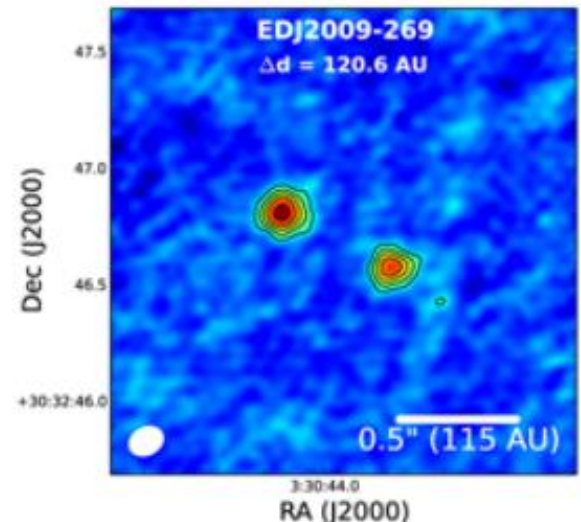


Group5  
Perseus 120

김정욱

# Introduction

- Enoch+ (2009) : spitzer observation
  - Near & Far infrared
  - EDJ2009-269
- Tobin+ (2016) : VLA observation in 13,14
  - Separation  $\sim 0.524''$
  - ClassII + ClassII



# Data

Band-6 ALMA data	
PI name	Tobin
Project code	2013.1.00031.S
Target source	YSOs with multiple system in Perseus
Distance	~230pc
$\theta$	~0.16"
FOV	~25"

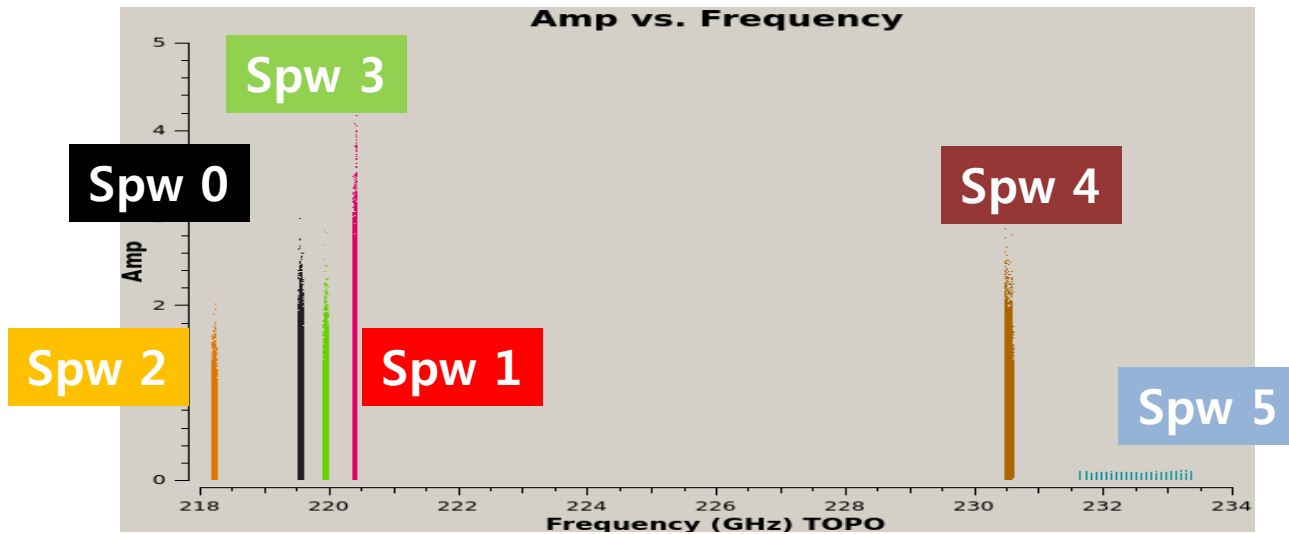
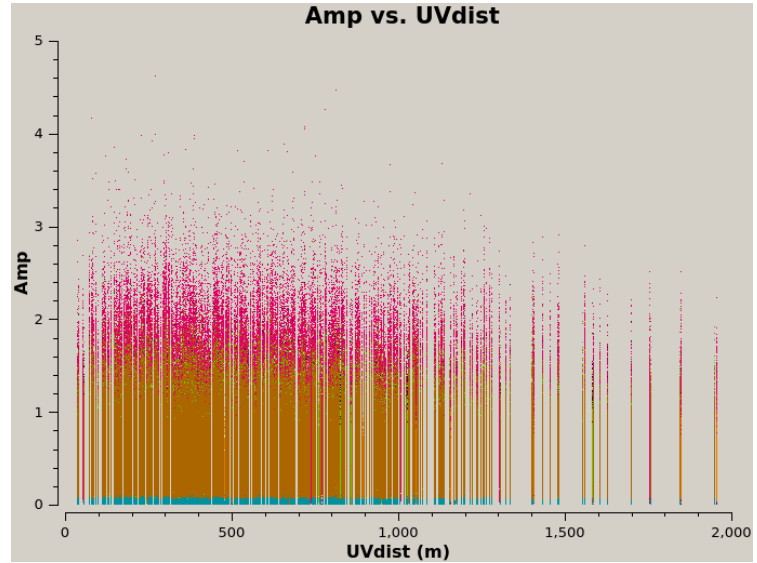
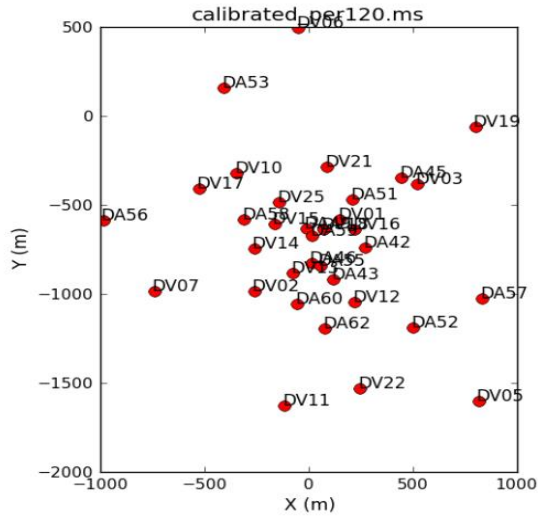


Per 120

RA  
03:30:44.014

DEC  
+30:32:46.812

# Data

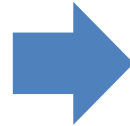


# Goal

- Plot continuum & line channel map to know how to make binary system in solar-like stars.
- Whether large scale fragmentation of gas cores and filaments, or smaller scale fragmentation of protostellar disk due to gravitational instabilities?

# Results -continuum

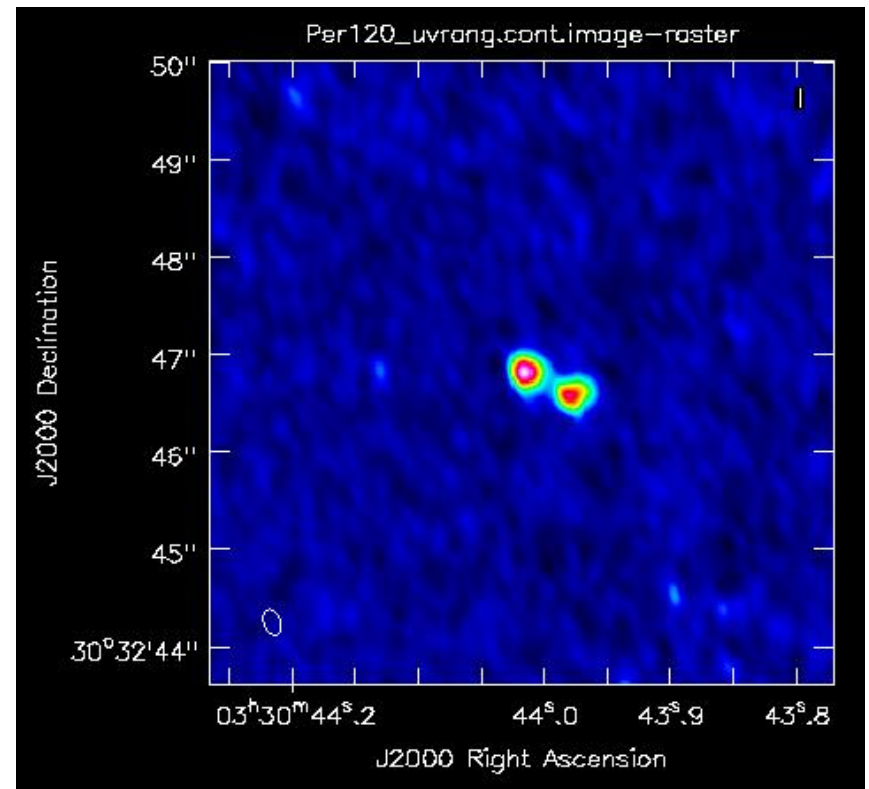
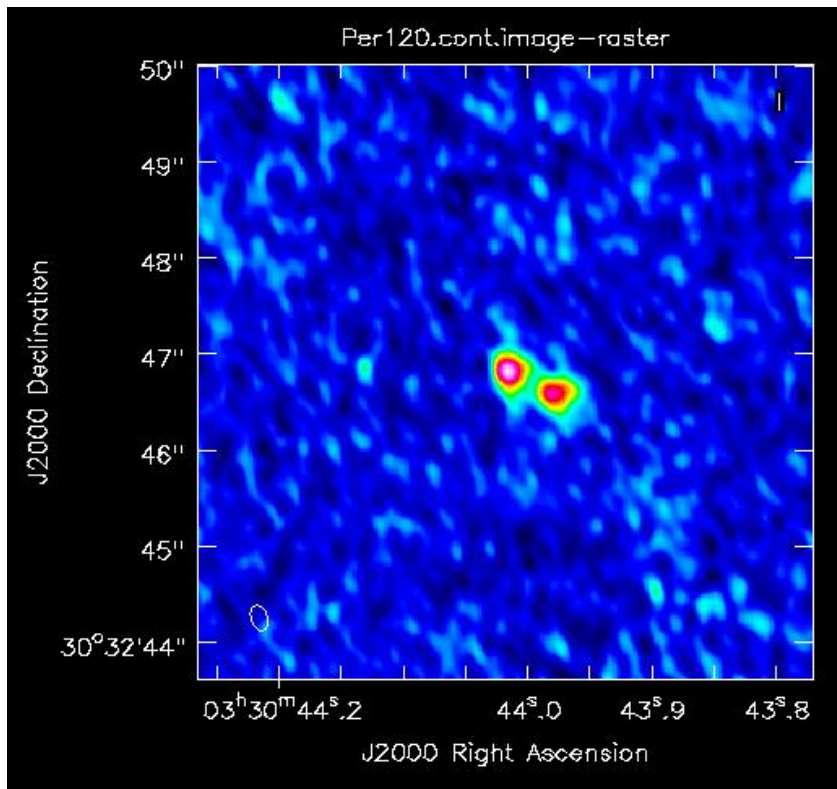
Dirty map



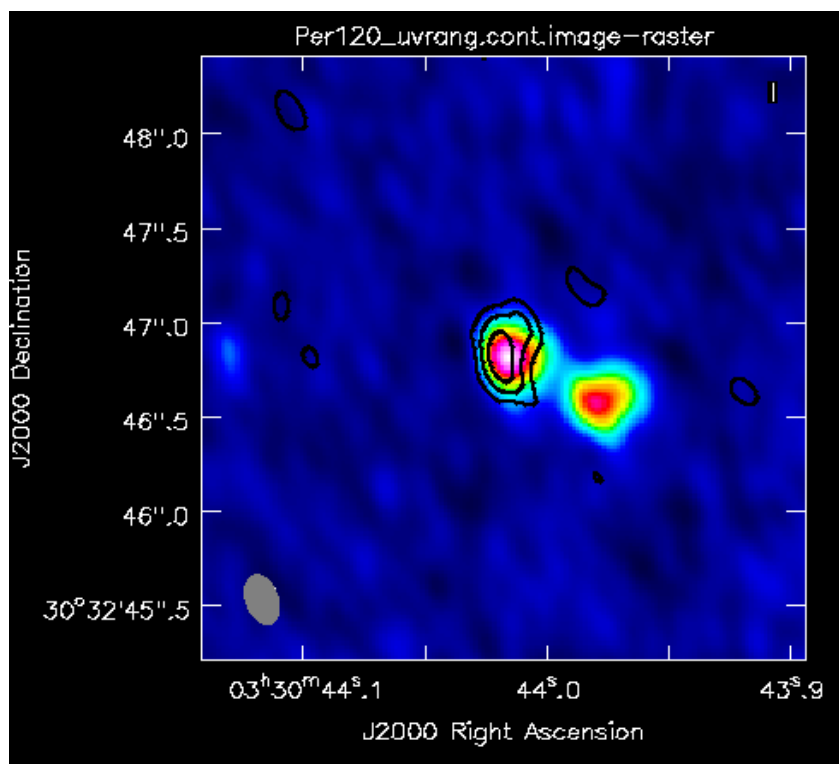
rms = 0.2mJy/beam

Continuum image

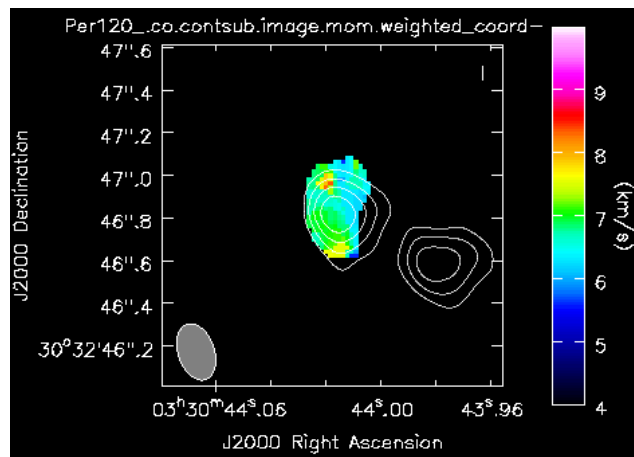
UV range > 50k $\lambda$



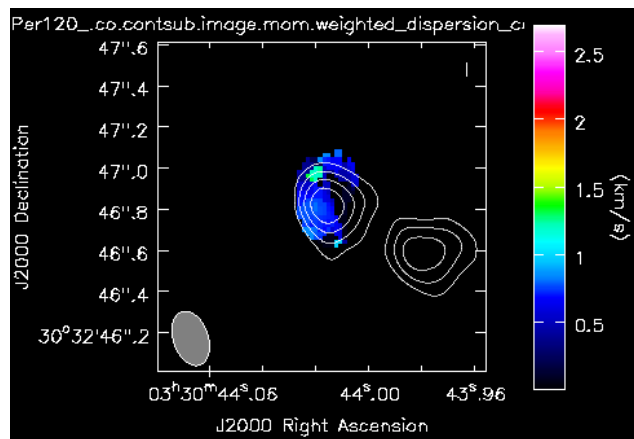
# Results –line



CO line contour



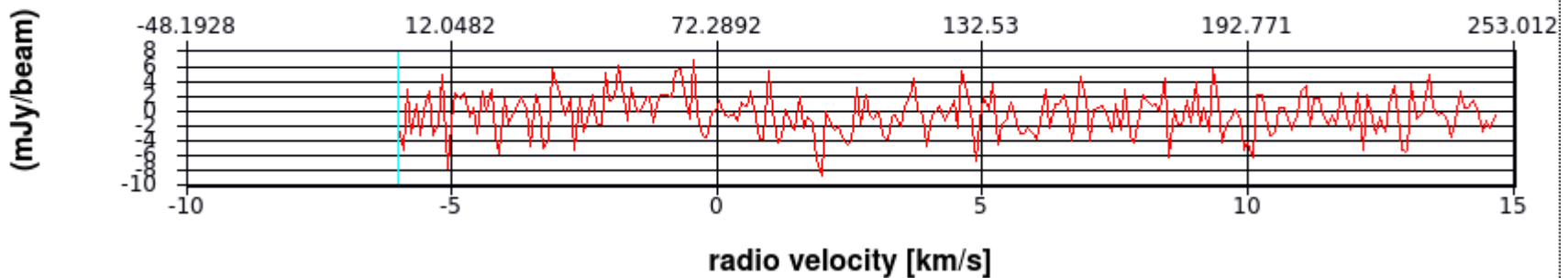
mom 1



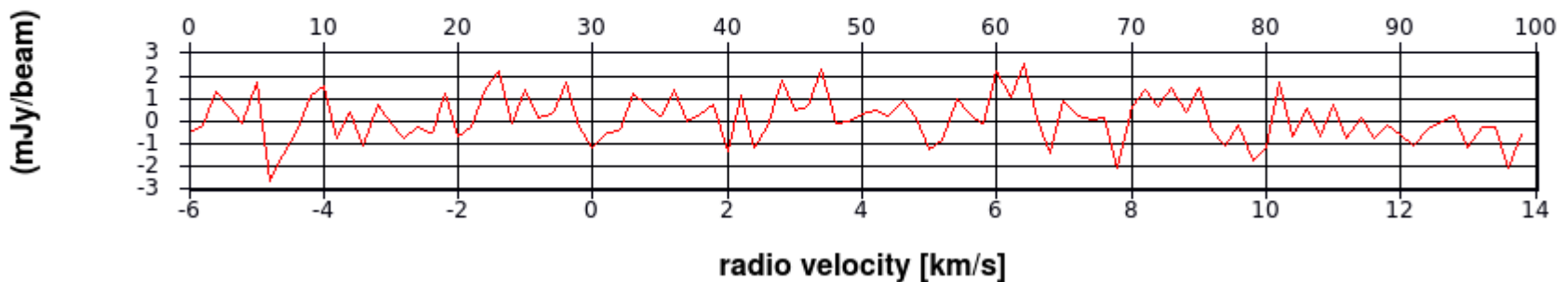
mom 2

# Results -line

**13CO** Rectangle Region Profile  
channel



**C18O** Rectangle Region Profile  
channel



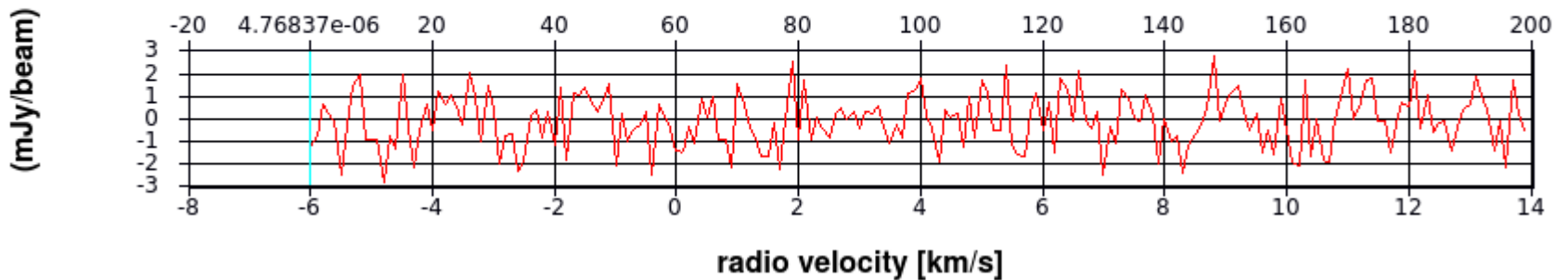


# Results -line

**H2CO**

Rectangle Region Profile

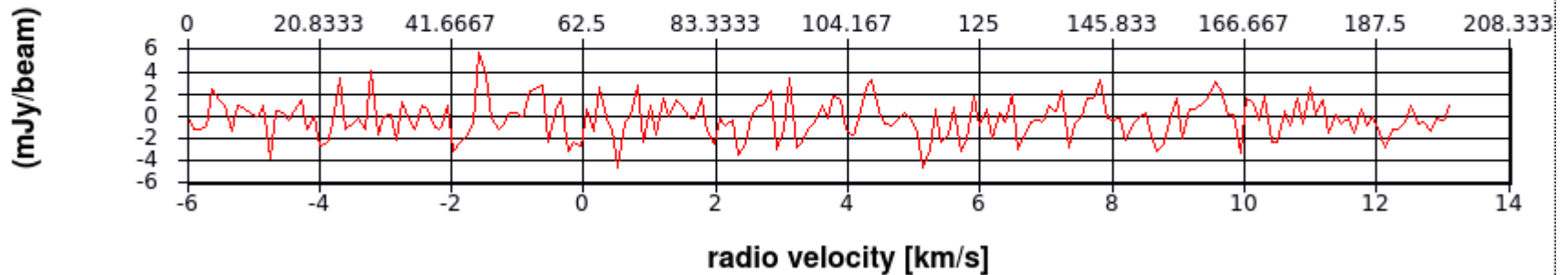
channel



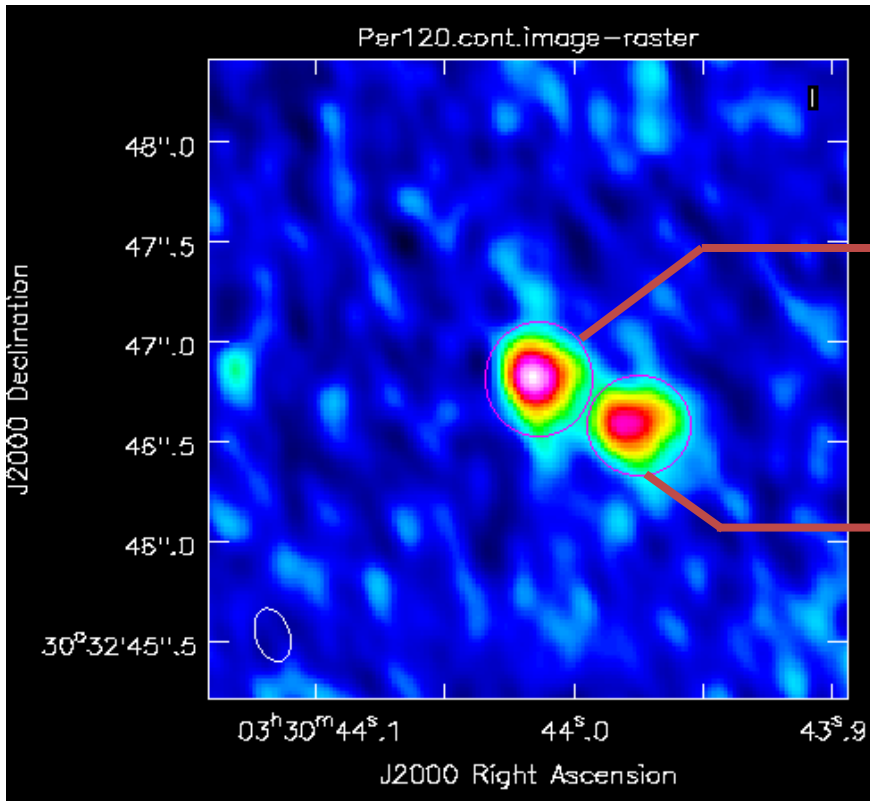
**SO**

Rectangle Region Profile

channel



# Discussion



Integrated flux = 0.0075Jy  
 $(X, Y)_{center} = (1282, 1279)$

Integrated flux = 0.0073Jy  
 $(X, Y)_{center} = (1305, 1268)$

Separation  $\sim 0.517''$