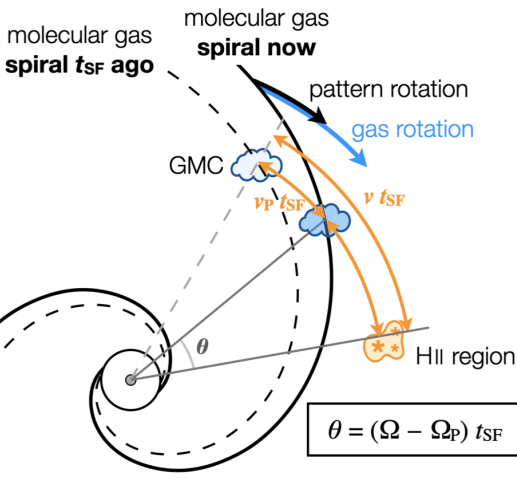


quasi-stationary spiral density wave



material arms or dynamical spirals

