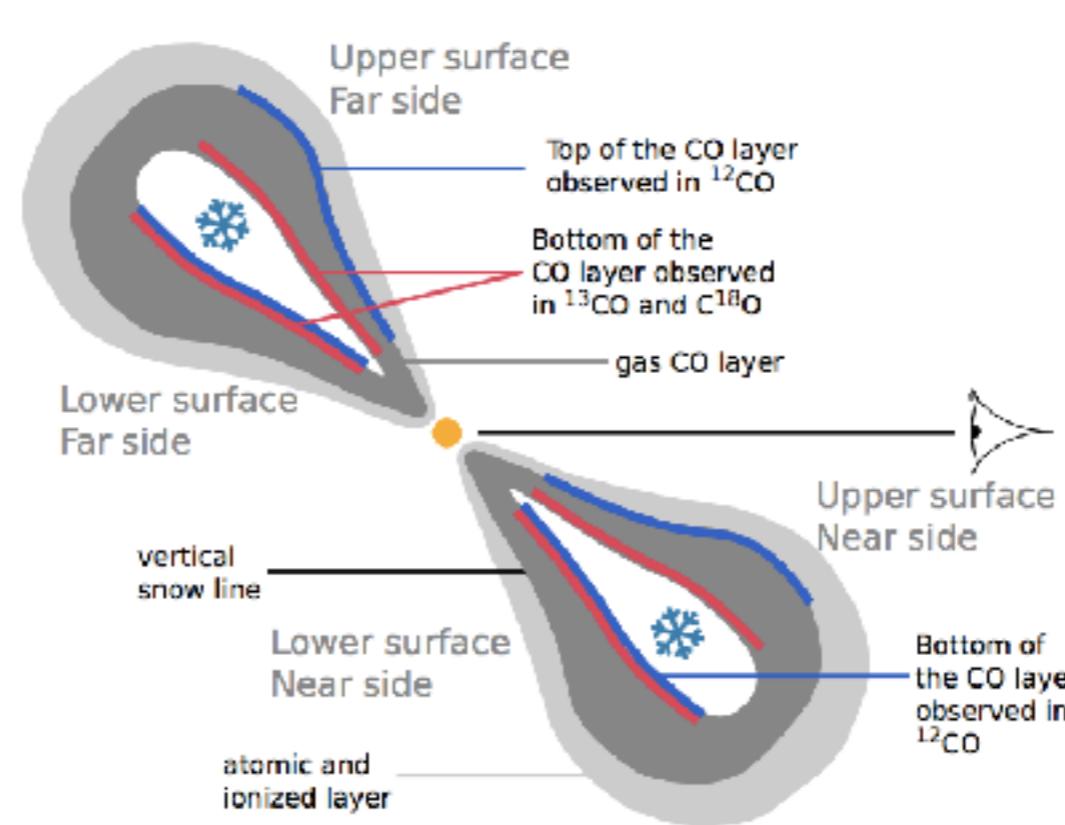
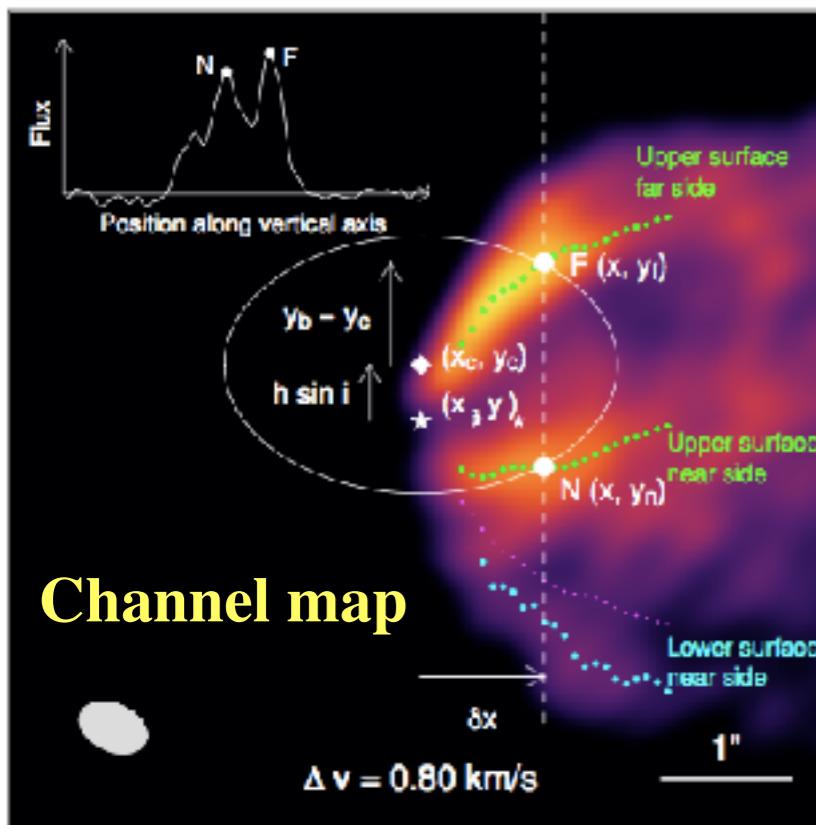


# Star Formation News Letter

## No. 299 #31-35, 41-45 花輪 知幸

- No. 31** Kraus et al. Dust-trapping vortices and a potentially **planet-triggered spiral wake** in the pre-transitional disk of V1247 Orionis
- No. 32** Kuhn et al. Young Star Cluster **NGC 6231**. II.
- No. 33 C. Lee et al. Parsec-Scale Relationship Between  $I_{\text{CO}}$  and  $A_V$
- No. 34** P.S. Li et al. Formation of **stellar clusters** in **magnetized, filamentary infrared dark clouds**
- No. 35** Baobab Liu et al. **1.3mm SMA Survey** of 29 Variable YSOs
- No. 36** Motegi et al. High-Mass Star-Formation: **Possible Dusty Infall Streams** within 100 AU
- No. 37 Murray et al. Protostellar **Jet Feedback** on Turbulent Collapse
- No. 38 Ndugu et al. **Planet population synthesis** by pebble accretion
- No. 39 Nisini et al. Jets, winds and accretion in T Tauri: **X-shooter view**
- No. 40** Pinte et al. **Direct mapping of the temperature and velocity gradients** in discs. Imaging the vertical CO snow line around IM Lupi

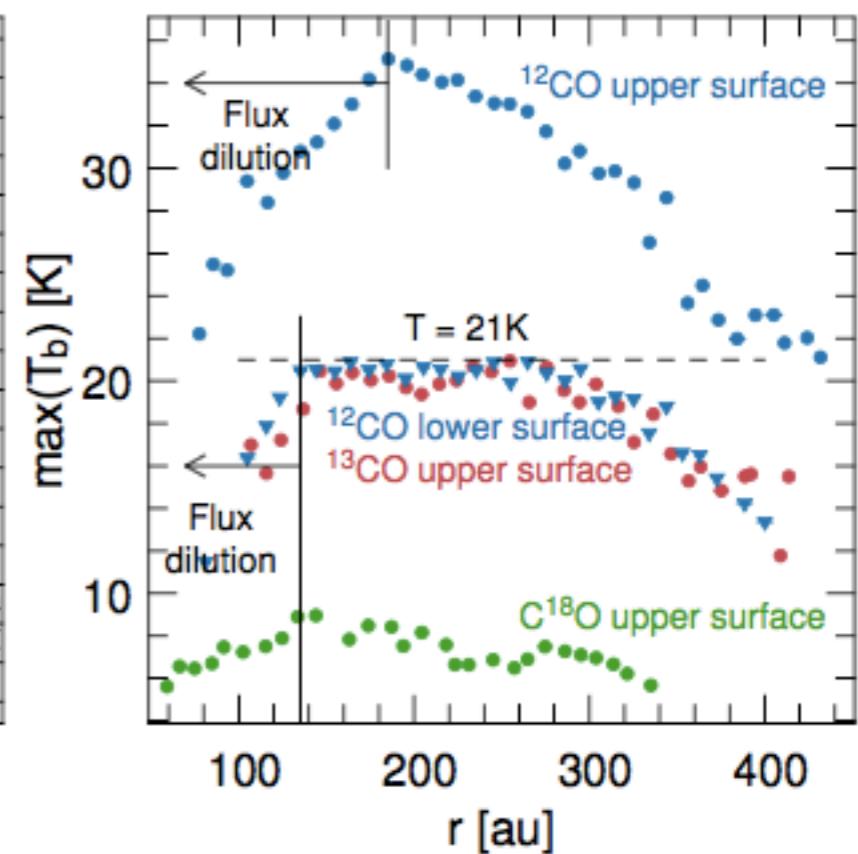
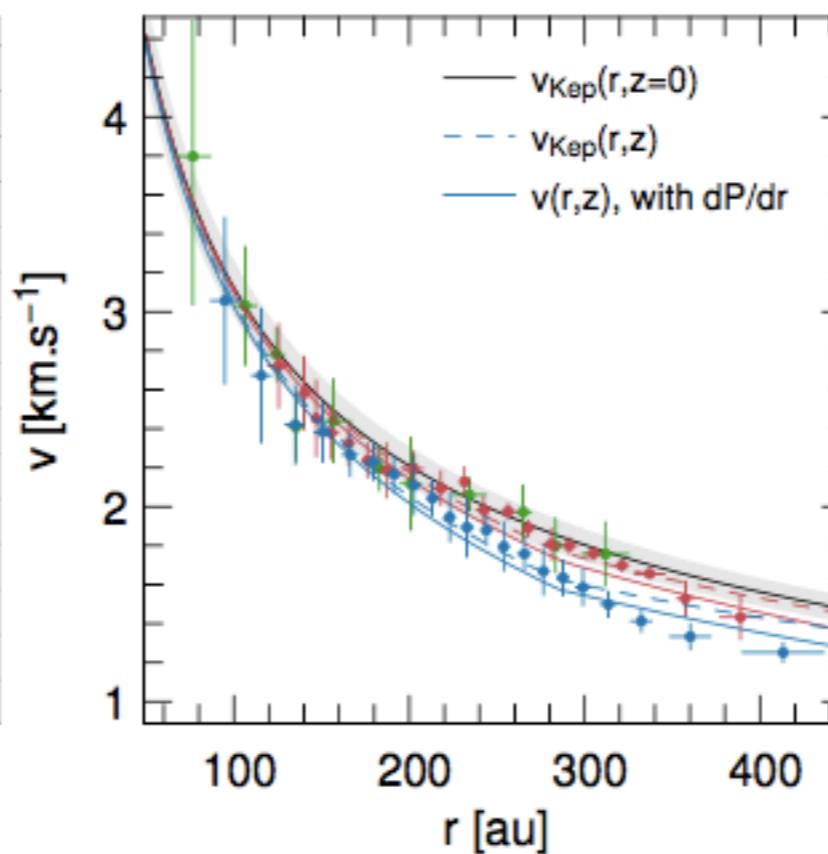
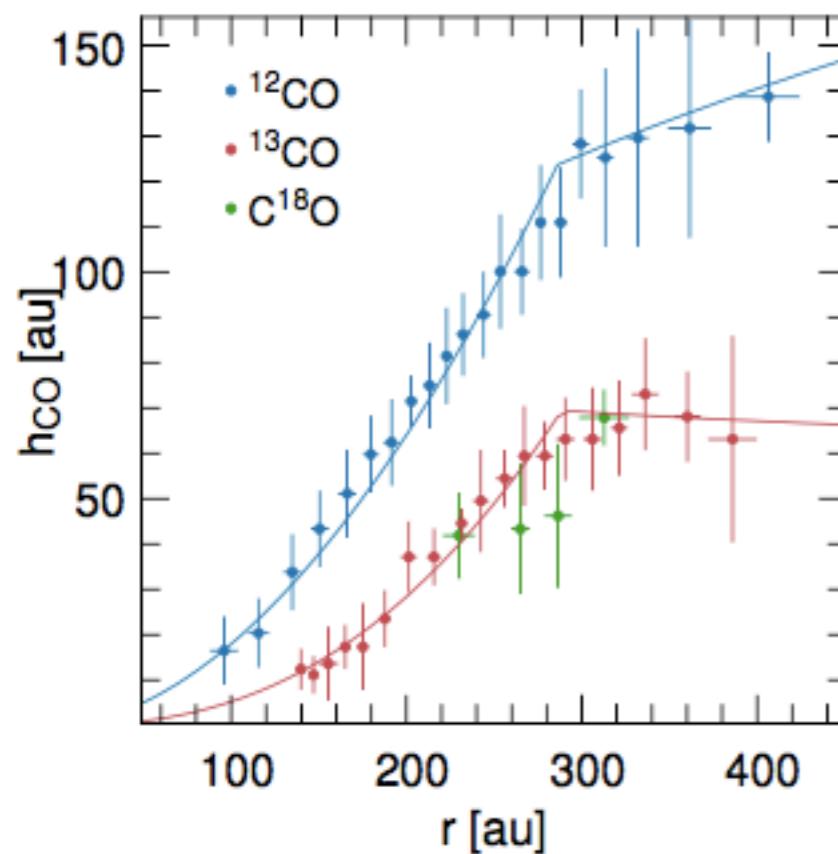
# No. 45 Direct mapping of the temperature and velocity gradients in discs Imaging the vertical CO snow line around IM Lupi, C. Pint et al. A&Ap

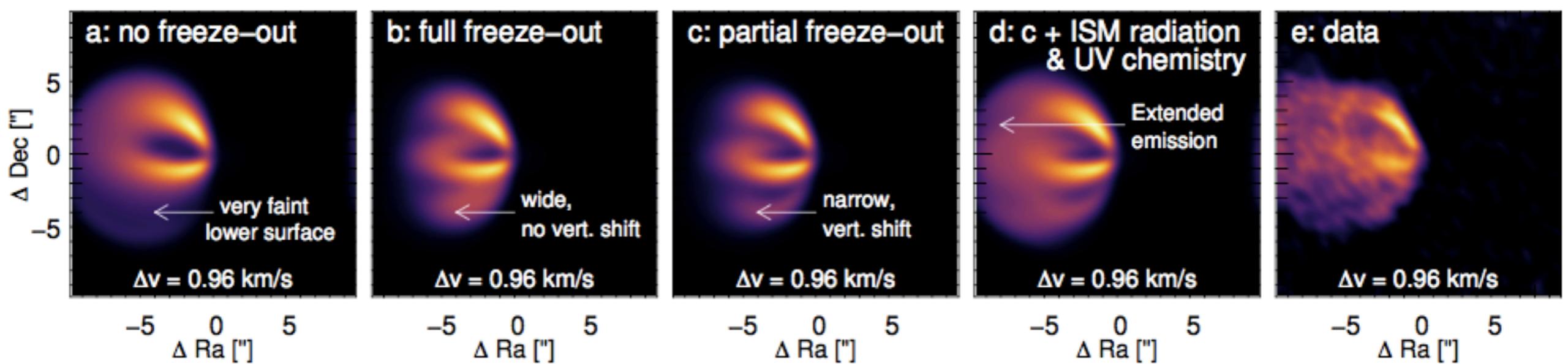
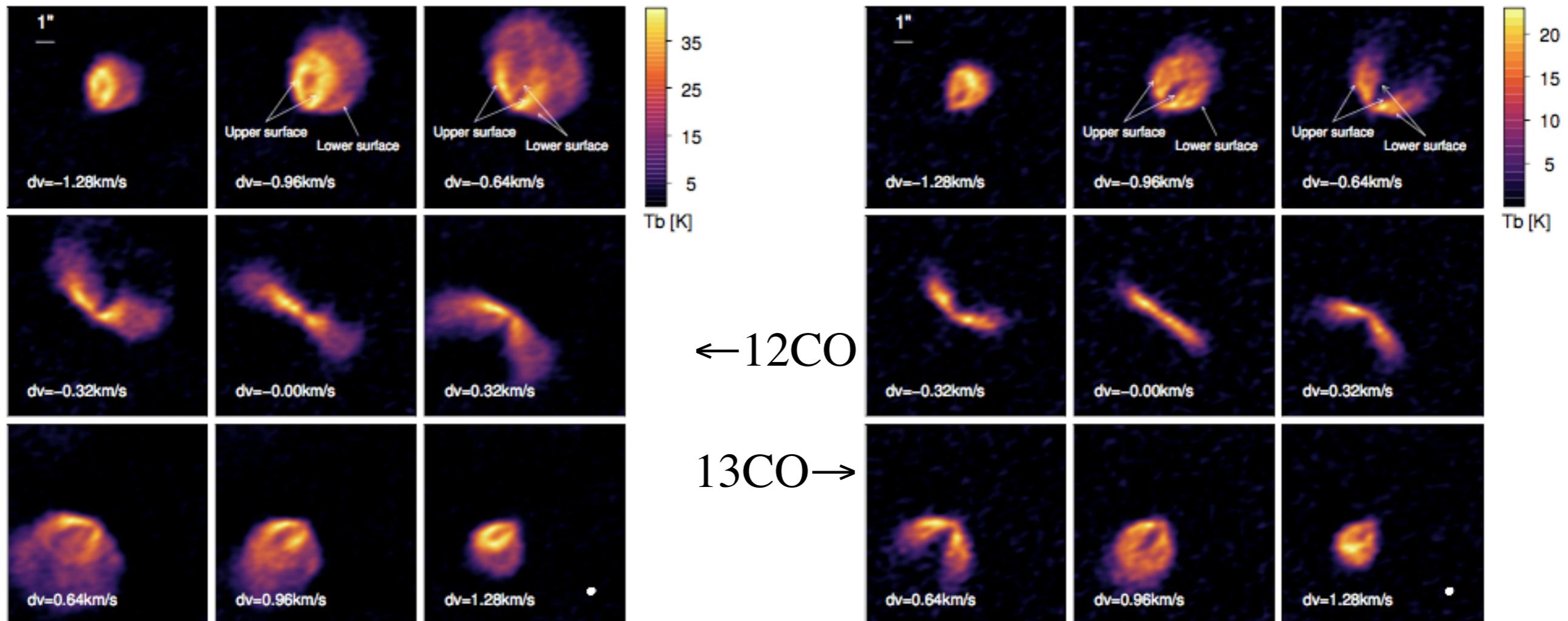


$\Delta v = 0.05 \text{ km/s}$   
 $0.^{\prime\prime}4$  beam  
M05 V T Tau  
 $161 \pm 10 \text{ pc}$

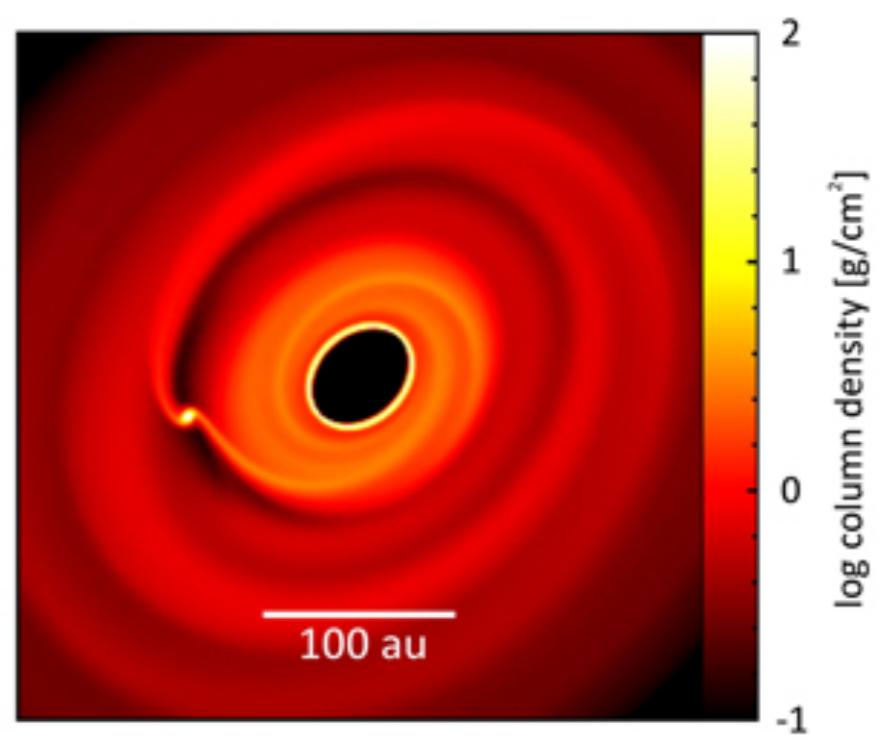
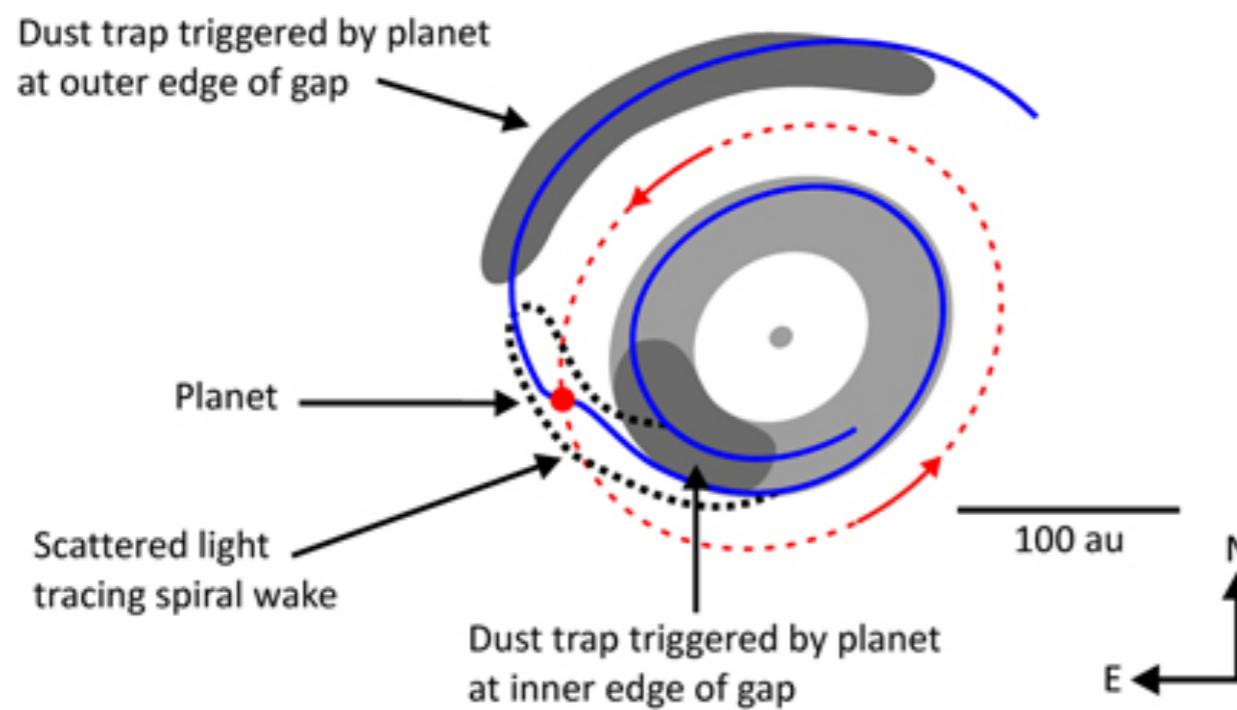
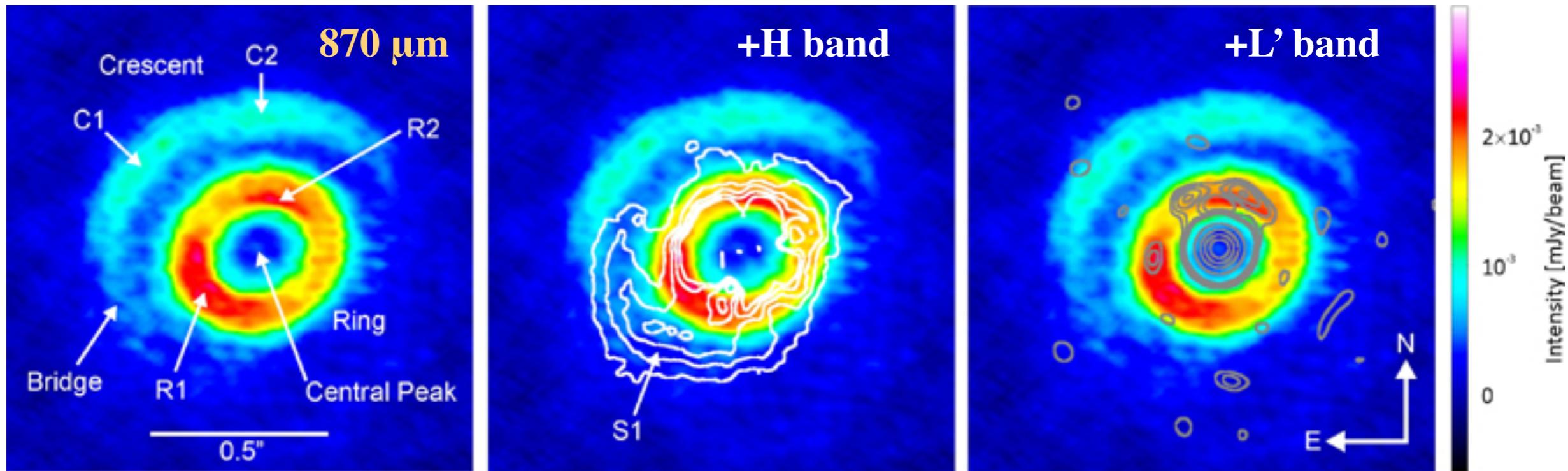
回転だけ考える

$$v_\phi(\mathbf{r}, z)$$

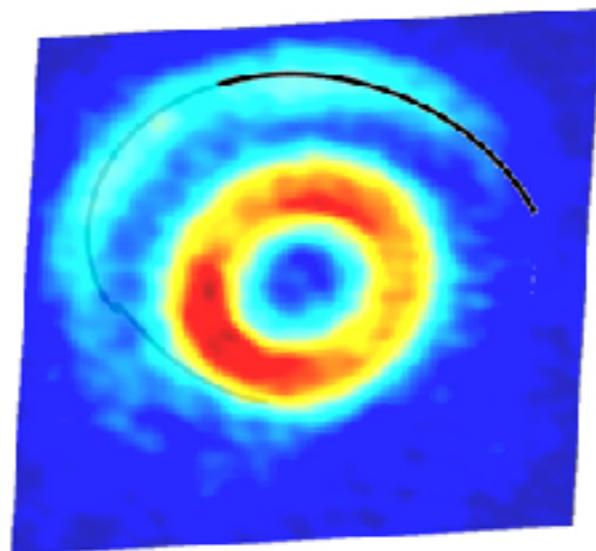
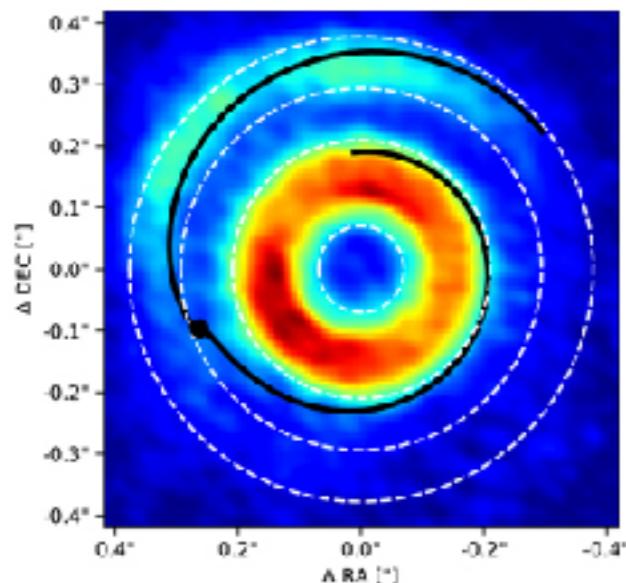




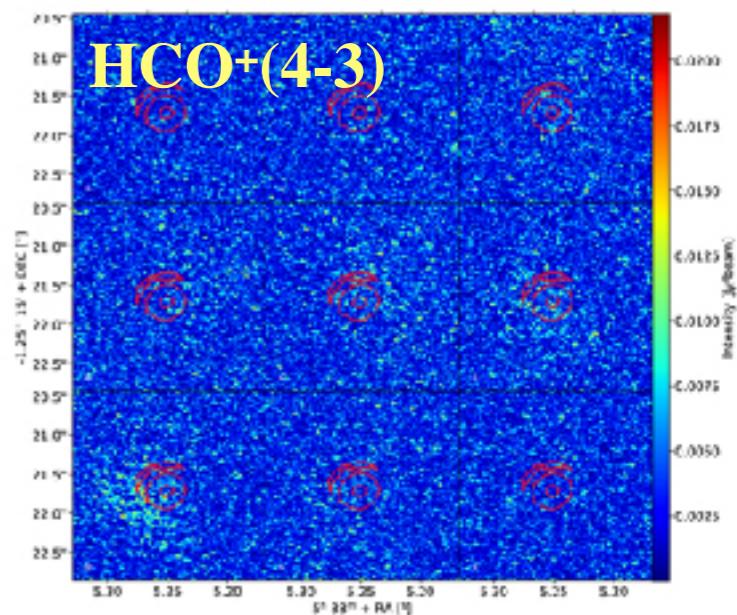
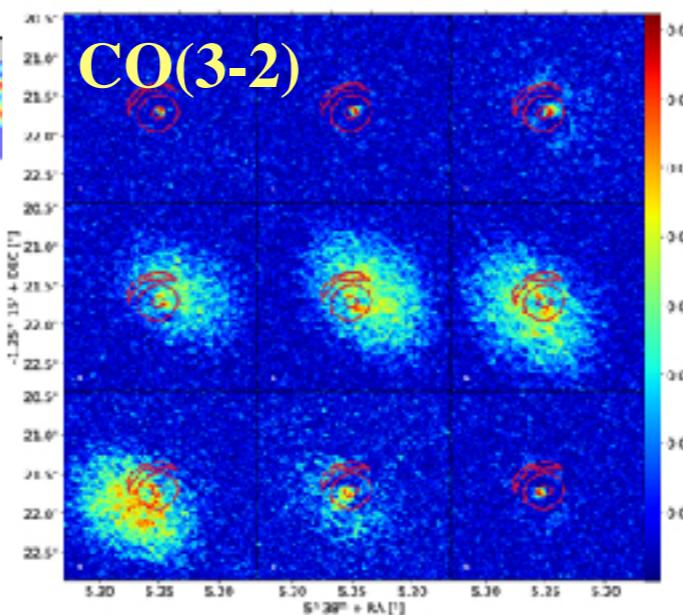
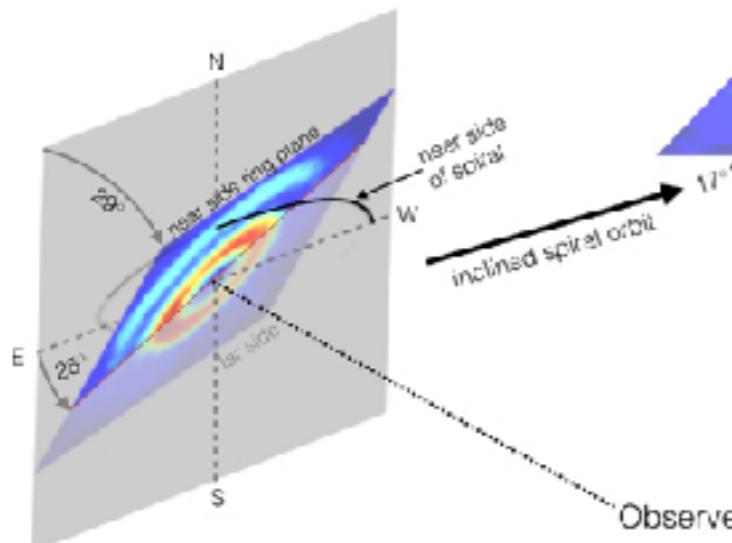
No. 31 Dust-trapping Vortices and a Potentially Planet-triggered Spiral Wake in the Pre-transitional Disk of V1247 Orionis, S. Kraus et al. ApJ, 848, L11



ALMA 0.''04, F05V, 320±30 pc



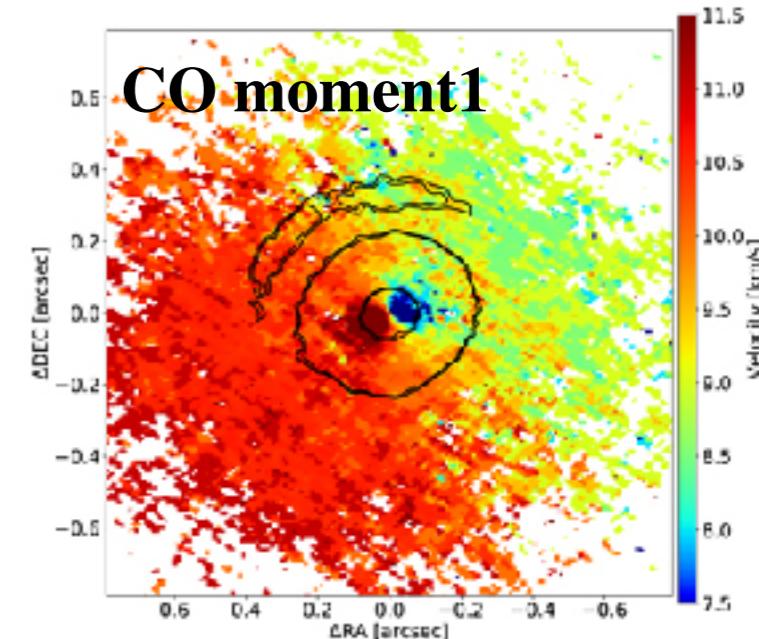
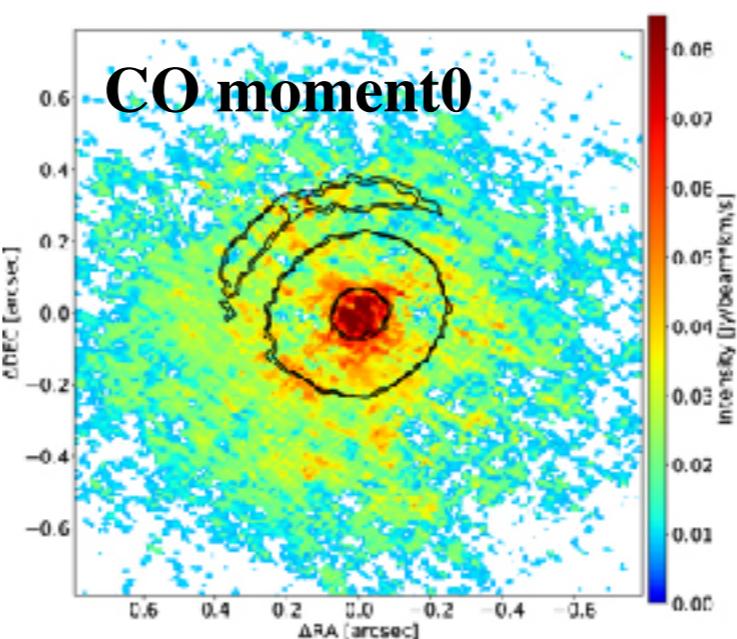
enhancement in scaleheight  
due to spiral

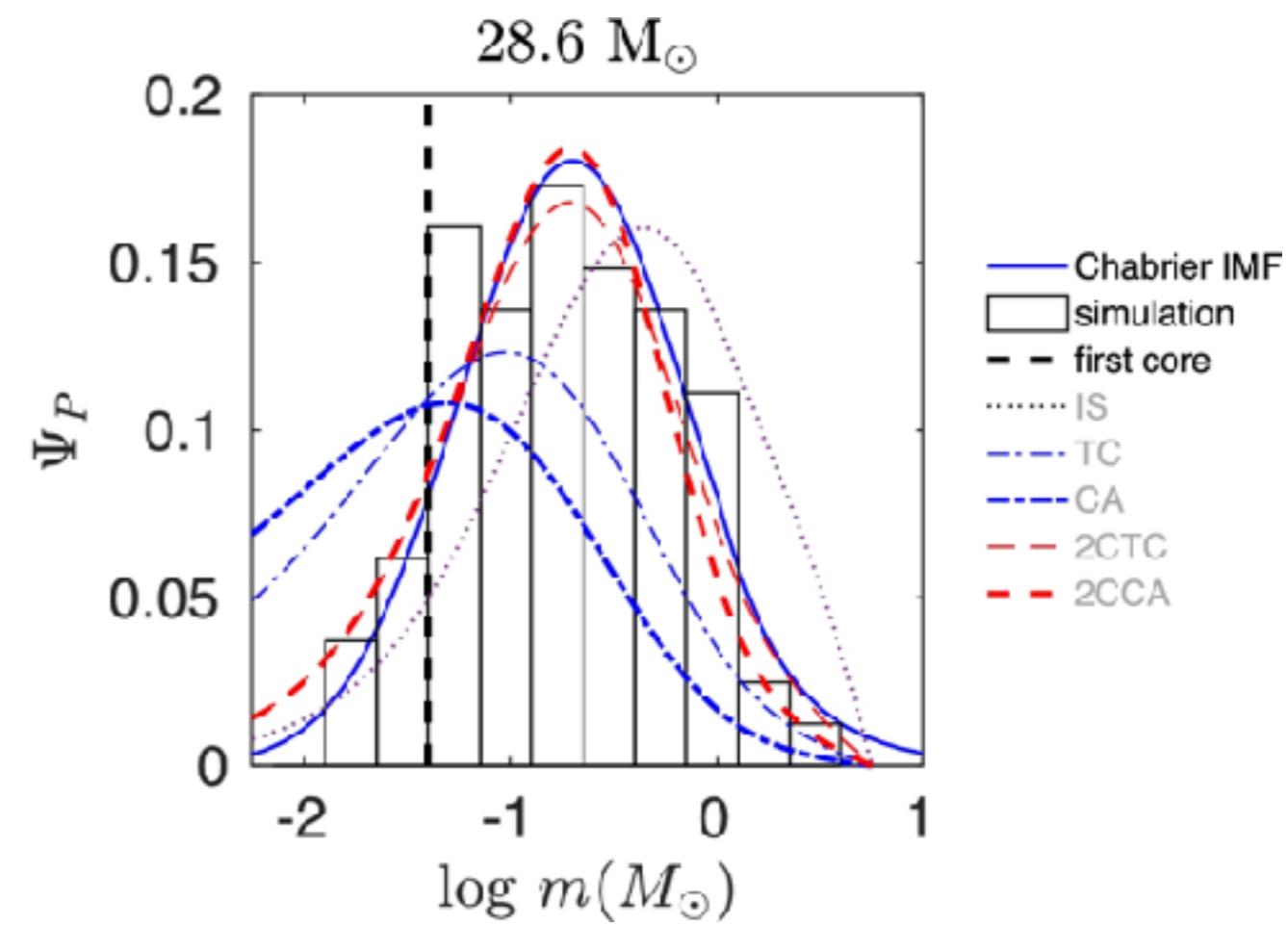
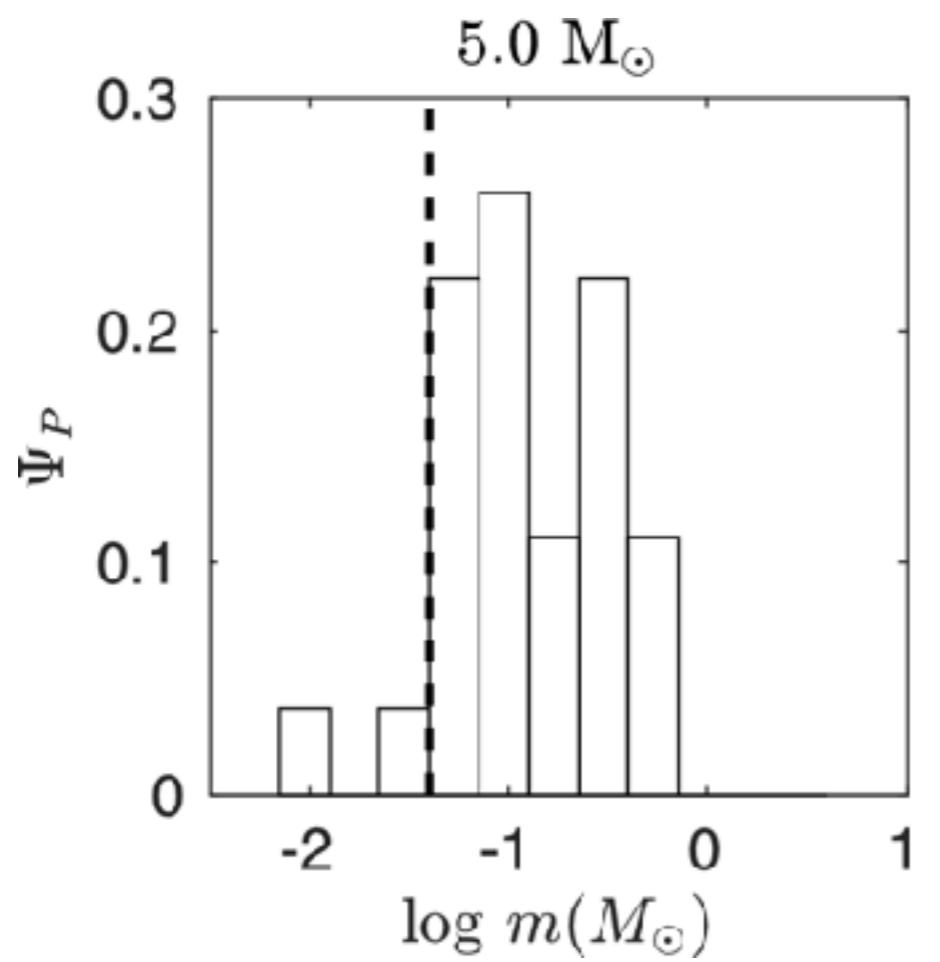
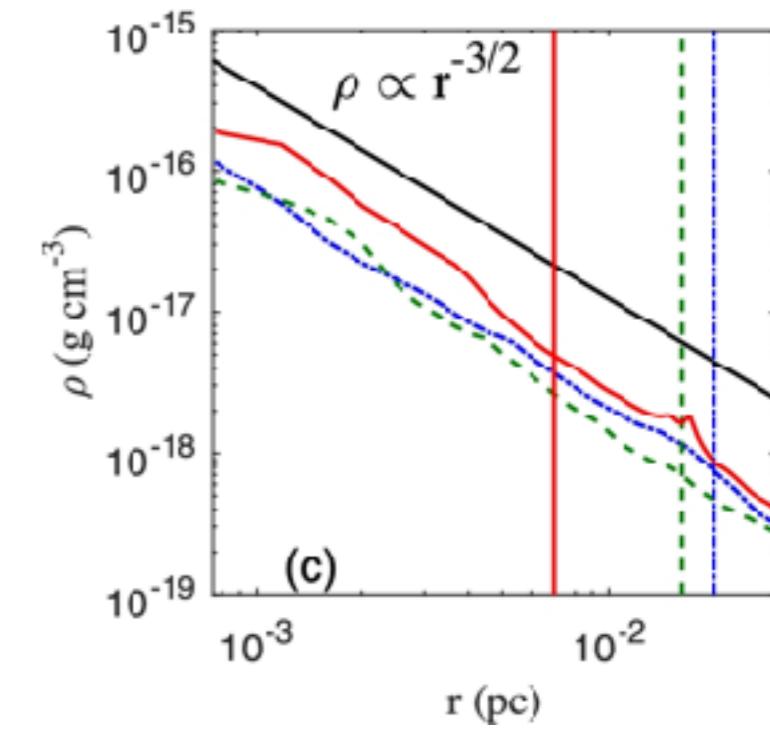
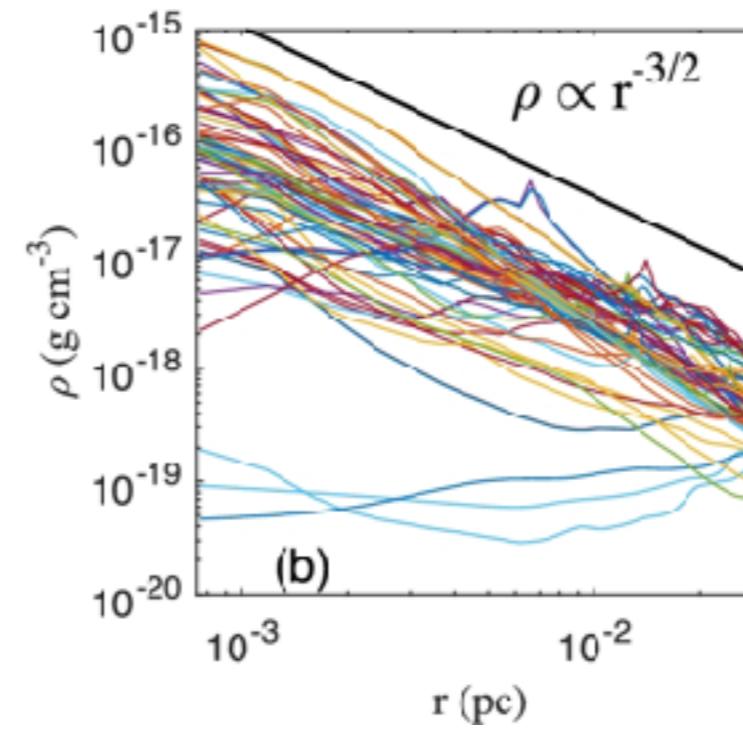
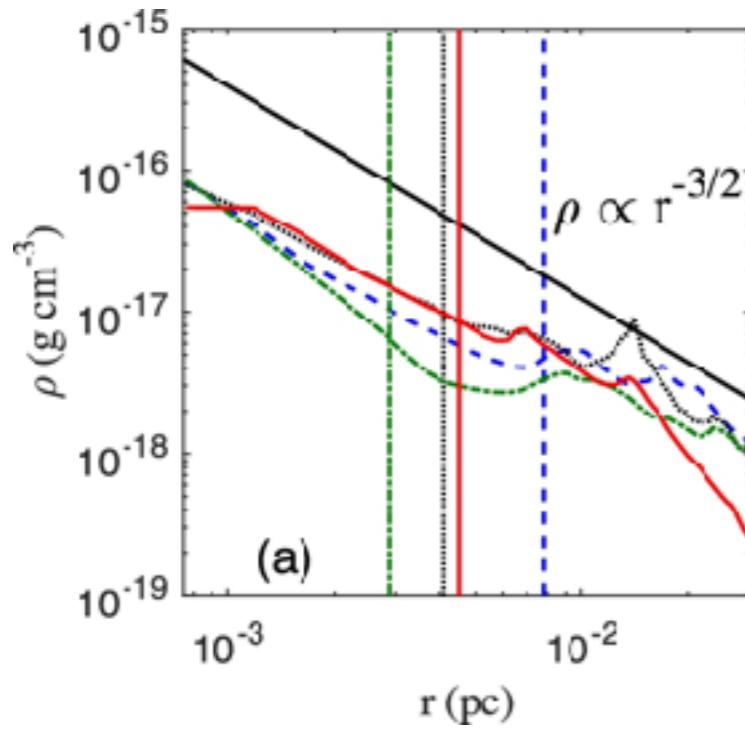


Ring Structure (Significance $27\sigma$ )			
Ring inclination	$i_{\text{proj}}$	[ $^{\circ}$ ]	$30.0 \pm 1.0$
Ring PA	$\theta_{\text{proj}}$	[ $^{\circ}$ ]	$25.4 \pm 0.4$
Ring inner radius	$r_{\text{R}}^{\text{in}}$	[ $''$ ]	$0.129 \pm 0.001$
Ring outer radius	$r_{\text{R}}^{\text{out}}$	[ $''$ ]	$0.203 \pm 0.003$
Ring flux	$f_{\text{R}}$	[mJy]	$86.8 \pm 6.5$

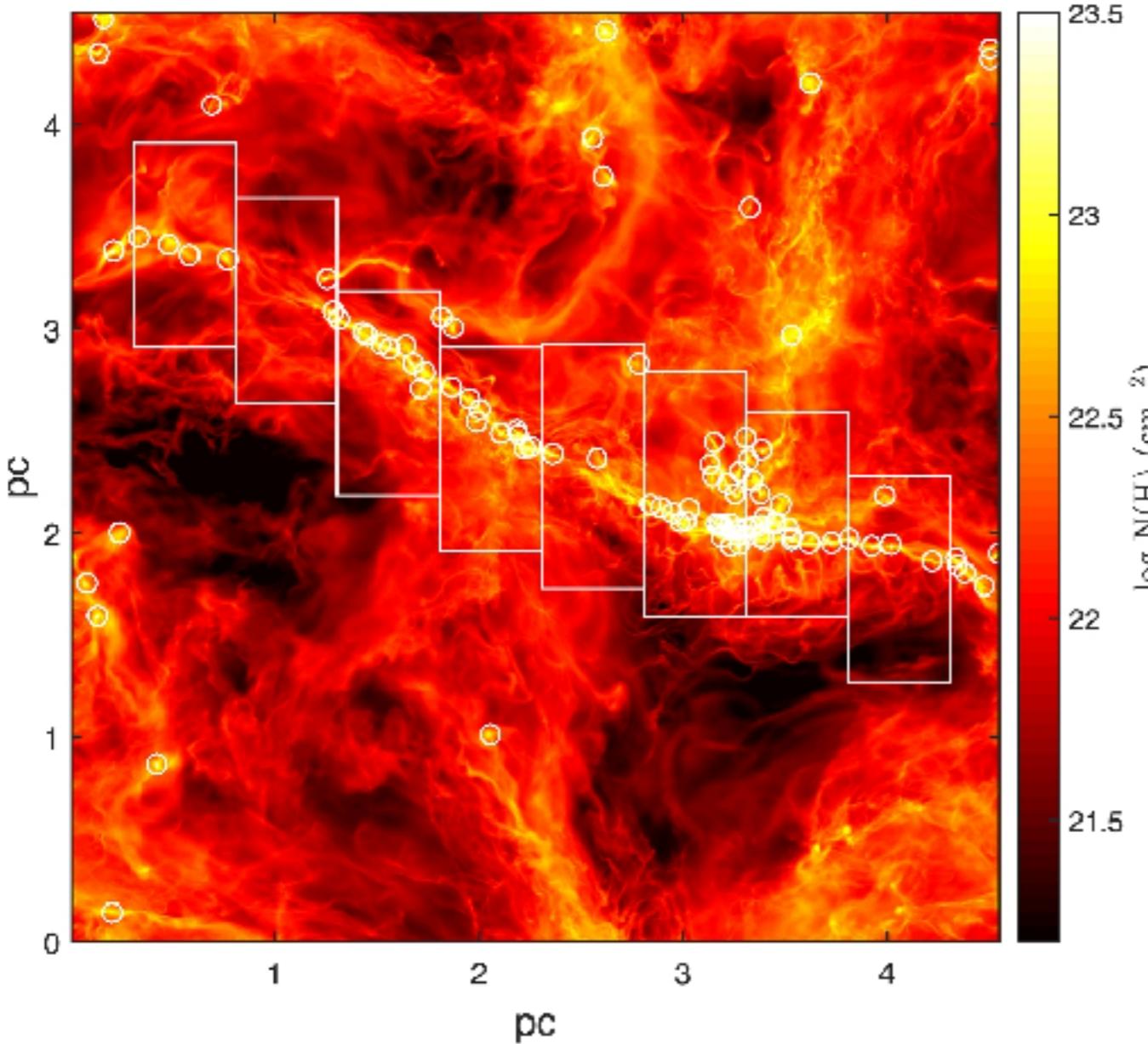
Crescent Structure (Significance $10\sigma$ )			
Crescent radius	$r_{\text{C}}$	[ $''$ ]	$0.398 \pm 0.001$
Crescent HWHM	$\Theta_{\text{C}}$	[ $''$ ]	$0.053 \pm 0.002$
Crescent flux	$f_{\text{C}}$	[mJy]	$39.2 \pm 2.3$
Crescent asymmetry, PA	$\theta_{\text{C}}$	[ $^{\circ}$ ]	$5.0 \pm 1.2$
Crescent asymmetry, amplitude	$a_{\text{C}}$		$0.751 \pm 0.002$
Crescent asymmetry, stretch-factor	$\gamma_{\text{C}}$		$2.57 \pm 0.15$



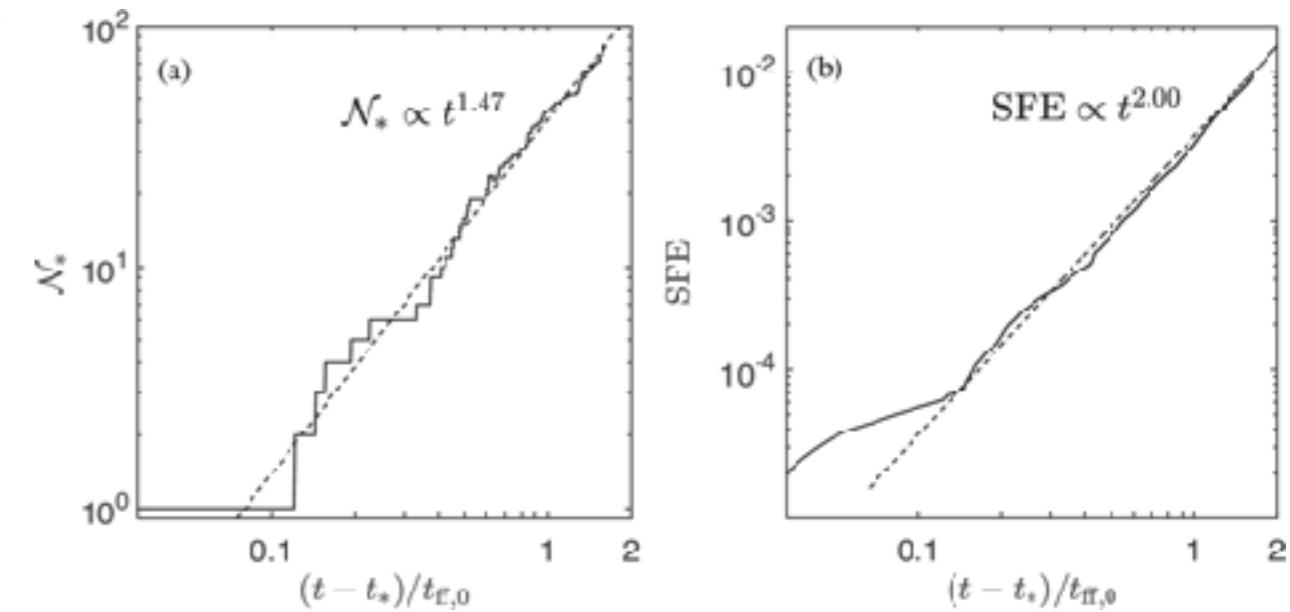


# No. 34 Formation of stellar clusters in magnetized, filamentary infrared dark clouds, Li, Klein & McKee, MNRaS

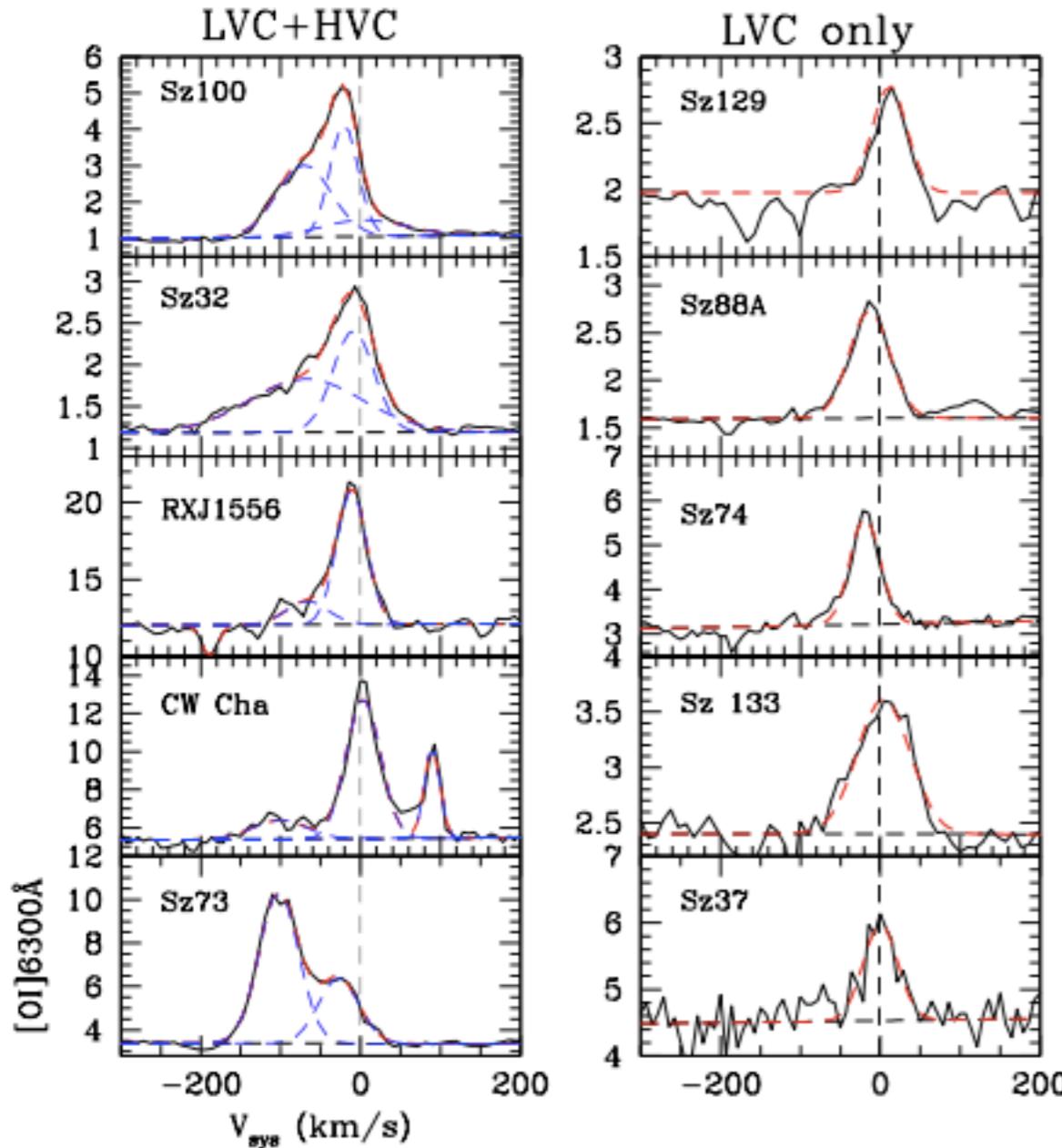
Orion 2  
Radiation, MHD, AMR, Feedback



Initial Condition:  
Li+15b  
two temperature ( $T_g, T_R$ )  
 $512^3$  AMR  
max 6 level (1/64)  
 $\Delta x = 36$  au  
driven turbulence

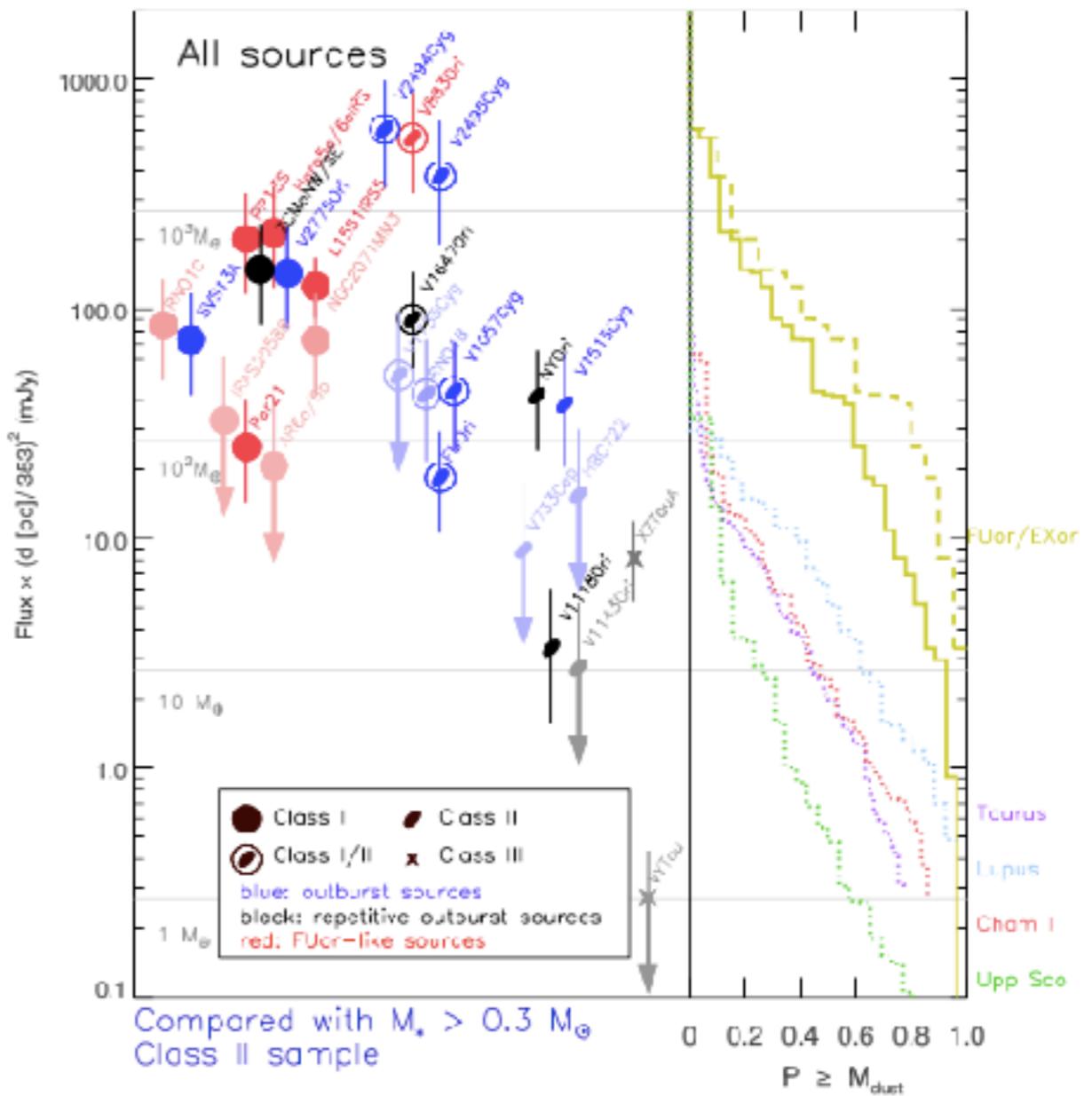


No. 39 Nisini et al.



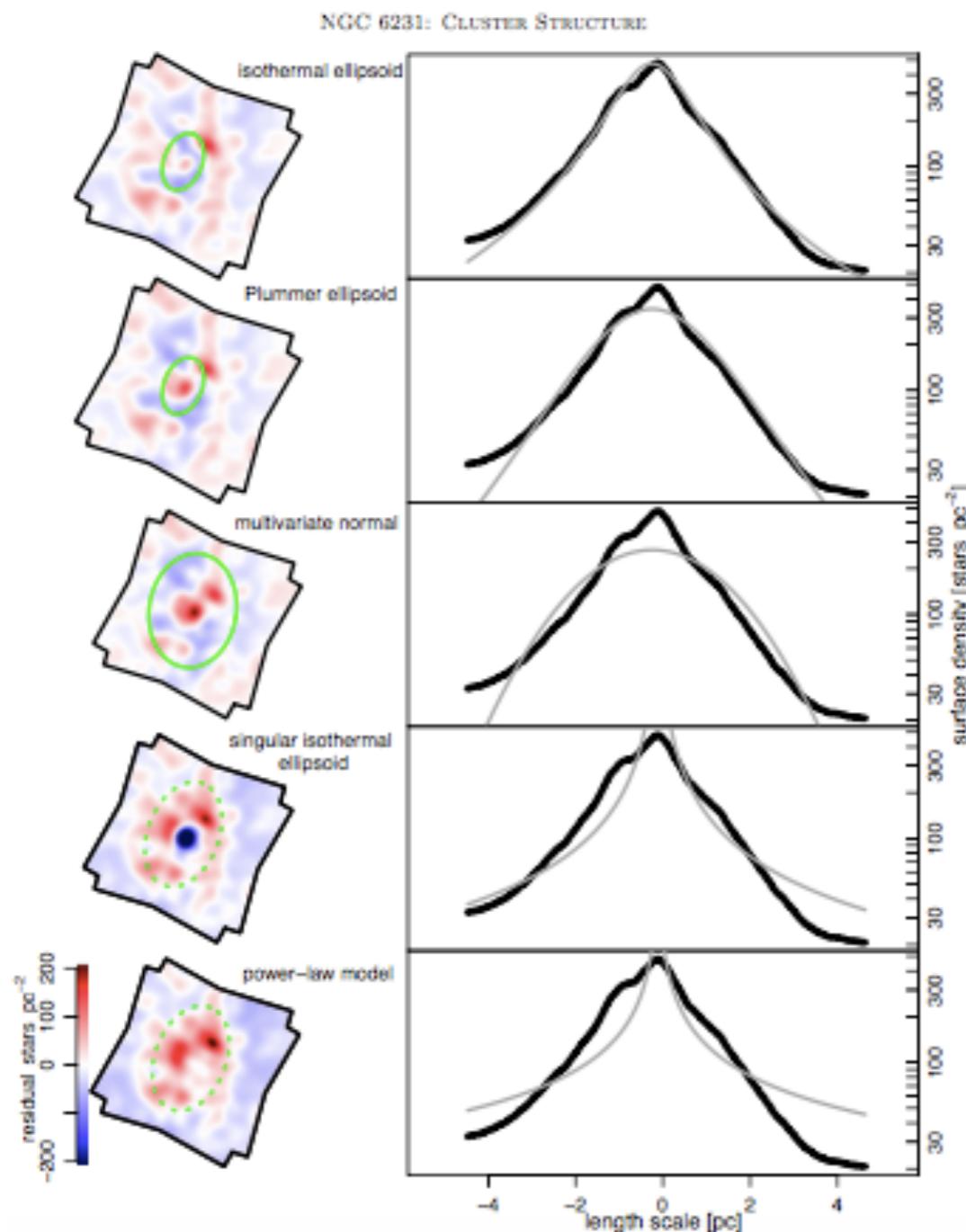
VLT X-shooter

No. 35 Baobab Liu et al.



SMA 39 YSOs 1.3 mm archive

No. 32 Kuhn



NGC 6231

No. 41 Motogi et al.

