$\bar{X}_{H2}, \bar{X}_{CO}, \bar{n}_H$ → from sim.

(Δv) → $\bar{l}^1_{CO}$

(c_s, CO) → $\bar{l}^2_{CO}$

] → from sim [erg s^{-1} cm^{-3}]

(Δv) → $\bar{l}^1_{CO,SI}$

(c_s, CO) → $\bar{l}^2_{CO,SI}$

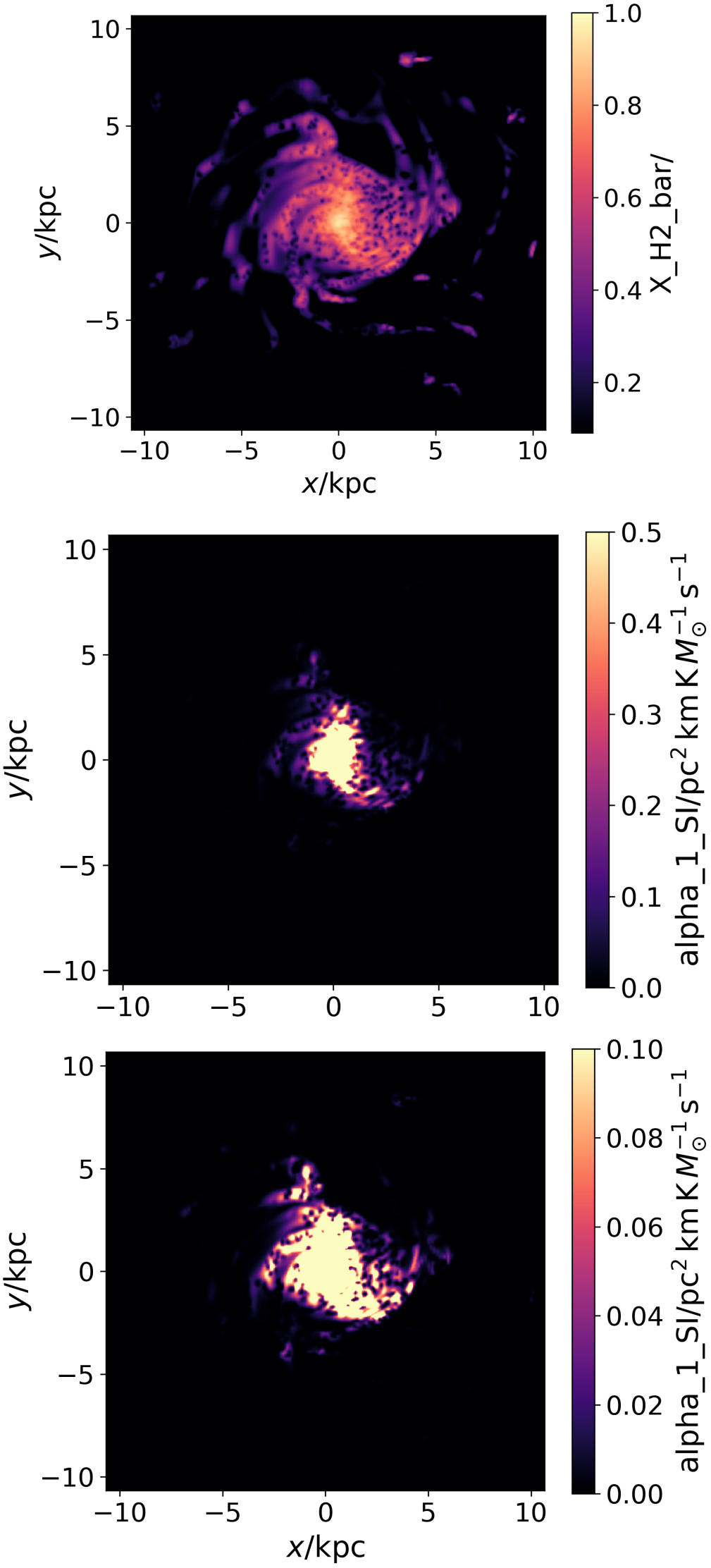
] → from sim [K km/s pc^2 cm^{-3}]

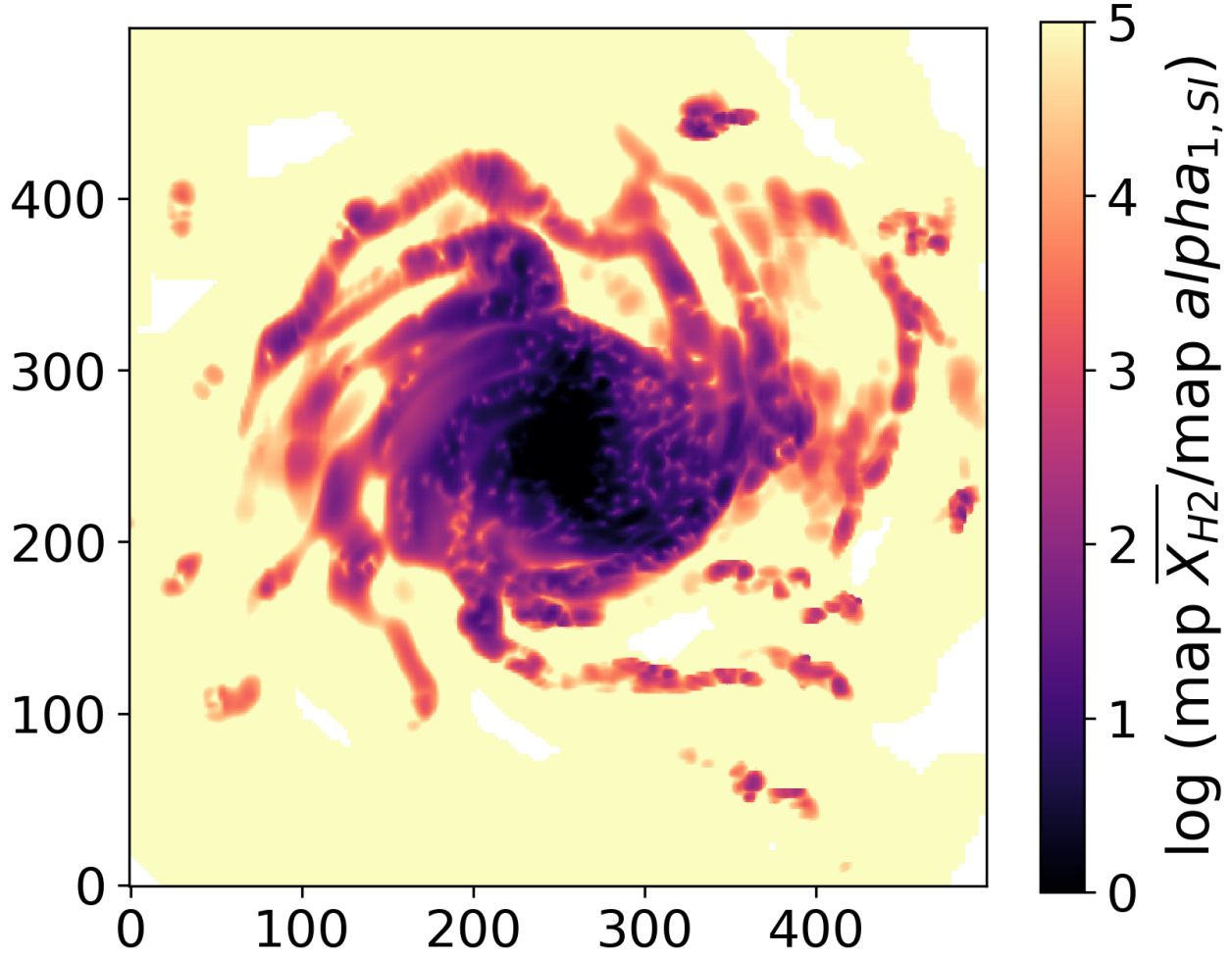
$$\alpha_{1,SI} = \frac{\bar{l}^1_{CO,SI}}{\bar{n}_H \cdot m_p} \times M_\odot \quad \text{[K km/s } pc^2 M_\odot^{-1}\text{]}$$

$$\text{map of } \bar{X}_{H2} = \frac{\int \bar{X}_{H2} \bar{\rho}_H \, dz}{\int \bar{\rho}_H \, dz}$$

$$\text{map of } \alpha_{1,SI} = \frac{\int \alpha_{1,SI} \bar{\rho}_H \, dz}{\int \bar{\rho}_H \, dz}$$

$$\not{z} = \frac{\text{map of } \bar{X}_{H2}}{\text{map of } \alpha_{1,SI}}$$


10
5
0
−5
−10
y/kpc
−10
−5
0
5
10
x/kpc
1.0
0.8
0.6
0.4
0.2
X_H2_bar/
0.5
0.4
0.3
0.2
0.1
0.0
alpha_1_SI/pc^2 km K $M_\odot^{-1}$ s^{-1}
0.10
0.08
0.06
0.04
0.02
0.00
alpha_1_SI/pc^2 km K $M_\odot^{-1}$ s^{-1}



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