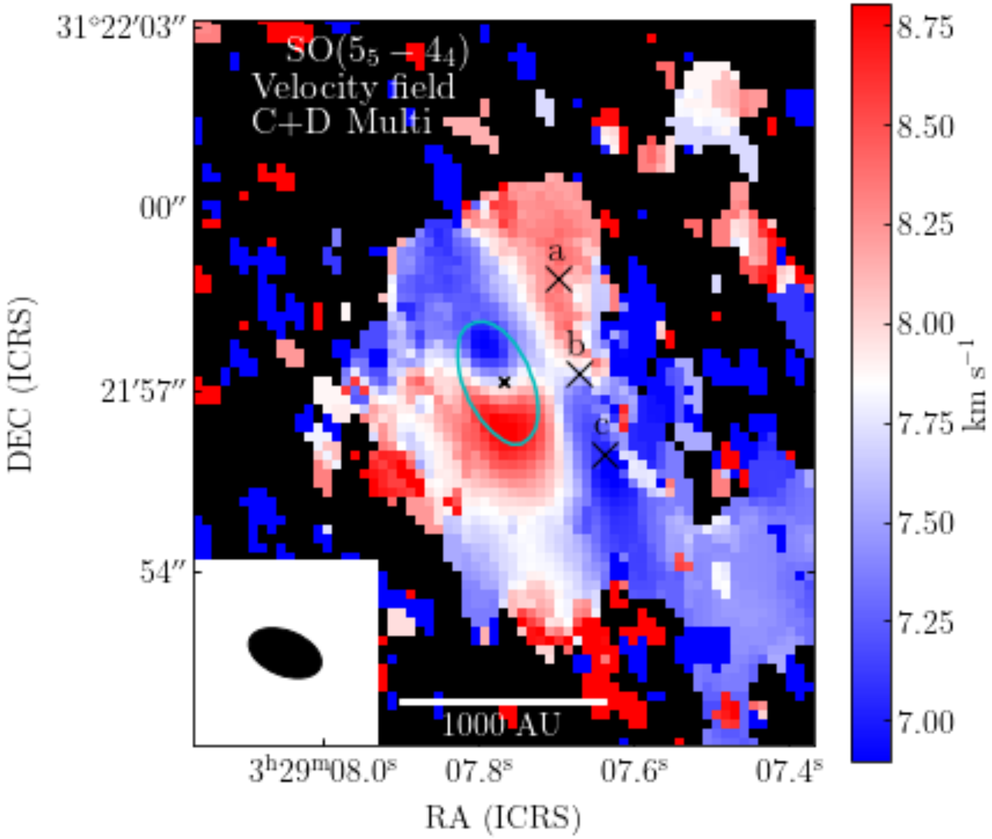
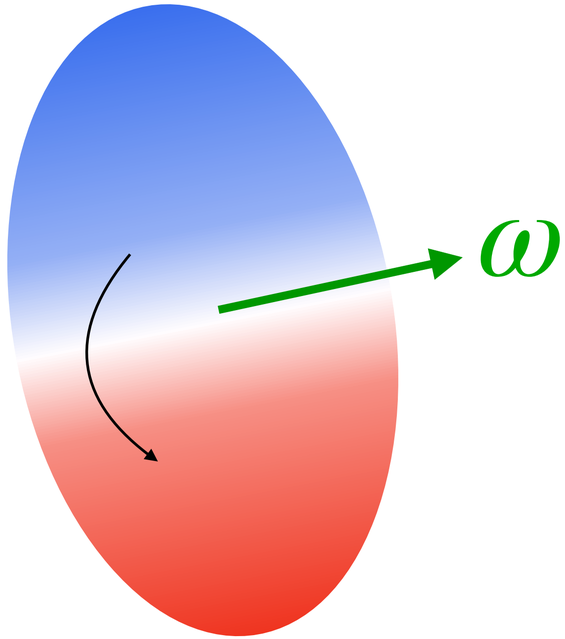
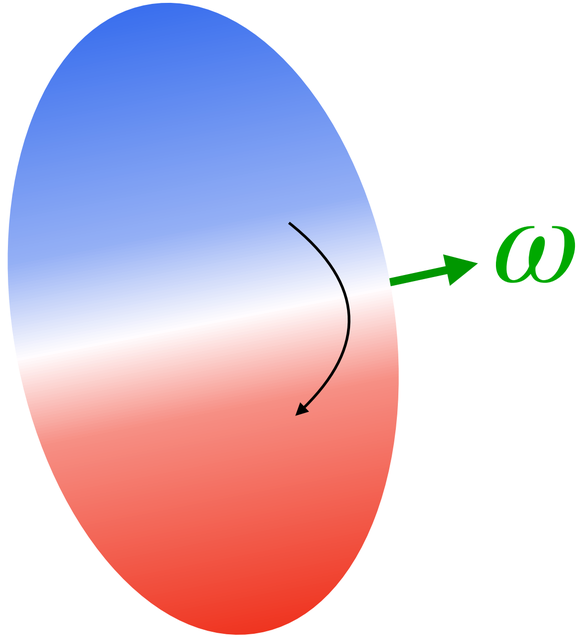
SO(5_5-4_4) velocity field



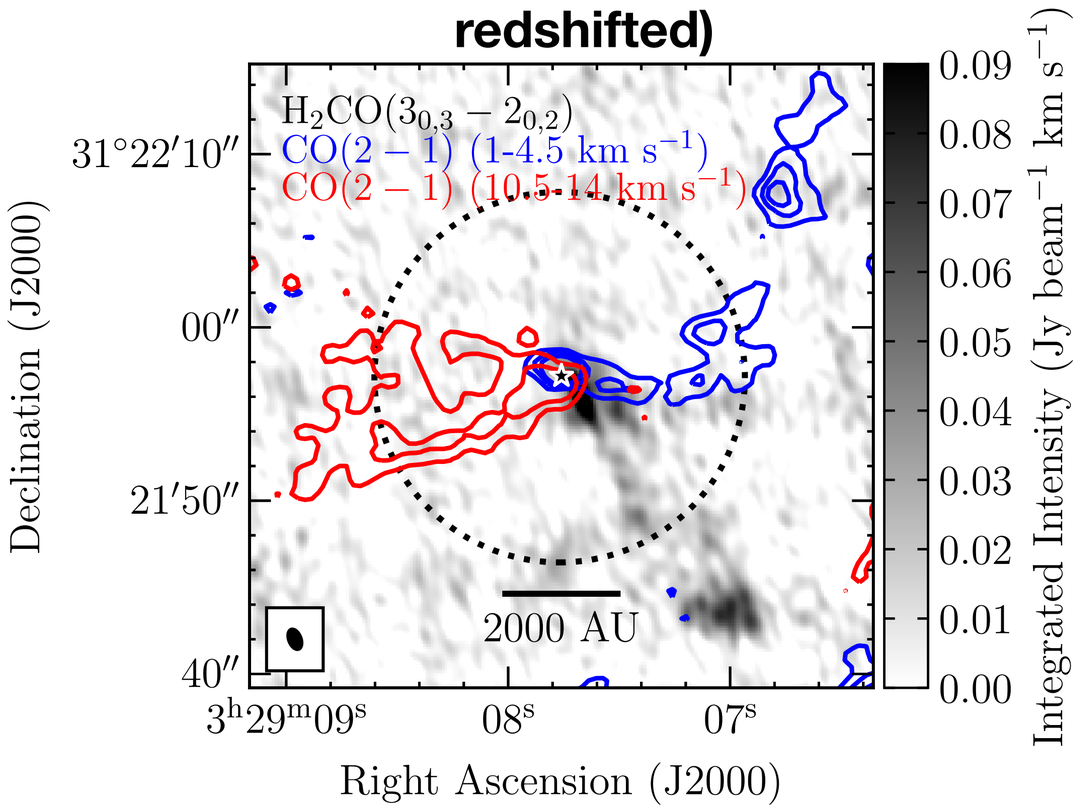


Angular momentum pointing towards the observer



Angular momentum pointing away from the observer

H2CO($3_{0,3}$-$2_{0,2}$) with CO(2-1) (MASSES) integrated intensity (blueshifted and redshifted)



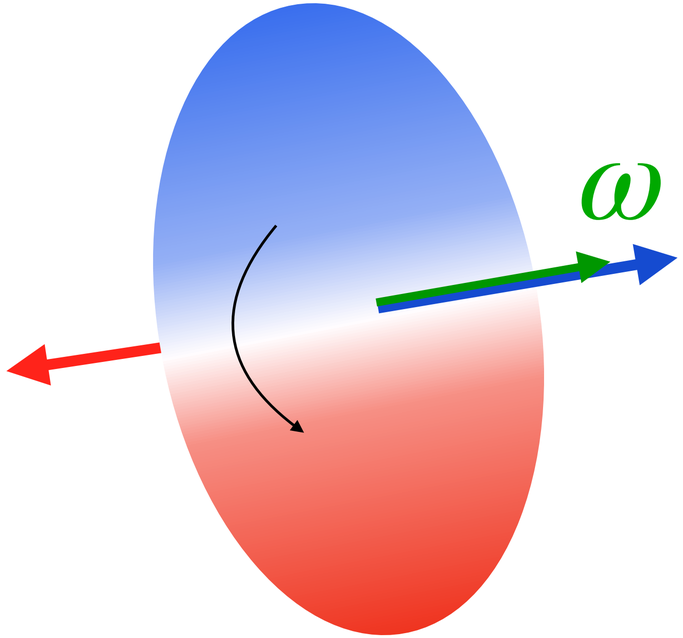
Agurto-Gangas et al. 2019 updated values (d=293 pc):

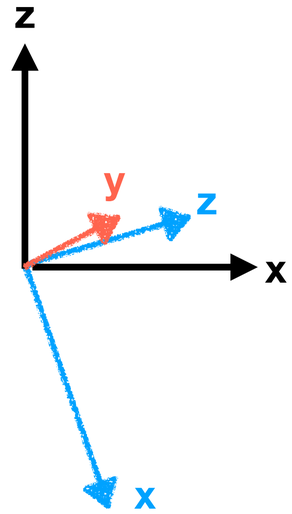
- i=67 deg (i=0 is face-on)
- PA=170 (from north)

⇒

In velocity_tools (Jaime Pineda) coord. system:

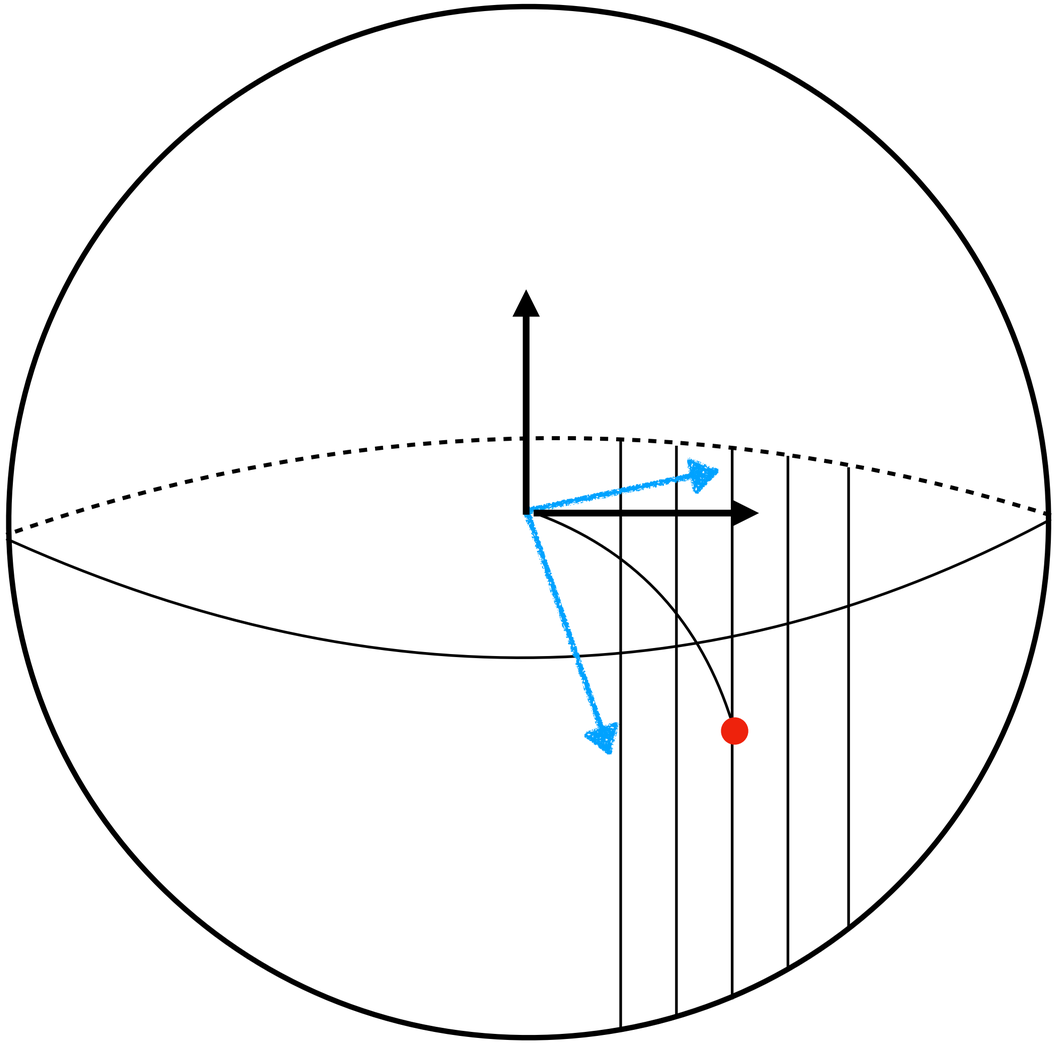
- i=-23 deg (i=0 is edge-on, i>0 goes behind)
- PA=80 (from west)





Because of the rotation diagram, it does not make sense to place the z axis with the red outflow

- M_disk = 0.58 Mo (Agurto-Gangas et al. 2019, adapted from Segura-Cox et al 2016 for a d=293 pc)
- M_star = 2.9 Mo (from Agurto-Gangas et al. 2019 two-phase model, this was a fixed parameter)
- M_env = 2.2 Mo (Agurto-Gangas et al. 2019, adapted from Enoch et al 2009 for a d=293 pc)
- For now, I am adding up the three
- Has to come from behind towards the front (shaded area)
- It works in the projection distance v/s v_lsr, but the rc was too small (10 AU)



Best attempt for now:

- **Theta0 = 70º**
- **Phi0 = 20º**
- **r0 = 1550 AU**
- **Omega0 = 8e-13 s-1**
- **v_r0 = 0 km/s**

The plot here varies theta slightly around 70º