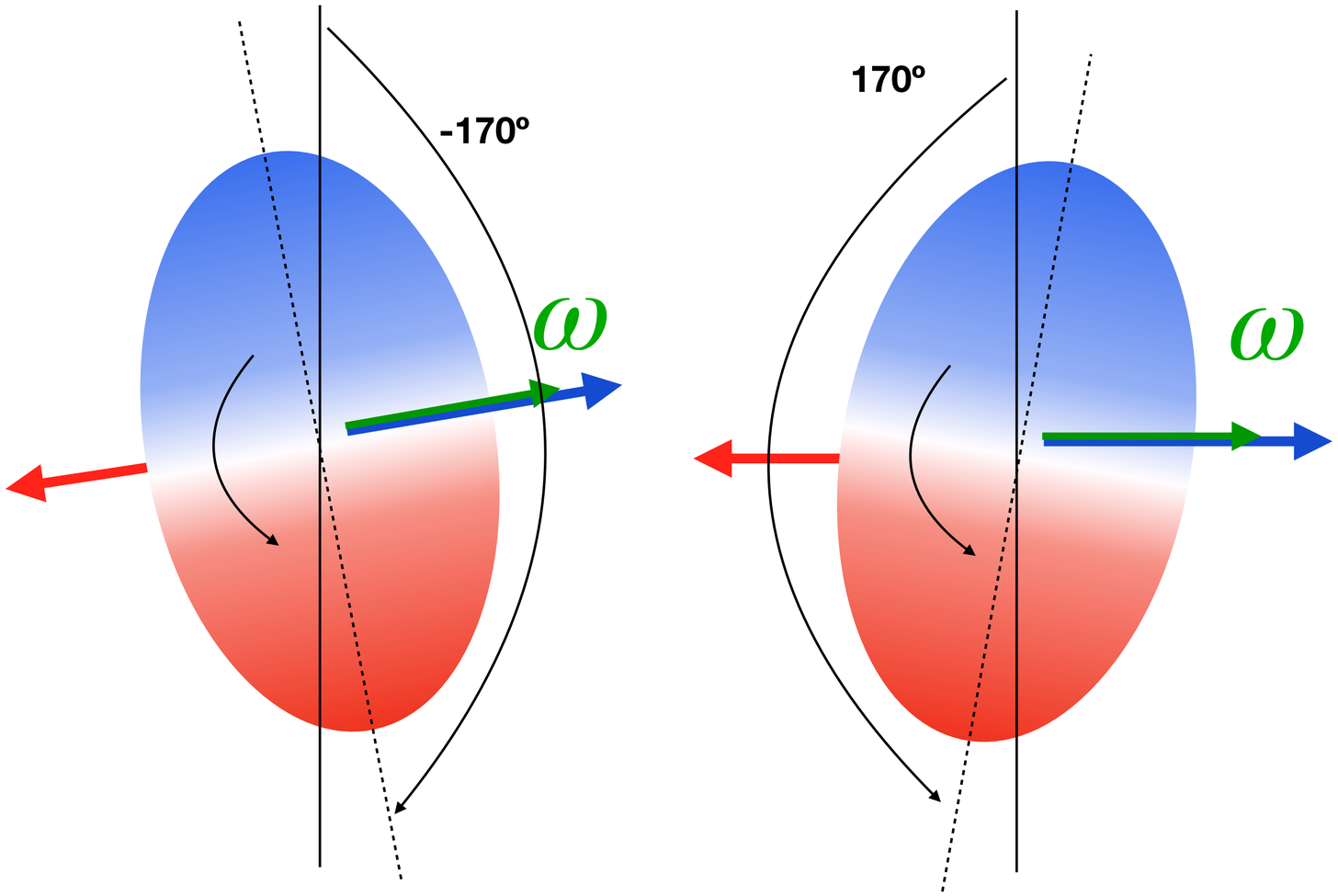
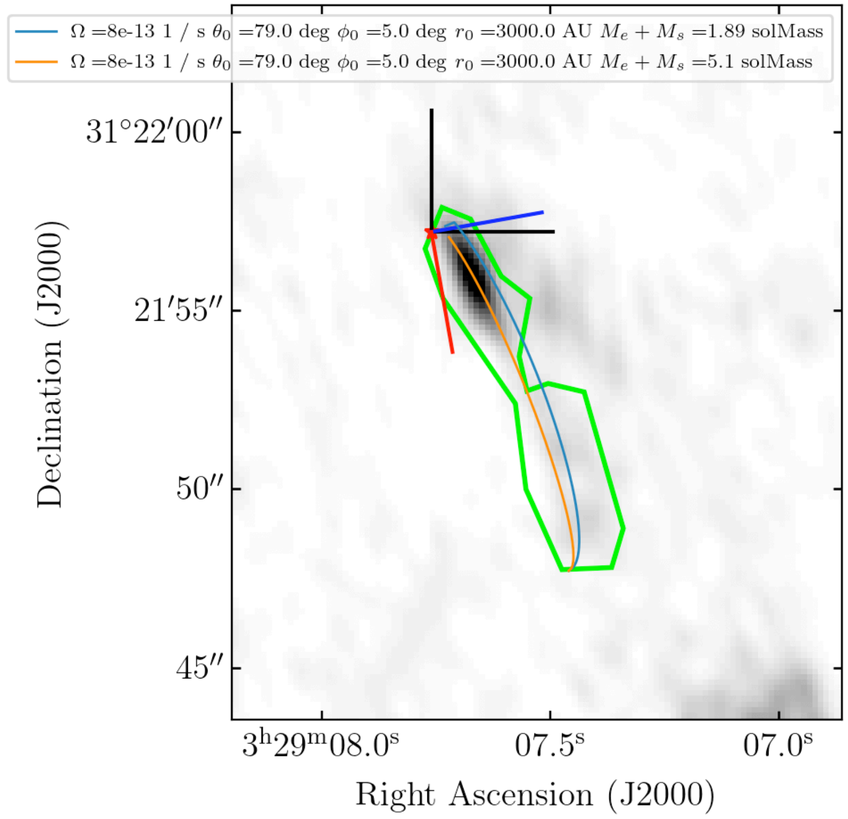
# Streamline model: disk angles correction

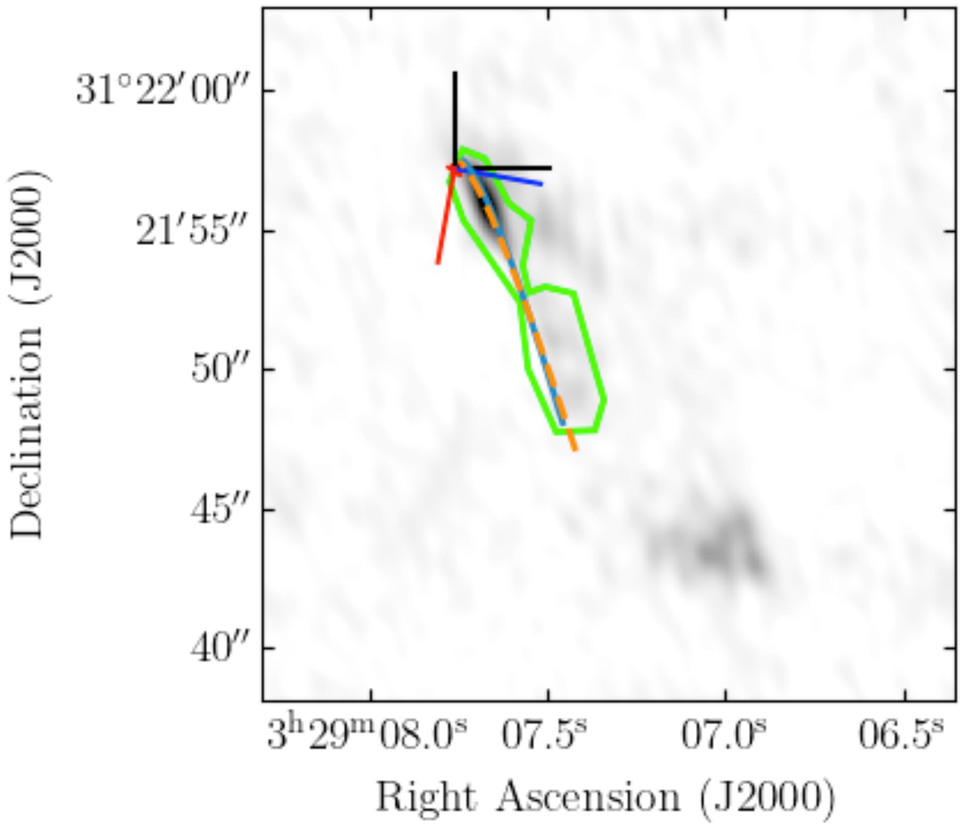
- I placed -170º instead of 170º as PA in my model
- Confusion with West and East :(
- Learned the lesson, corrected the angles
- The following slides show the correct models and parameters for $H_2CO$ emission and PV diagrams



# How does this correction look in the image plane?




From an old test run (old PA angle)




From a new test run (new PA angle)

# Streamline in $H_2CO$ correction

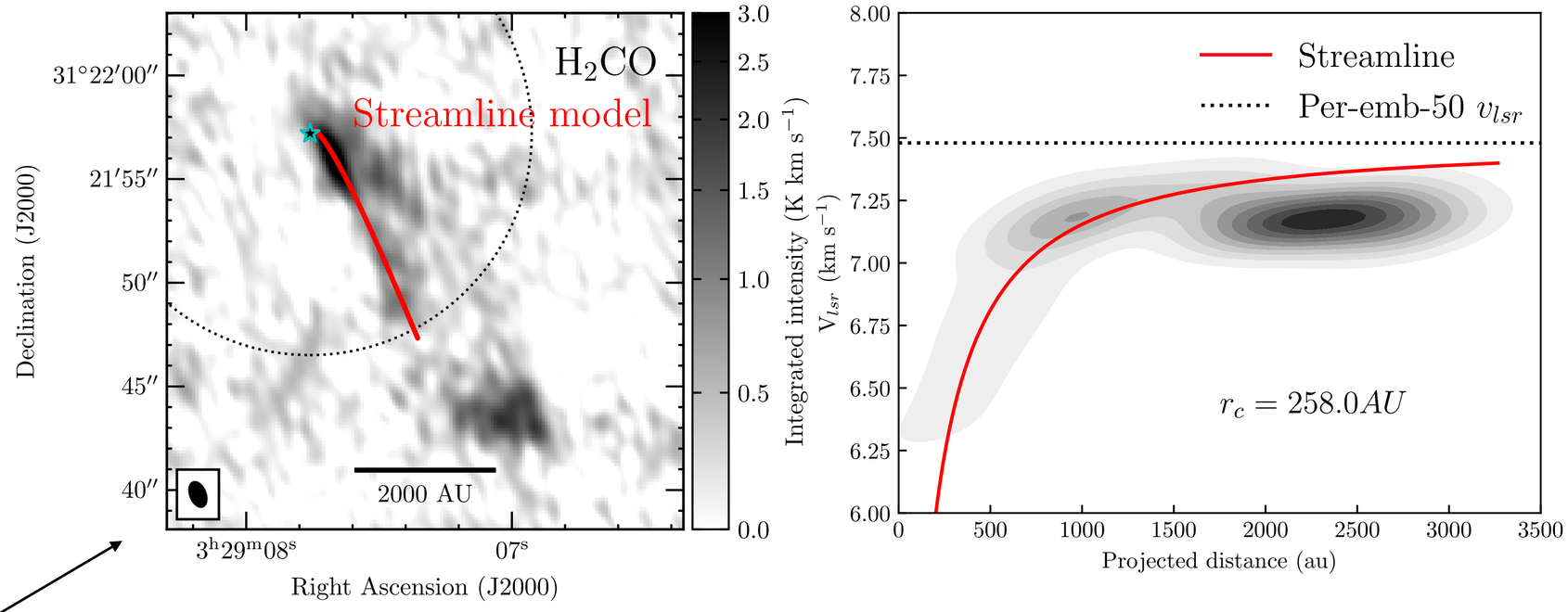
**Old PA (-170º)**

| Envelope Mass ($M_{sun}$) | 0.18 |
|---|---|
| $\theta_0$ (deg) | 80 |
| $\phi_0$ (deg) | 16.5 |
| $r_0$ (AU) | 3330 |
| $\Omega_0$ ($s^{-1}$) | 1.15E-12 |
| $v_{r0}$ (km $s^{-1}$) | 1.1 |

**New PA (170º)**

| Envelope Mass ($M_{sun}$) | 0.18 |
|---|---|
| $\theta_0$ (deg) | 61.5 |
| $\phi_0$ (deg) | 28.0 |
| $r_0$ (AU) | 3330 |
| $\Omega_0$ ($s^{-1}$) | 4.53E-13 |
| $v_{r0}$ (km $s^{-1}$) | 1.25 |

$M_{env} = 0.18\ M_{sun}$




What changes most are the angles $\theta_0, \phi_0$ and the velocity needed to replicate the same streamline model as before

# Streamline in $H_2CO$ correction

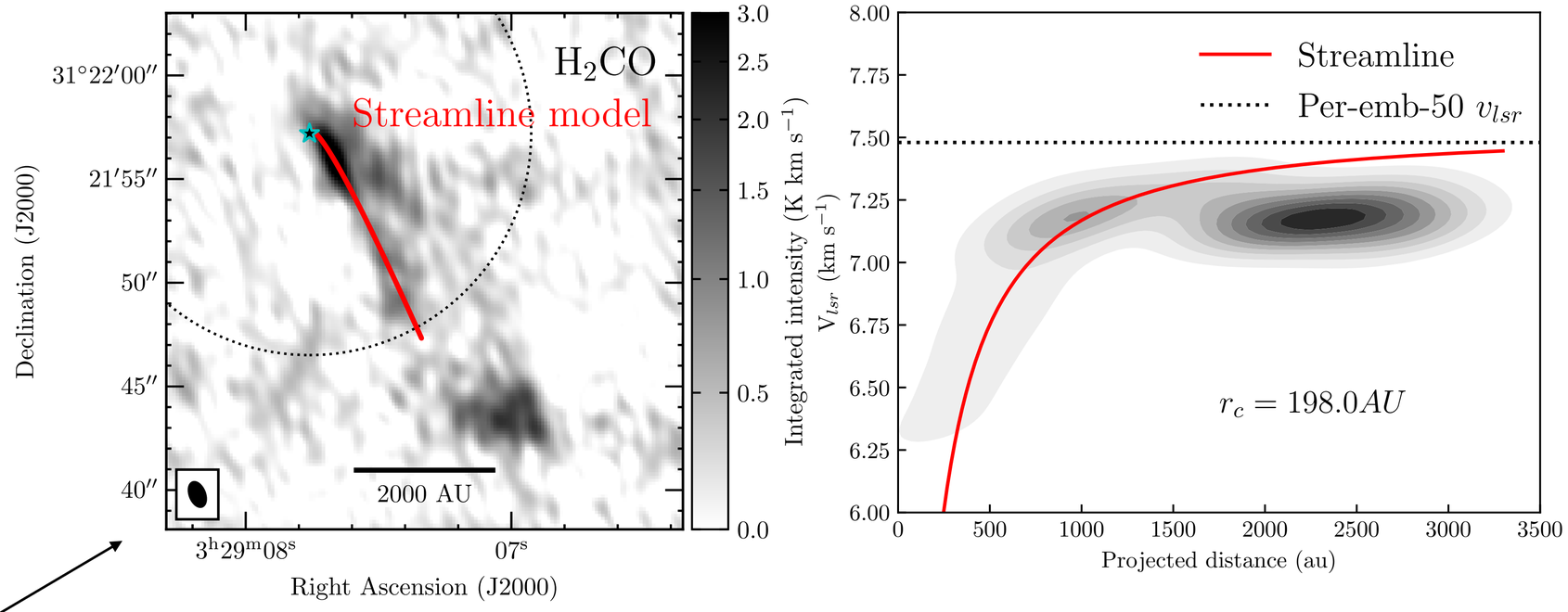
**Old geometry**

| Envelope Mass ($M_{sun}$) | 2.2 |
|---|---|
| $\theta_0$ (deg) | 80.5 |
| $\phi_0$ (deg) | 17.5 |
| $r_0$ (AU) | 2863 |
| $\Omega_0$ ($s^{-1}$) | 5.35E-13 |
| $v_{r0}$ (km $s^{-1}$) | 2.6 |

**New geometry**

| Envelope Mass ($M_{sun}$) | 2.2 |
|---|---|
| $\theta_0$ (deg) | 59.0 |
| $\phi_0$ (deg) | 25.6 |
| $r_0$ (AU) | 3330 |
| $\Omega_0$ ($s^{-1}$) | 5.35E-13 |
| $v_{r0}$ (km $s^{-1}$) | 1.6 |

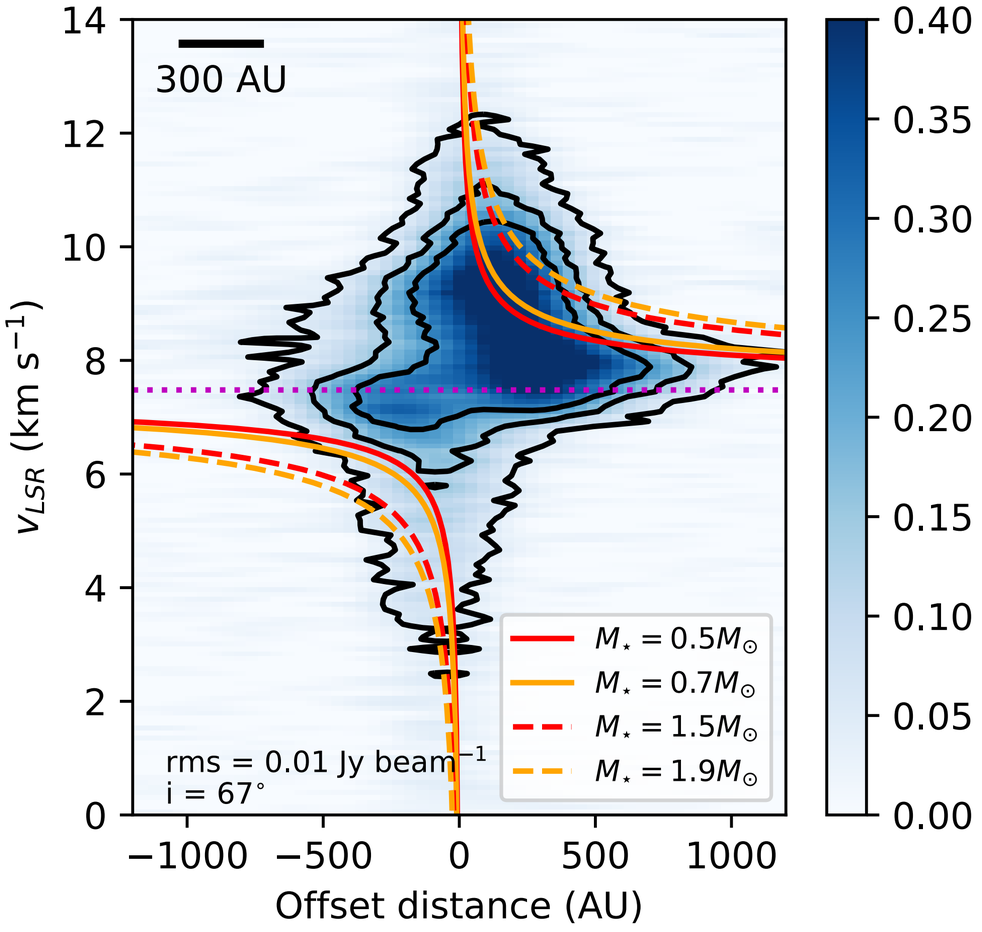
$M_{env}$ = 2.2 $M_{sun}$



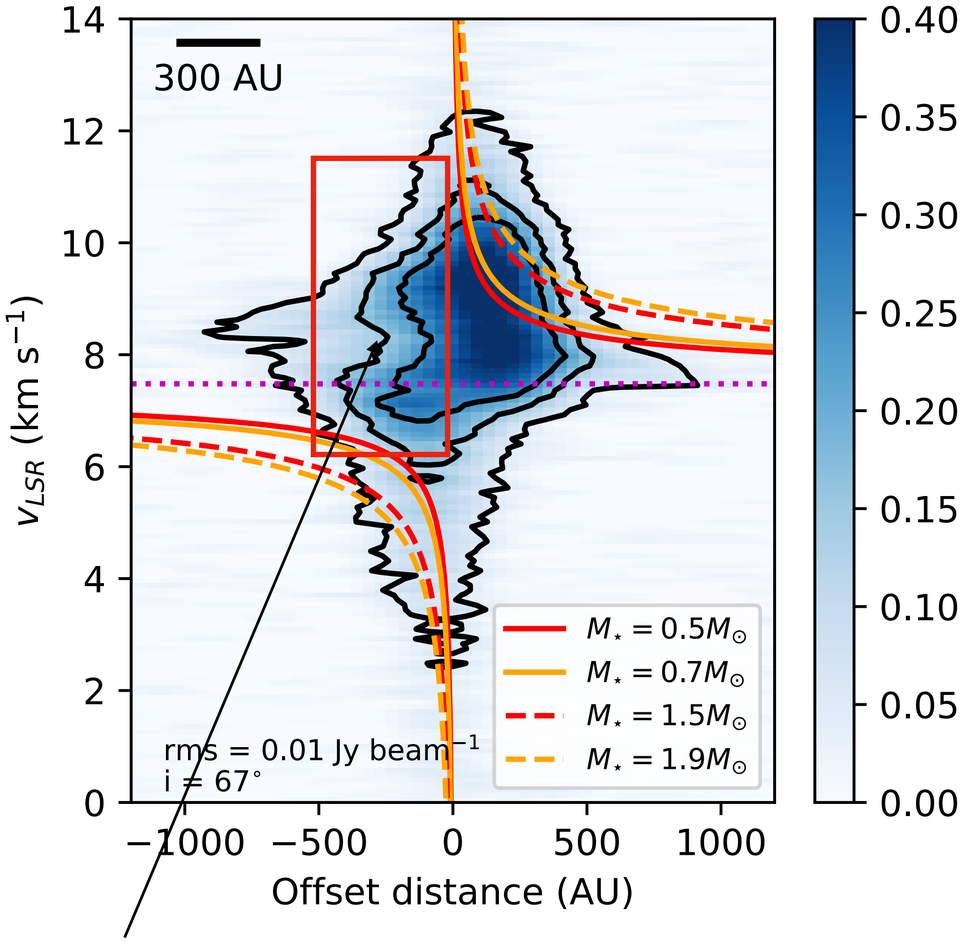

What changes most are the angles $\theta_0, \phi_0$ and the velocity needed to replicate the same streamline model as before

# Position-velocity corrected plots

**Old PA**




**New PA**




**suggestion for infall (red and blueshifted emission in negative offset)**