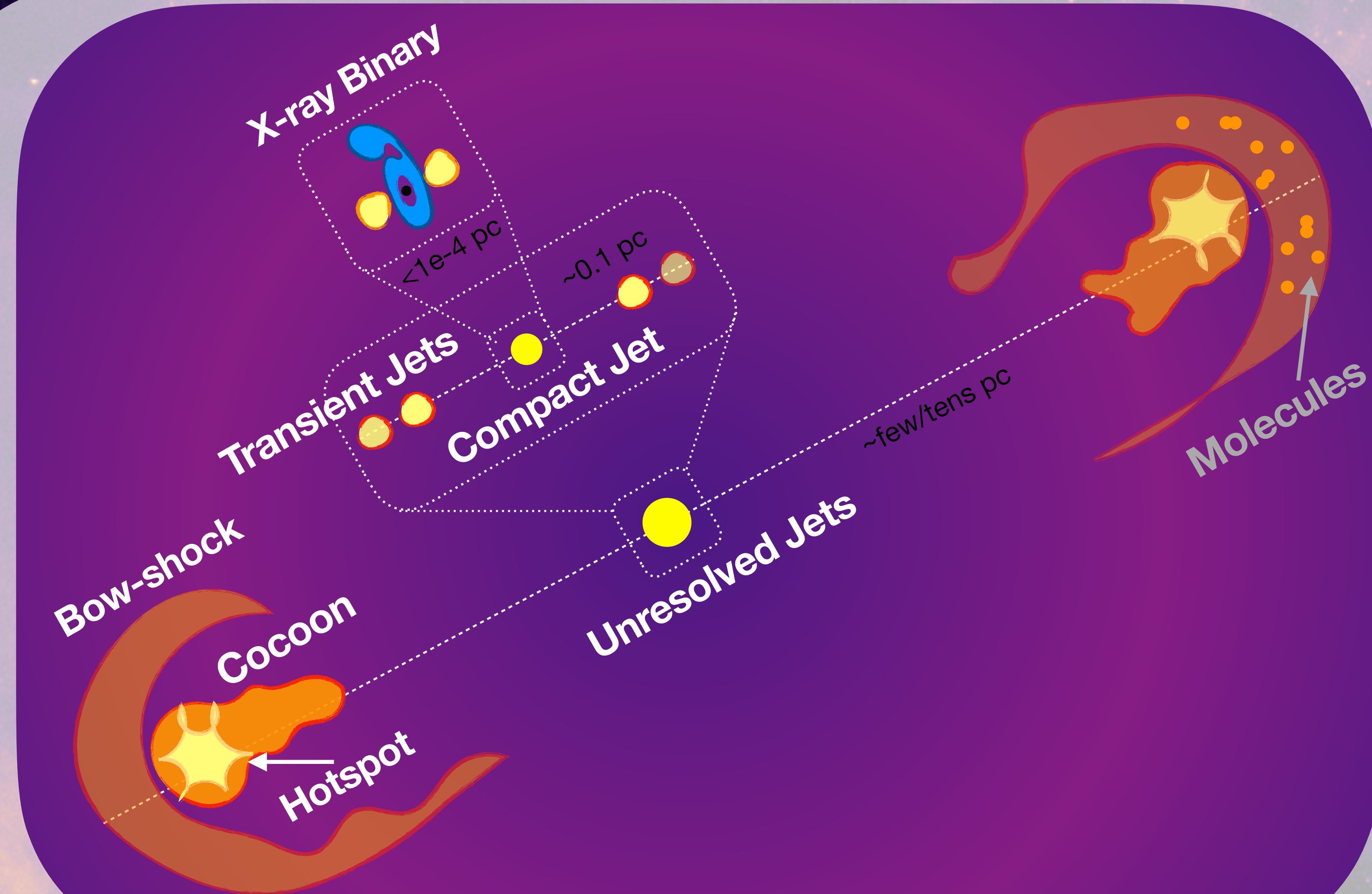


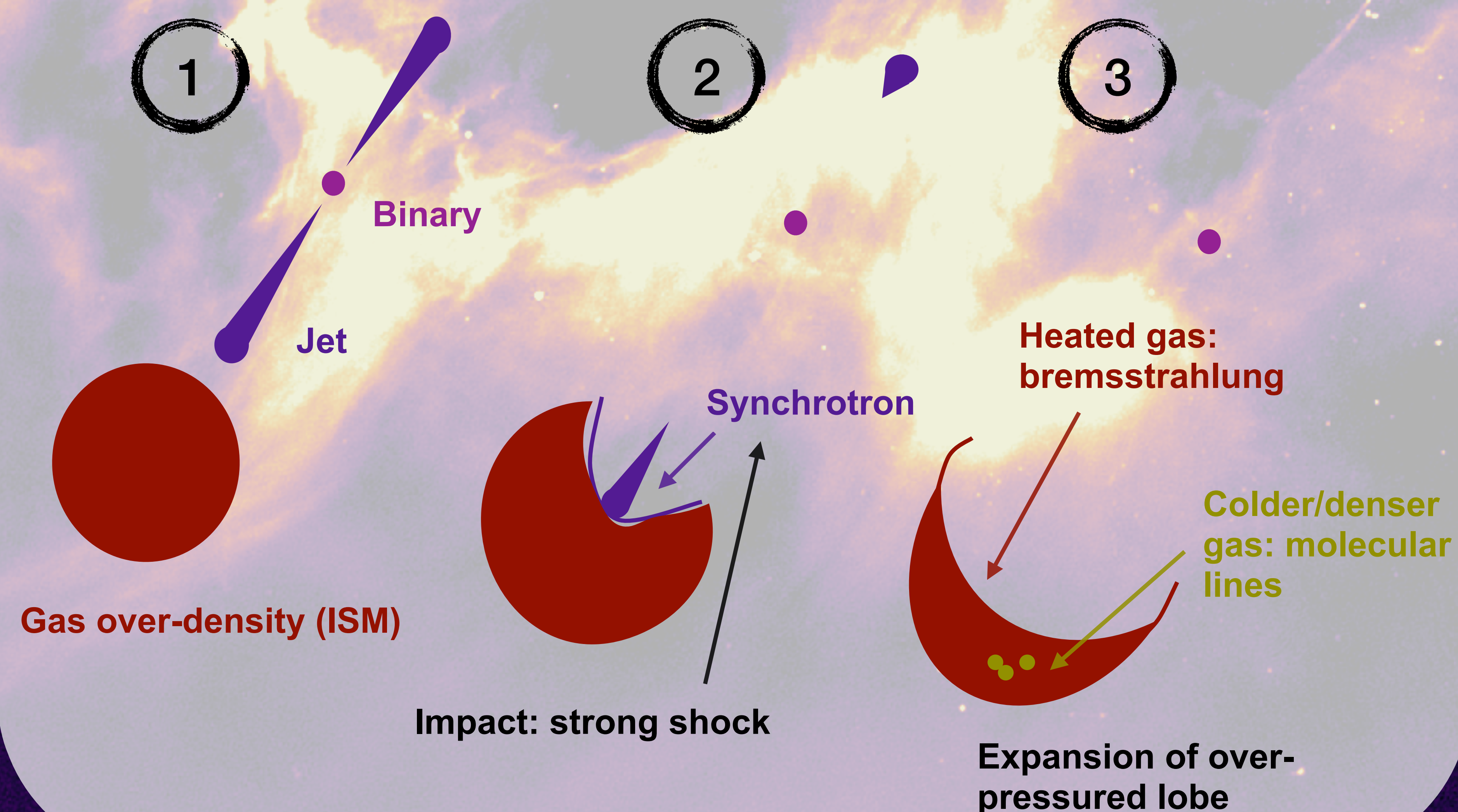
MeerKAT detection of a bow-shock structure close to the BH-XRB GRO J1655-40

Isabella Mariani^{1,2}, Sara E. Motta¹, Chiara Salvaggio¹

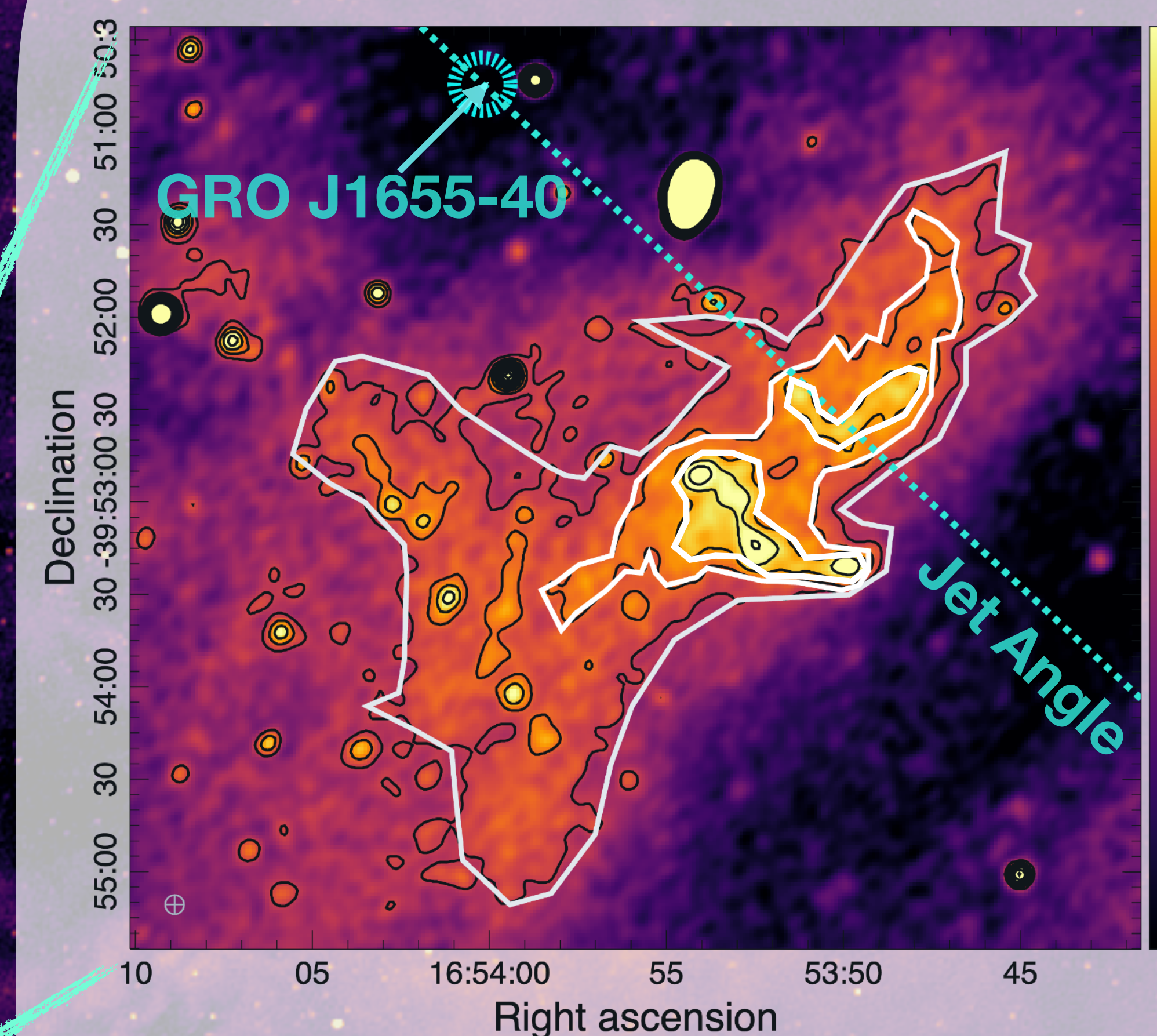
¹ INAF-OABrera, ²University of Milano-Bicocca



Jet-ISM interaction in X-ray binaries



A bow-shock in GRO J1655-40's jet direction



MeerKAT 1.3 GHz, ~ 7 hr

Regions at $\sim 3, 4, 5$ x rms level ($\sim 15 \mu\text{Jy beam}^{-1}$)*

Synchrotron emission:
 $S_\nu \propto \nu^\alpha$,
 $\alpha \in [-1.2, -0.8]**$
 (in-band)

*External regions are hollow where other one are placed
 **Ranges determined by the values from the different regions

Minimum energy/equipartition model:

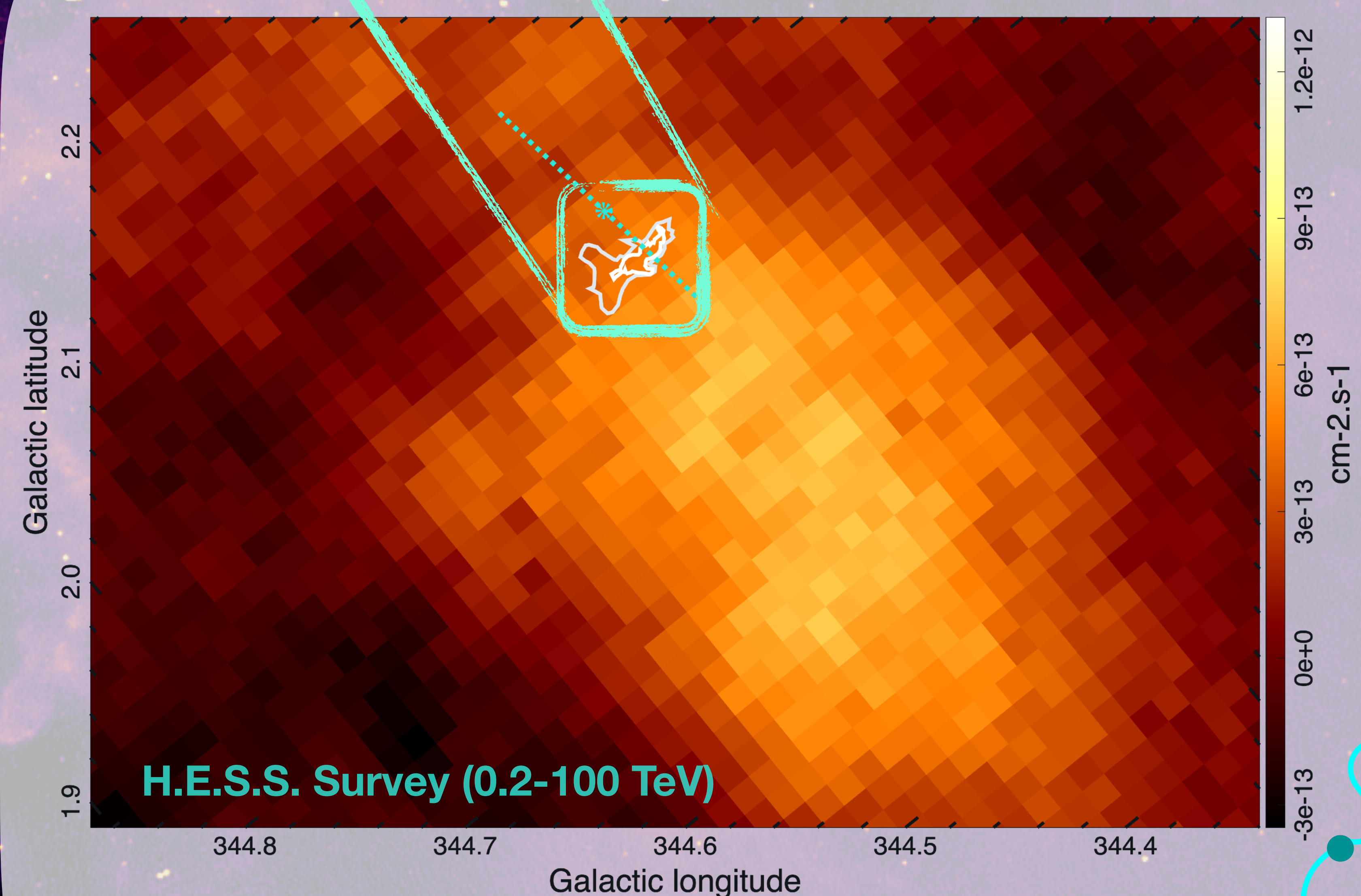
$$E_{\min} \gtrsim [0.3 - 9.2] \times 10^{43} \text{ erg}^{**}$$

$$B_{\text{eq}} \gtrsim [0.8 - 1.6] \times 10^{-4} \text{ G}^{**}$$

$$p_{\min} \gtrsim [2.0 - 7.7] \times 10^{-10} \text{ erg cm}^{-3}^{**}$$

isabella.mariani@inaf.it

A very-high energy counterpart?



Particle accelerated at VHE??