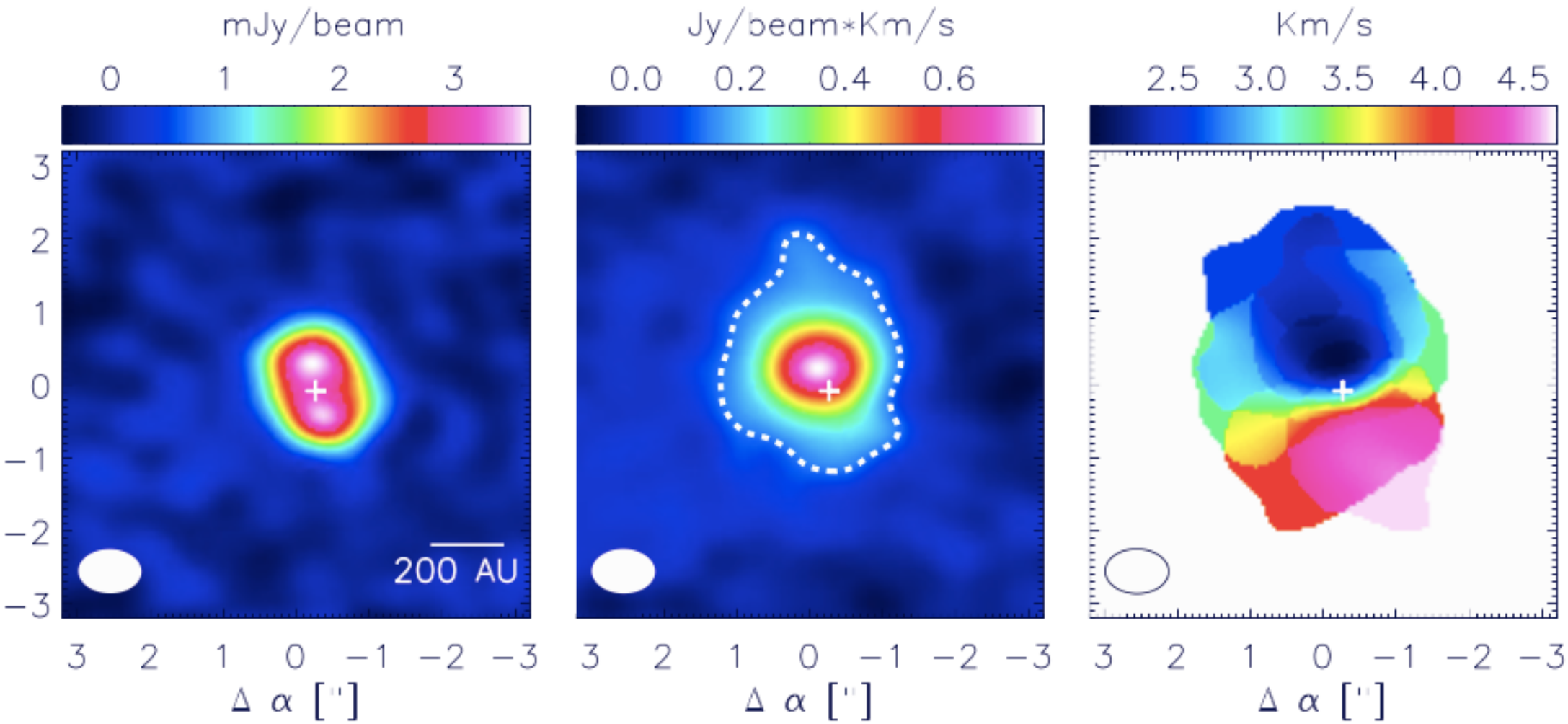
Star Formation News Letter
No. 268 (2015 April)
#11 (Canovas)-#15(Dierickx)

2015.5.8 花輪 知幸

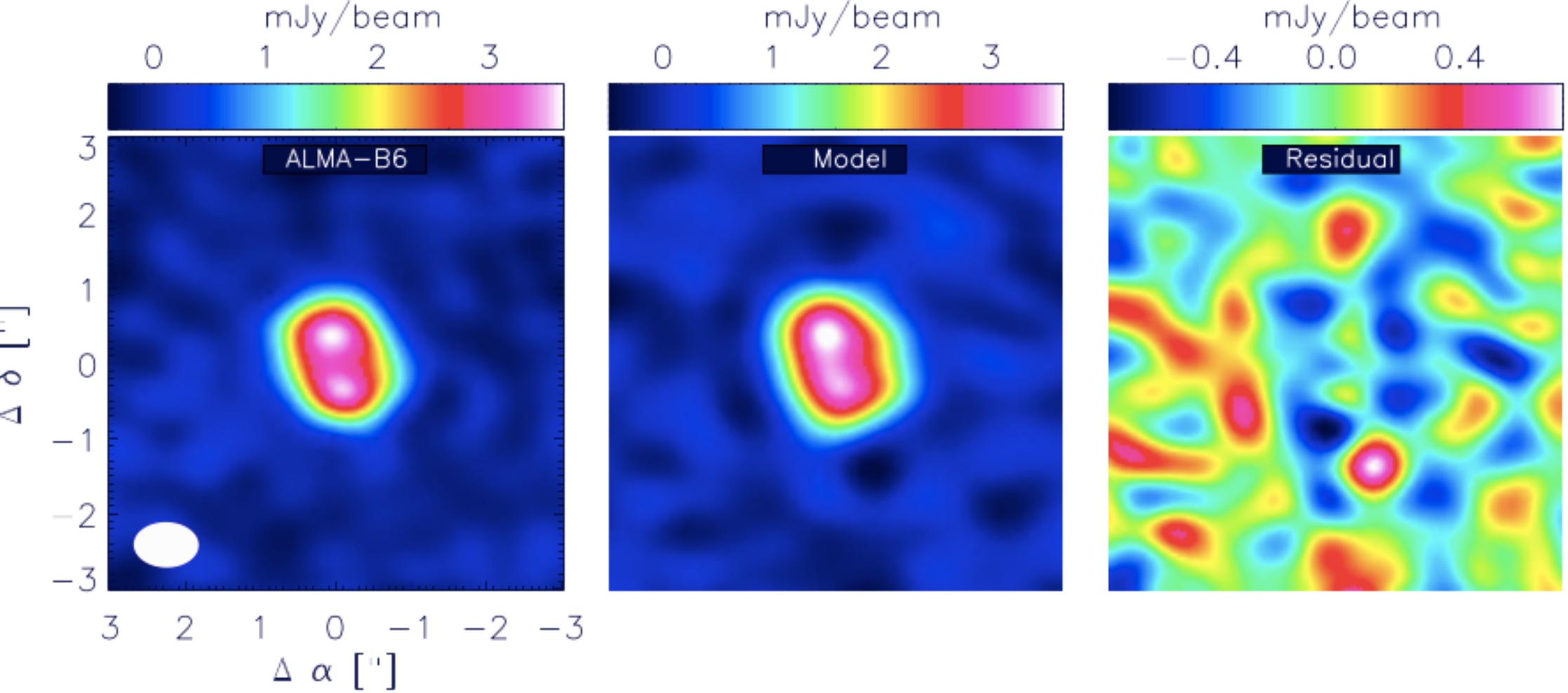
Gas inside the 97 au cavity around the transition disk Sz 91

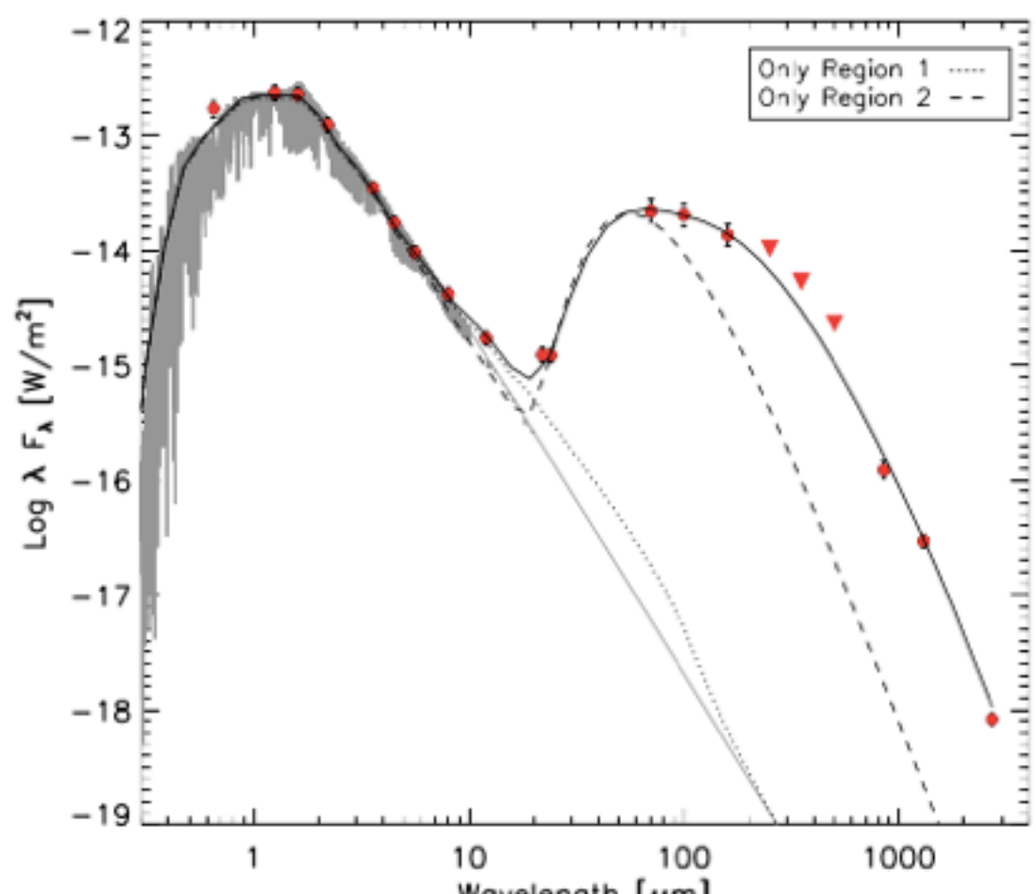
H. Canovas et al. to appear in ApJ



ALMA Band 6, (左) 連続波, (中央) Moment 0, (右) Moment ^{12}CO

塚越さんが詳しいらしい, Tsukagoshi+13, Lupus

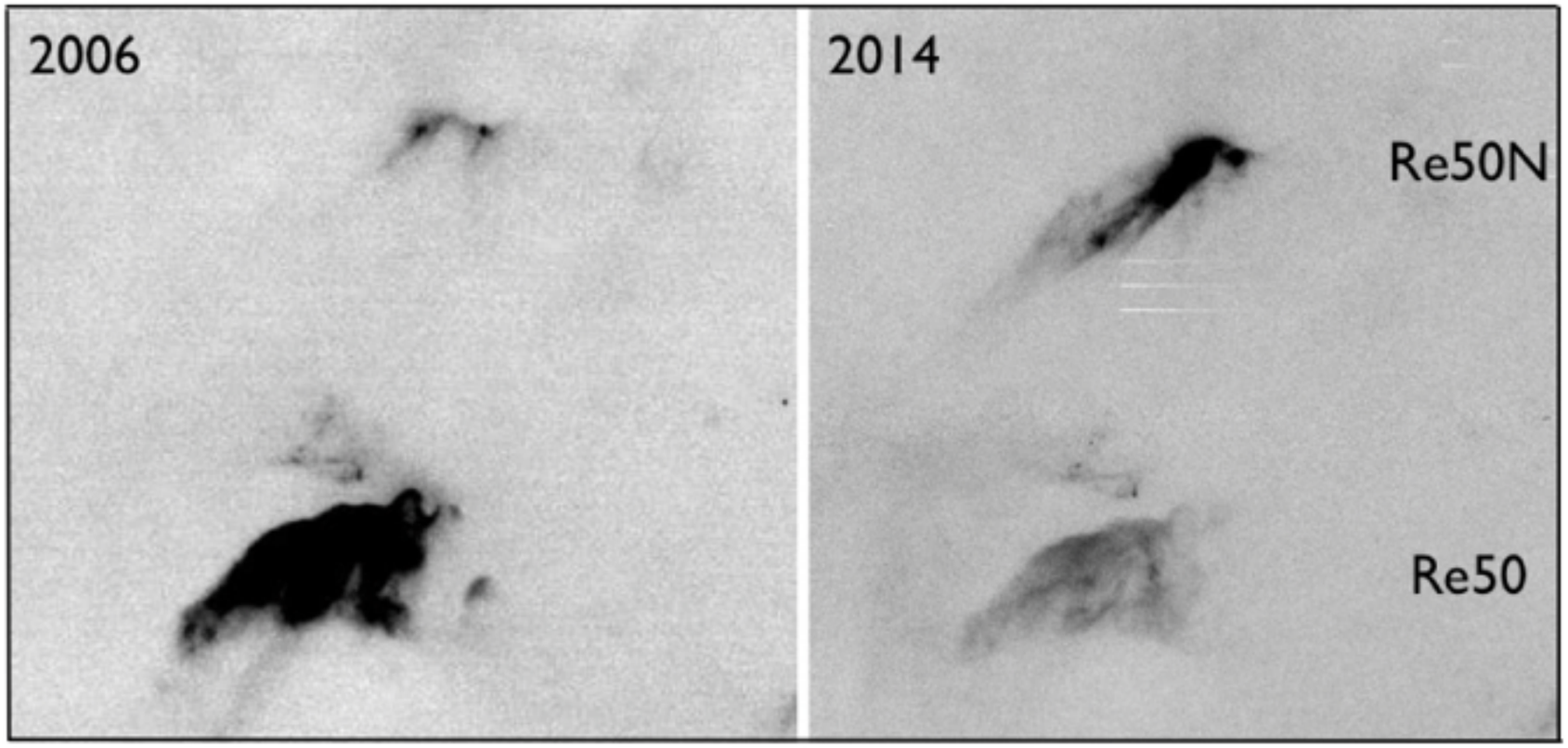

mJy/beam
0 1 2 3
ALMA−B6
Model
mJy/beam
0 1 2 3
mJy/beam
−0.4 0.0 0.4
Residual
3 2 1 0 −1 −2 −3
Δ δ ['']
3 2 1 0 −1 −2 −3
Δ α ['']


Only Region 1
Only Region 2
Log λ F_λ [W/m²]
−12 −13 −14 −15 −16 −17 −18 −19
1 10 100 1000

The Brightening of Re50N: Accretion Event or Dust Clearing?

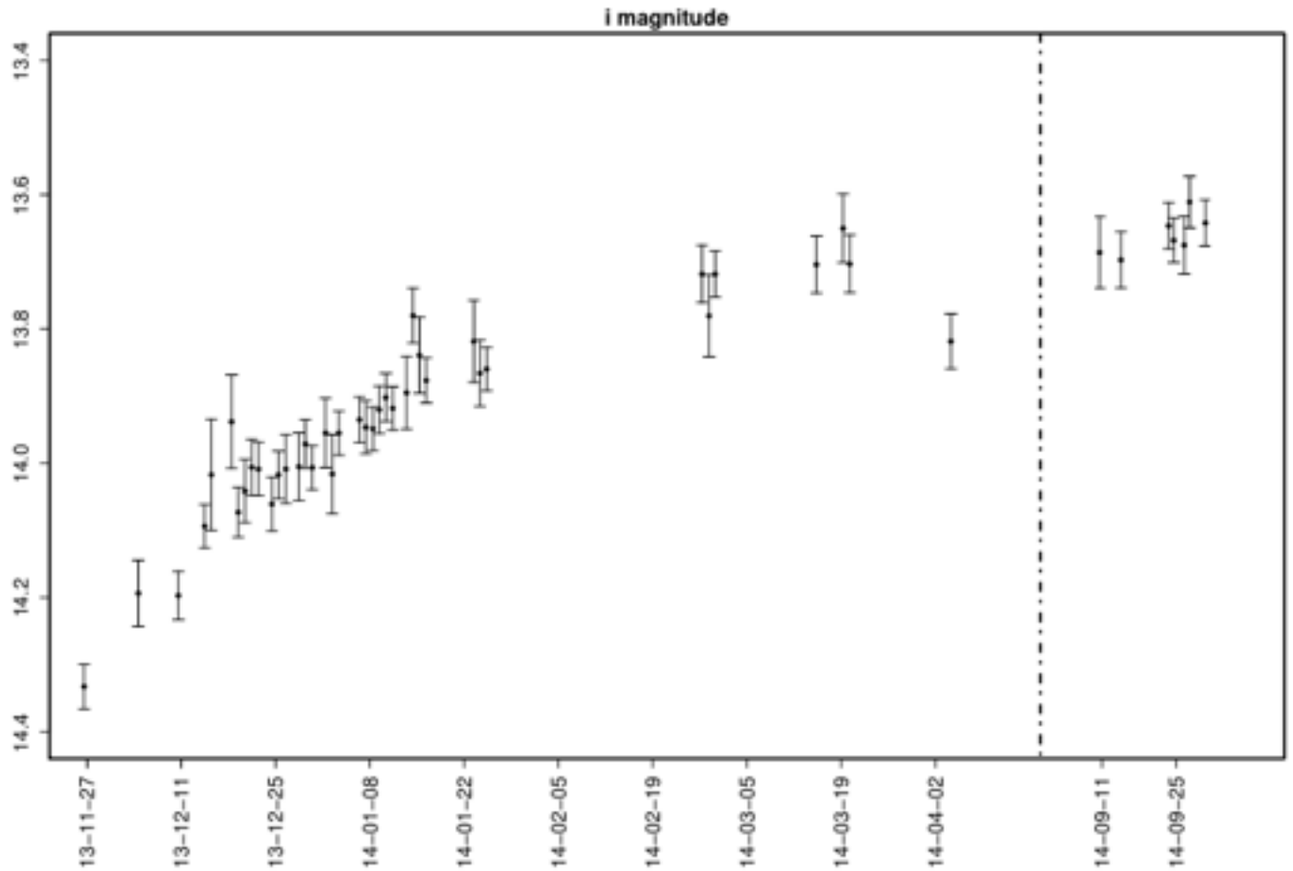
Hsin-Fang Chiang et al. to appear in ApJ

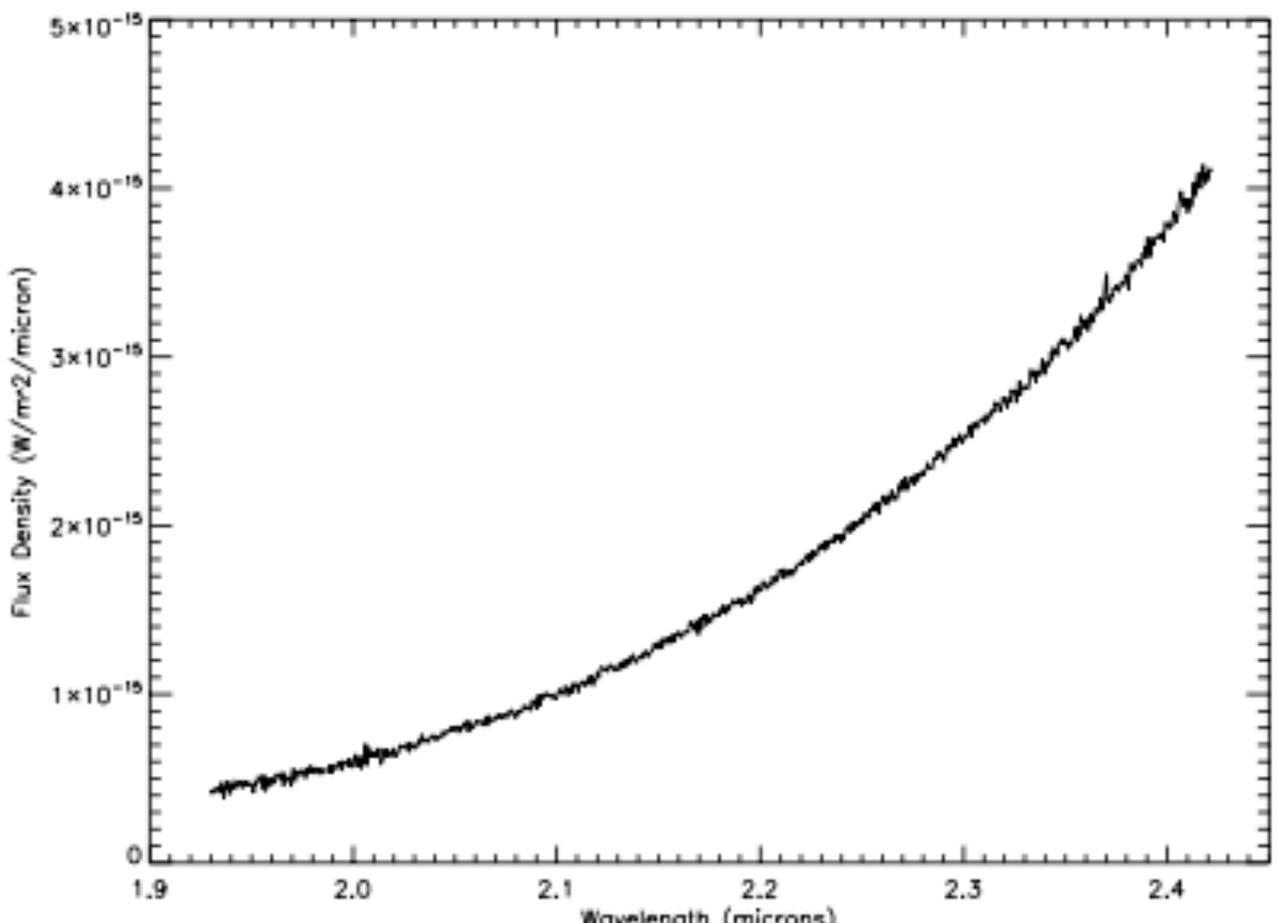
JHK



HBC 494 is visible only in K (red).

Re=Reipurth



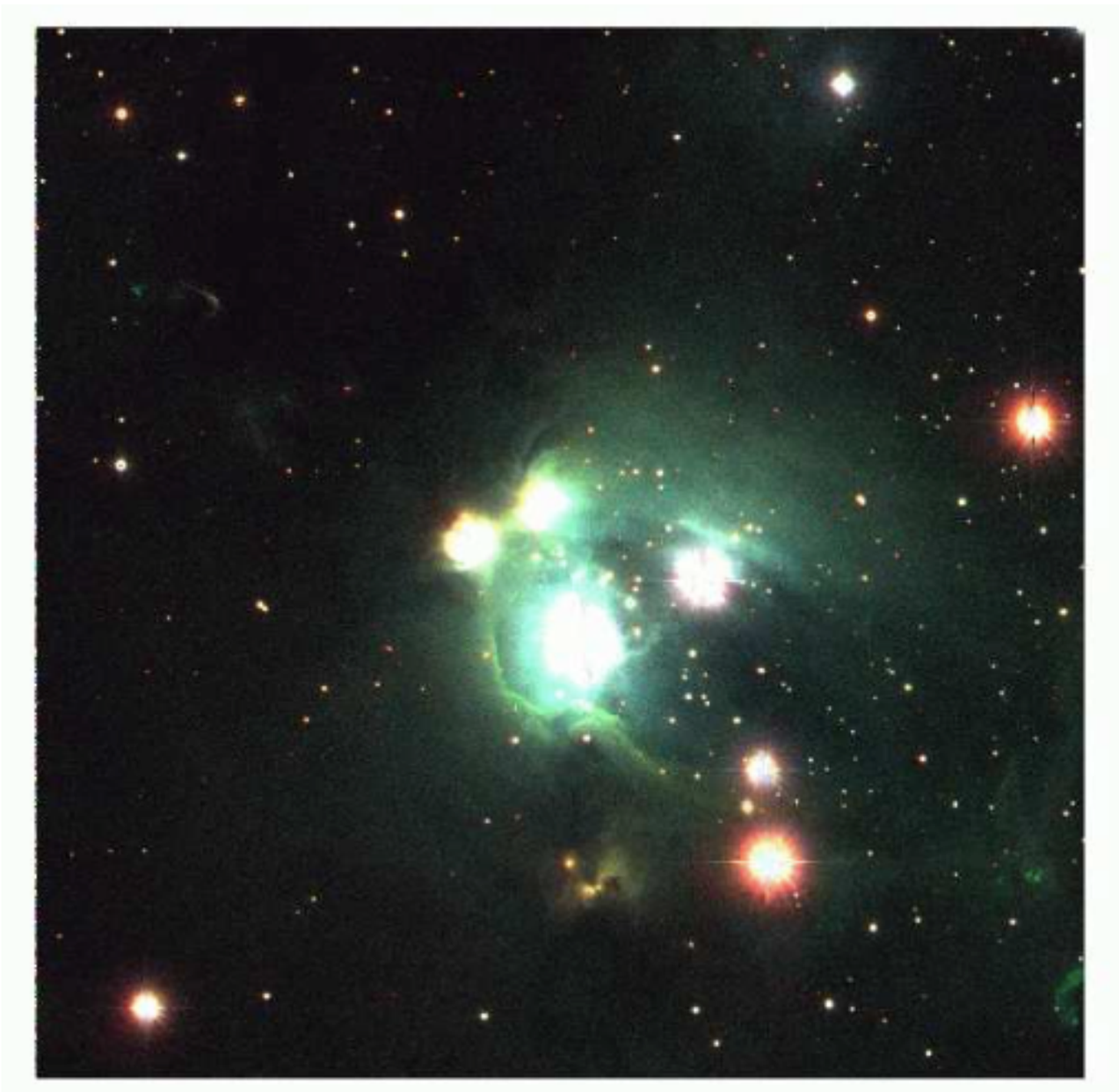


HBC494

featureless cont.

An Optical Survey of the Partially Embedded Young Cluster in NGC 7129

S. E. Dahm, L. A. Hillenbrand, to appear in AJ



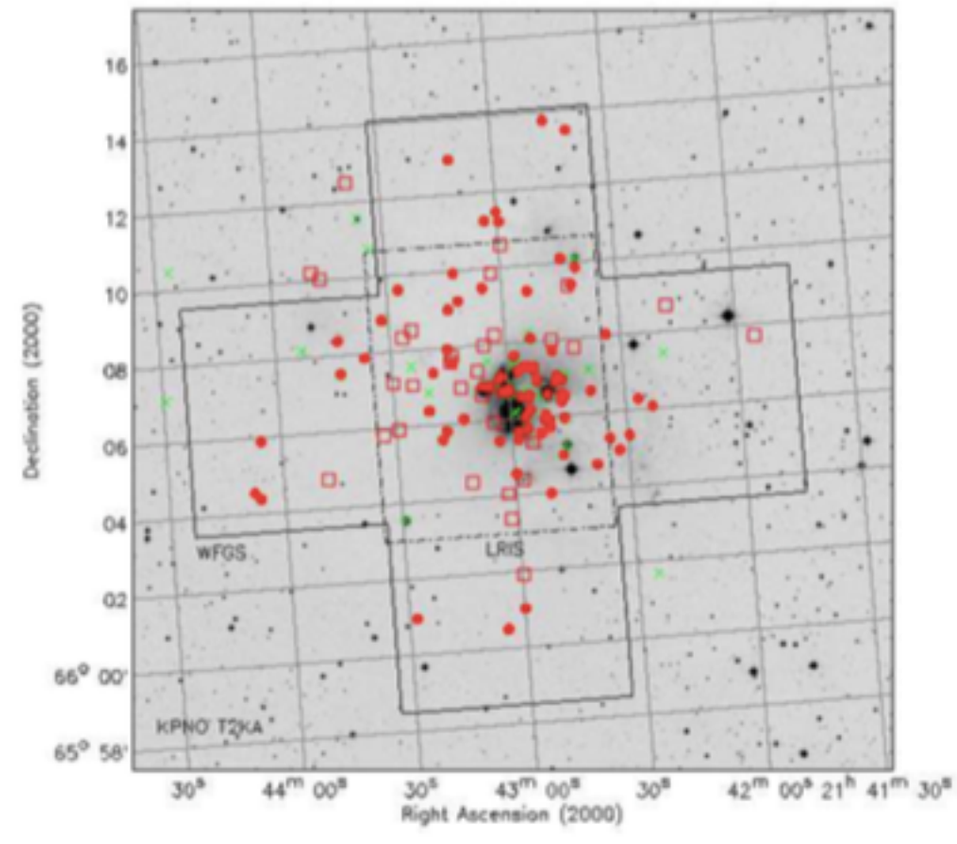
BD+65°1638 (B3V),

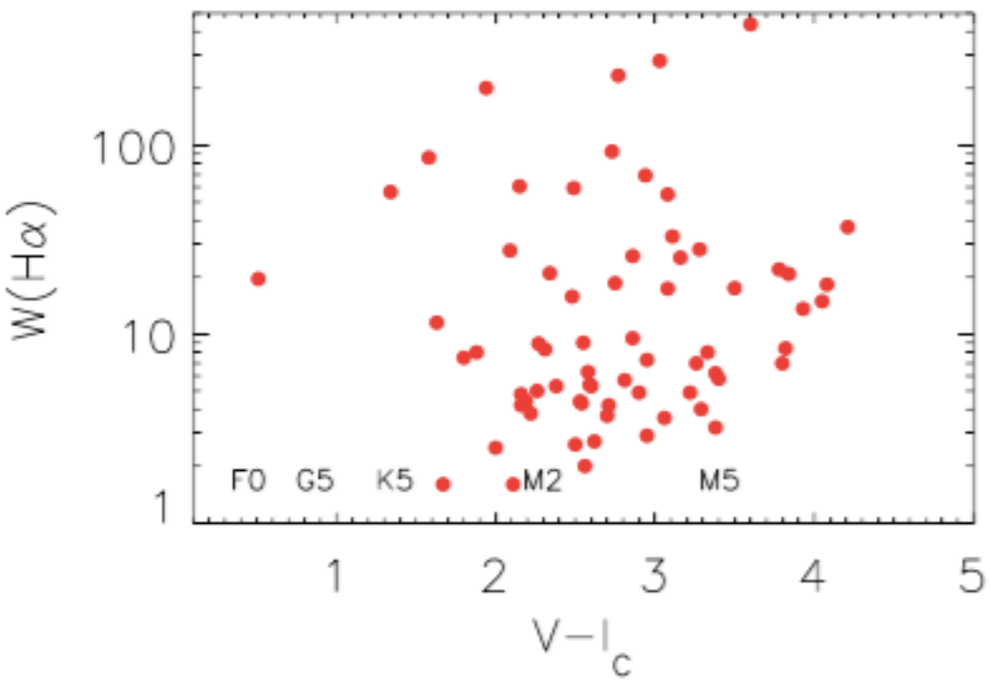
BD+65°1637 (B3e),

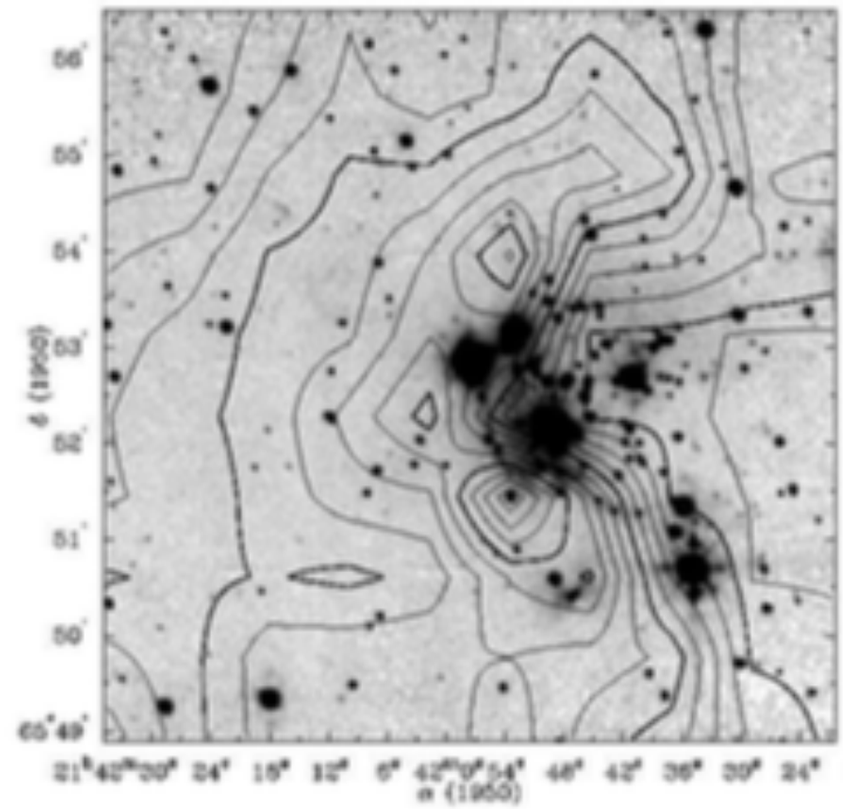
SVS 13 (B5e),

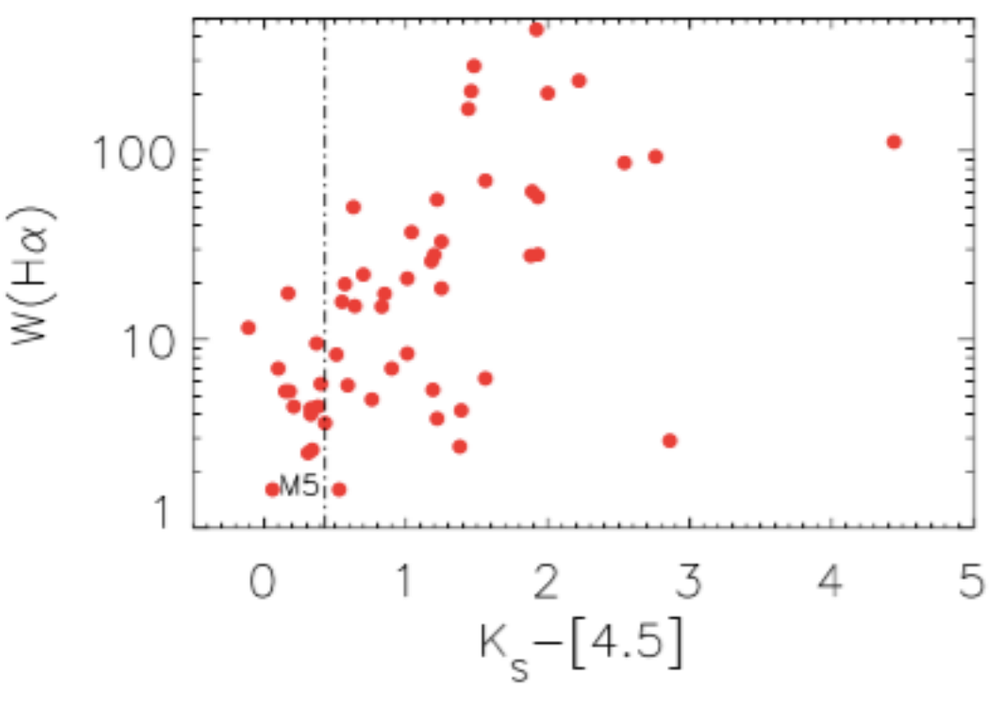
LkHα 234 (B8e).

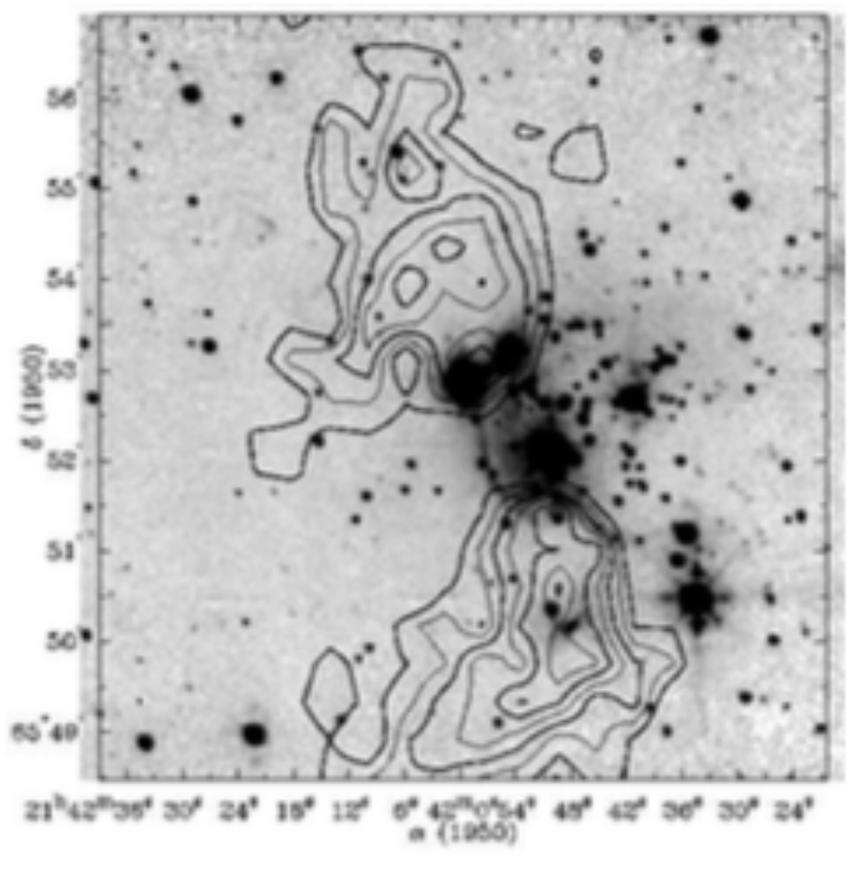
∼80 H_α emitting stars (V < 23)

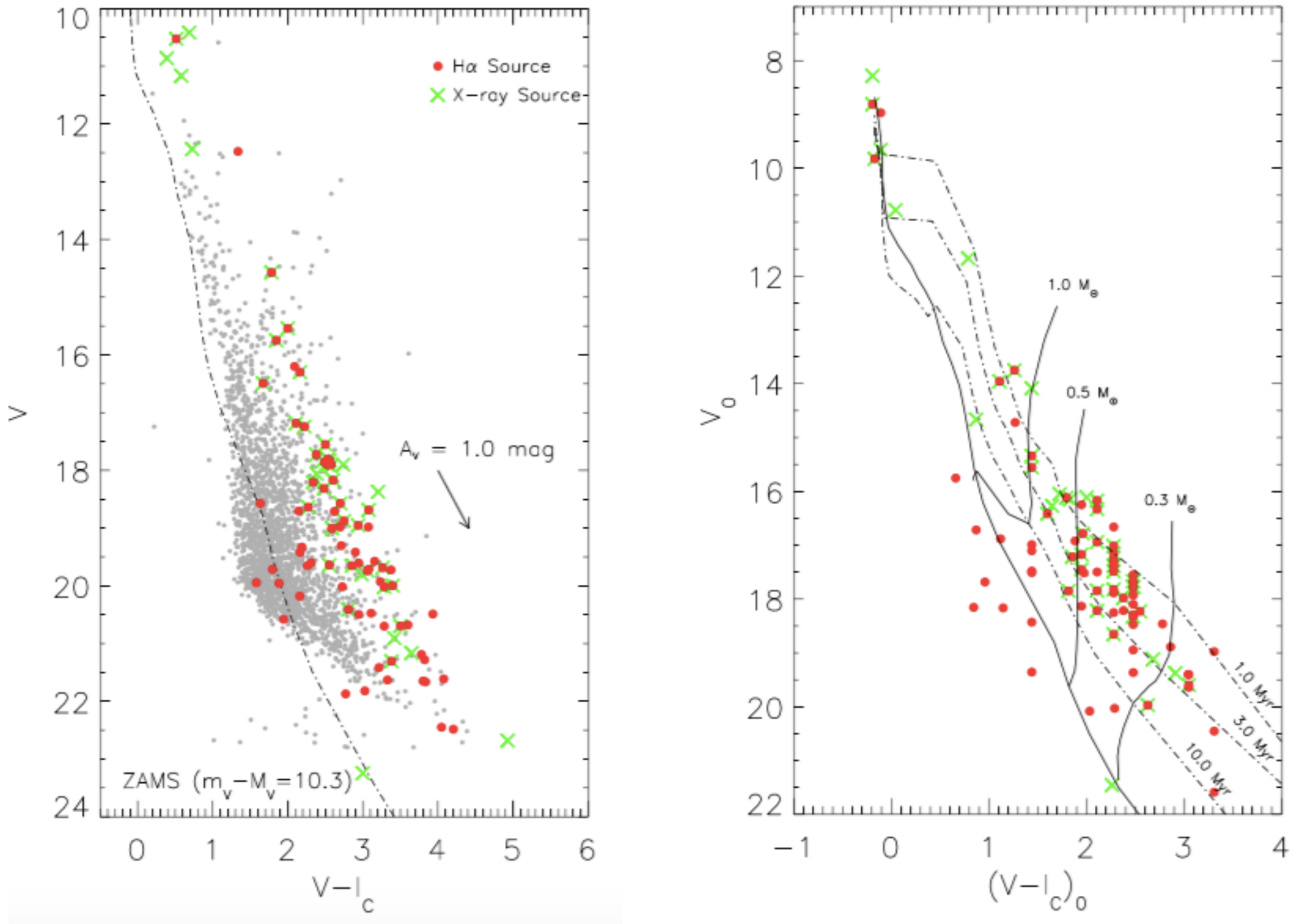


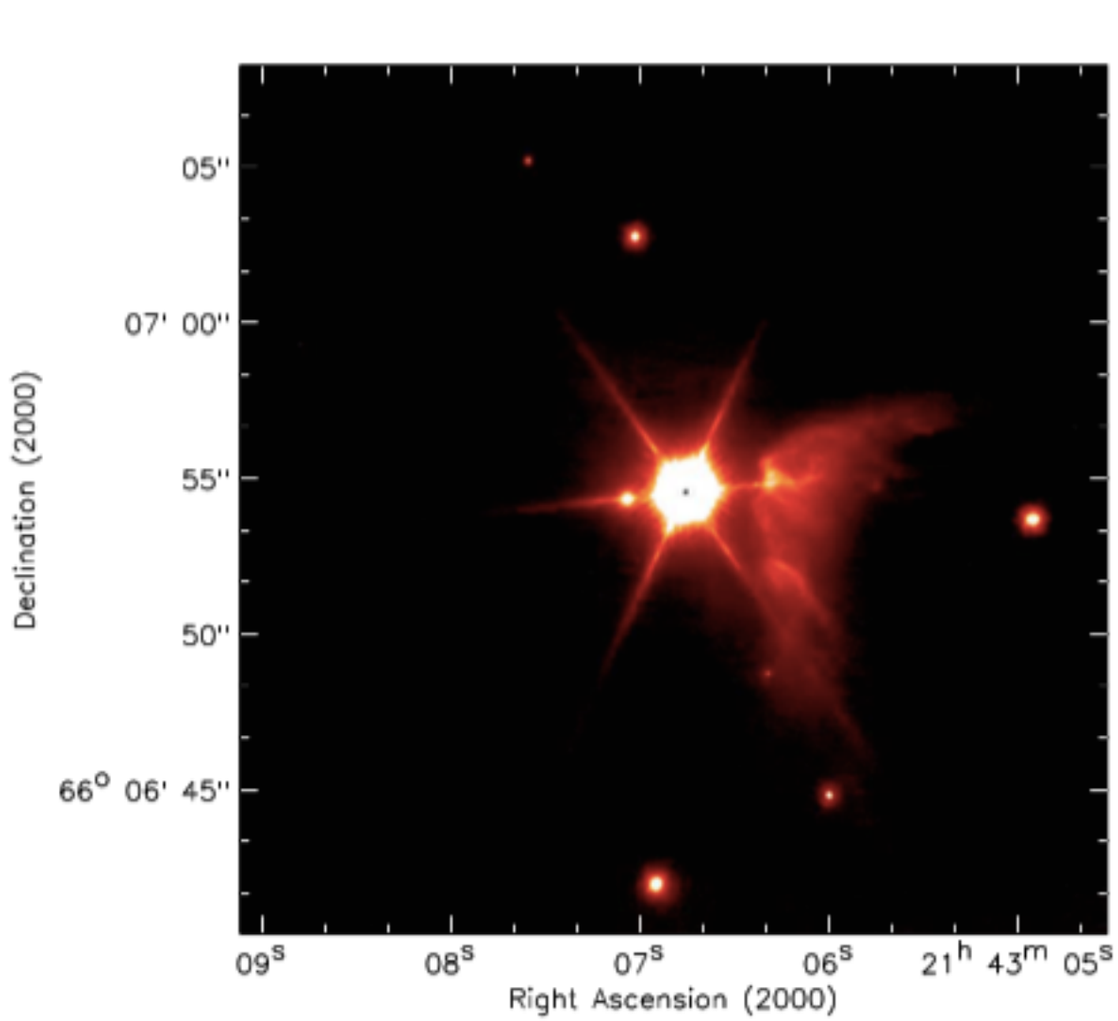

W(Hα)
100
10
1
F0
G5
K5
M2
M5
1
2
3
4
5
V−I_c



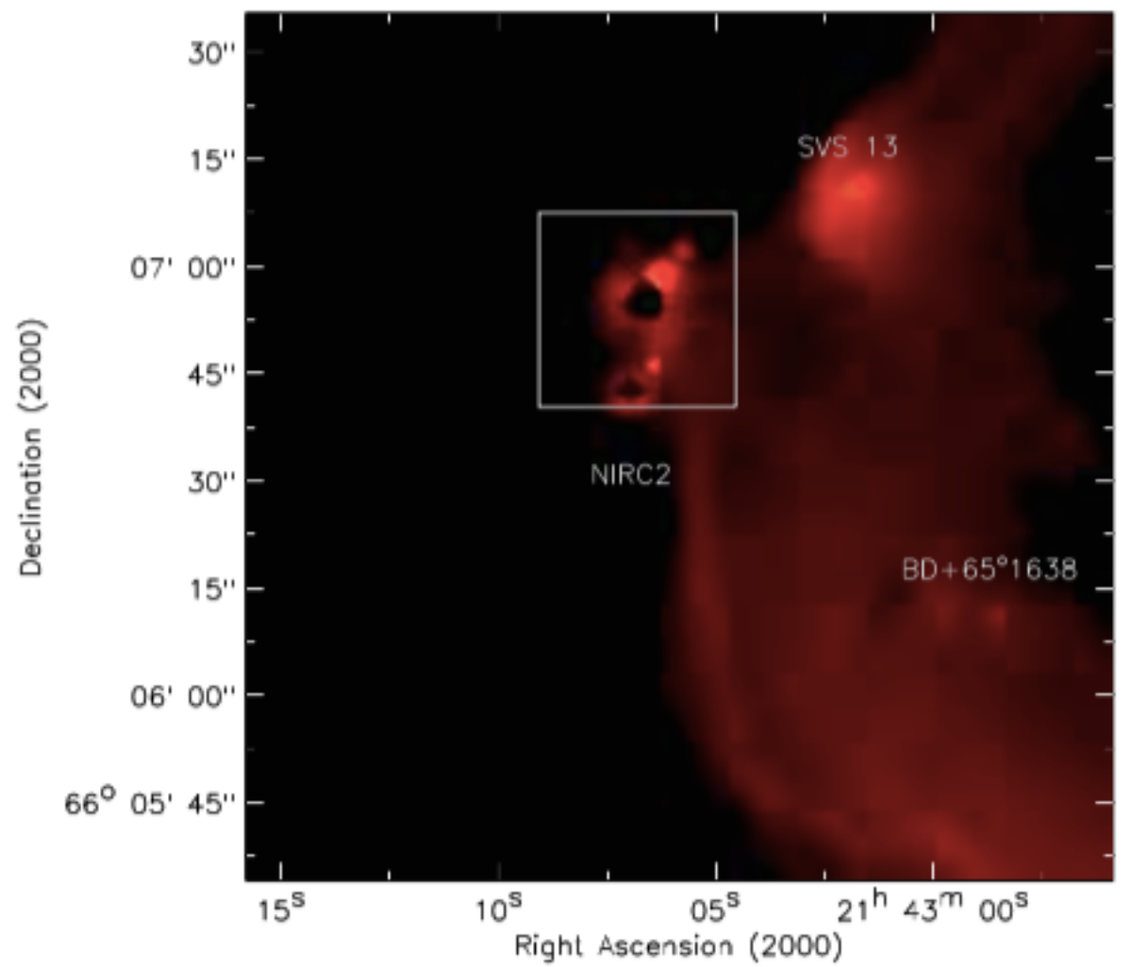

W(Hα)
100
10
1
M5
0
1
2
3
4
5
K_s−[4.5]




Hα Source
X-ray Source
A_V = 1.0 mag
ZAMS ($m_V - M_V$=10.3)
V
$V-I_C$
V_0
$(V-I_C)_0$
1.0 $M_\odot$
0.5 $M_\odot$
0.3 $M_\odot$
1.0 Myr
3.0 Myr
10.0 Myr



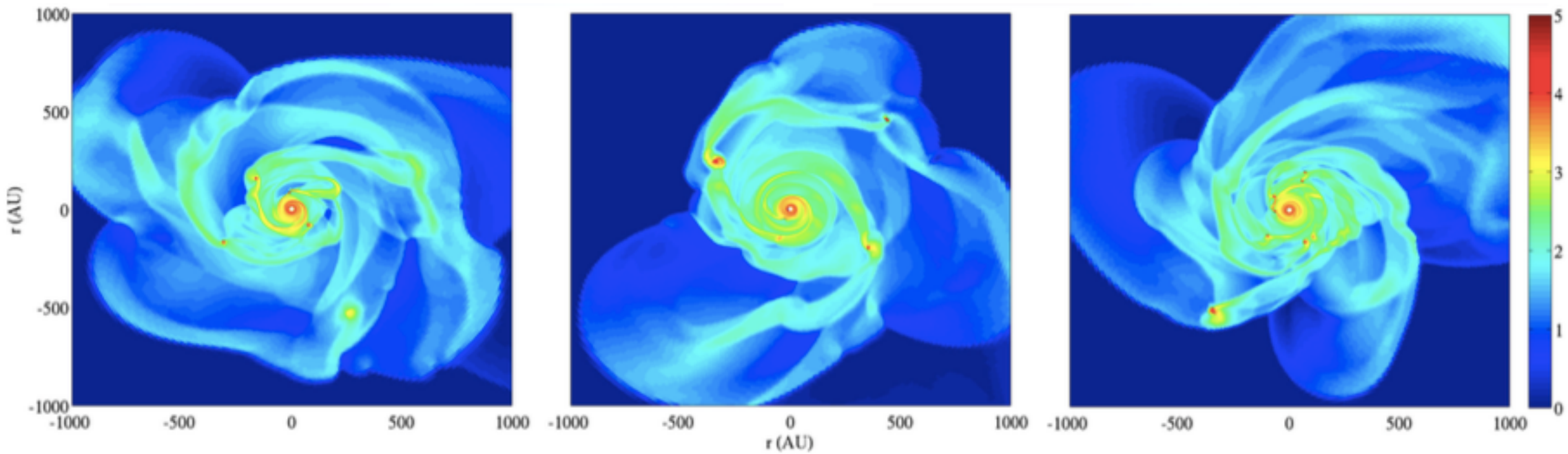
K′ image centered near LkHα 234



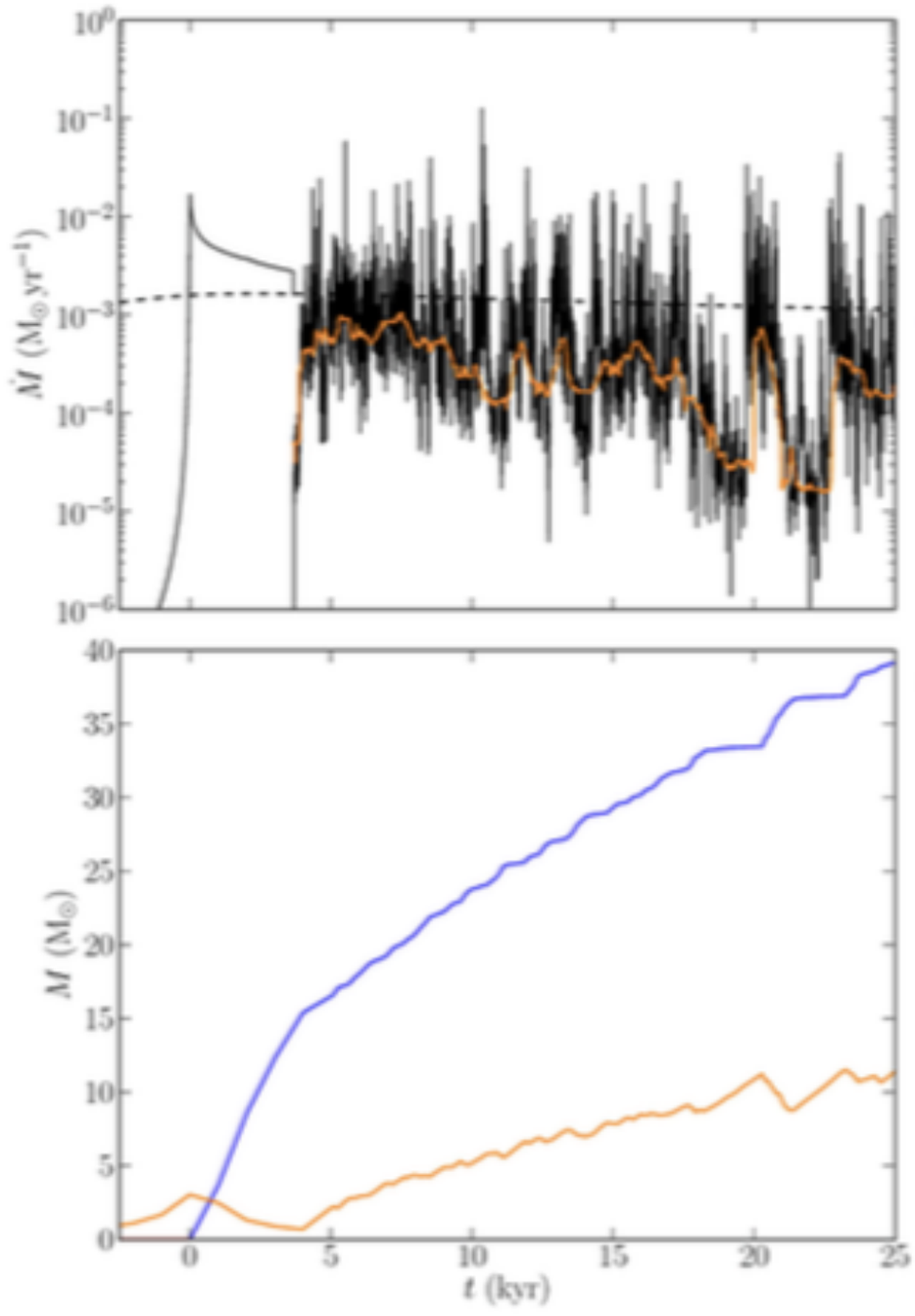
Spitzer IRAC [5.8] post BCD image centered near LkHα 234.

The luminosity of Population III star clusters

A. L. DeSouza & S. Basu, MNRaS, 450, pp. 295-304 (2015)

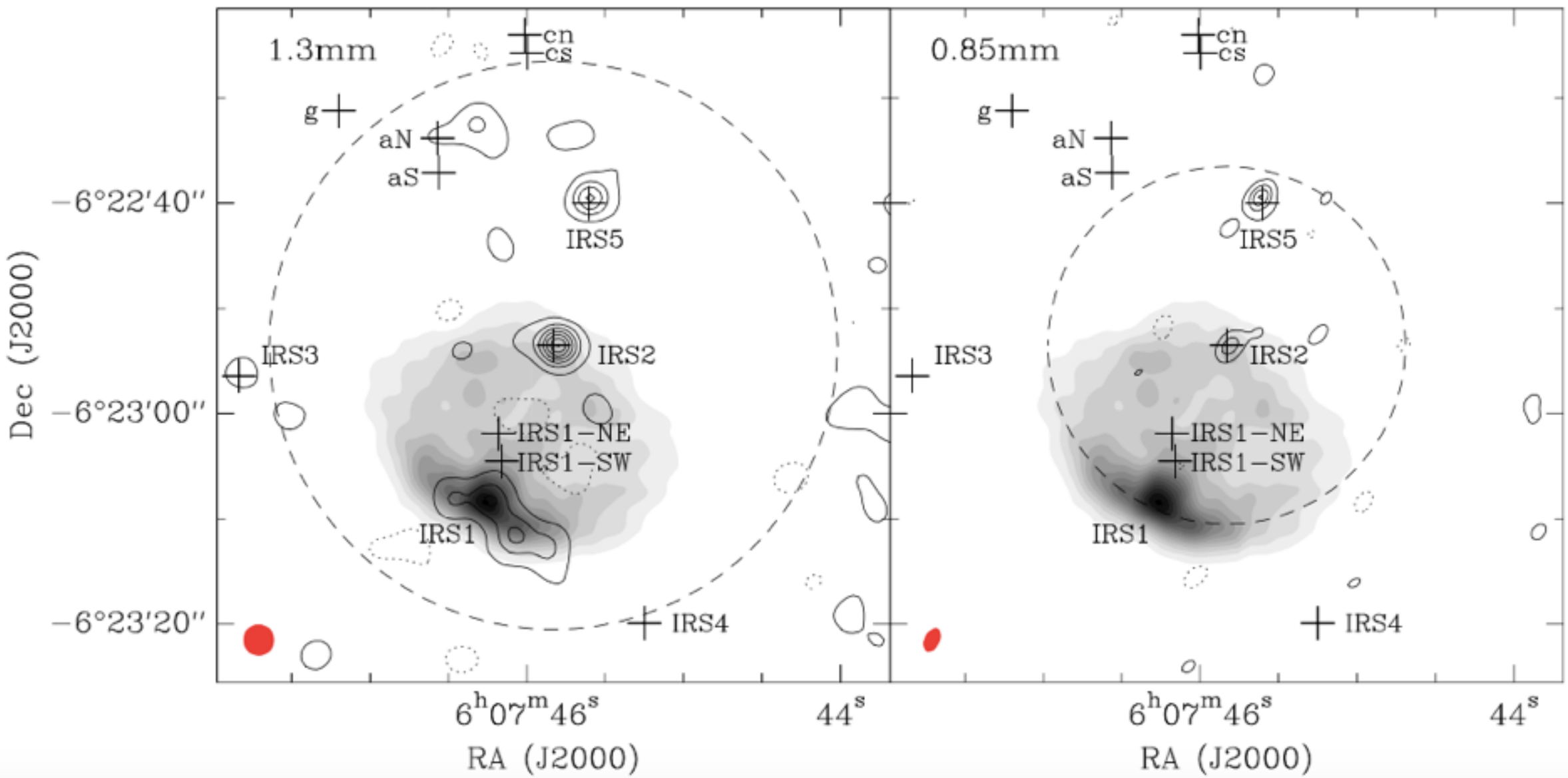


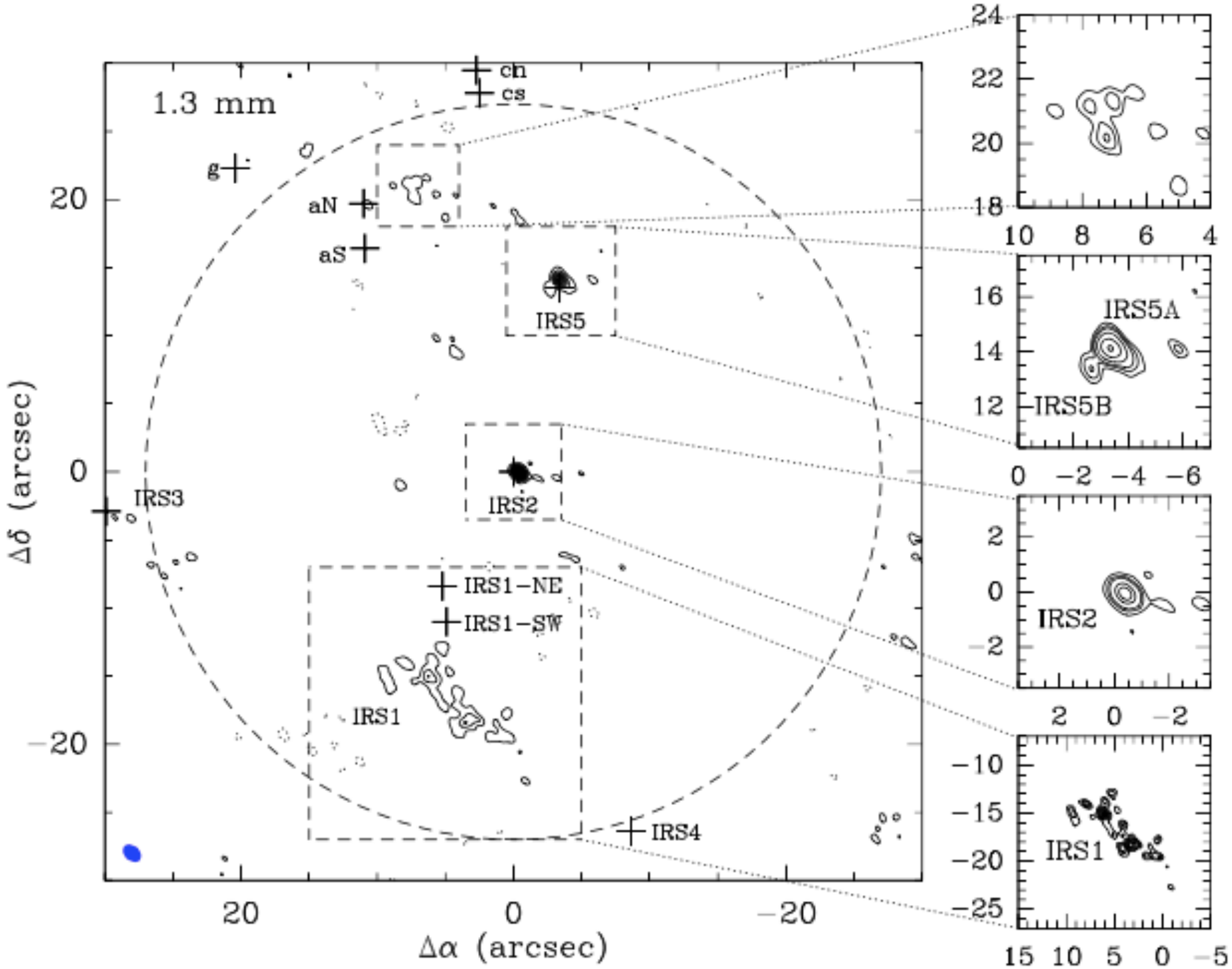
円盤不安定で一時的な質量降着率増加が繰り返される


10^0
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
$\dot{M}$ ($M_\odot$ yr^{-1})
40
35
30
25
20
15
10
5
0
M ($M_\odot$)
0
5
10
15
20
25
t (kyr)

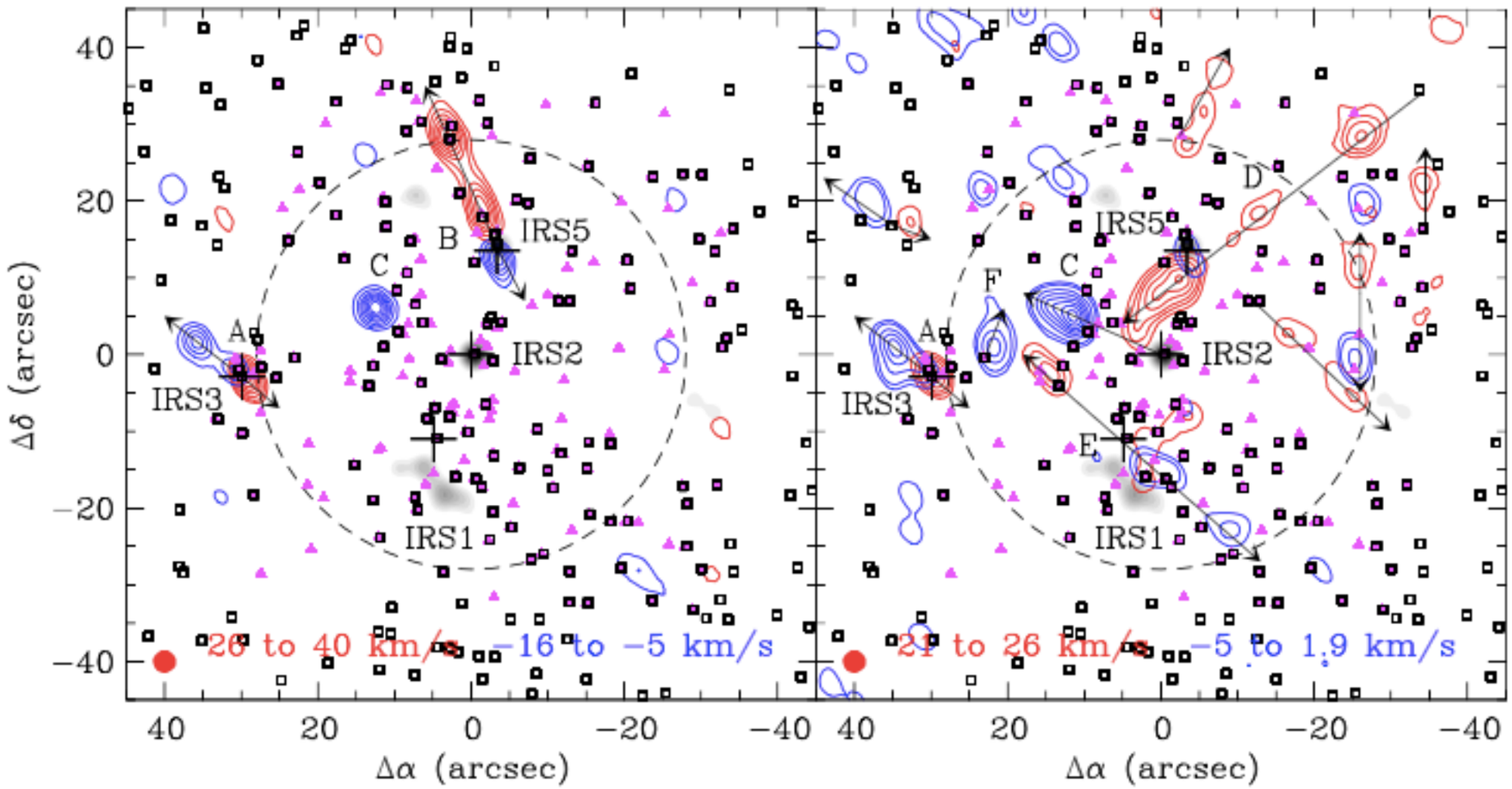
Submillimeter Array High-angular Resolution Observations of the Monoceros R2 Star Forming Cluster

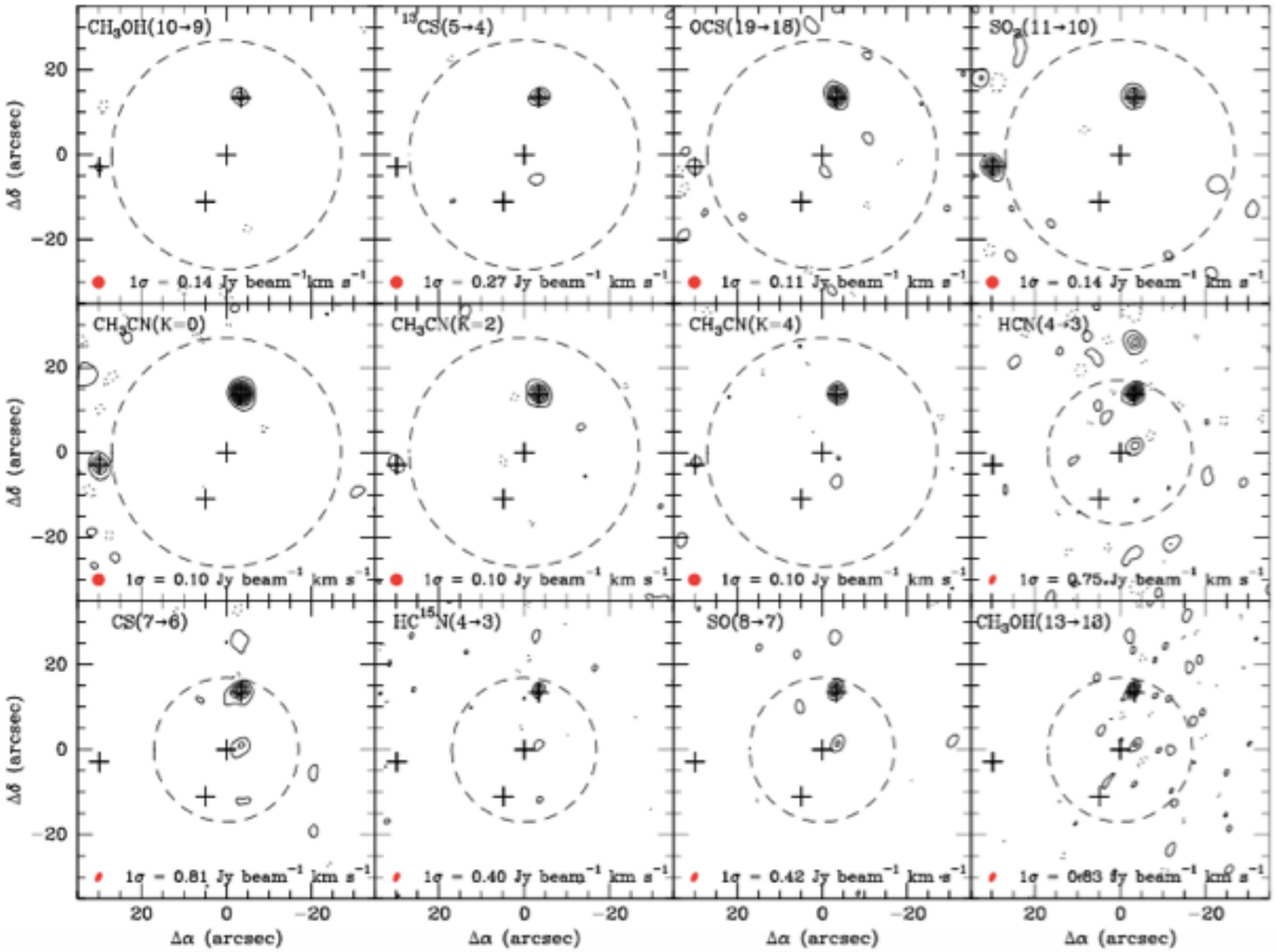
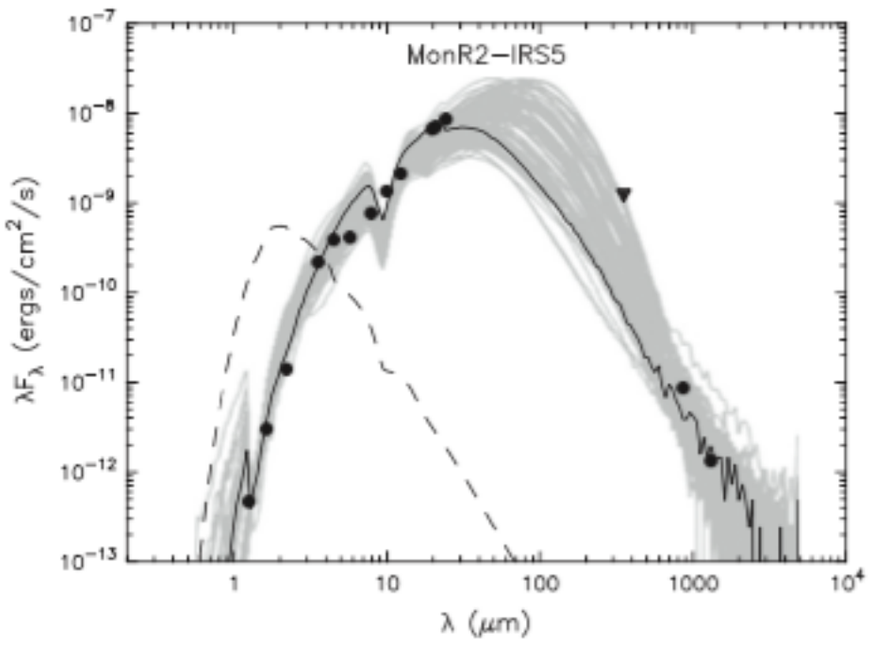
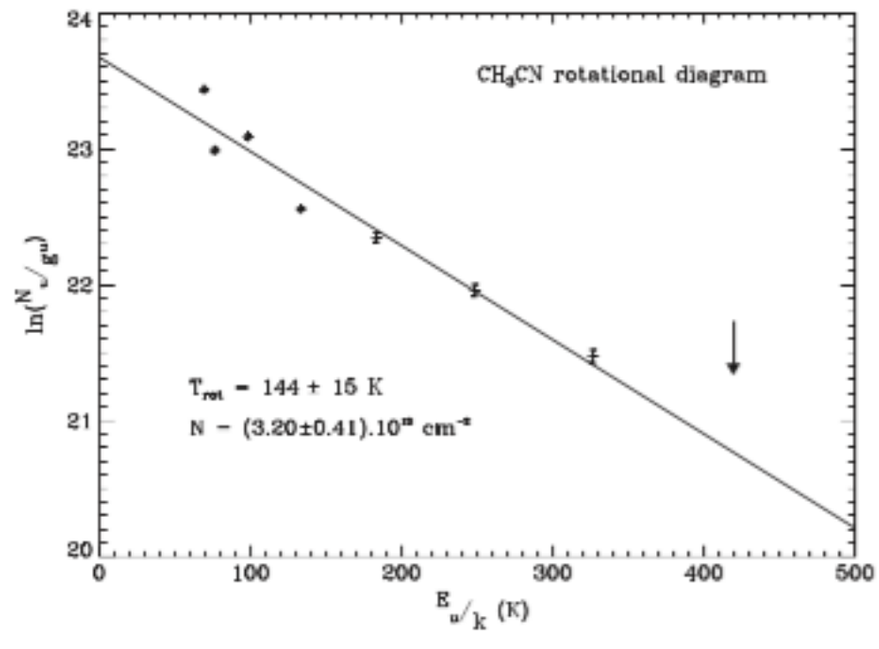
M. Dierickx et al. ApJ, 803, 89 (2015)




1.3 mm
ch
cs
g
aN
aS
IRS5
IRS2
IRS3
IRS1-NE
IRS1-SW
IRS1
IRS4
Δδ (arcsec)
Δα (arcsec)
IRS5A
IRS5B
IRS2
IRS1

VEX


40
20
0
−20
−40
Δδ (arcsec)
40
20
0
−20
−40
Δα (arcsec)
A
B
C
IRS5
IRS2
IRS3
IRS1
26 to 40 km/s
−16 to −5 km/s
D
E
F
21 to 26 km/s
−5 to 1.9 km/s



IRS5 is also chemically active
IRS3 = Hot Corino