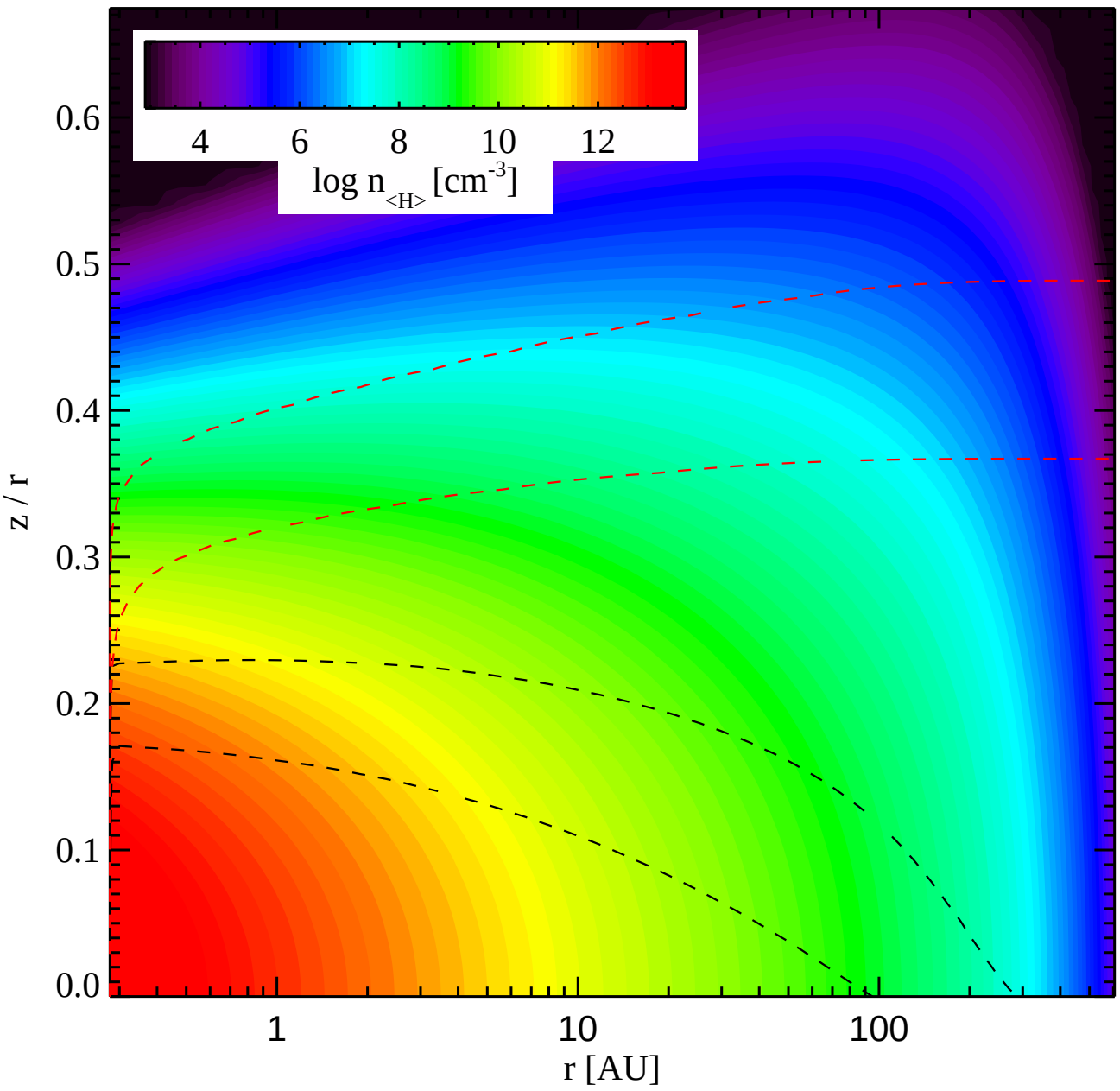
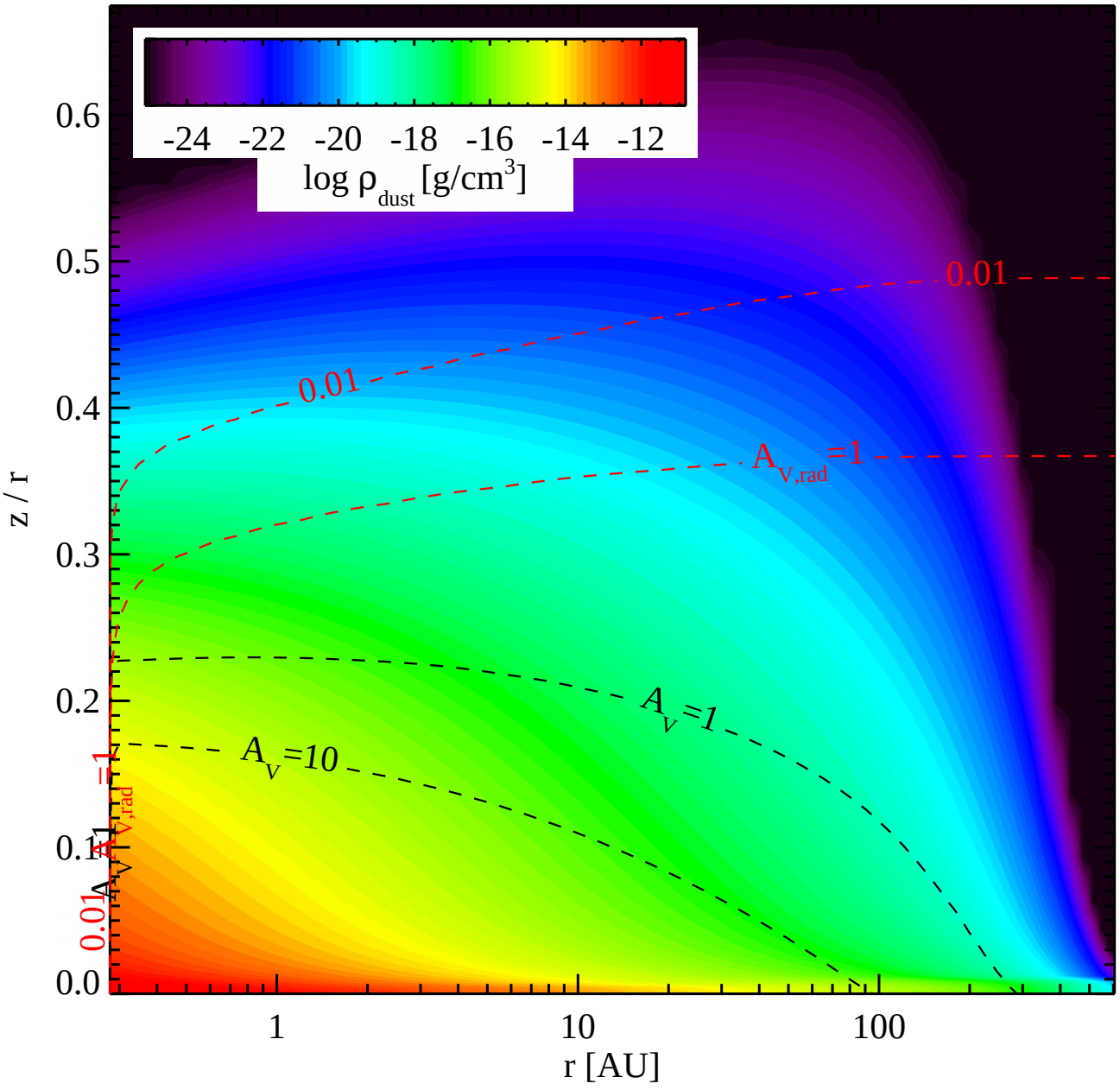
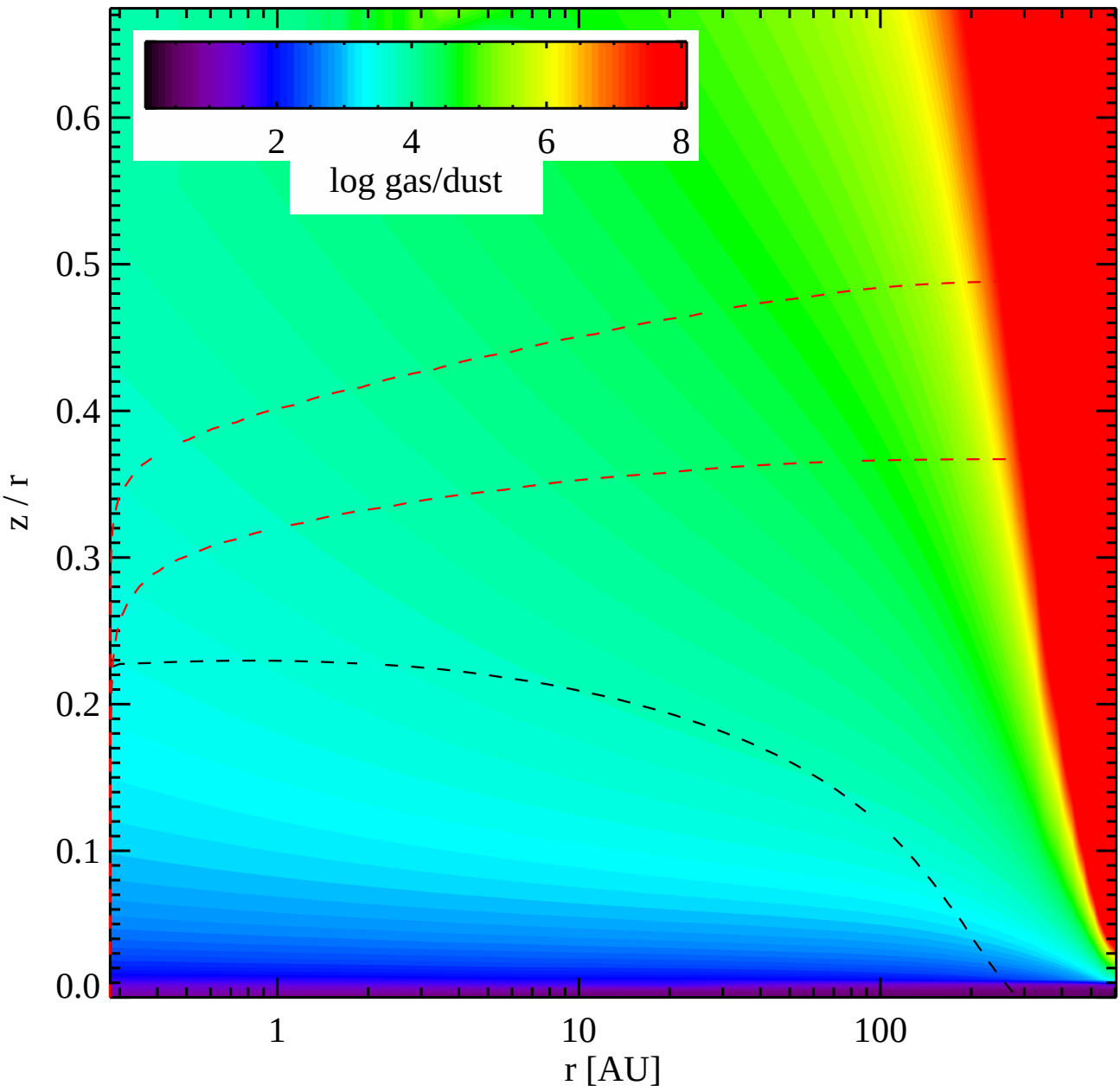
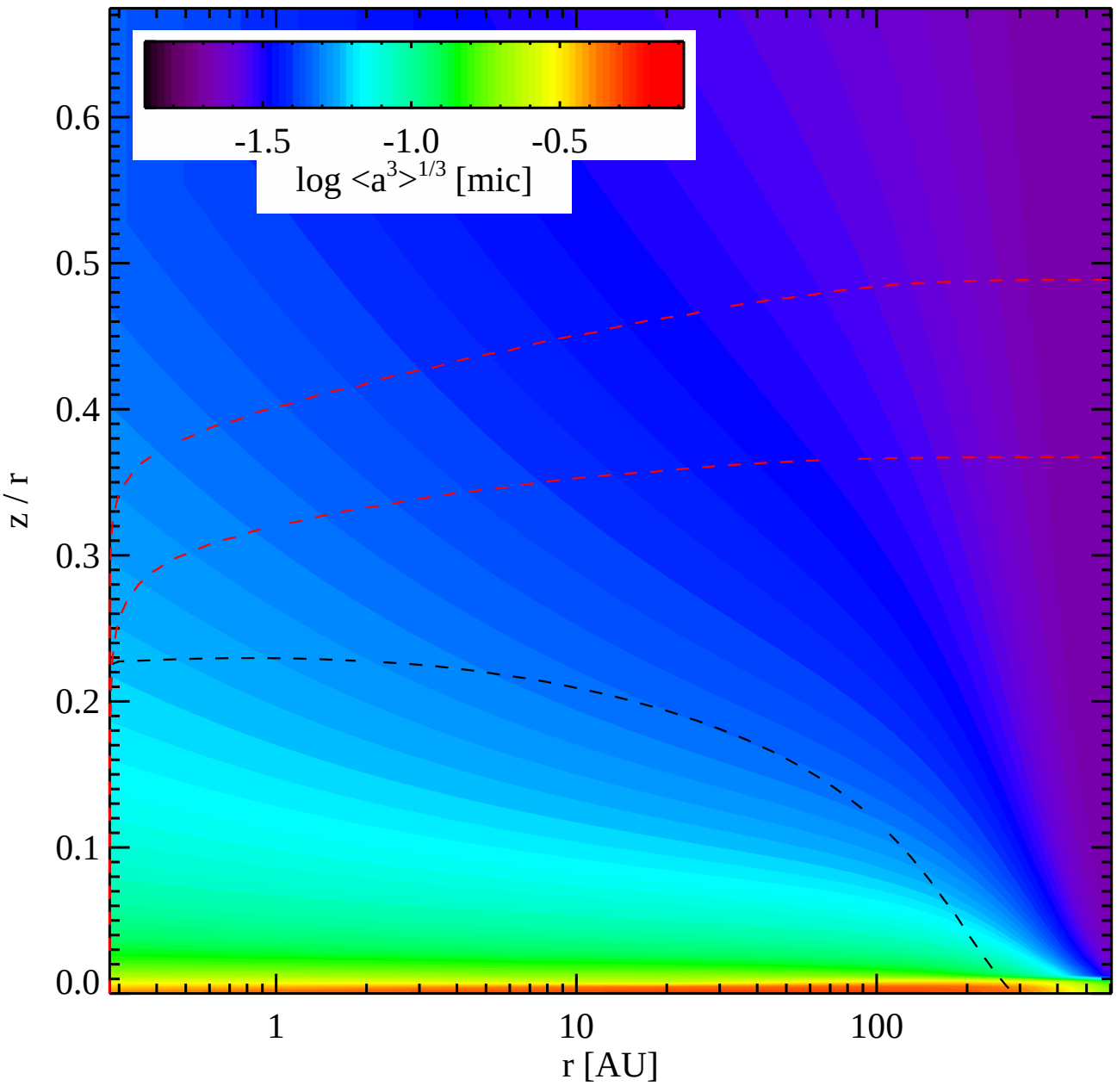
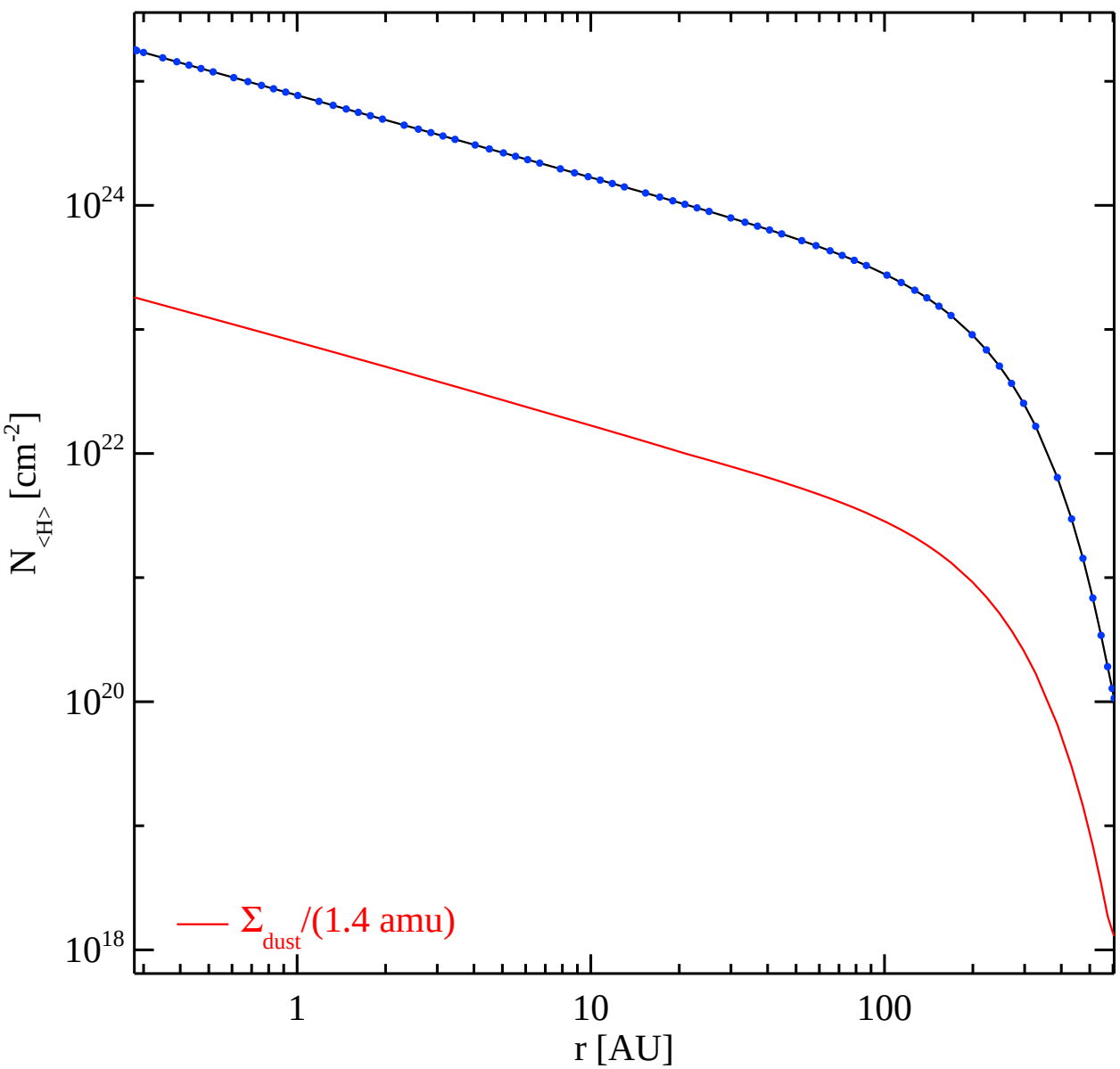
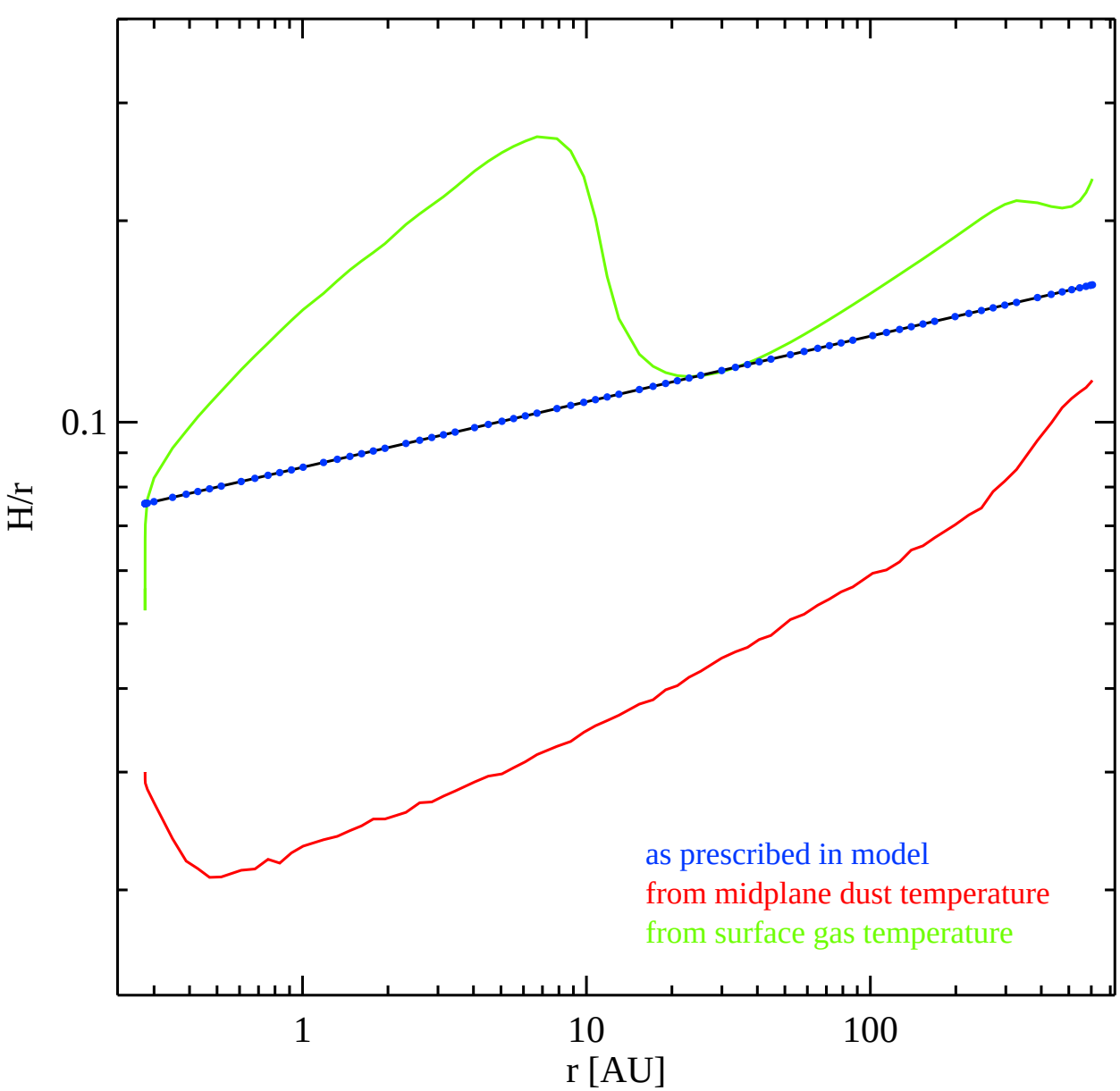

4
6
8
10
12
log n<H> [cm-3]
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
1
10
100
r [AU]

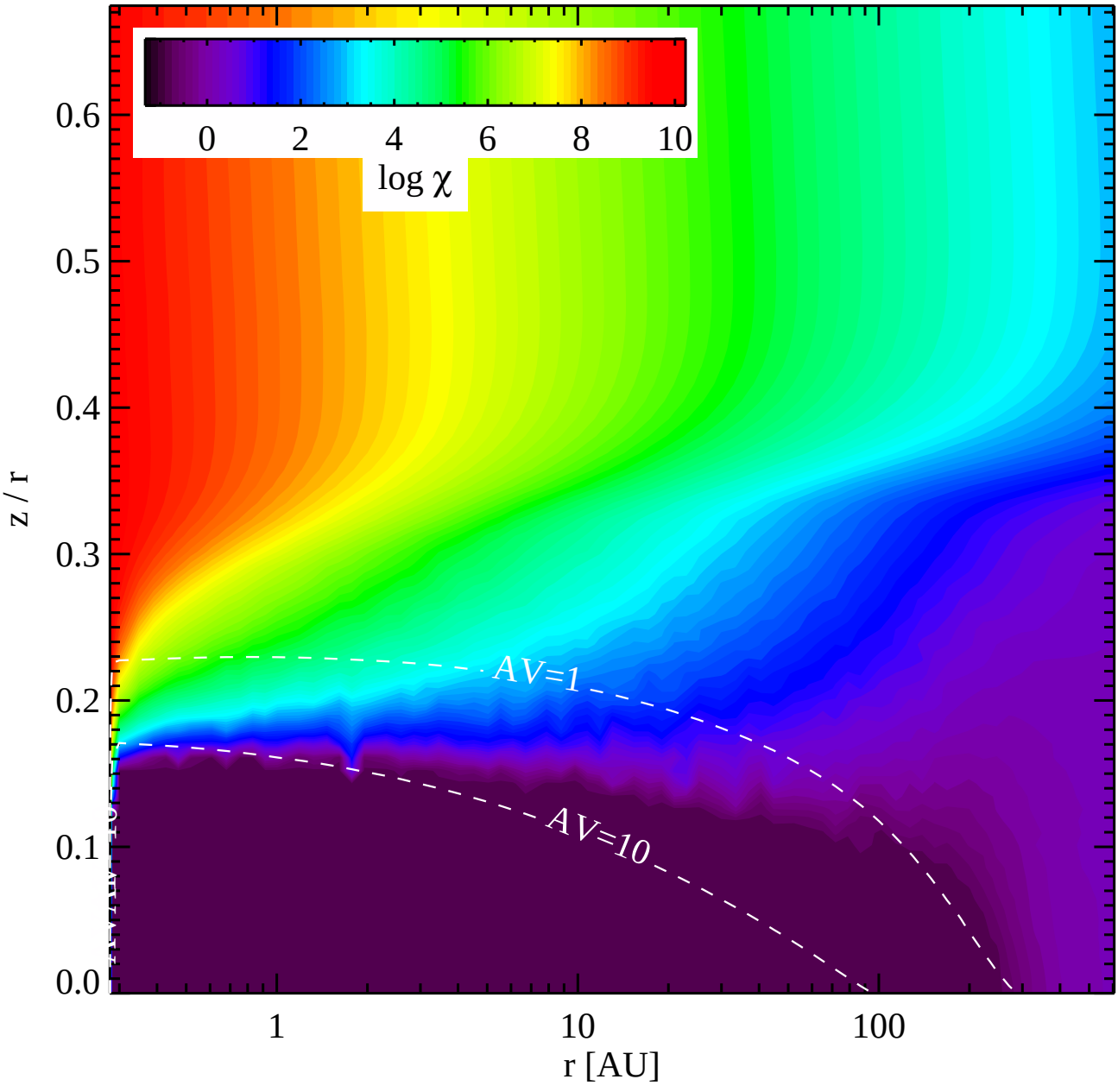

-24 -22 -20 -18 -16 -14 -12
log ρdust [g/cm3]
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
1
10
100
r [AU]
0.01
AV,rad=1
AV=1
AV=10
0.01
AV,rad=1

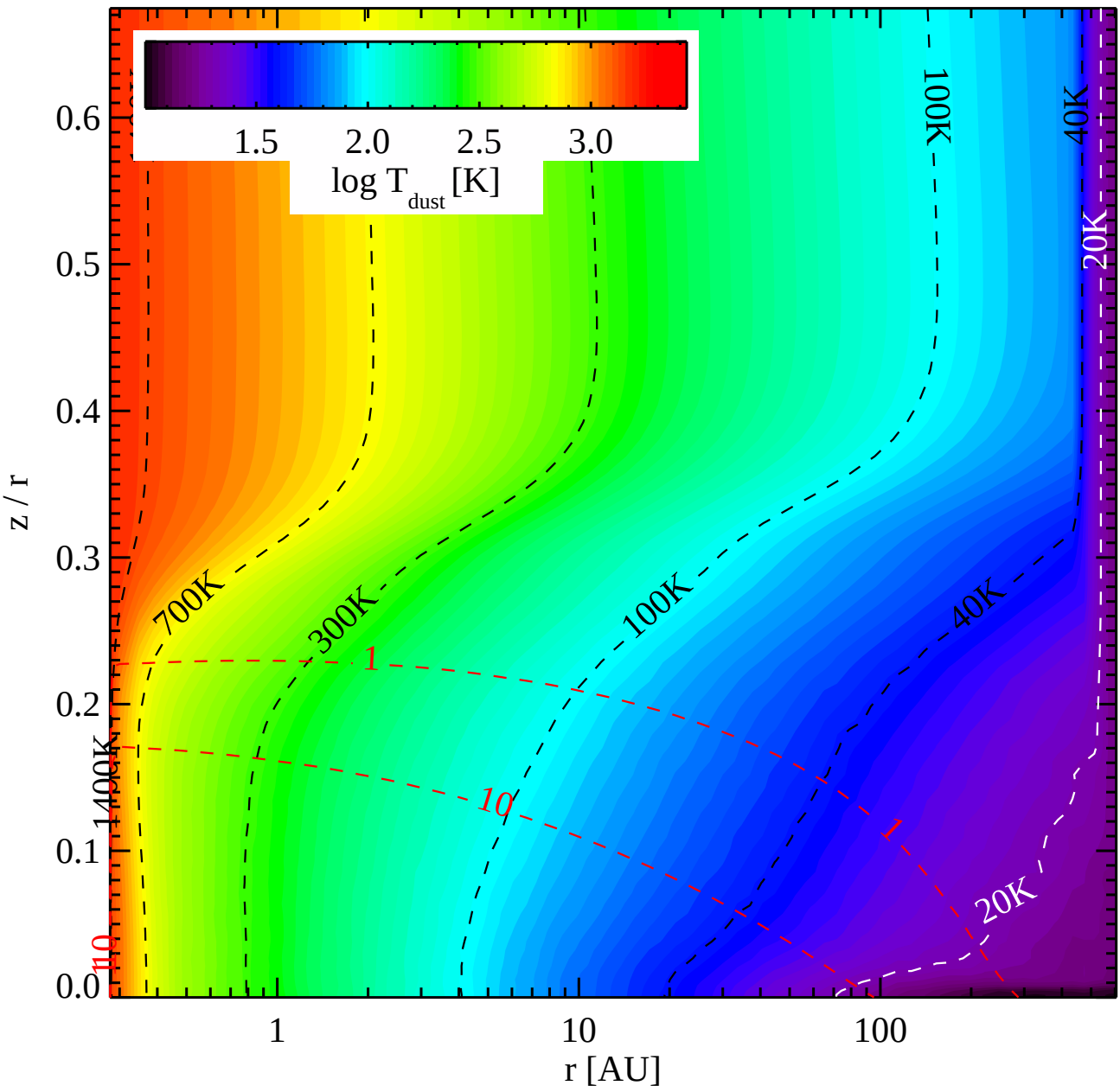

2
4
6
8
log gas/dust
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
1
10
100
r [AU]

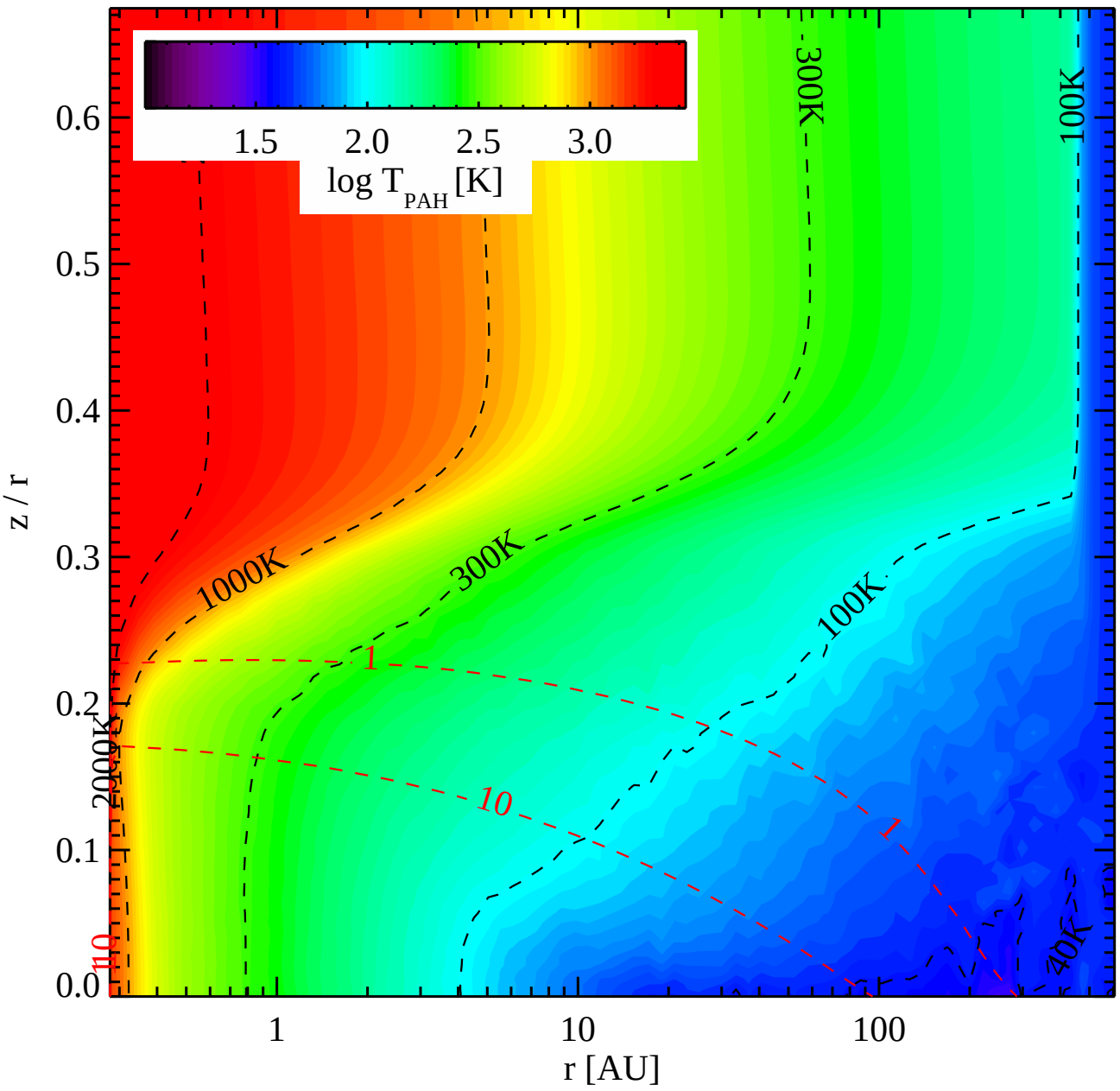

-1.5
-1.0
-0.5
log <a^3>^1/3 [mic]
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
1
10
100
r [AU]

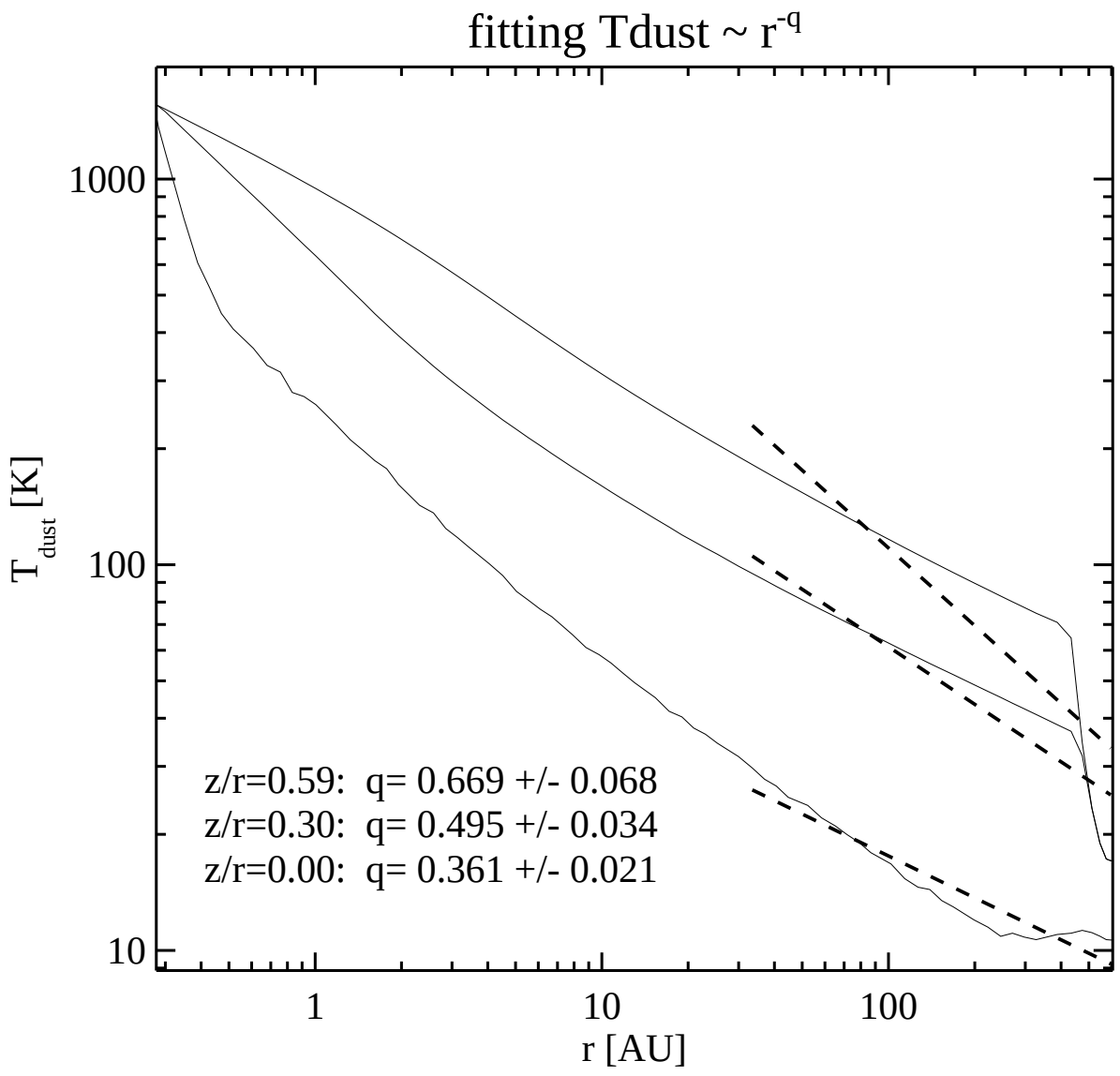

10^{24}
10^{22}
10^{20}
10^{18}
$N_{<H>}$ [cm^{-2}]
1
10
100
r [AU]
Σ_{dust}/(1.4 amu)

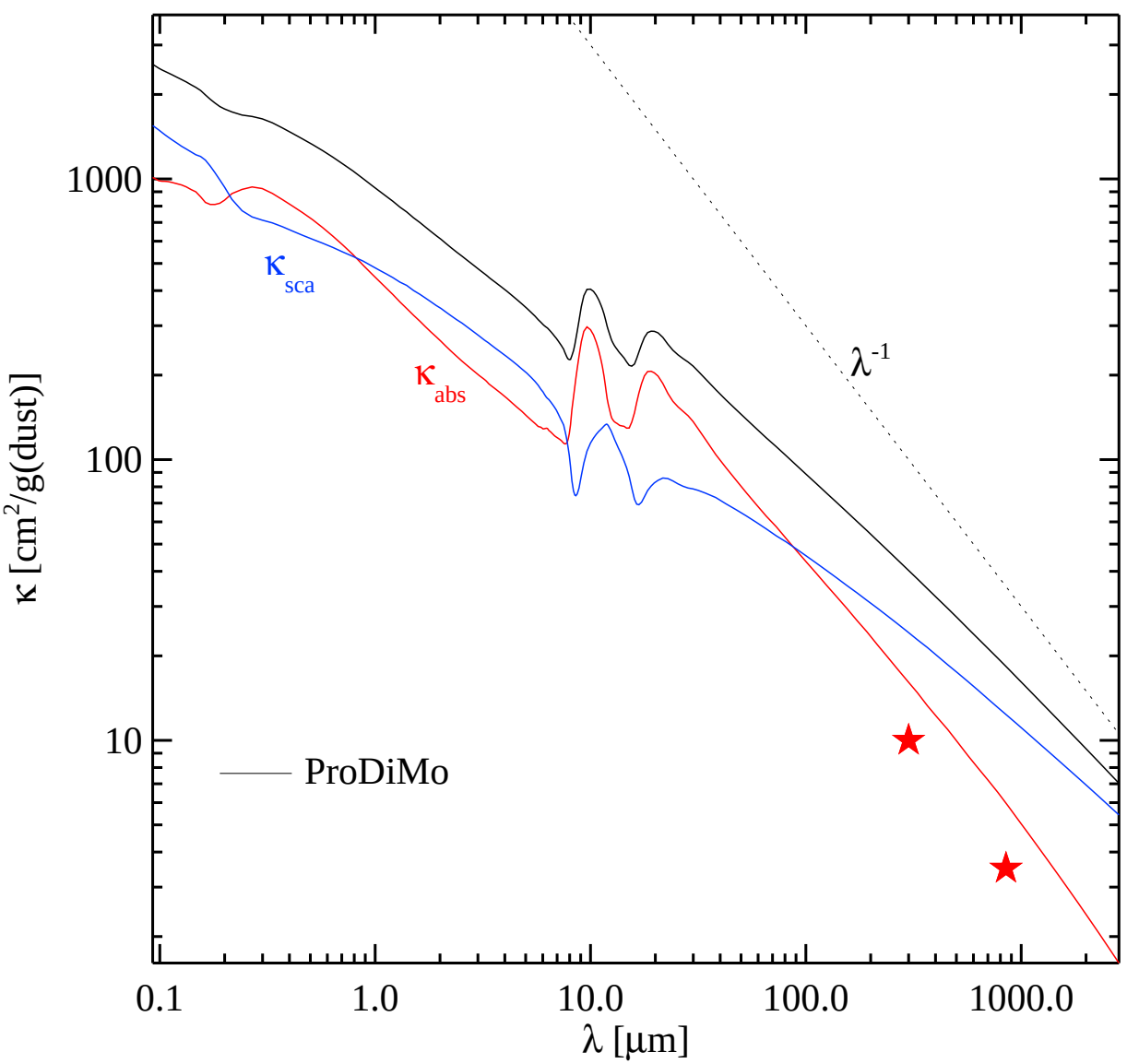

0.1
H/r
1
10
100
r [AU]
as prescribed in model
from midplane dust temperature
from surface gas temperature

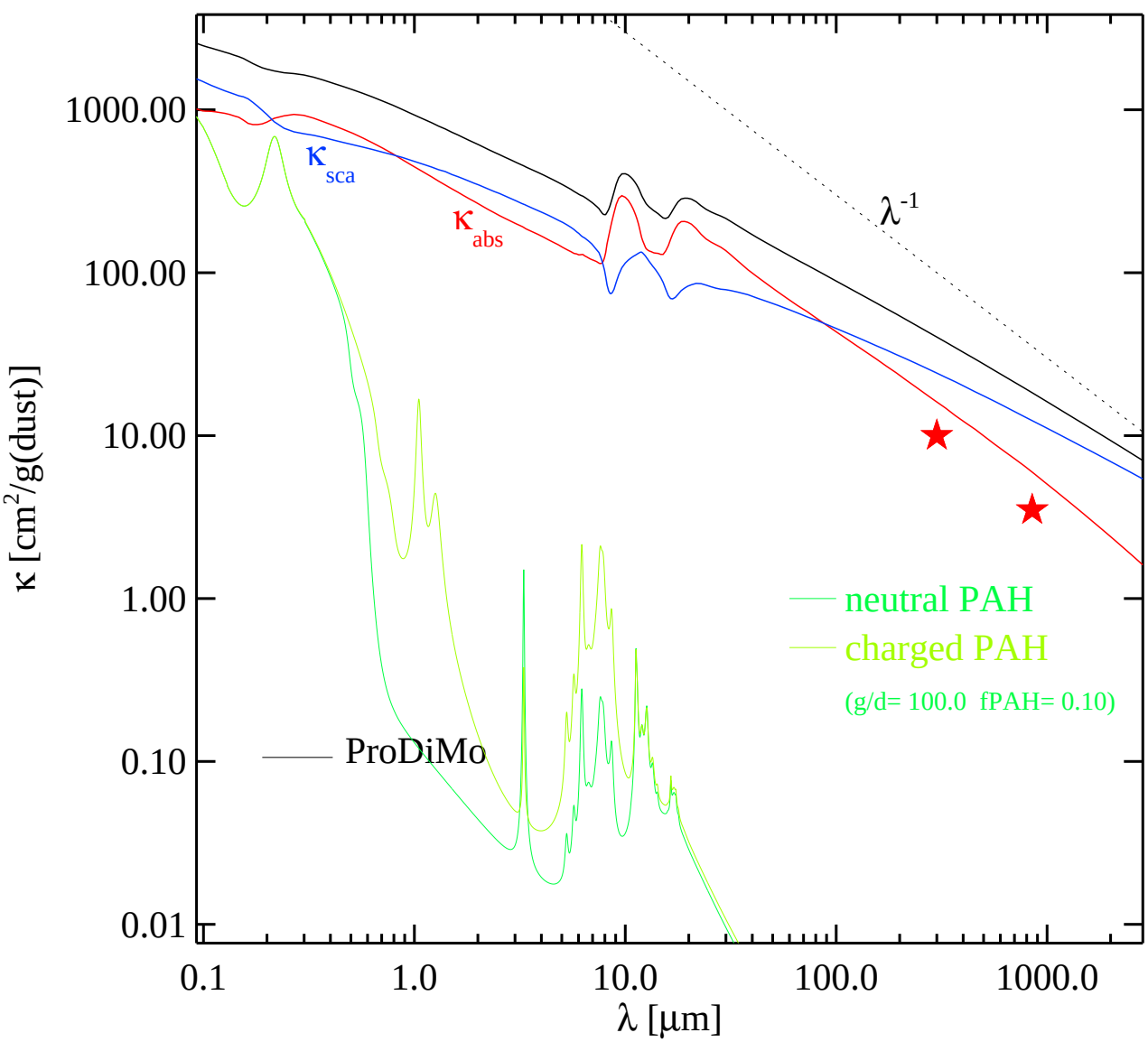

0
2
4
6
8
10
log χ
AV=1
AV=10
0.0
0.1
0.2
0.3
0.4
0.5
0.6
z / r
1
10
100
r [AU]

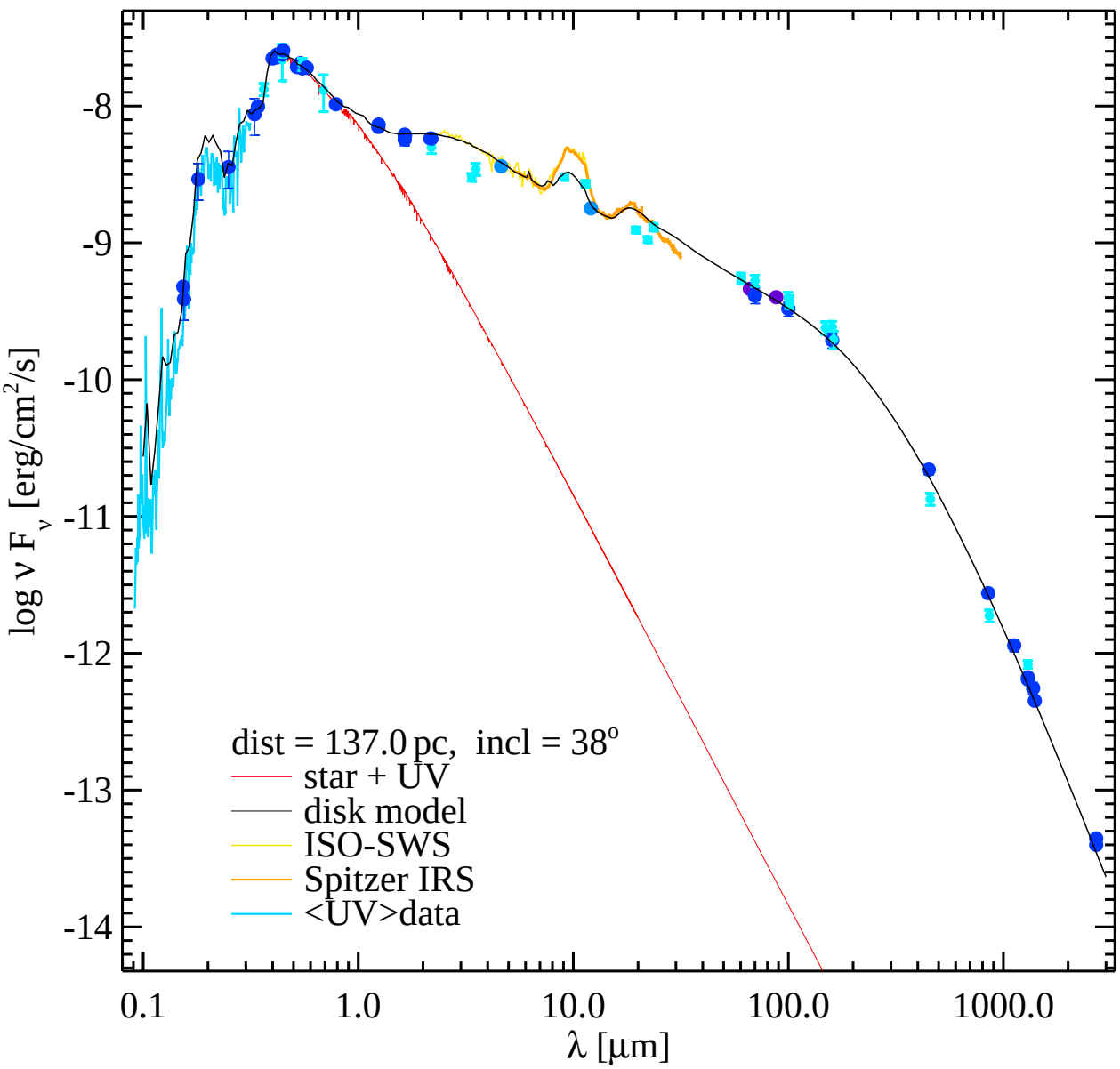

1.5
2.0
2.5
3.0
log T dust [K]
700K
300K
1400K
100K
40K
20K
100K
40K
20K
1
10
1
10
0.0
0.1
0.2
0.3
0.4
0.5
0.6
z / r
1
10
100
r [AU]

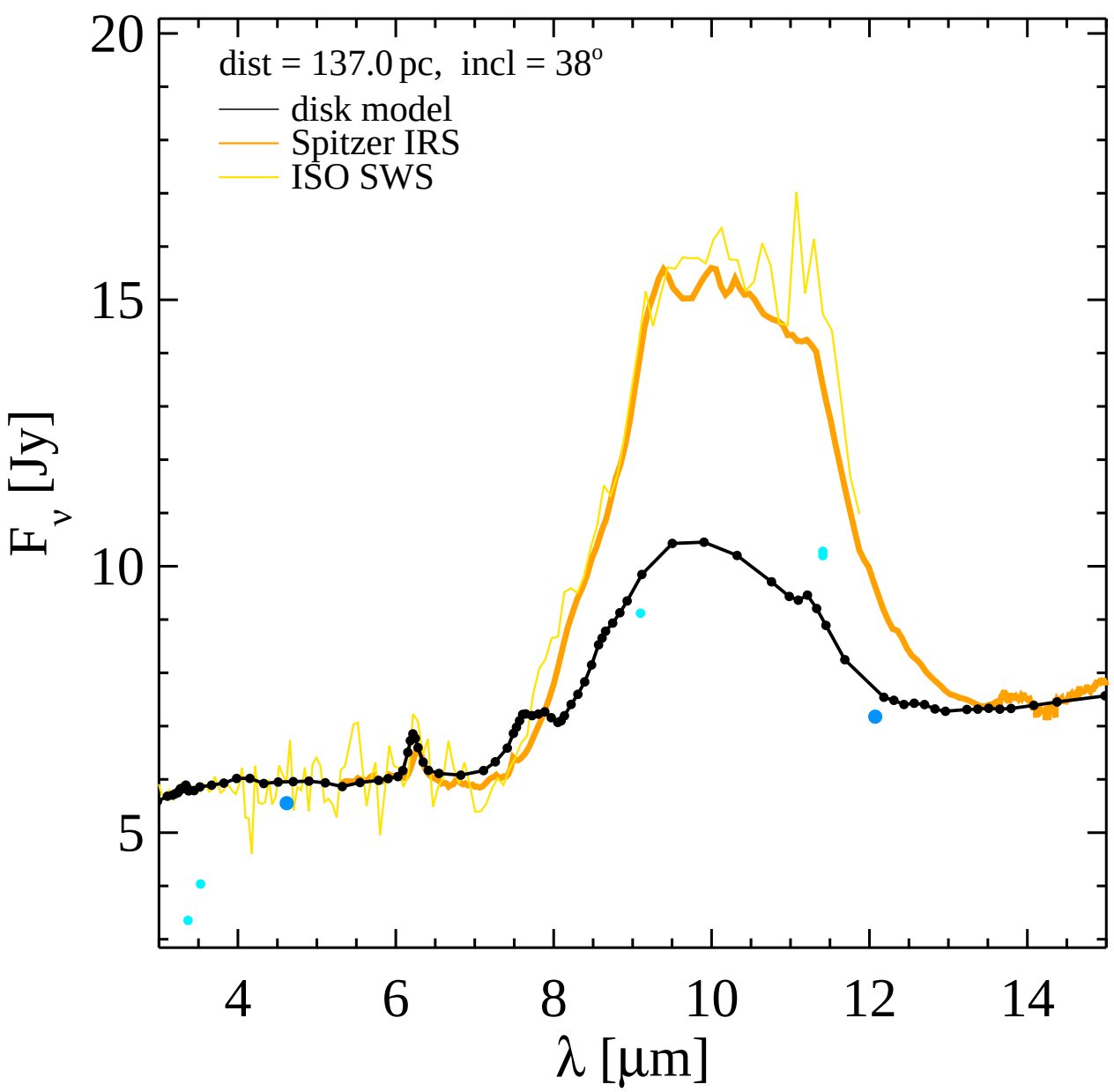

1.5
2.0
2.5
3.0
log T PAH [K]
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
1
10
100
r [AU]
300K
100K
1000K
300K
100K
2000K
1
10
1
40K

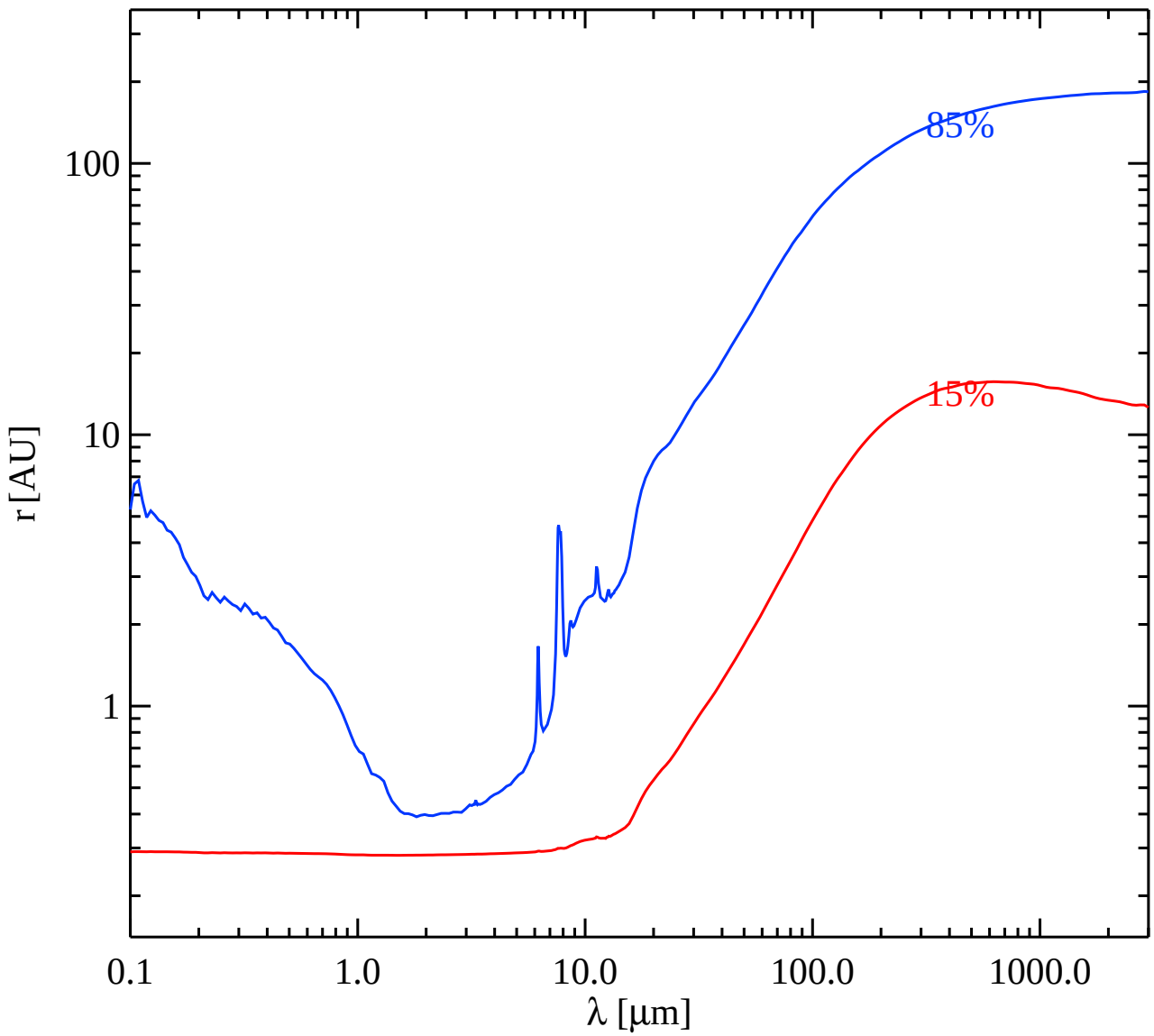

fitting Tdust ~ r^-q
1000
100
10
T dust [K]
1
10
100
r [AU]
z/r=0.59: q= 0.669 +/- 0.068
z/r=0.30: q= 0.495 +/- 0.034
z/r=0.00: q= 0.361 +/- 0.021

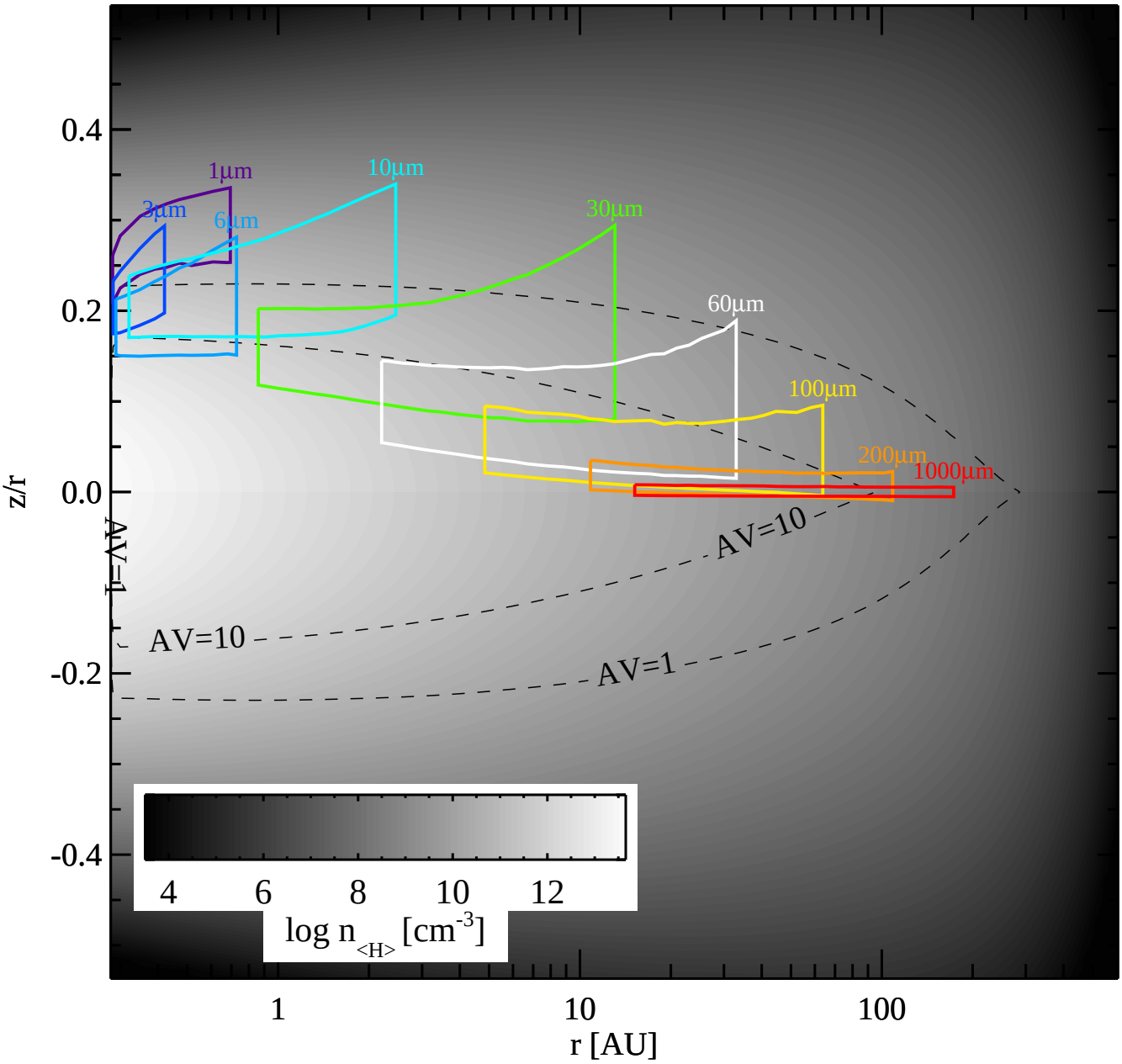

1000
100
10
κ [cm²/g(dust)]
κsca
κabs
λ-1
ProDiMo
0.1
1.0
10.0
100.0
1000.0
λ [μm]

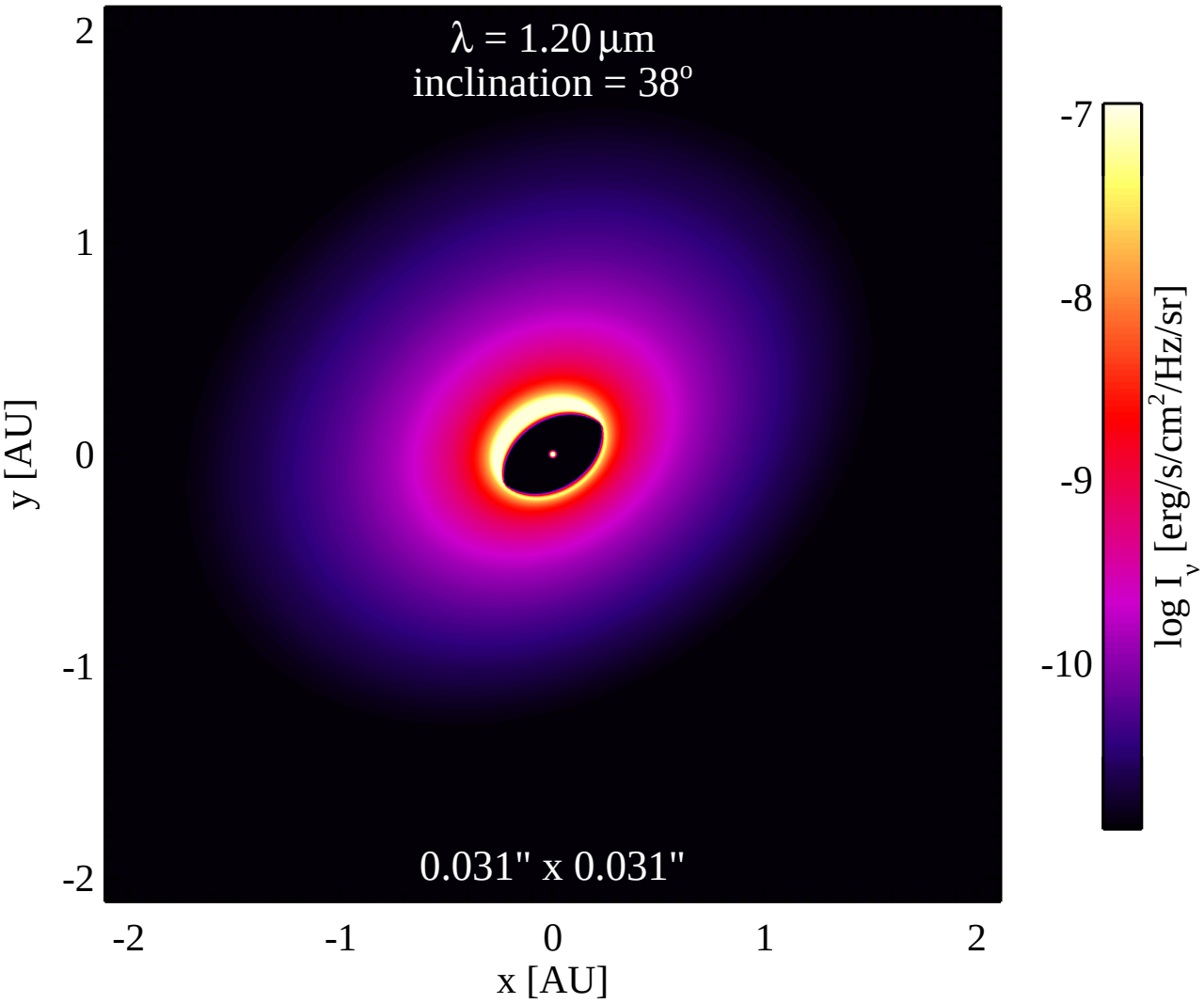

1000.00
100.00
10.00
1.00
0.10
0.01
κ [cm²/g(dust)]
0.1
1.0
10.0
100.0
1000.0
λ [μm]
κsca
κabs
λ-1
neutral PAH
charged PAH
(g/d= 100.0 fPAH= 0.10)
ProDiMo

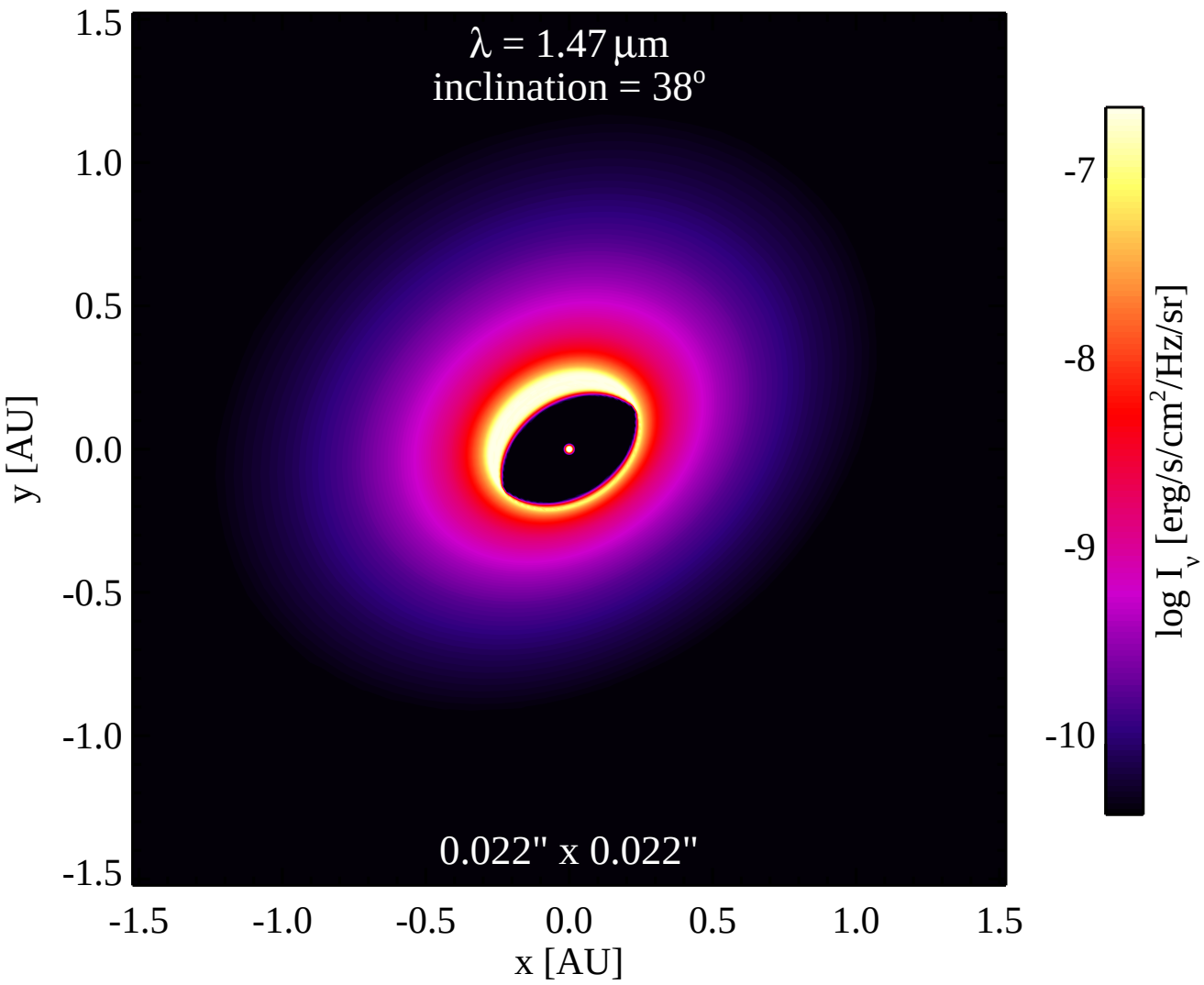

log ν F_ν [erg/cm²/s]
-8
-9
-10
-11
-12
-13
-14
0.1
1.0
10.0
100.0
1000.0
λ [μm]
dist = 137.0 pc, incl = 38°
star + UV
disk model
ISO-SWS
Spitzer IRS
<UV>data

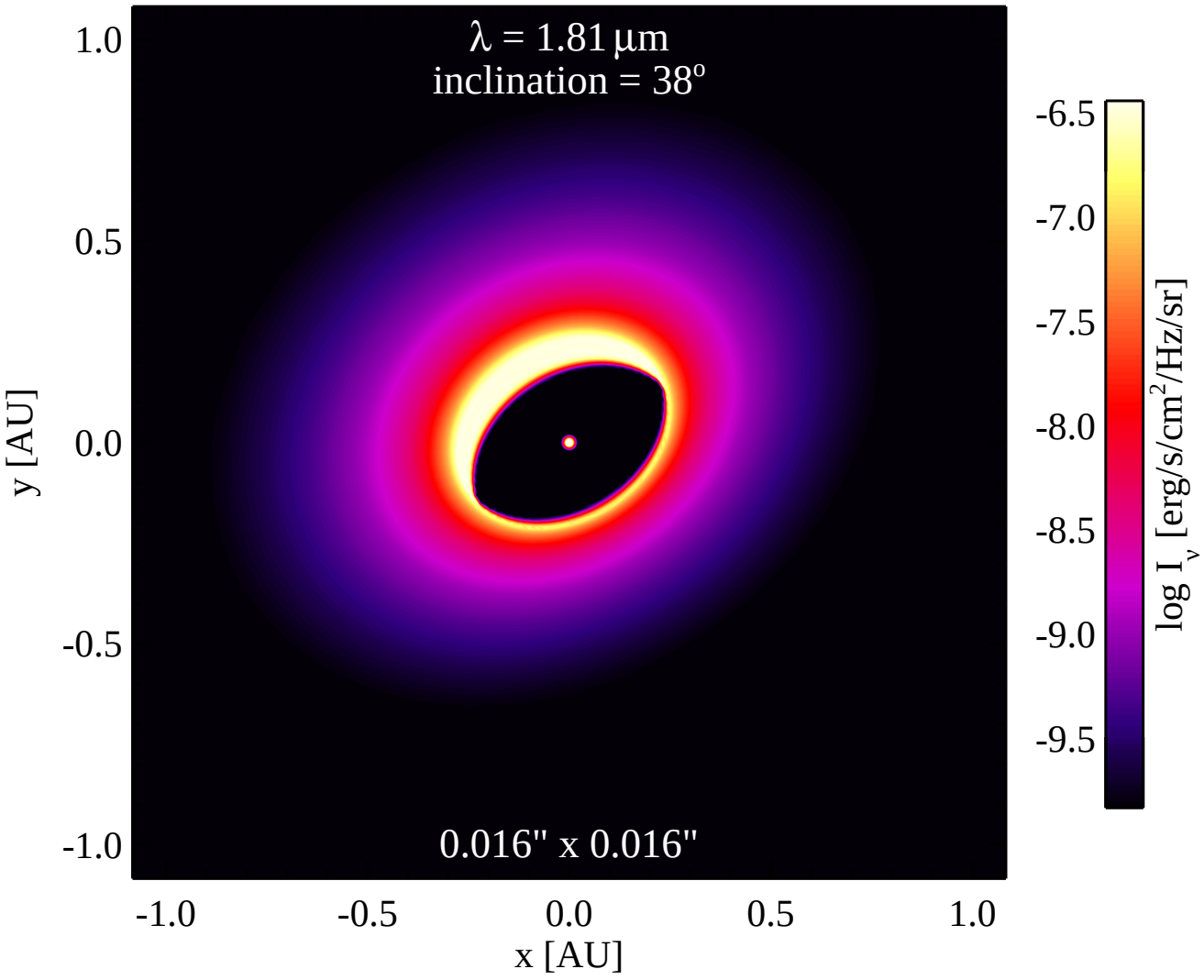

dist = 137.0 pc, incl = 38°
disk model
Spitzer IRS
ISO SWS
20
15
10
5
F_ν [Jy]
4
6
8
10
12
14
λ [μm]

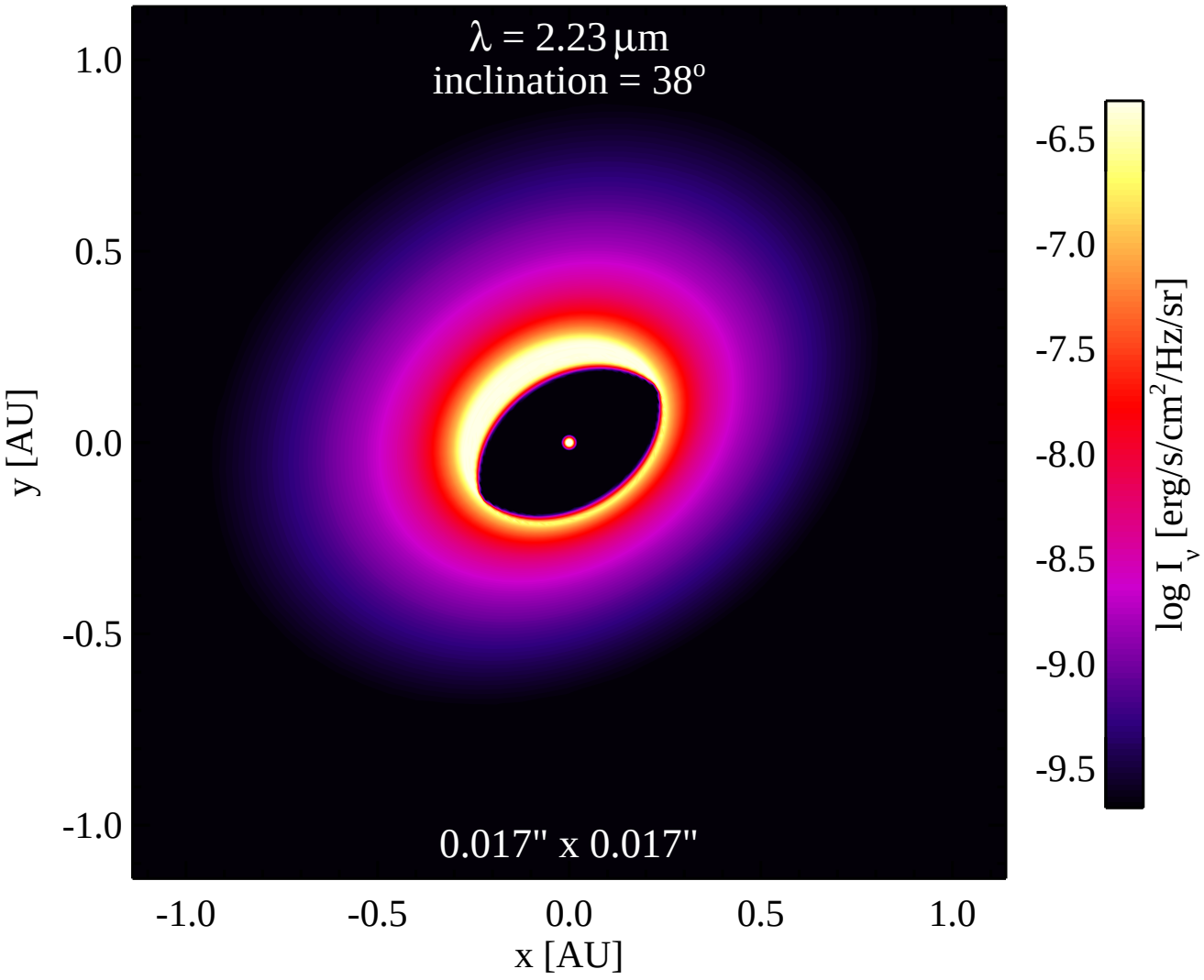

85%
15%
100
10
1
r [AU]
0.1
1.0
10.0
100.0
1000.0
λ [μm]

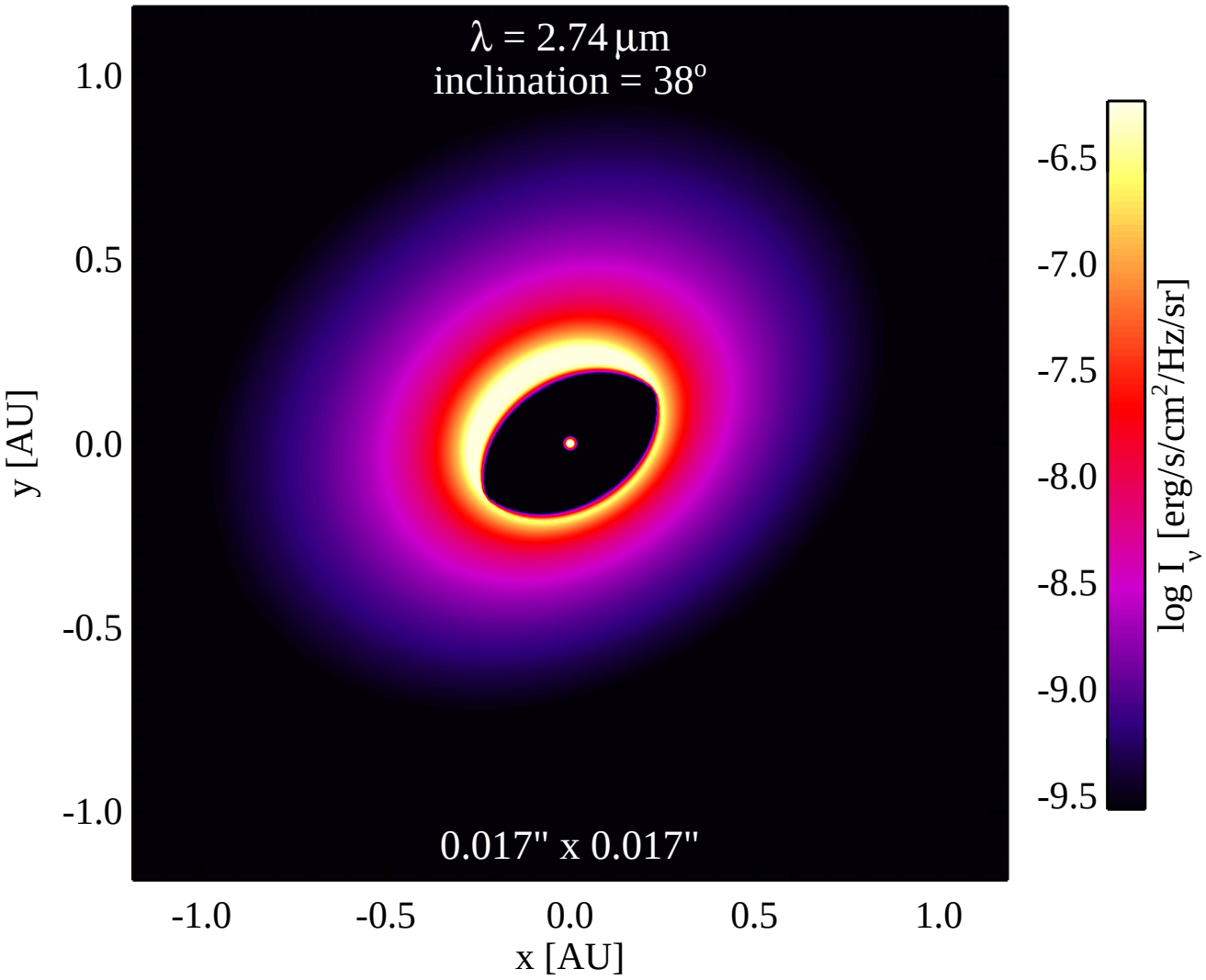

0.4
0.2
0.0
-0.2
-0.4
z/r
1µm
3µm
6µm
10µm
30µm
60µm
100µm
200µm
1000µm
AV=1
AV=10
AV=10
AV=1
4
6
8
10
12
log n<H> [cm-3]
1
10
100
r [AU]

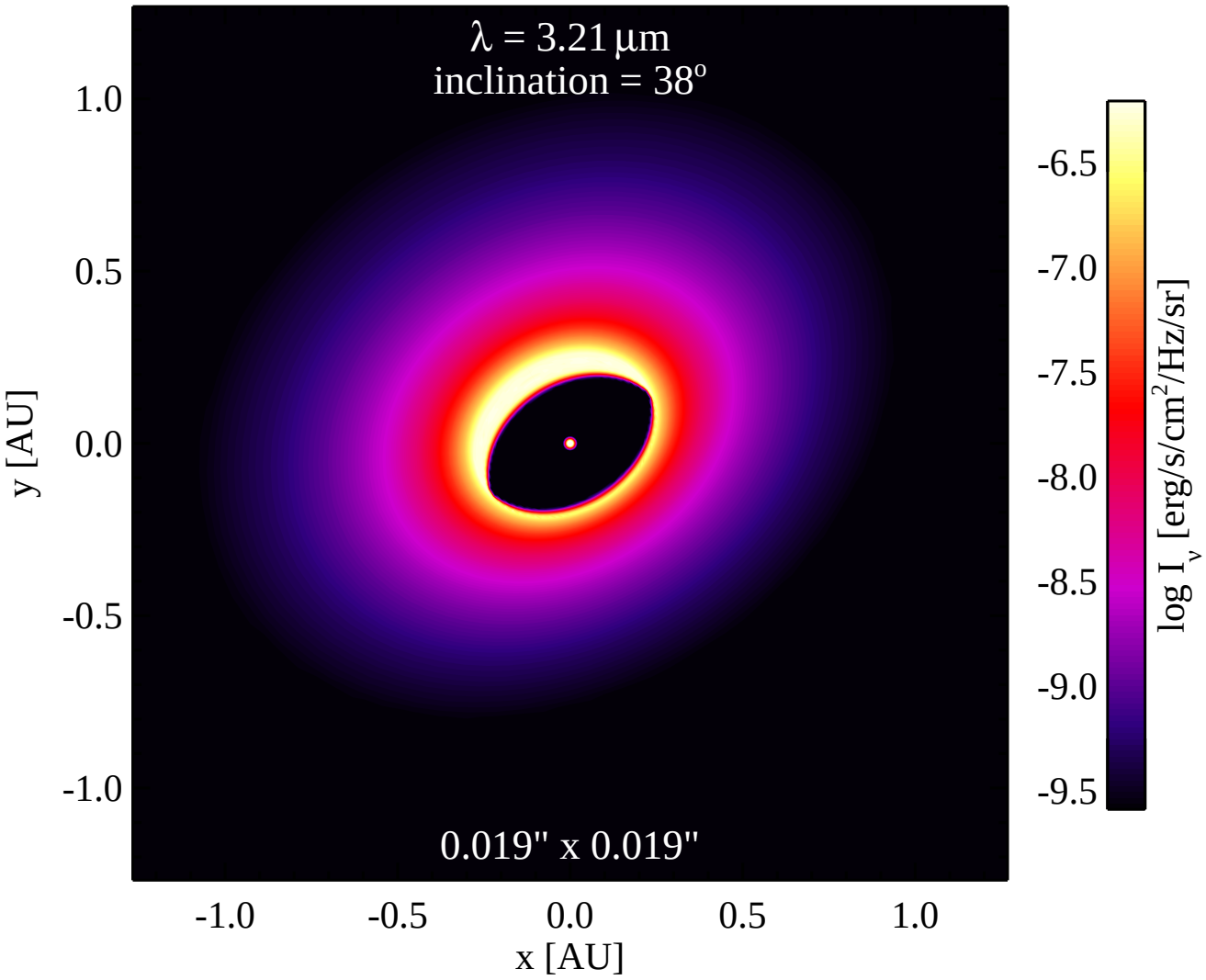

λ = 1.20 μm
inclination = 38°
0.031" x 0.031"
2
1
0
-1
-2
y [AU]
-2
-1
0
1
2
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

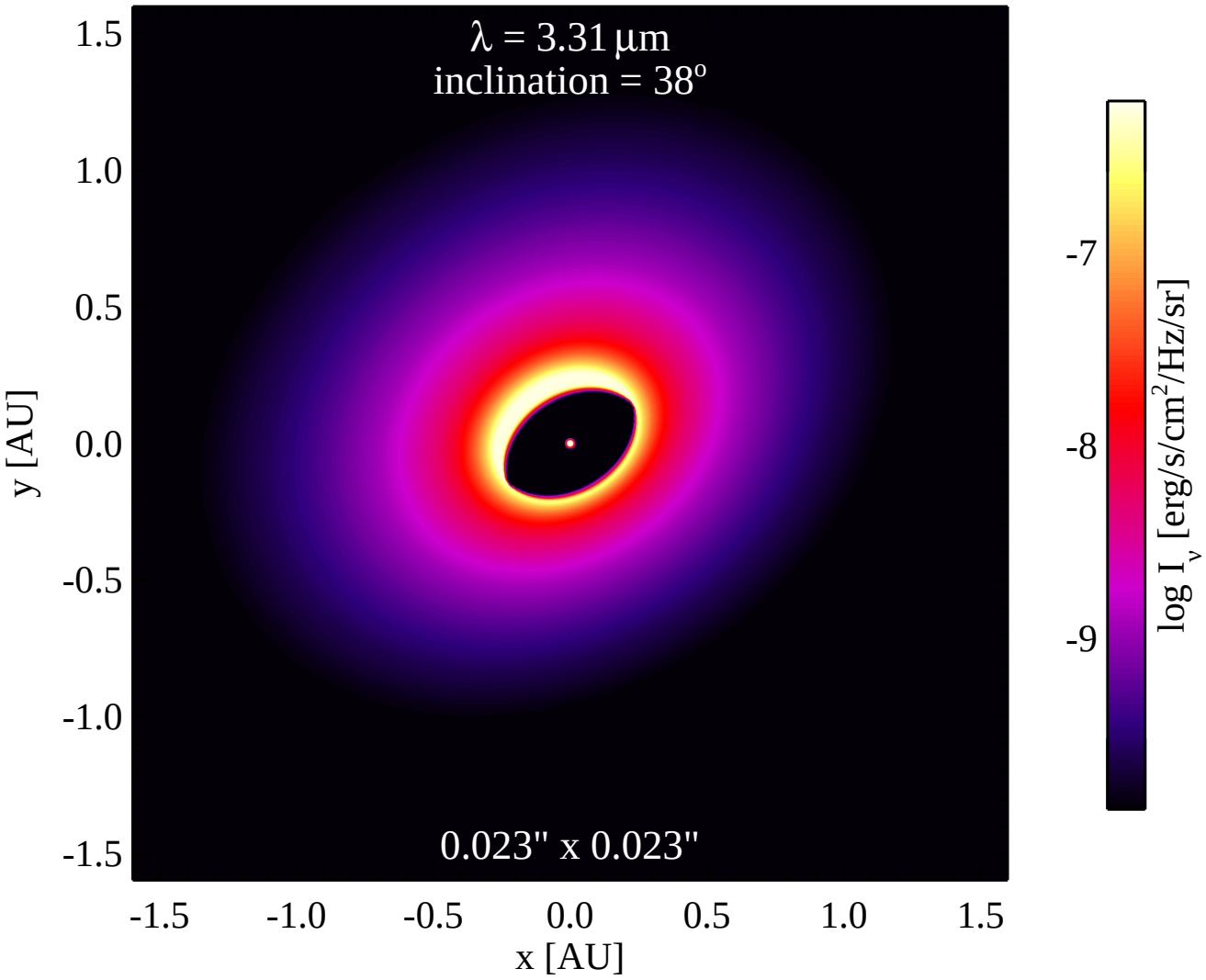

λ = 1.47 μm
inclination = 38°
0.022" x 0.022"
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
y [AU]
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

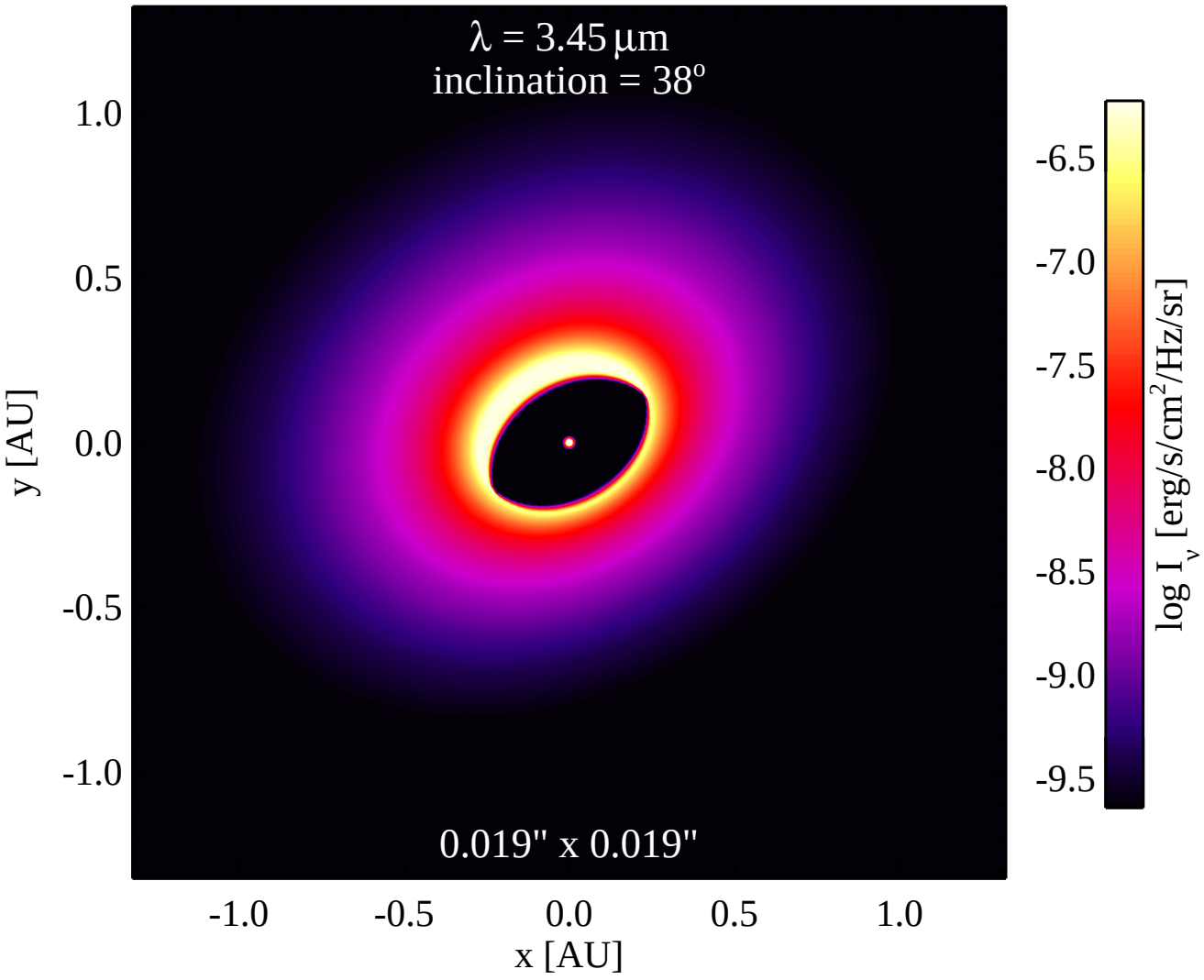

λ = 1.81 μm
inclination = 38°
0.016" x 0.016"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

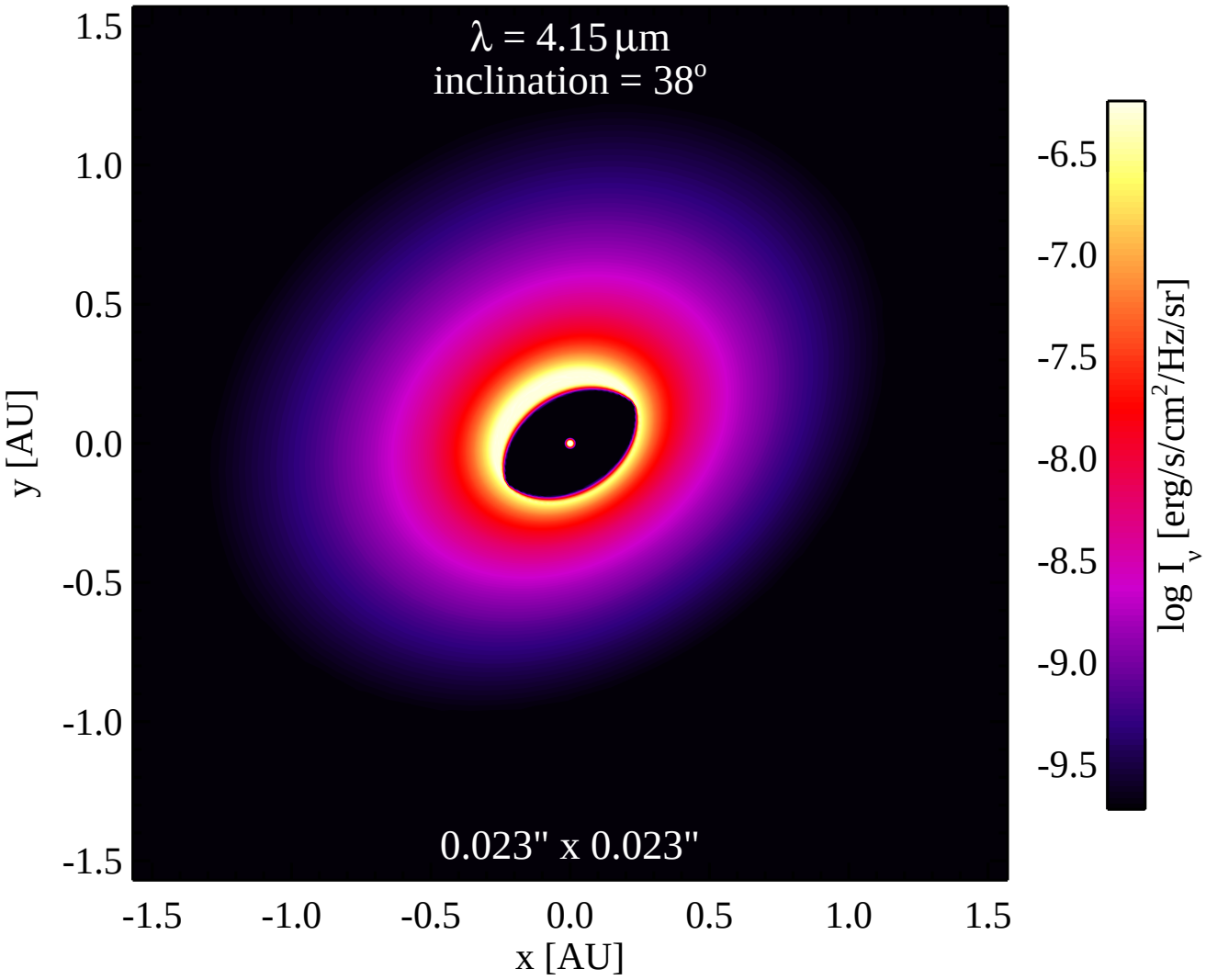

λ = 2.23 μm
inclination = 38°
0.017" x 0.017"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

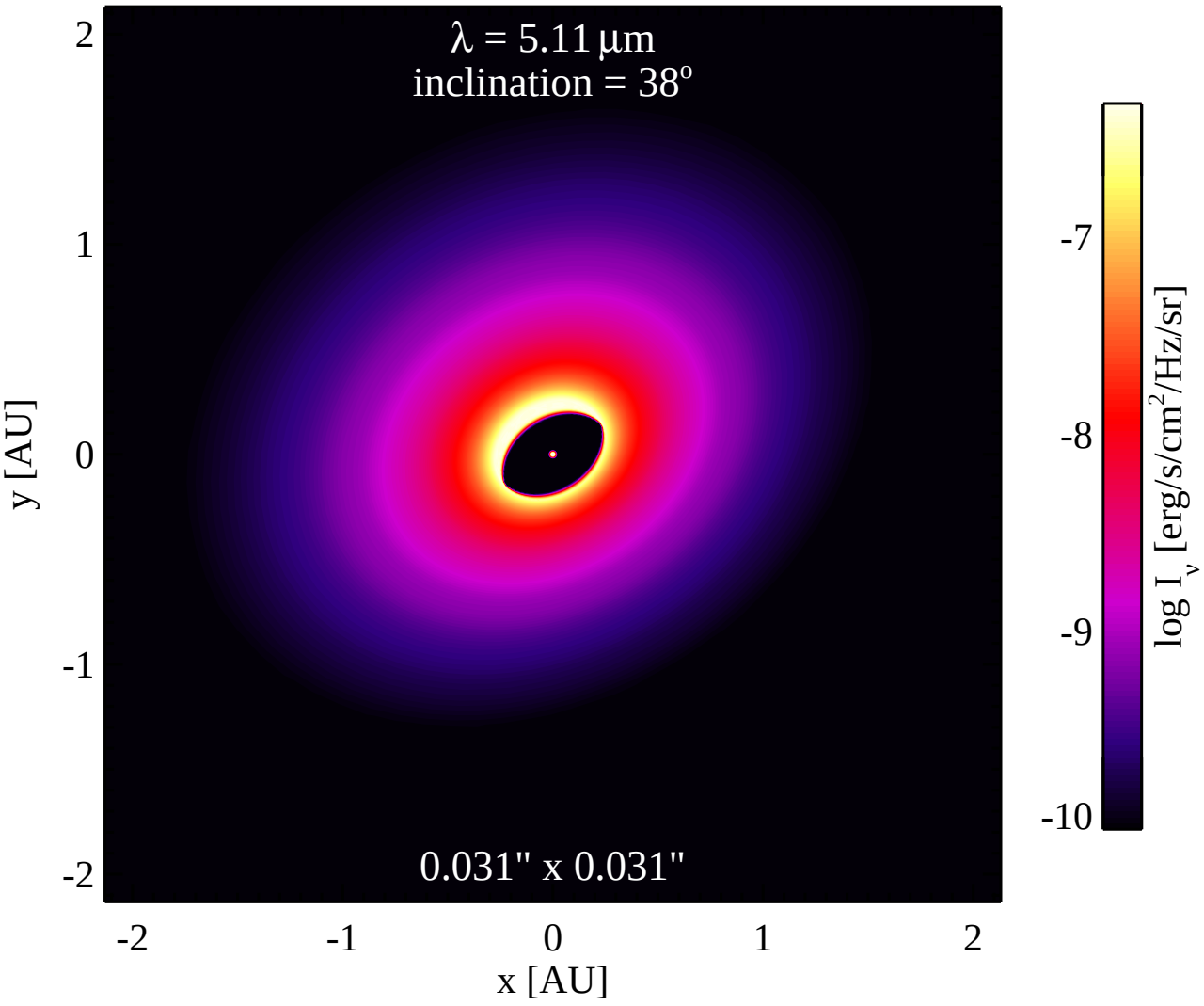

λ = 2.74 μm
inclination = 38°
0.017" x 0.017"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

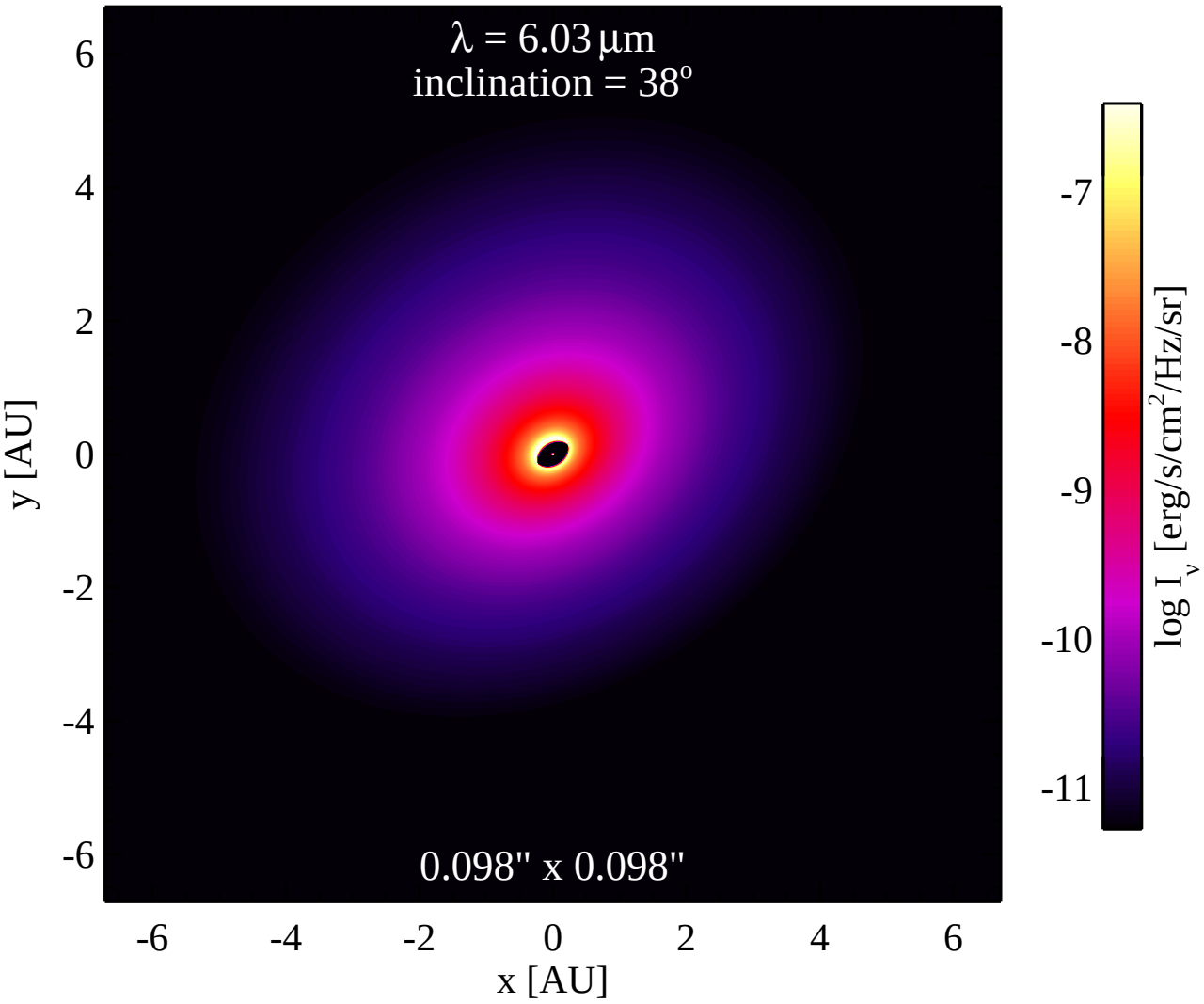

λ = 3.21 μm
inclination = 38°
0.019" x 0.019"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

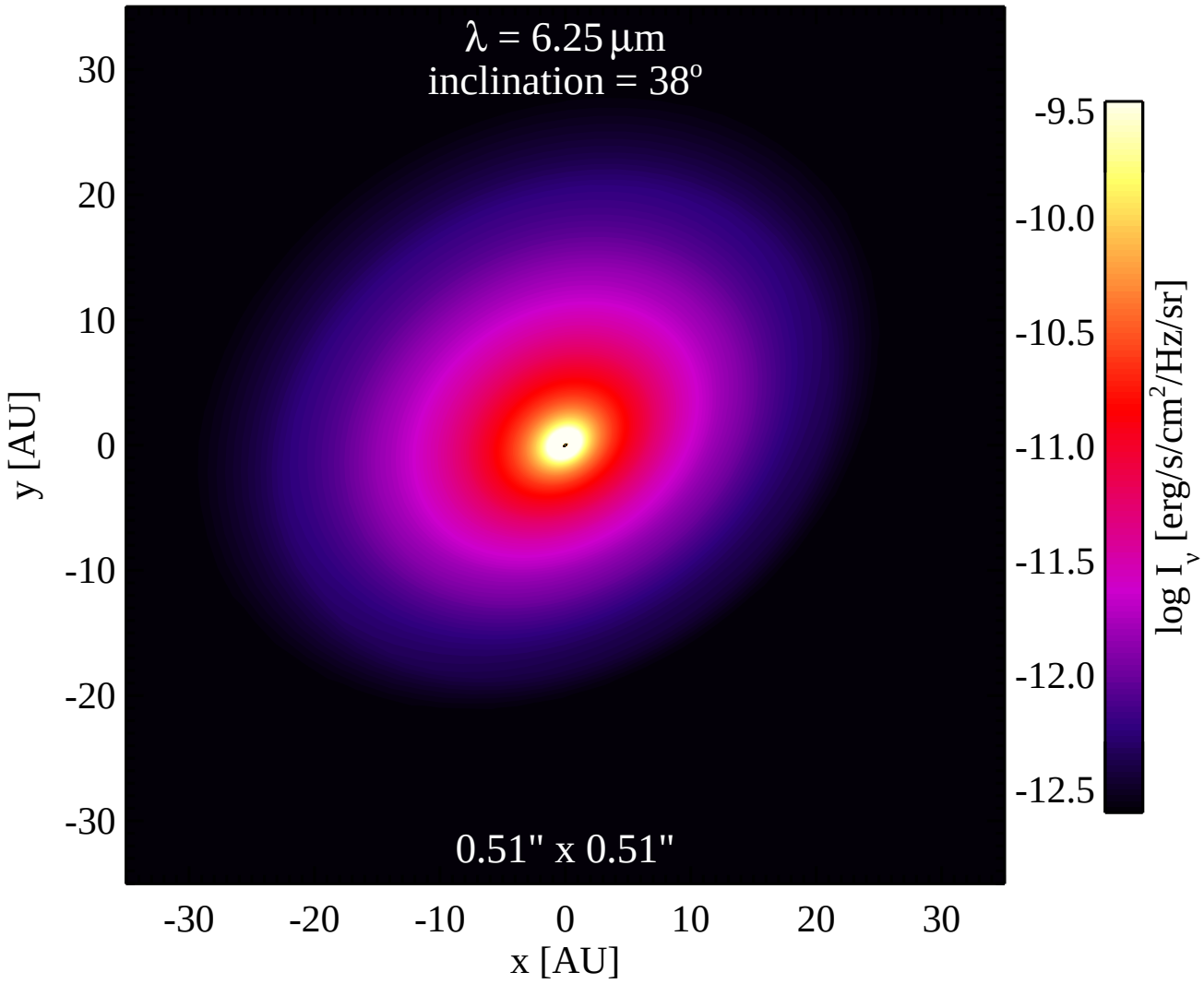

λ = 3.31 μm
inclination = 38°
0.023" x 0.023"
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
y [AU]
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
x [AU]
-7
-8
-9
log I_ν [erg/s/cm²/Hz/sr]

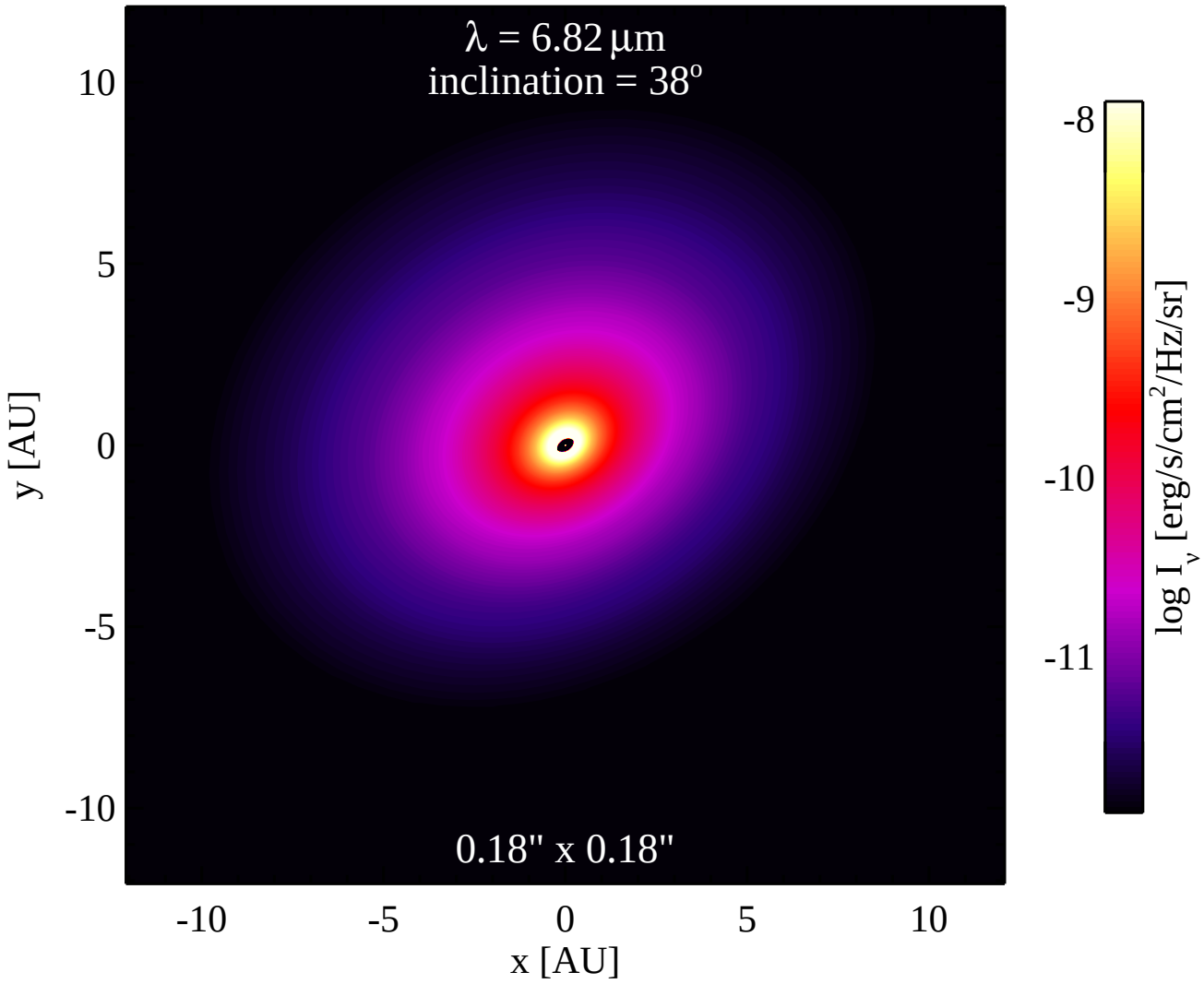

λ = 3.45 μm
inclination = 38°
0.019" x 0.019"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

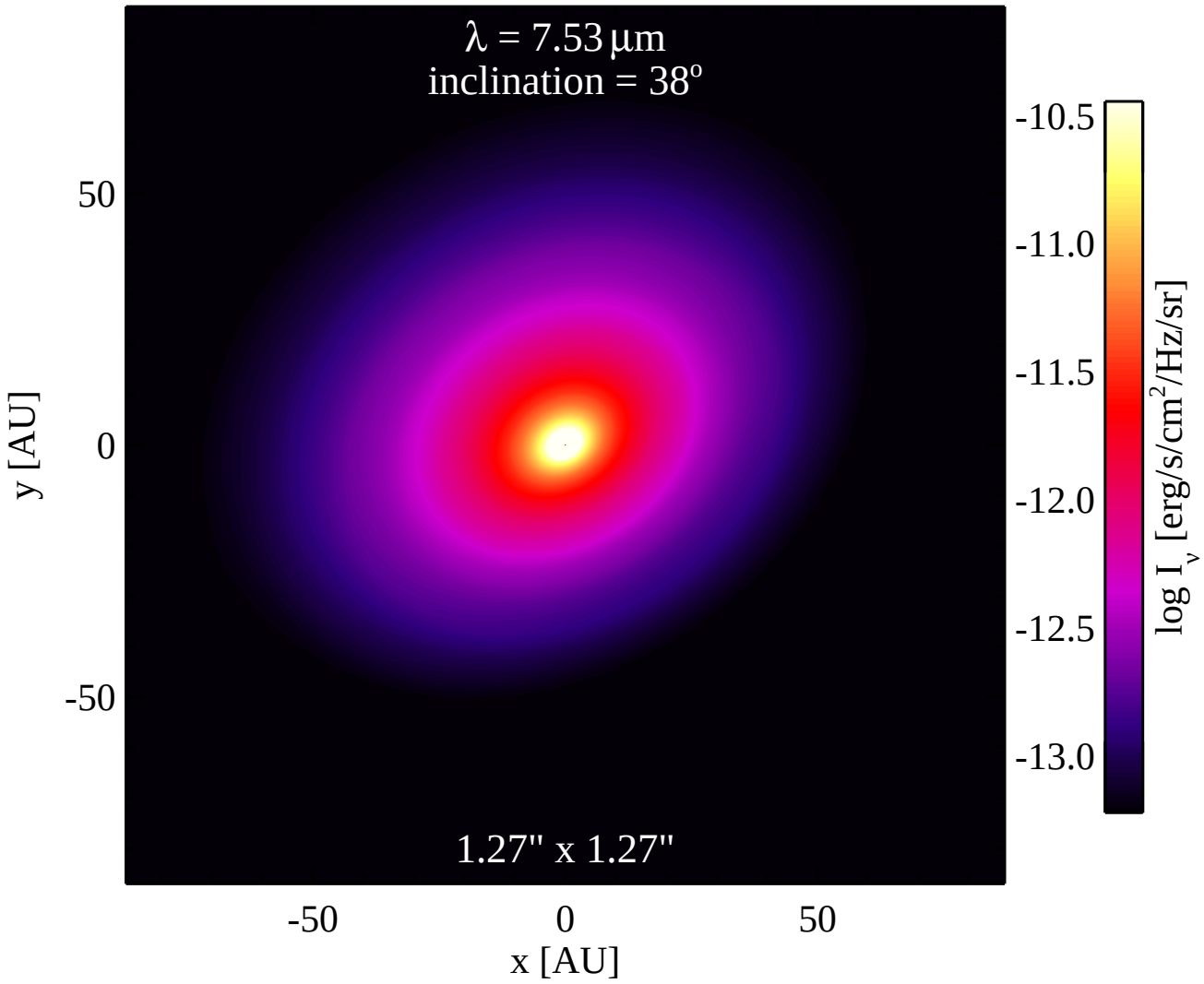

λ = 4.15 μm
inclination = 38°
0.023" x 0.023"
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
y [AU]
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

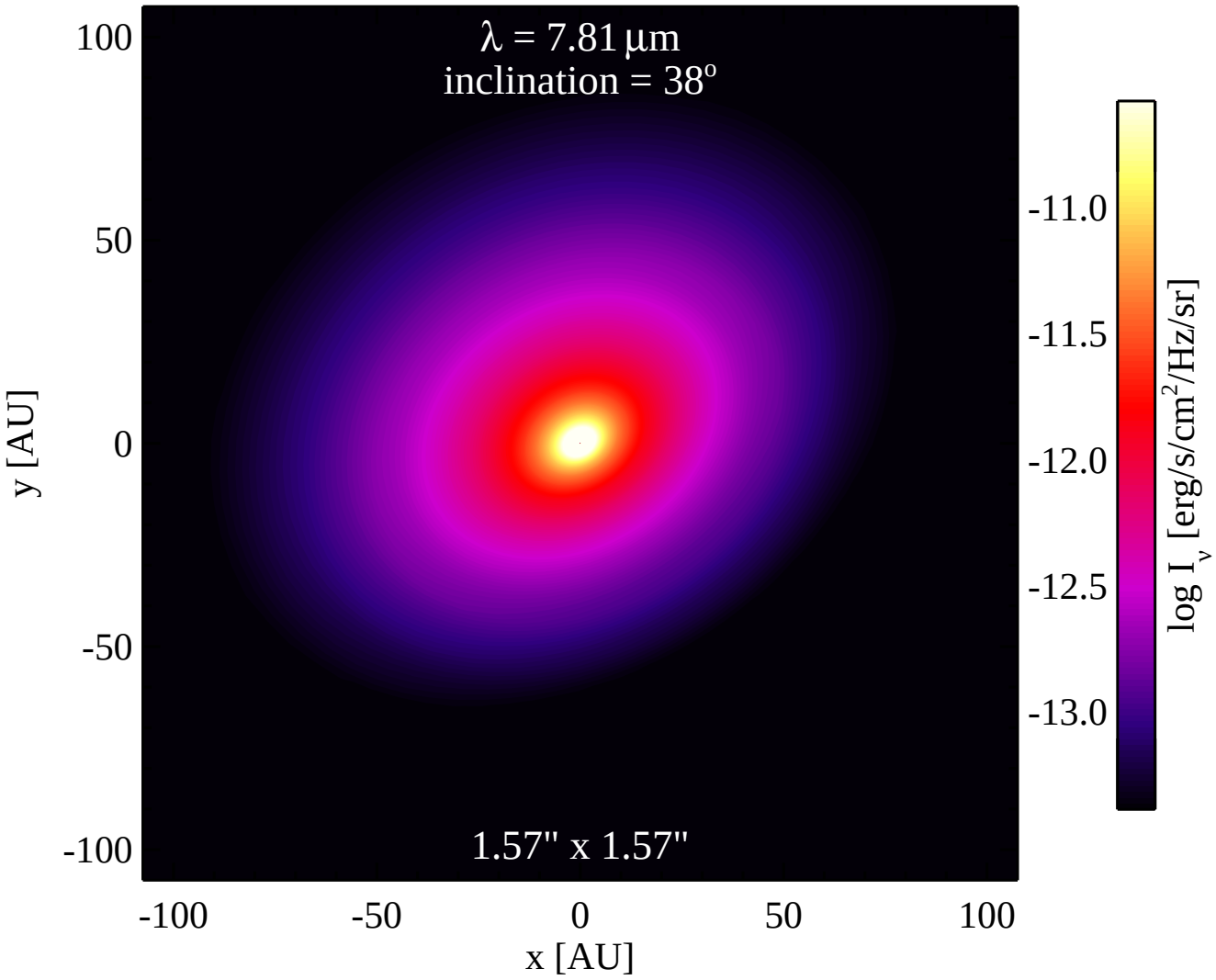

λ = 5.11 μm
inclination = 38°
0.031" x 0.031"
2
1
0
-1
-2
y [AU]
-2
-1
0
1
2
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

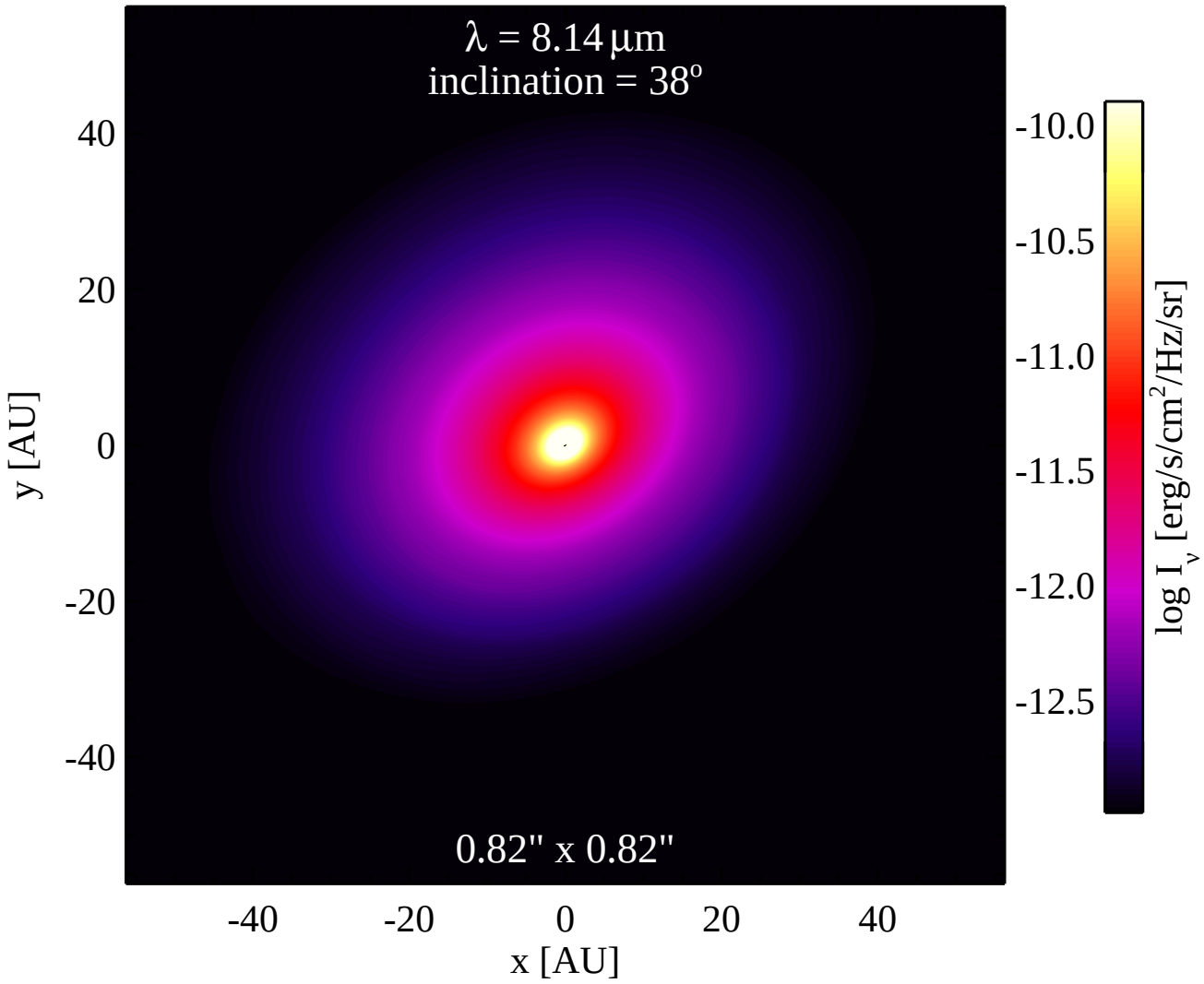

λ = 6.03 μm
inclination = 38°
0.098" x 0.098"
y [AU]
x [AU]
6
4
2
0
-2
-4
-6
-6
-4
-2
0
2
4
6
-7
-8
-9
-10
-11
log I_ν [erg/s/cm²/Hz/sr]

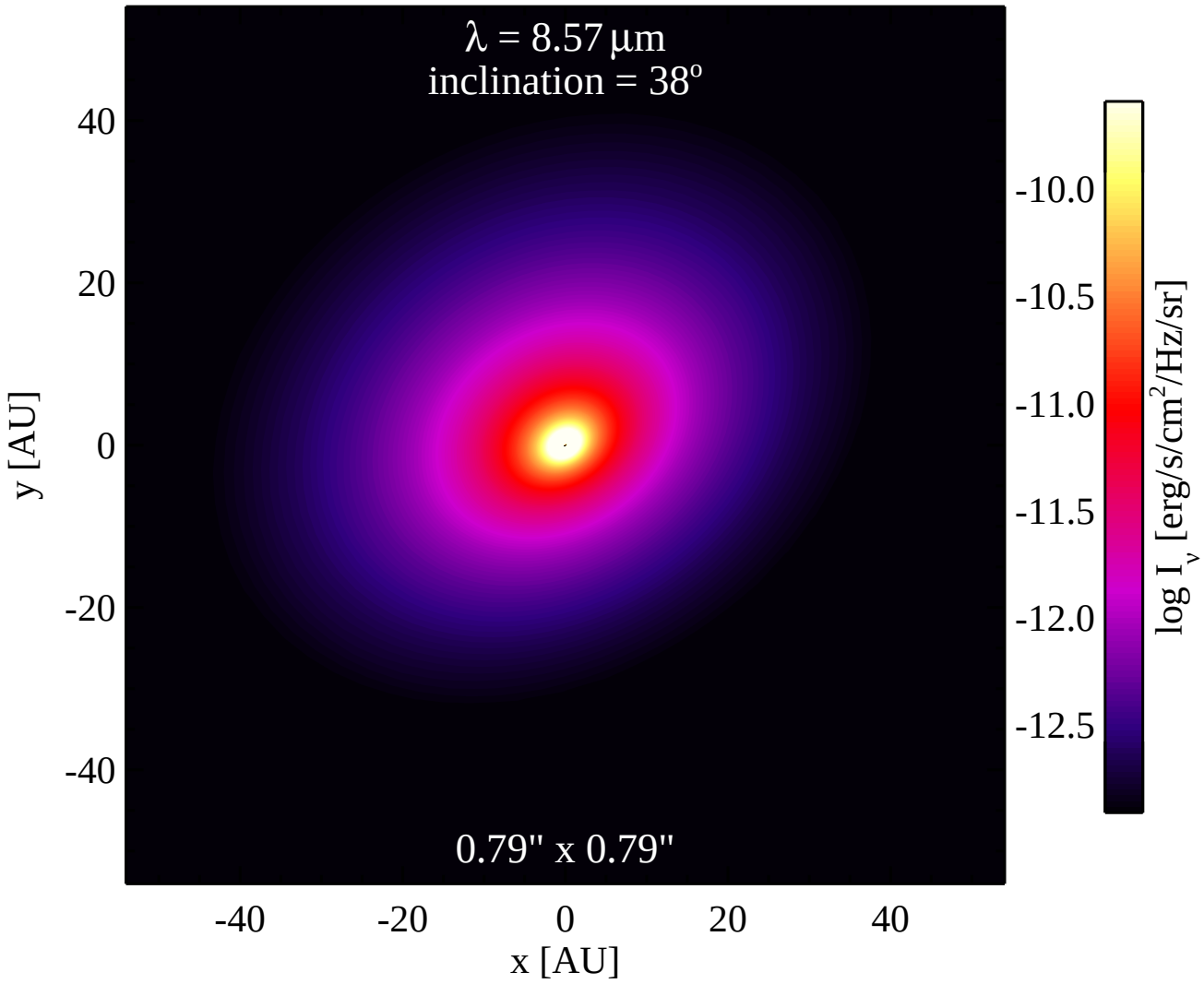

λ = 6.25 μm
inclination = 38°
0.51" x 0.51"
30
20
10
0
-10
-20
-30
y [AU]
-30
-20
-10
0
10
20
30
x [AU]
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

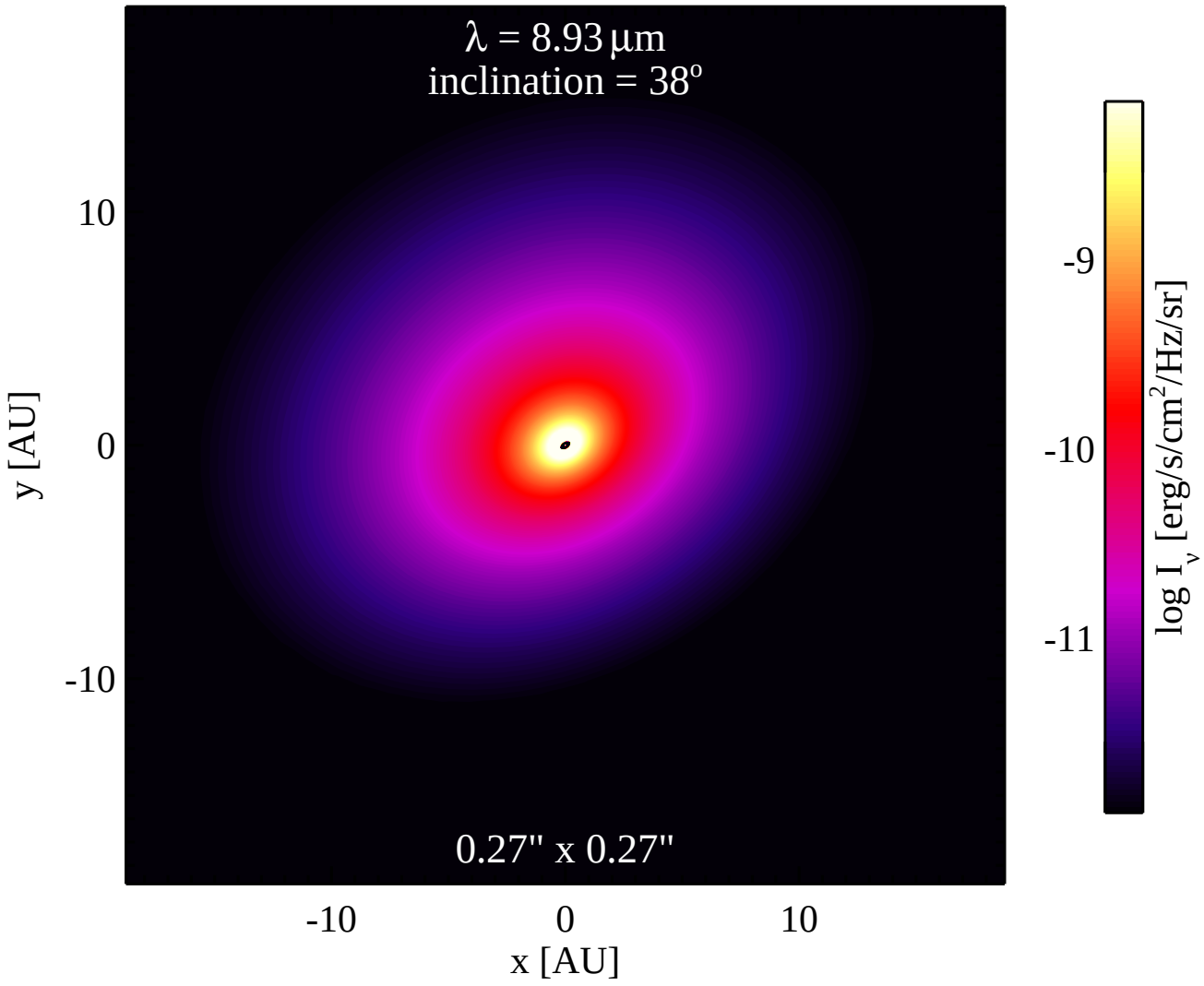

λ = 6.82 μm
inclination = 38°
0.18" x 0.18"
10
5
0
-5
-10
y [AU]
-10
-5
0
5
10
x [AU]
-8
-9
-10
-11
log I_ν [erg/s/cm²/Hz/sr]

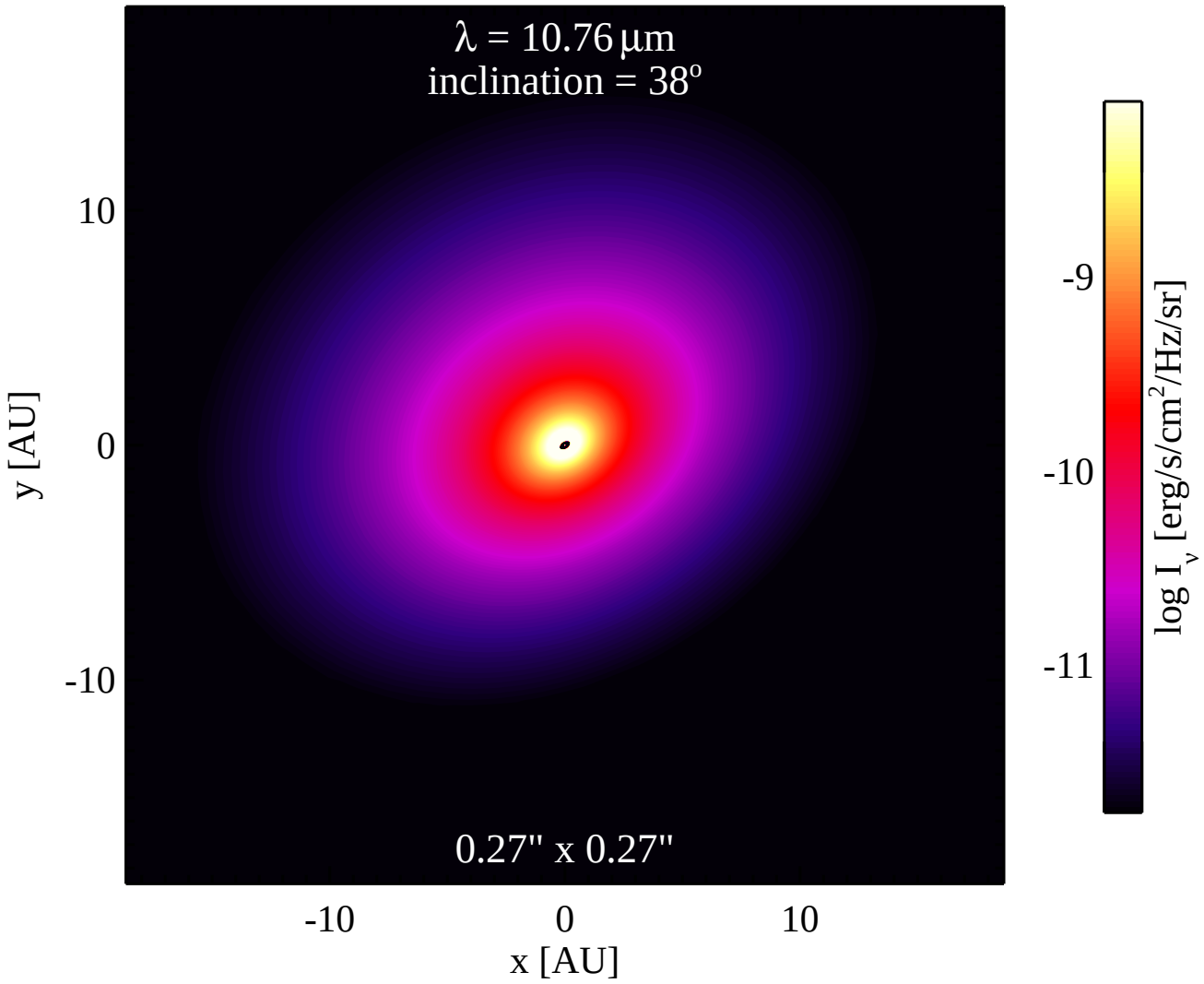

λ = 7.53 μm
inclination = 38°
1.27" x 1.27"
50
0
-50
y [AU]
-50
0
50
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

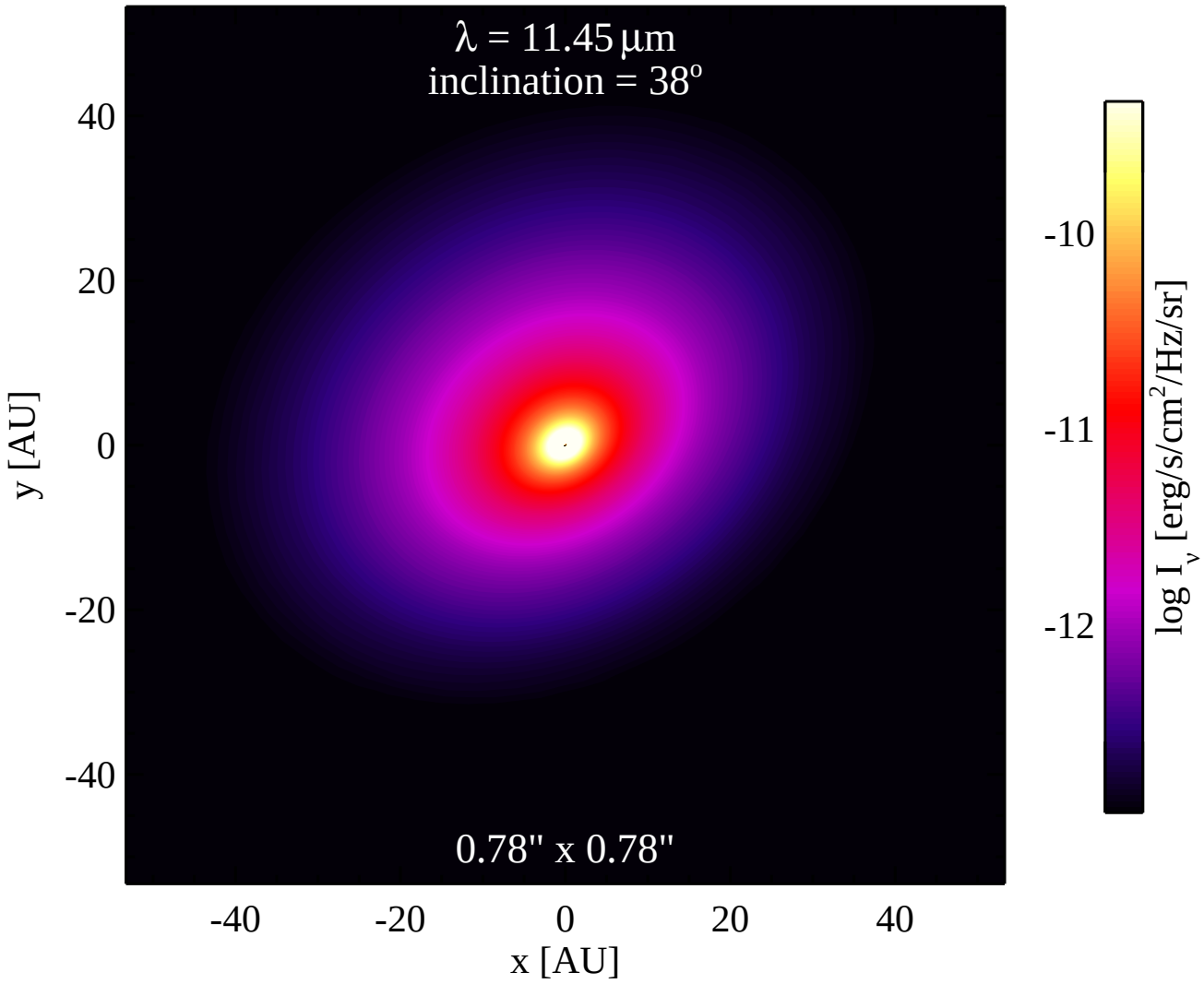

λ = 7.81 μm
inclination = 38°
1.57" x 1.57"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

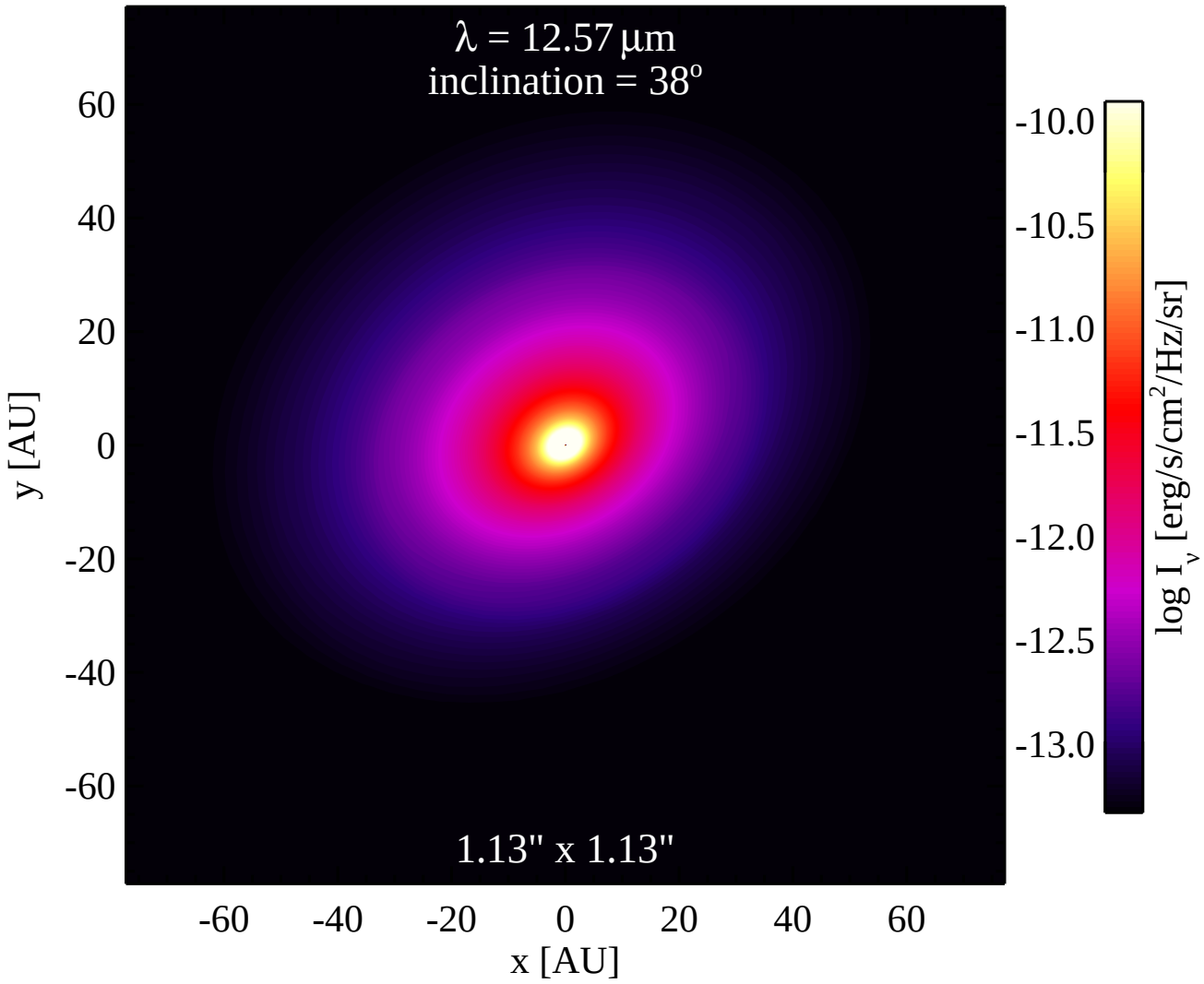

λ = 8.14 μm
inclination = 38°
0.82" x 0.82"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

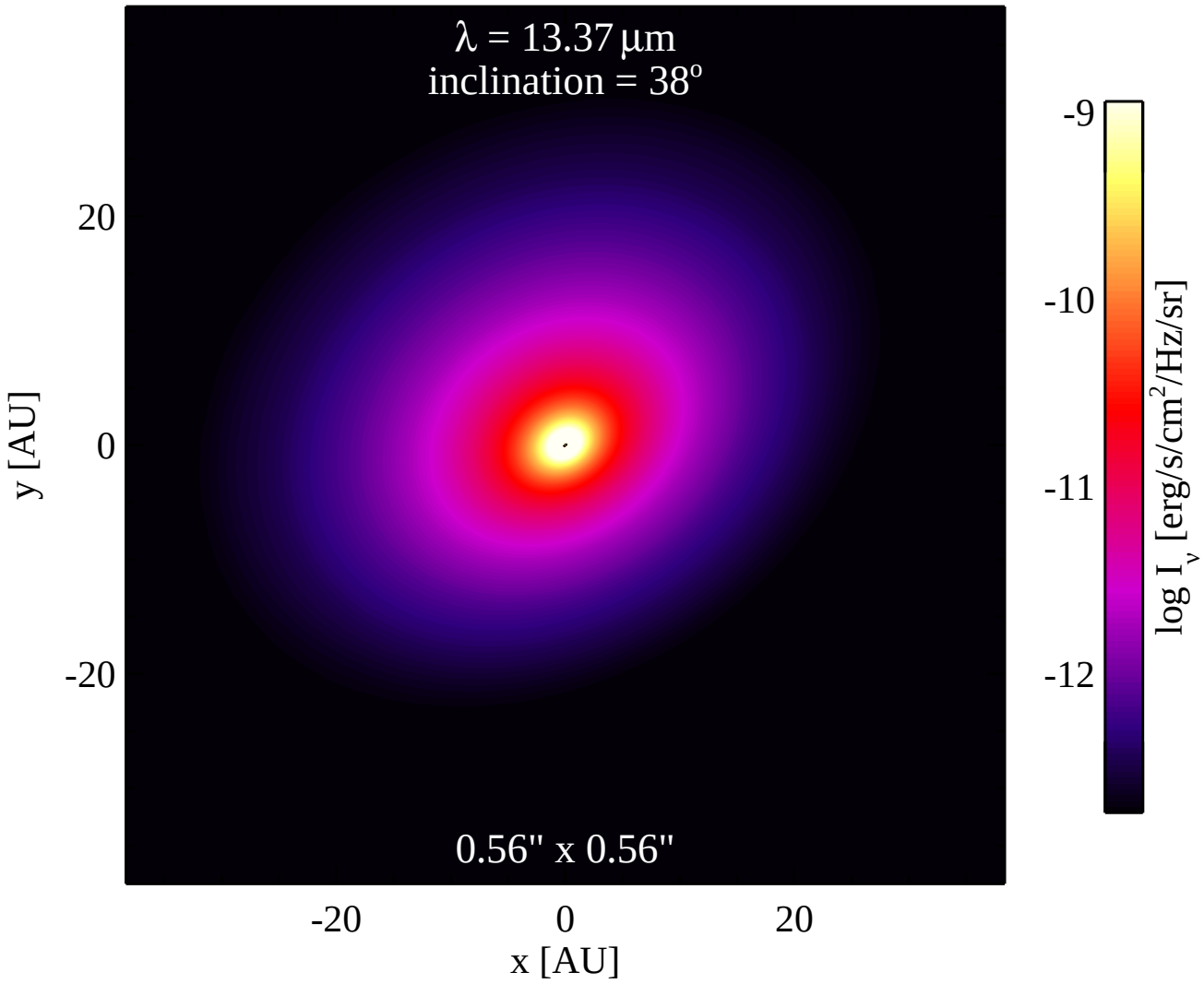

λ = 8.57 μm
inclination = 38°
0.79" x 0.79"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

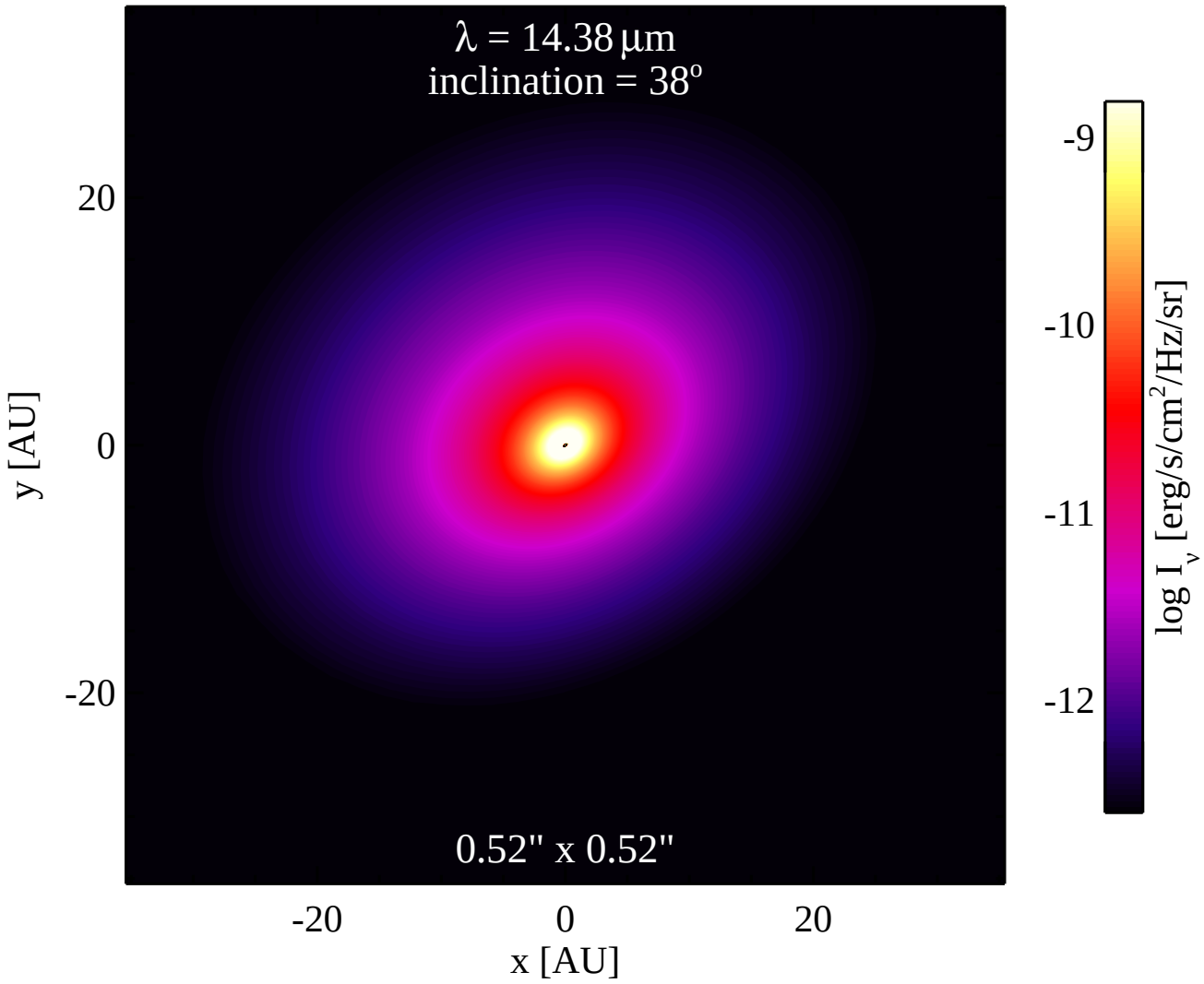

λ = 8.93 μm
inclination = 38°
0.27" x 0.27"
10
0
-10
y [AU]
-10
0
10
x [AU]
-9
-10
-11
log I_ν [erg/s/cm²/Hz/sr]

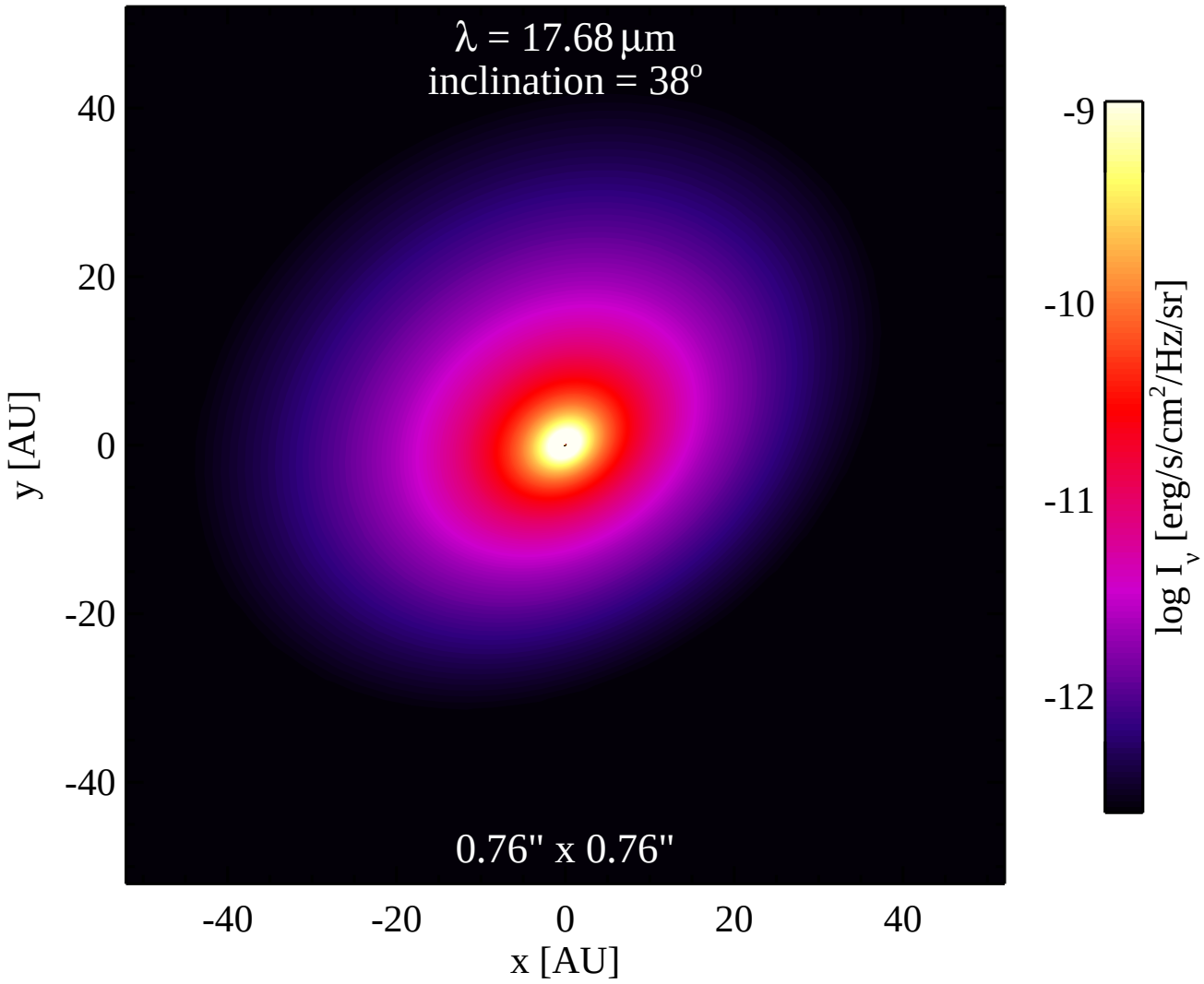

λ = 10.76 μm
inclination = 38°
0.27" x 0.27"
10
0
-10
y [AU]
-10
0
10
x [AU]
-9
-10
-11
log I_ν [erg/s/cm²/Hz/sr]

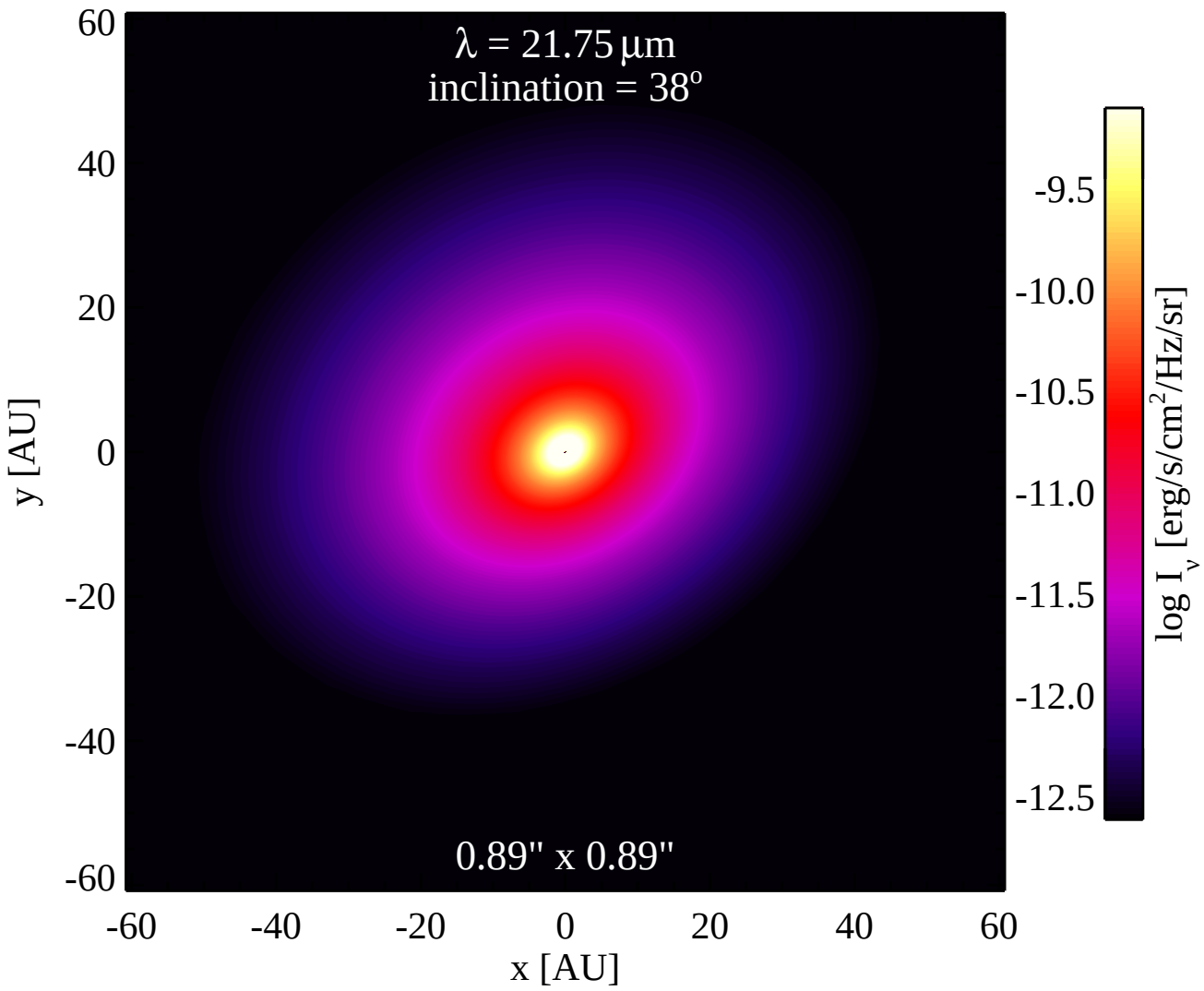

λ = 11.45 μm
inclination = 38°
0.78" x 0.78"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

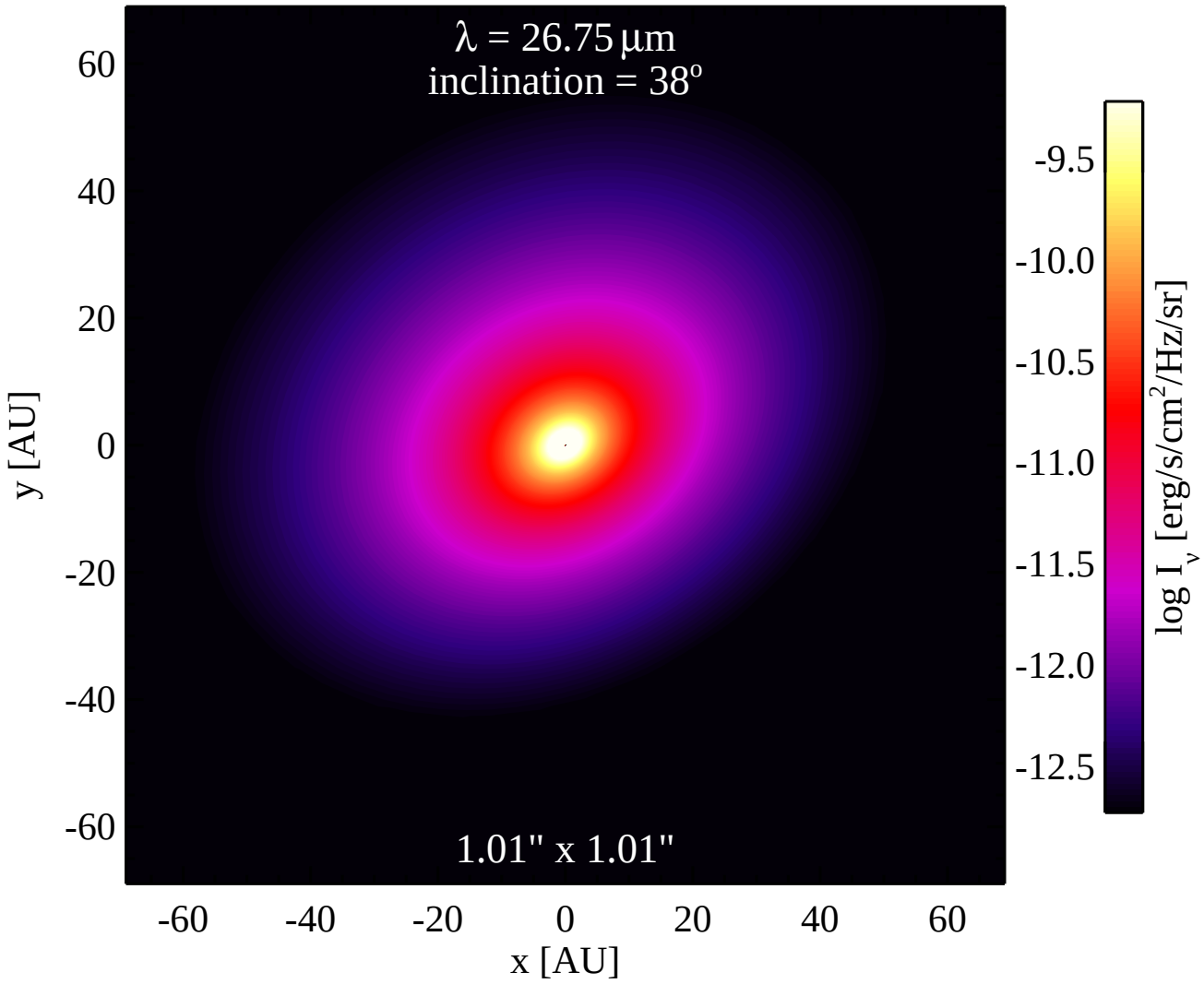

λ = 12.57 μm
inclination = 38°
1.13" x 1.13"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

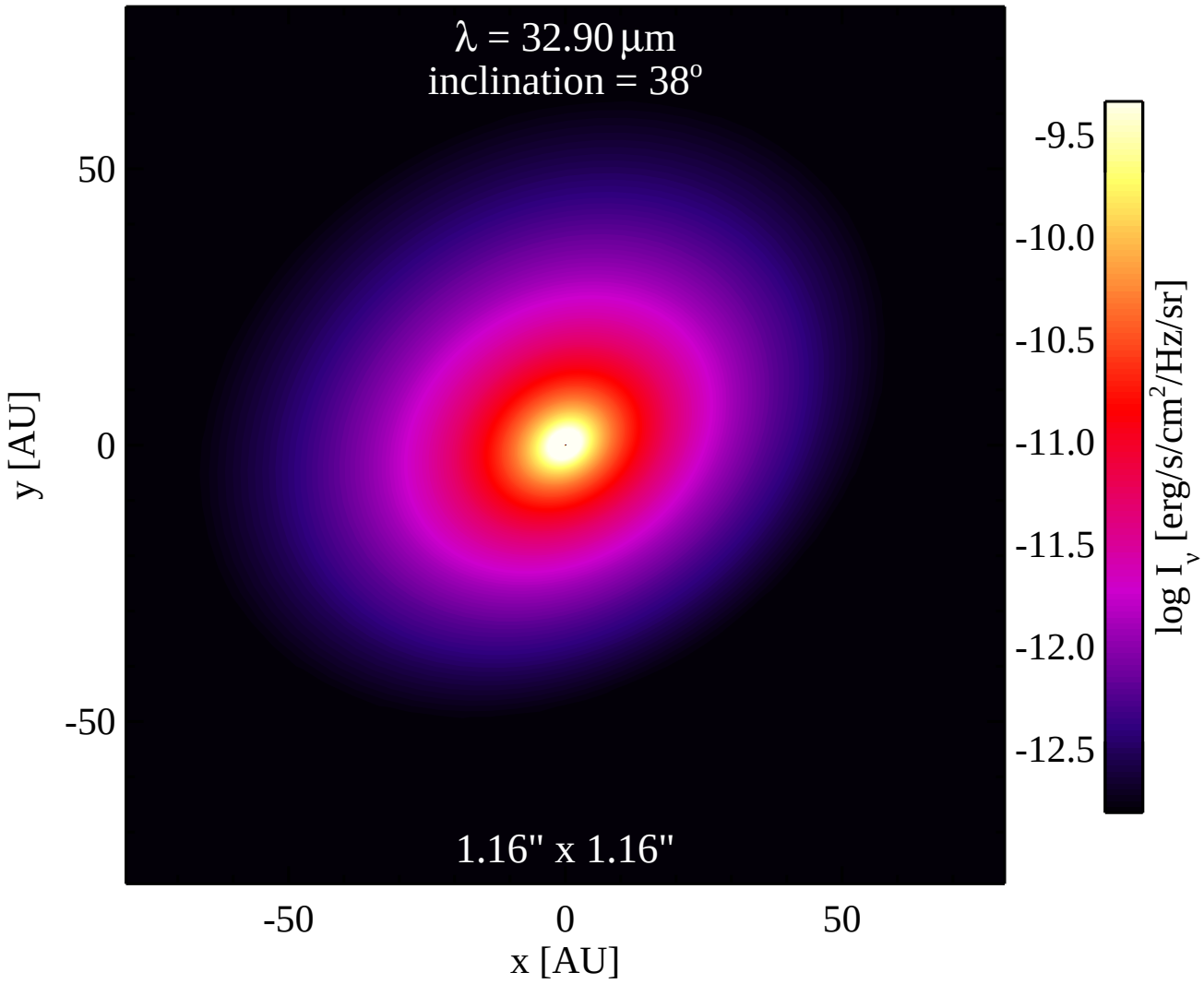

λ = 13.37 μm
inclination = 38°
0.56" x 0.56"
20
0
-20
y [AU]
-20
0
20
x [AU]
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

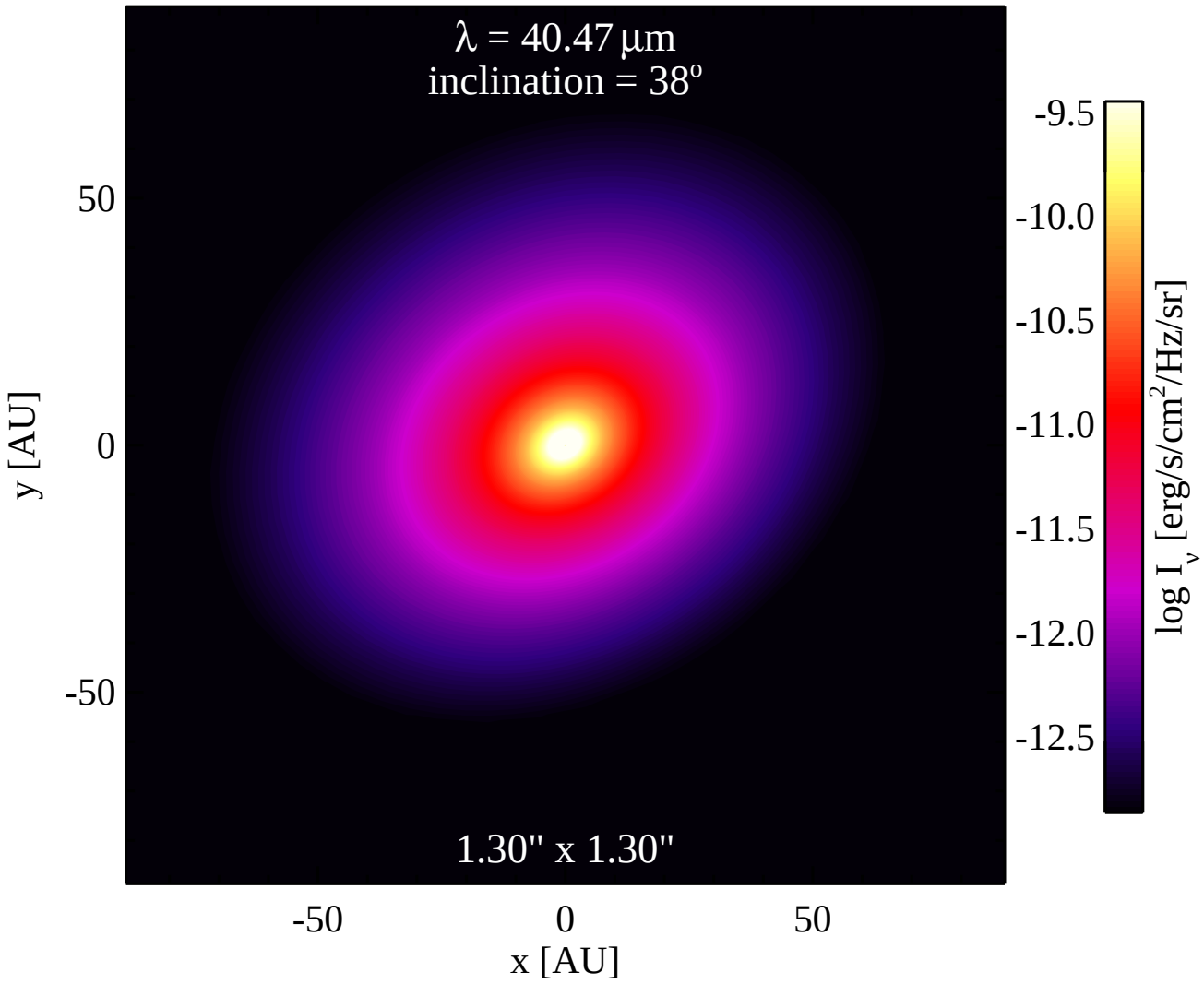

λ = 14.38 μm
inclination = 38°
0.52" x 0.52"
20
0
-20
y [AU]
-20
0
20
x [AU]
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

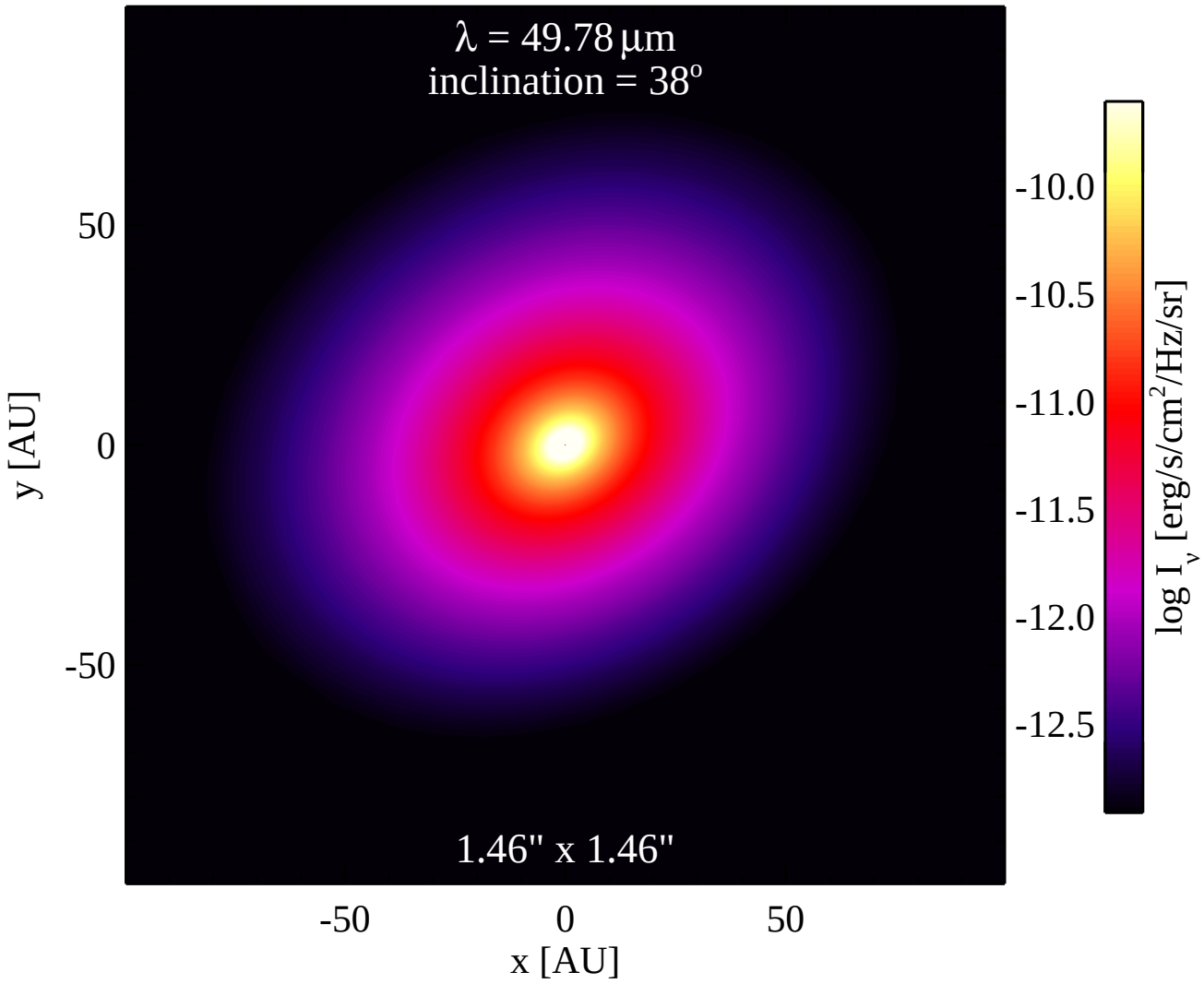

λ = 17.68 μm
inclination = 38°
0.76" x 0.76"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

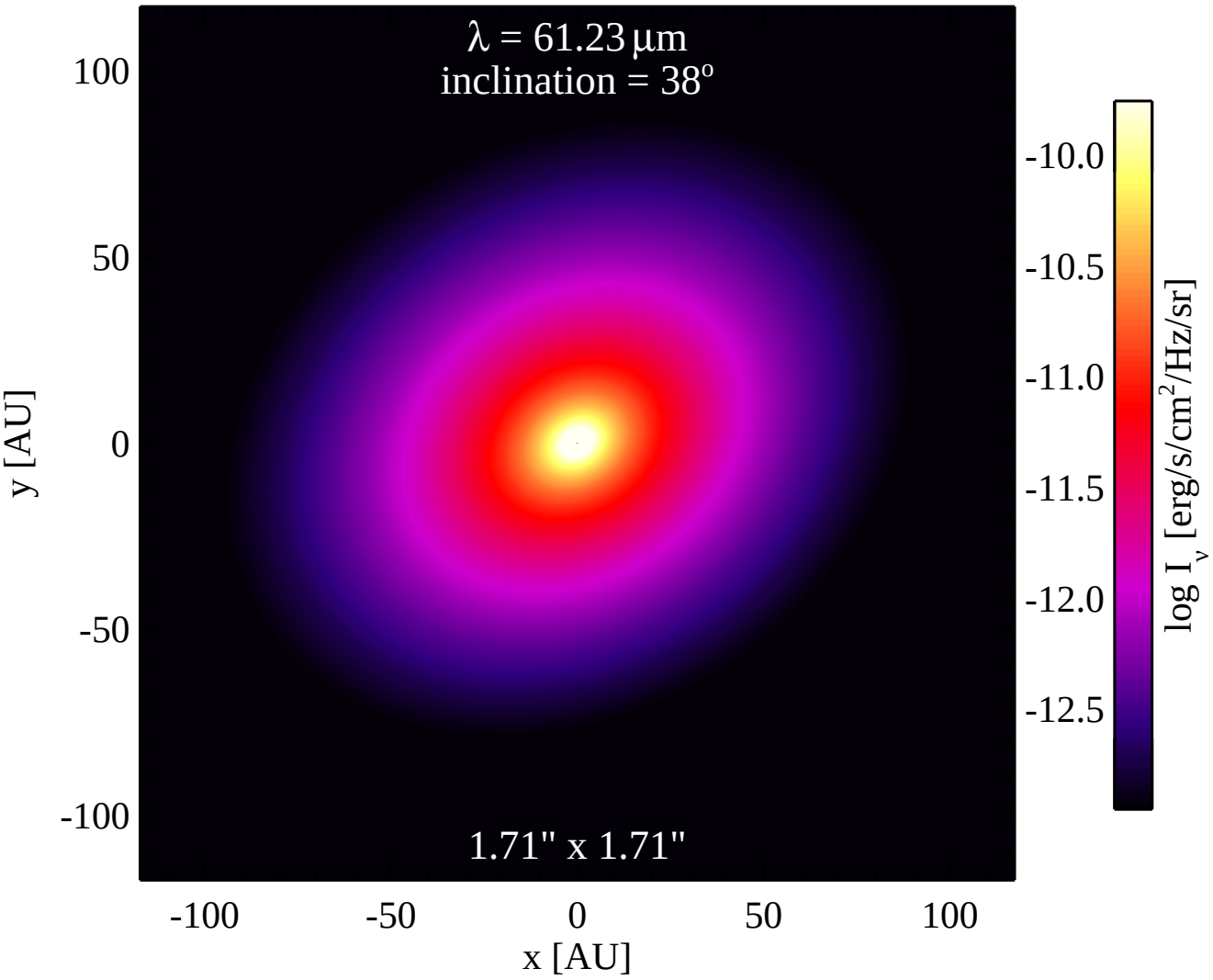

λ = 21.75 μm
inclination = 38°
0.89" x 0.89"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

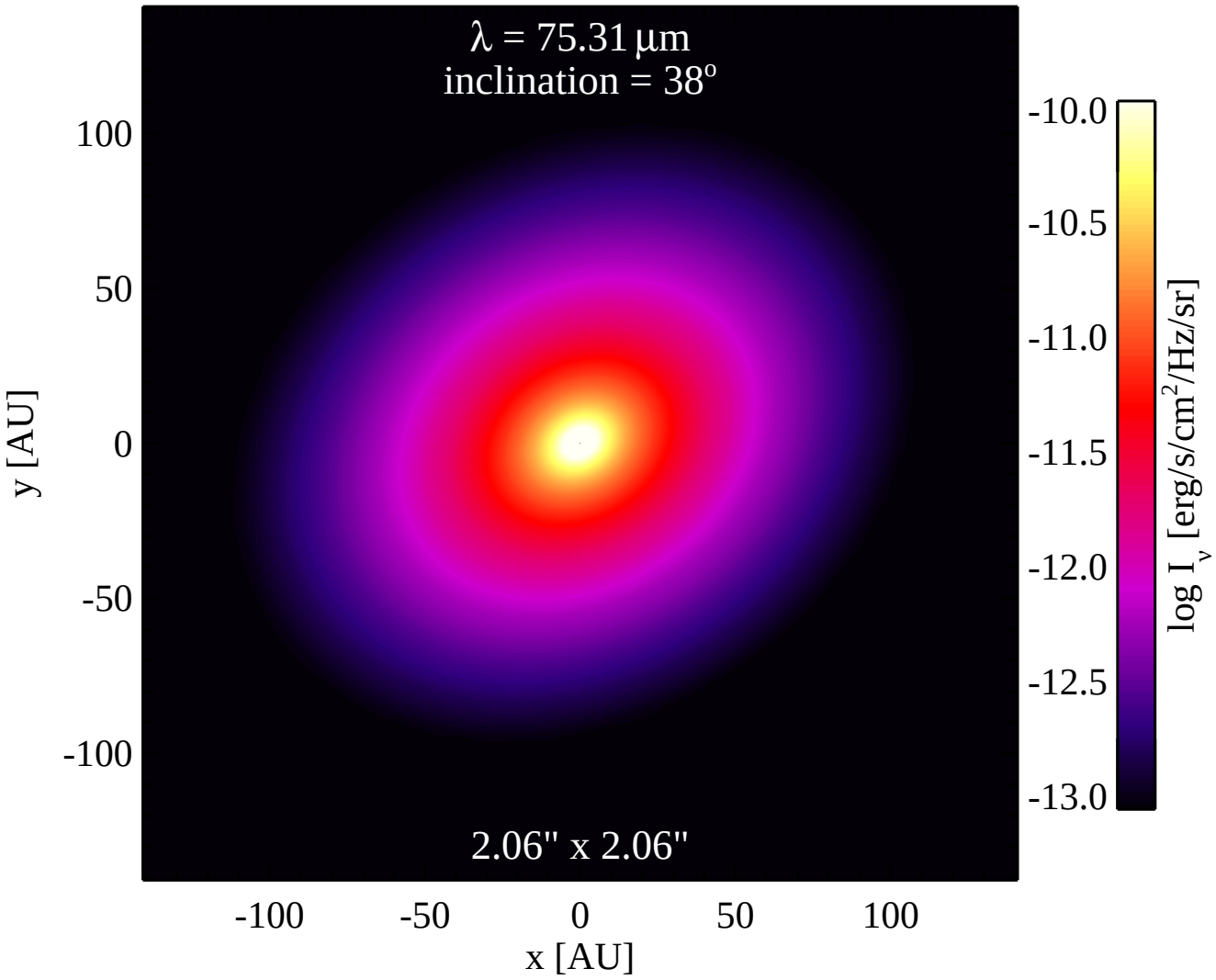

λ = 26.75 μm
inclination = 38°
1.01" x 1.01"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

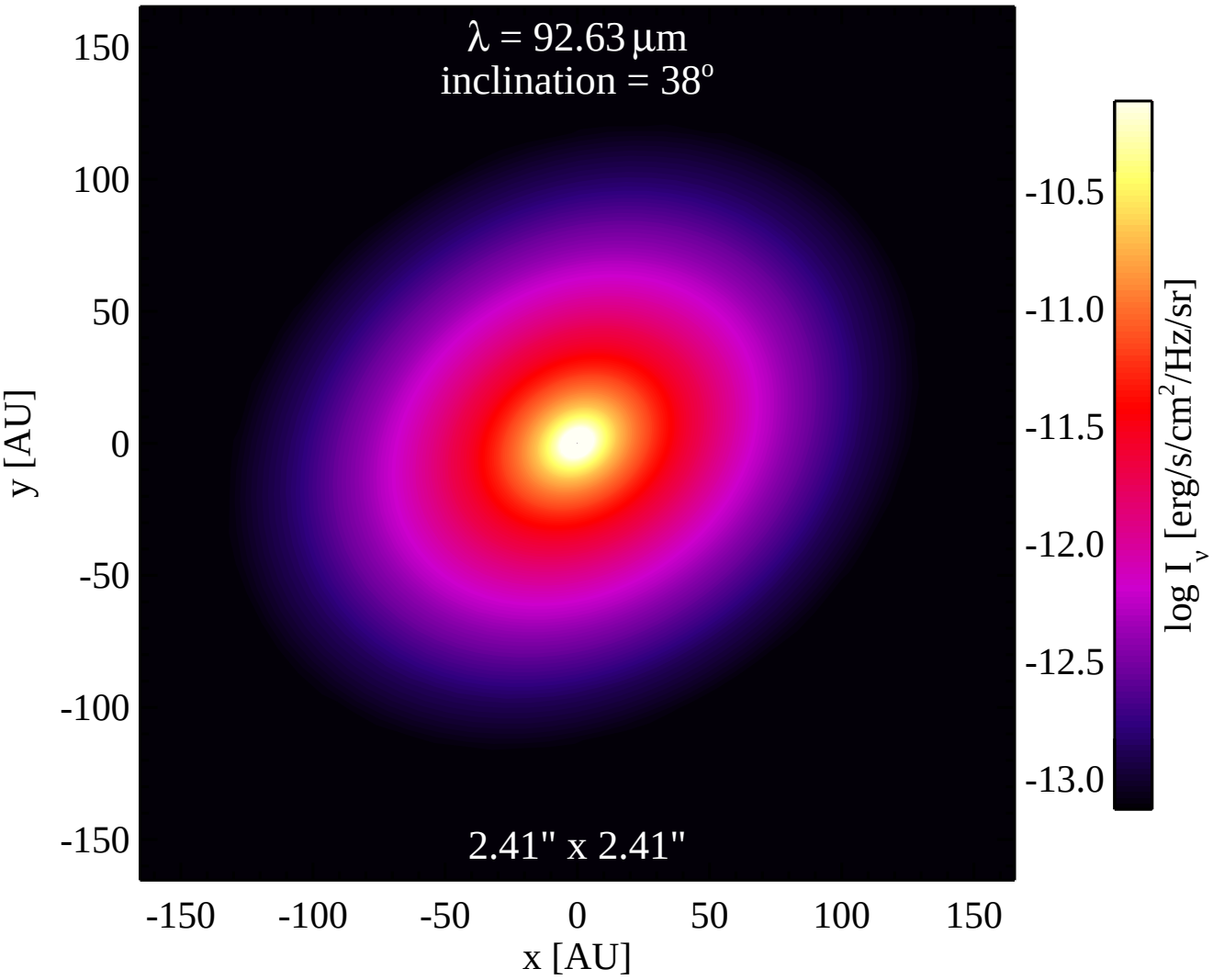

λ = 32.90 μm
inclination = 38°
1.16" x 1.16"
50
0
-50
y [AU]
-50
0
50
x [AU]
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

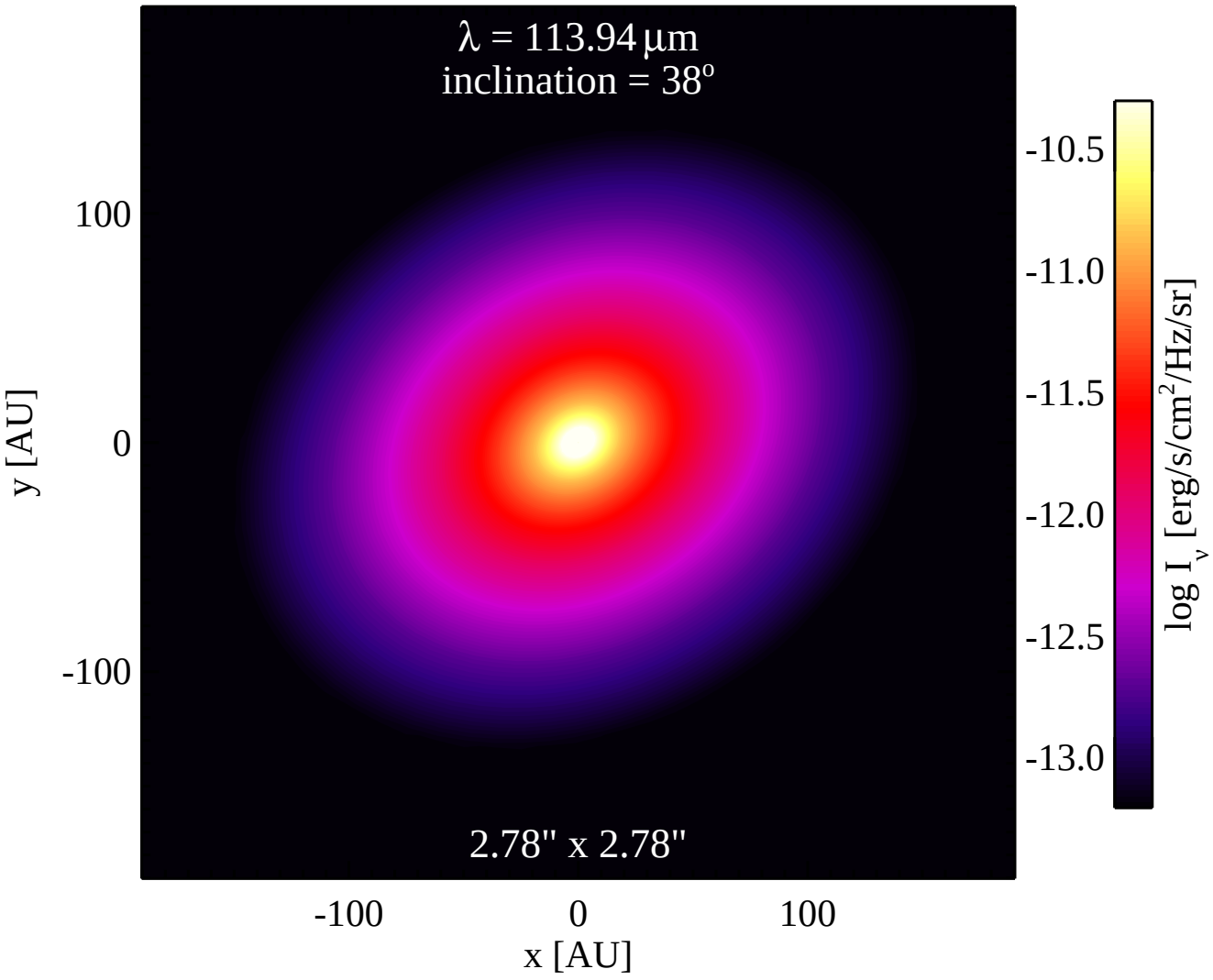

λ = 40.47 μm
inclination = 38°
1.30" x 1.30"
50
0
-50
y [AU]
-50
0
50
x [AU]
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

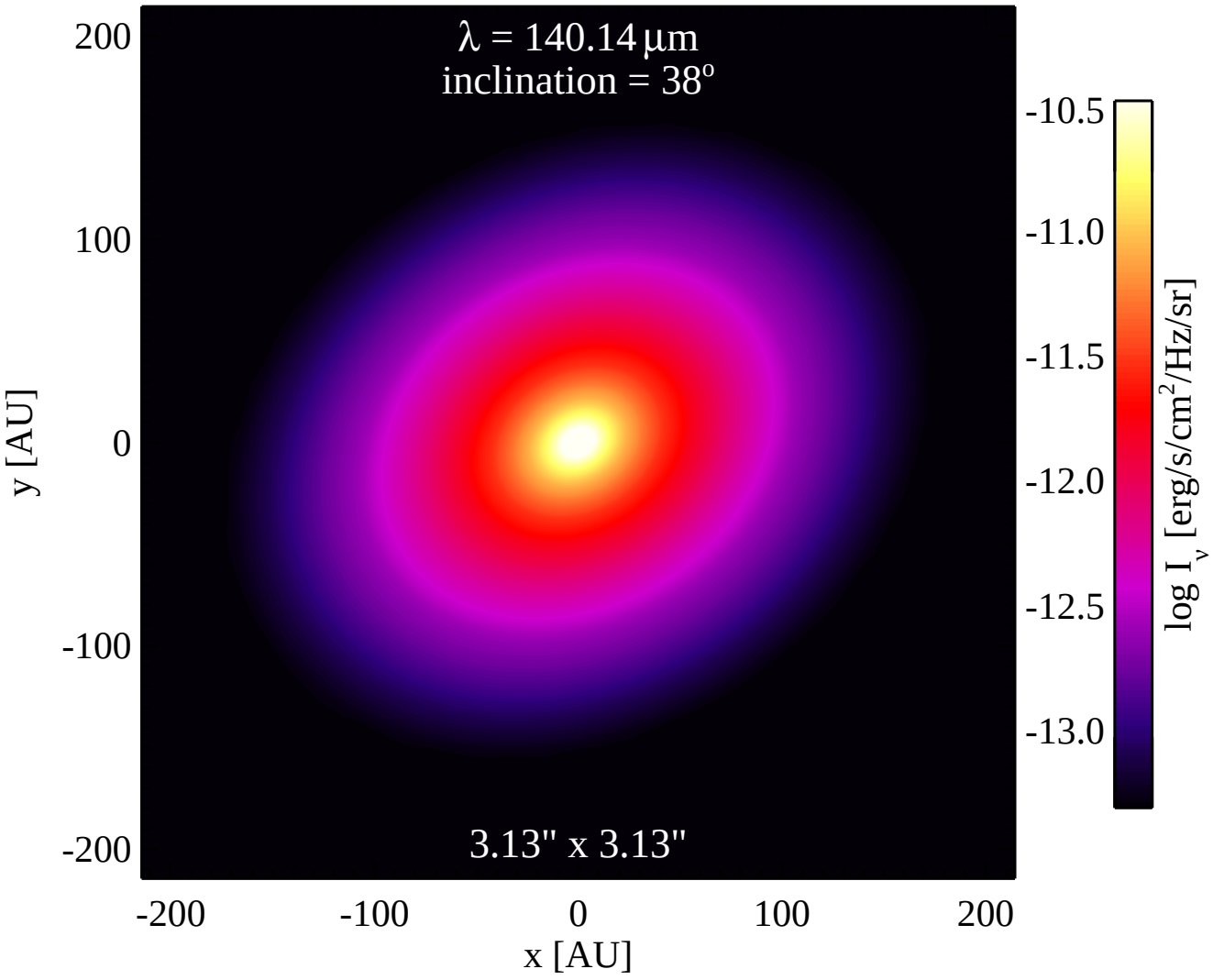

λ = 49.78 μm
inclination = 38°
1.46" x 1.46"
50
0
-50
y [AU]
-50
0
50
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

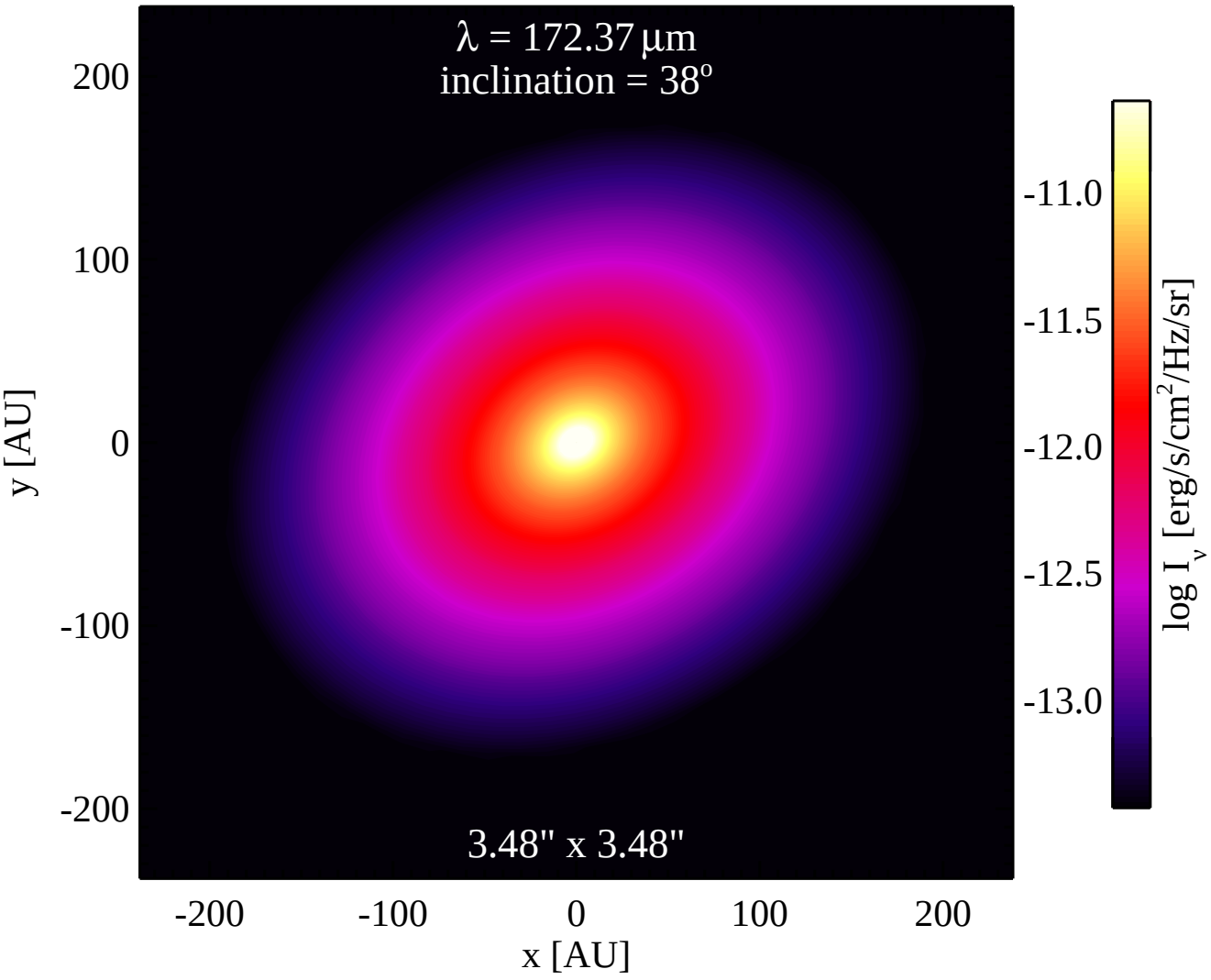

λ = 61.23 μm
inclination = 38°
1.71" x 1.71"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

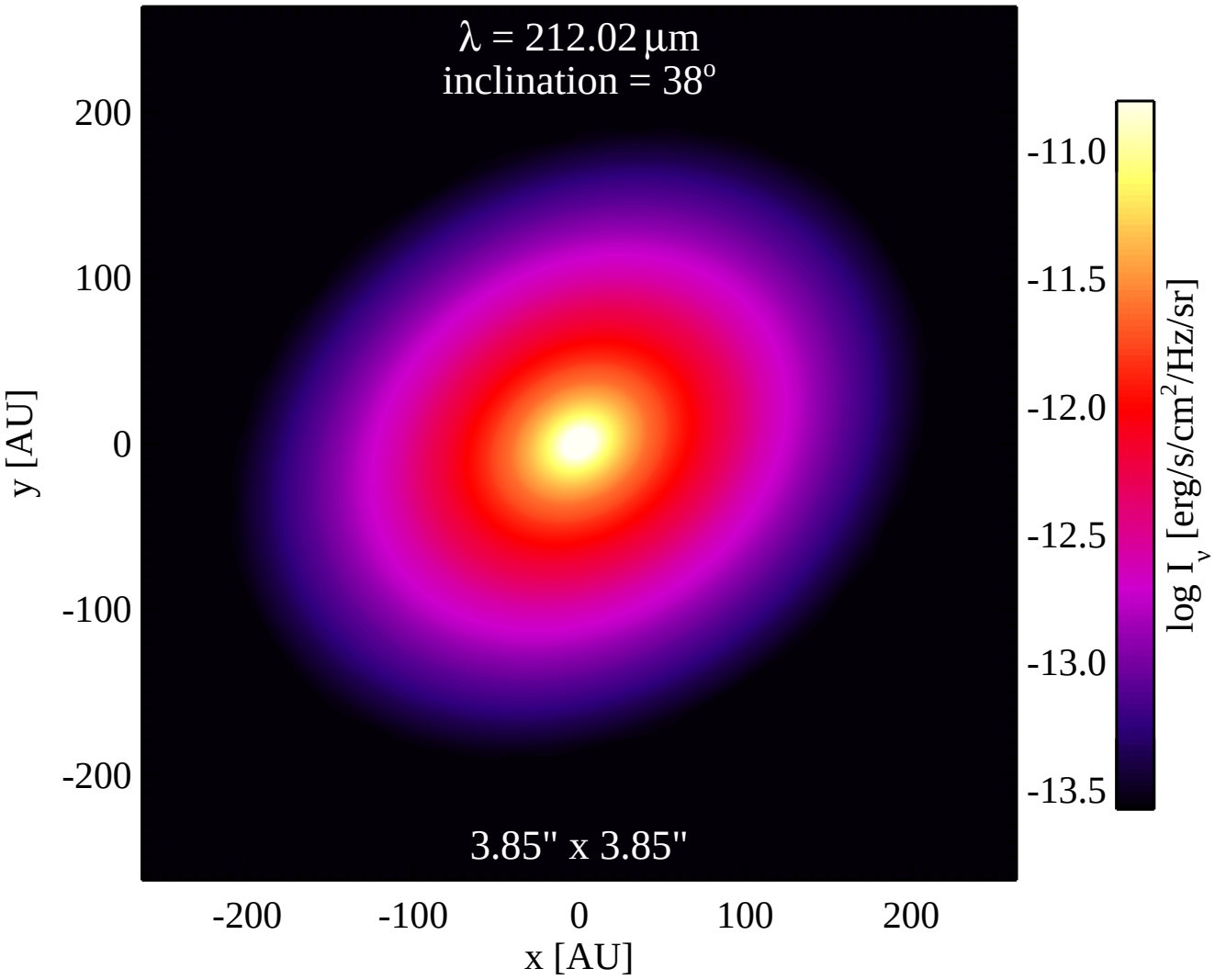

λ = 75.31 μm
inclination = 38°
2.06" x 2.06"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

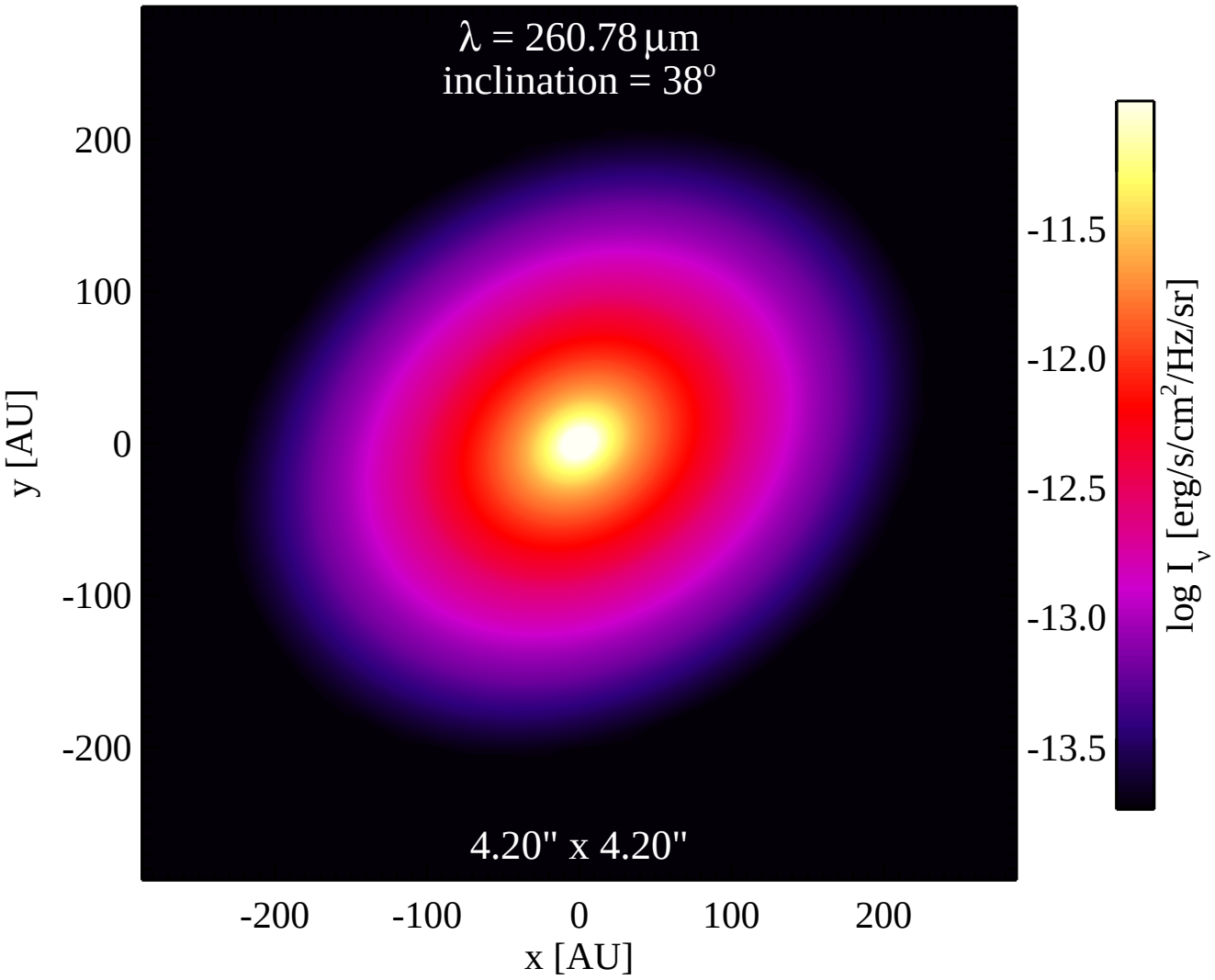

λ = 92.63 μm
inclination = 38°
2.41" x 2.41"
150
100
50
0
-50
-100
-150
y [AU]
-150
-100
-50
0
50
100
150
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

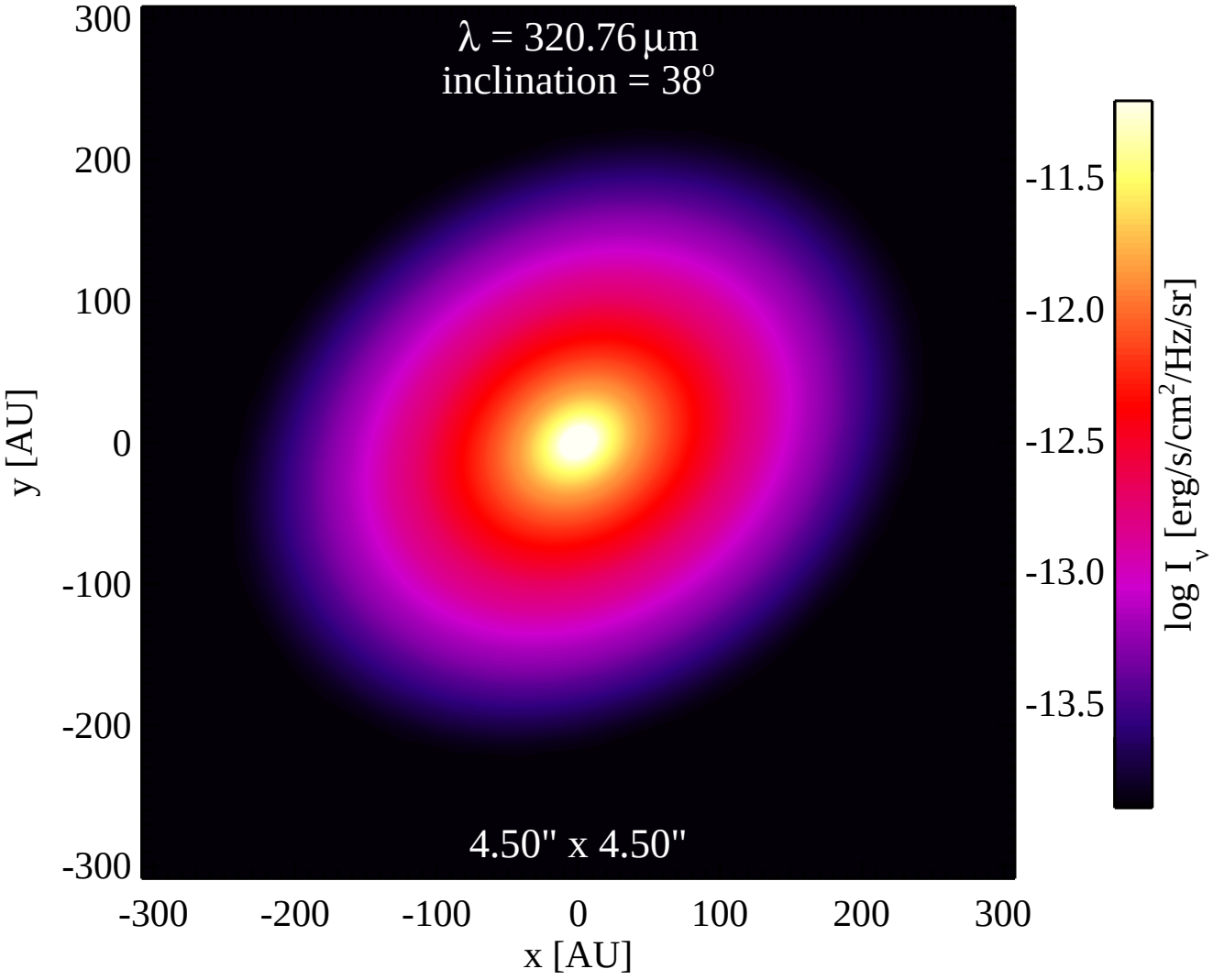

λ = 113.94 μm
inclination = 38°
2.78" x 2.78"
100
0
-100
y [AU]
-100
0
100
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

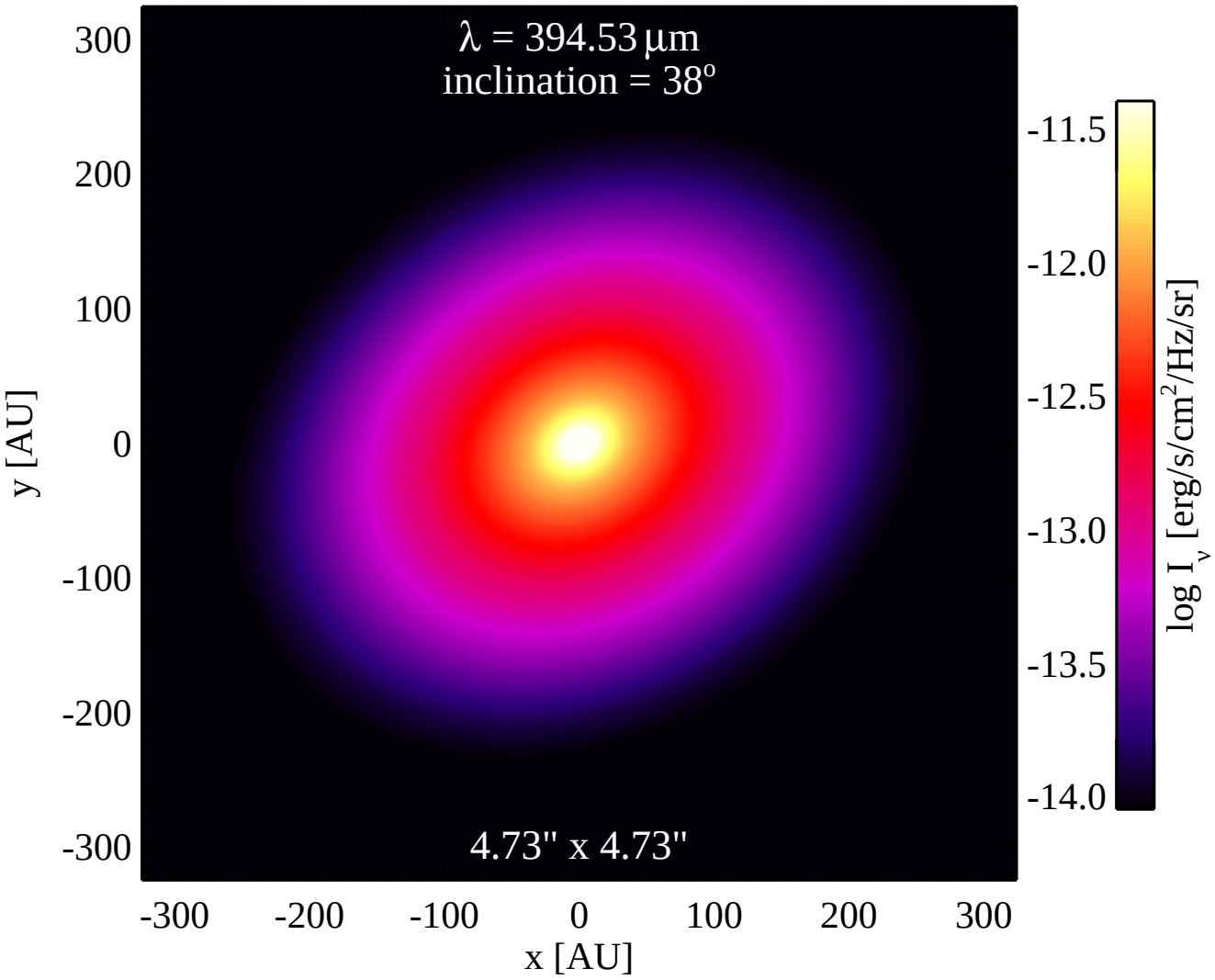

λ = 140.14 μm
inclination = 38°
3.13" x 3.13"
200
100
0
-100
-200
y [AU]
-200
-100
0
100
200
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

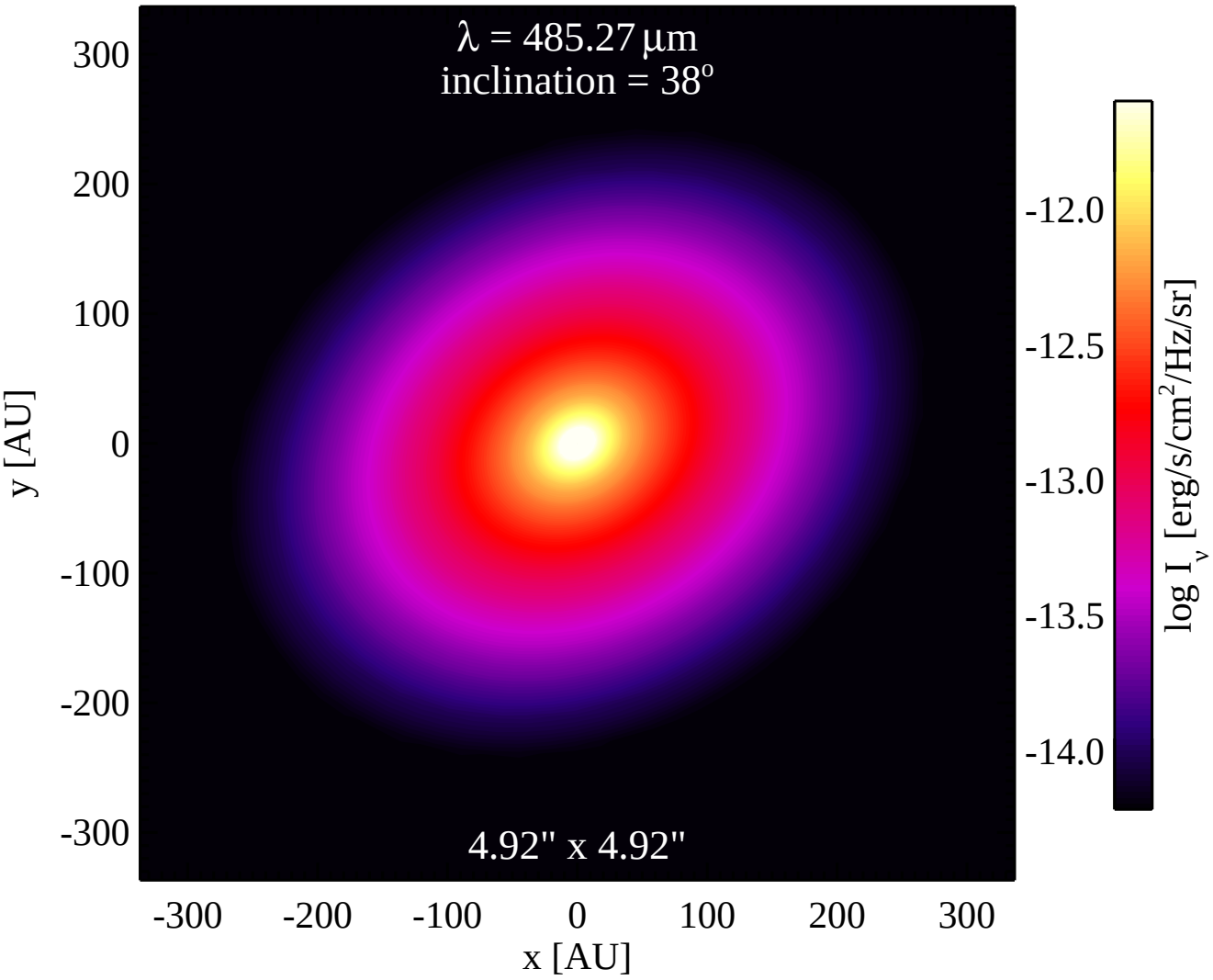

λ = 172.37 μm
inclination = 38°
3.48" x 3.48"
200
100
0
-100
-200
y [AU]
-200
-100
0
100
200
x [AU]
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

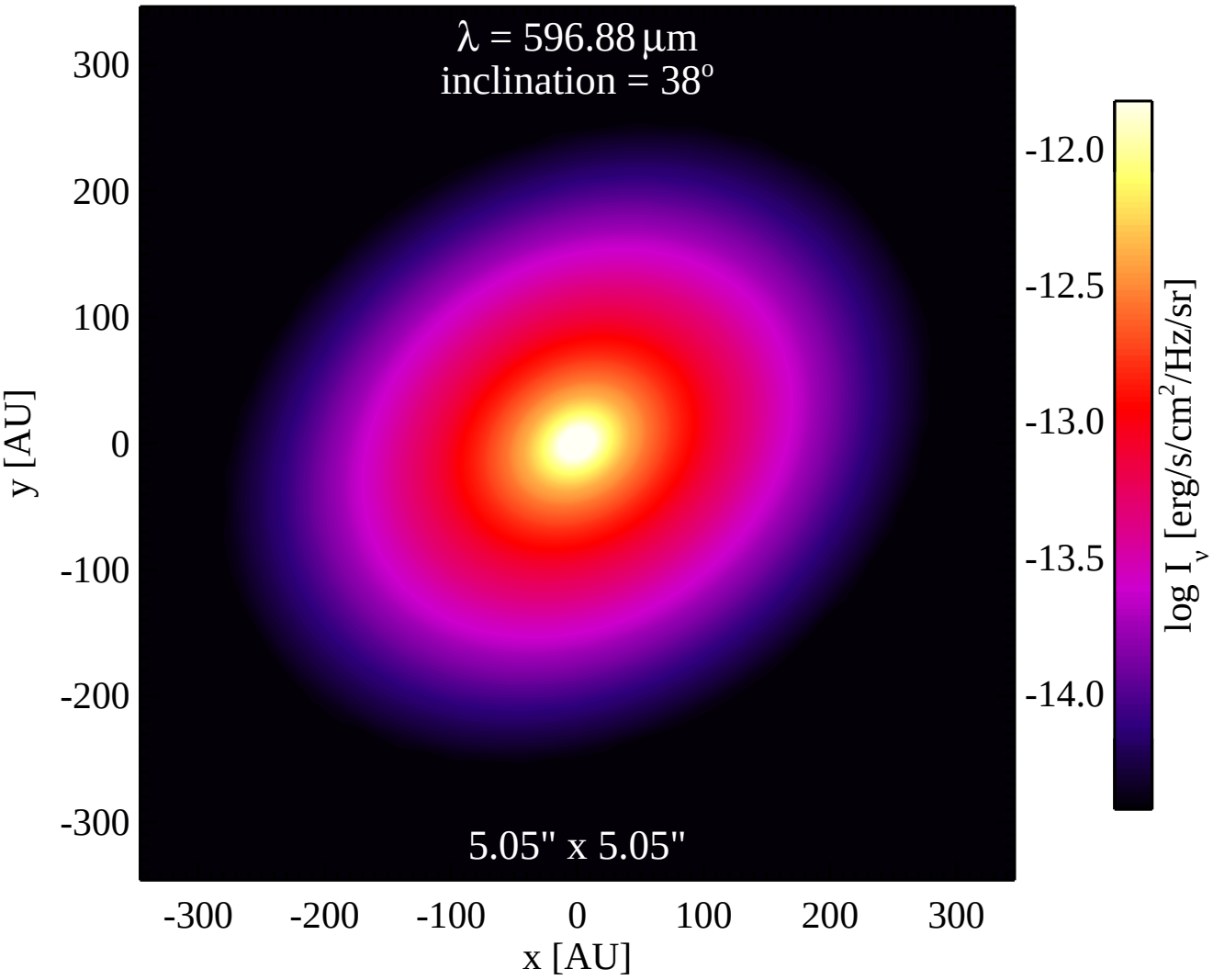

λ = 212.02 μm
inclination = 38°
3.85" x 3.85"
200
100
0
-100
-200
y [AU]
-200
-100
0
100
200
x [AU]
-11.0
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

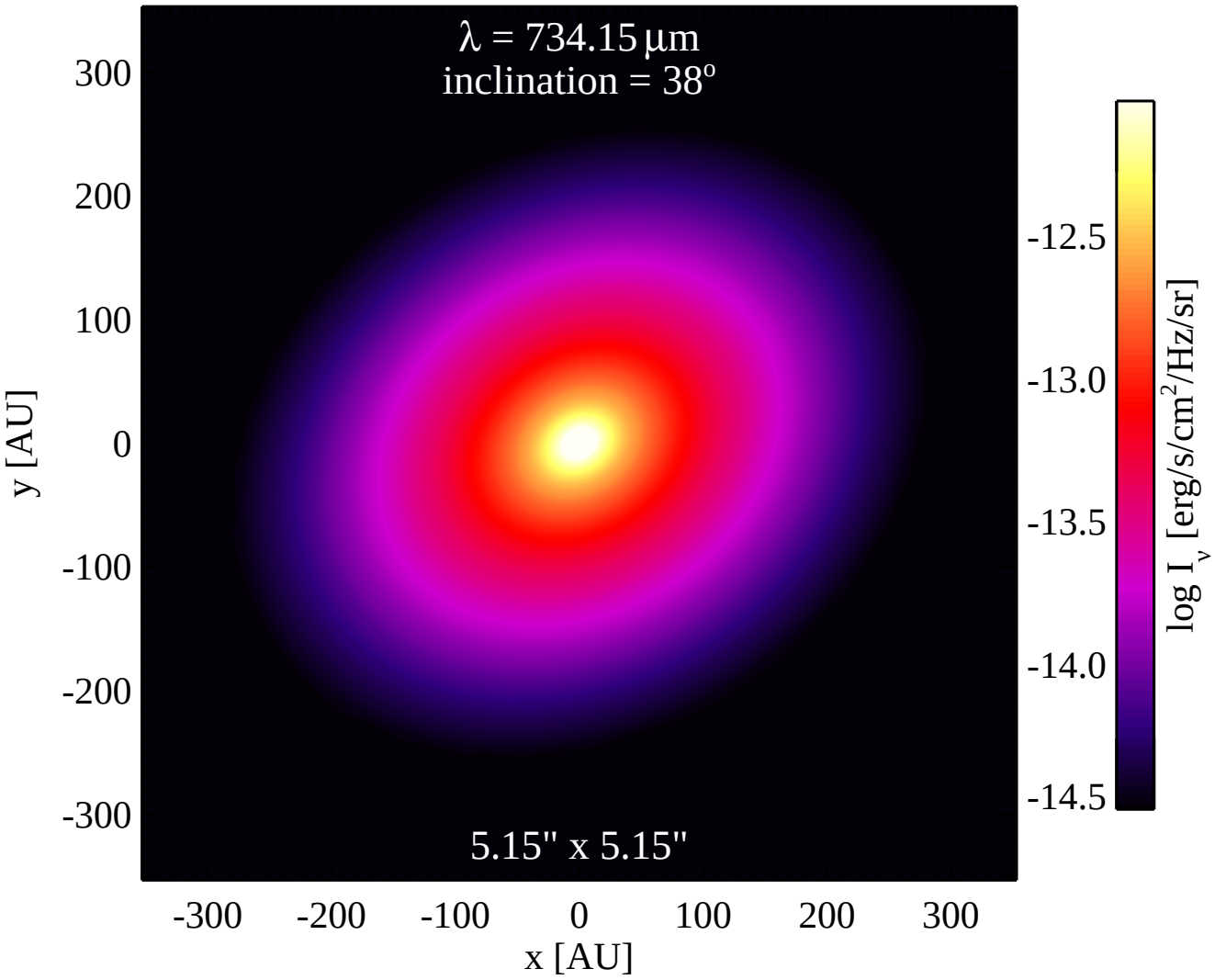

λ = 260.78 μm
inclination = 38°
4.20" x 4.20"
200
100
0
-100
-200
y [AU]
-200
-100
0
100
200
x [AU]
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

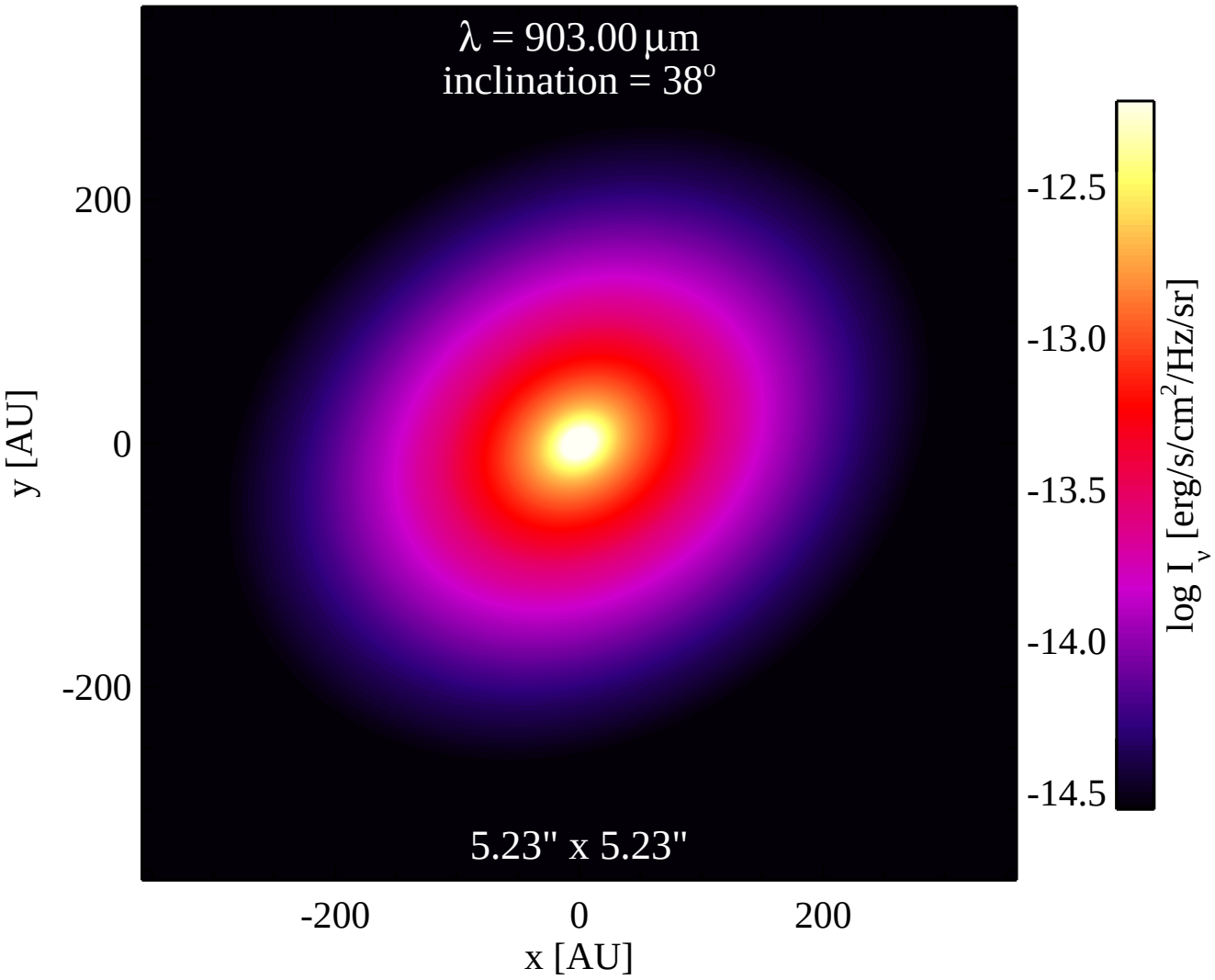

λ = 320.76 μm
inclination = 38°
4.50" x 4.50"
300
200
100
0
-100
-200
-300
y [AU]
-300
-200
-100
0
100
200
300
x [AU]
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

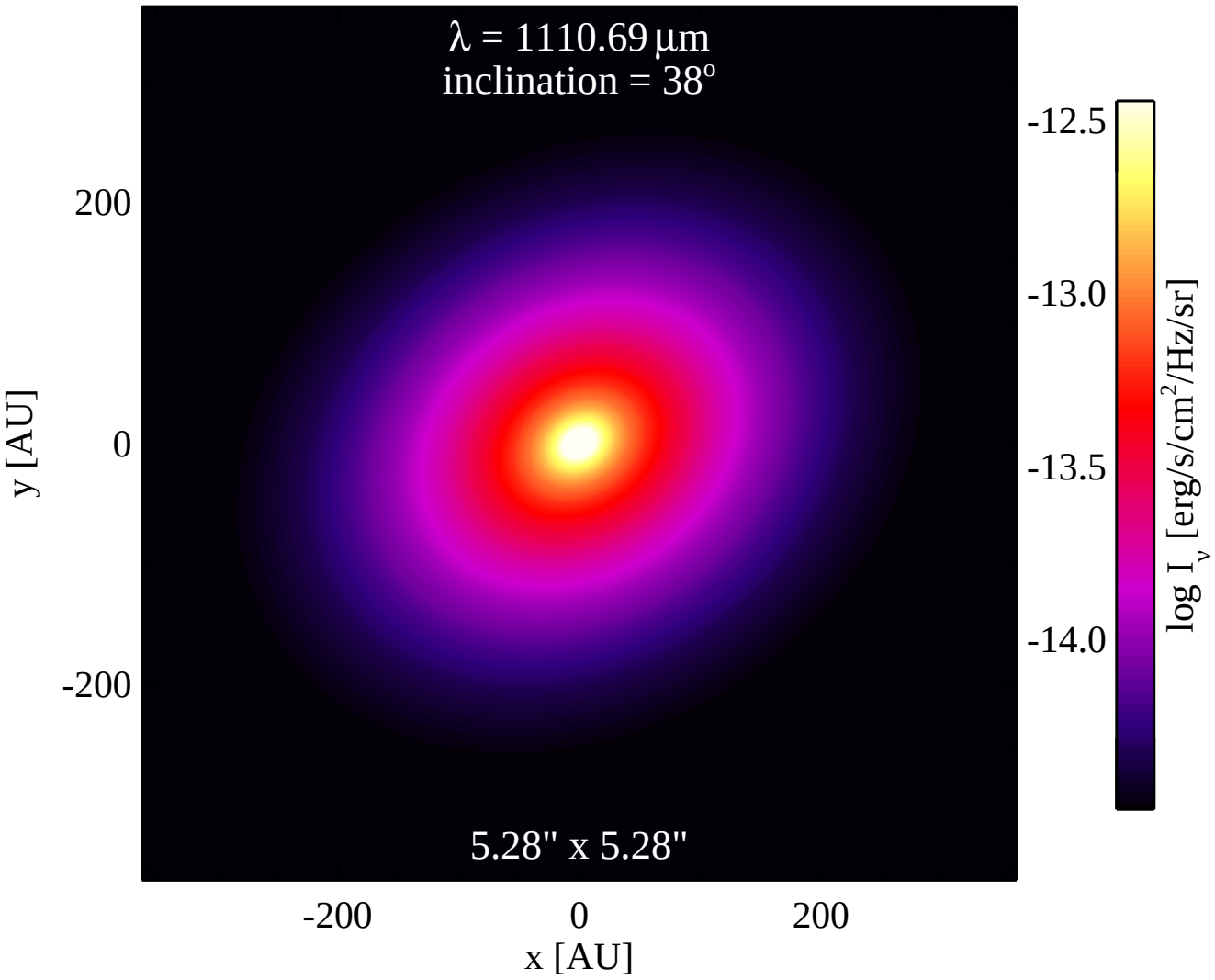

λ = 394.53 μm
inclination = 38°
4.73" x 4.73"
300
200
100
0
-100
-200
-300
y [AU]
-300
-200
-100
0
100
200
300
x [AU]
-11.5
-12.0
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]

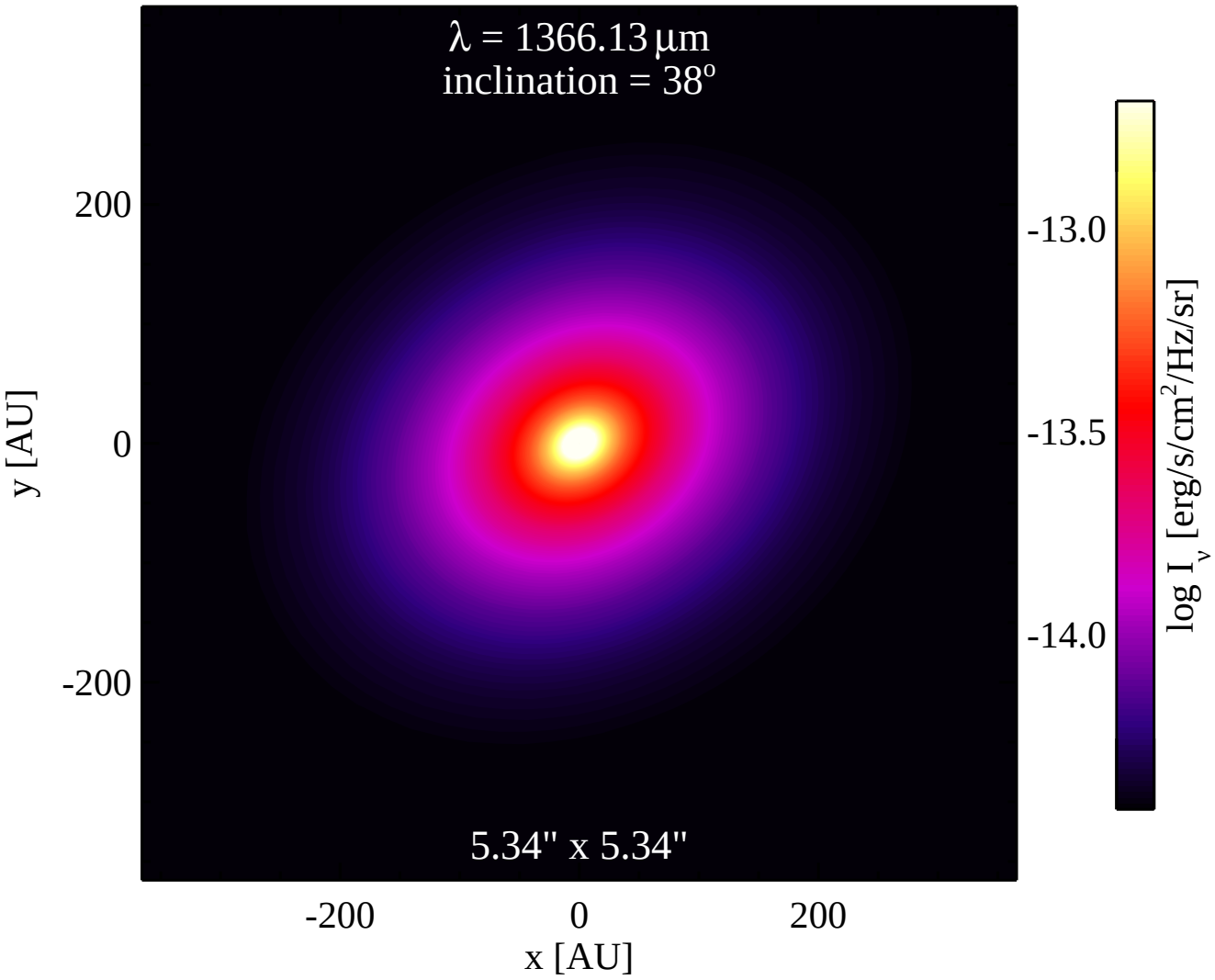

λ = 485.27 μm
inclination = 38°
4.92" x 4.92"
300
200
100
0
-100
-200
-300
y [AU]
-300
-200
-100
0
100
200
300
x [AU]
-12.0
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]

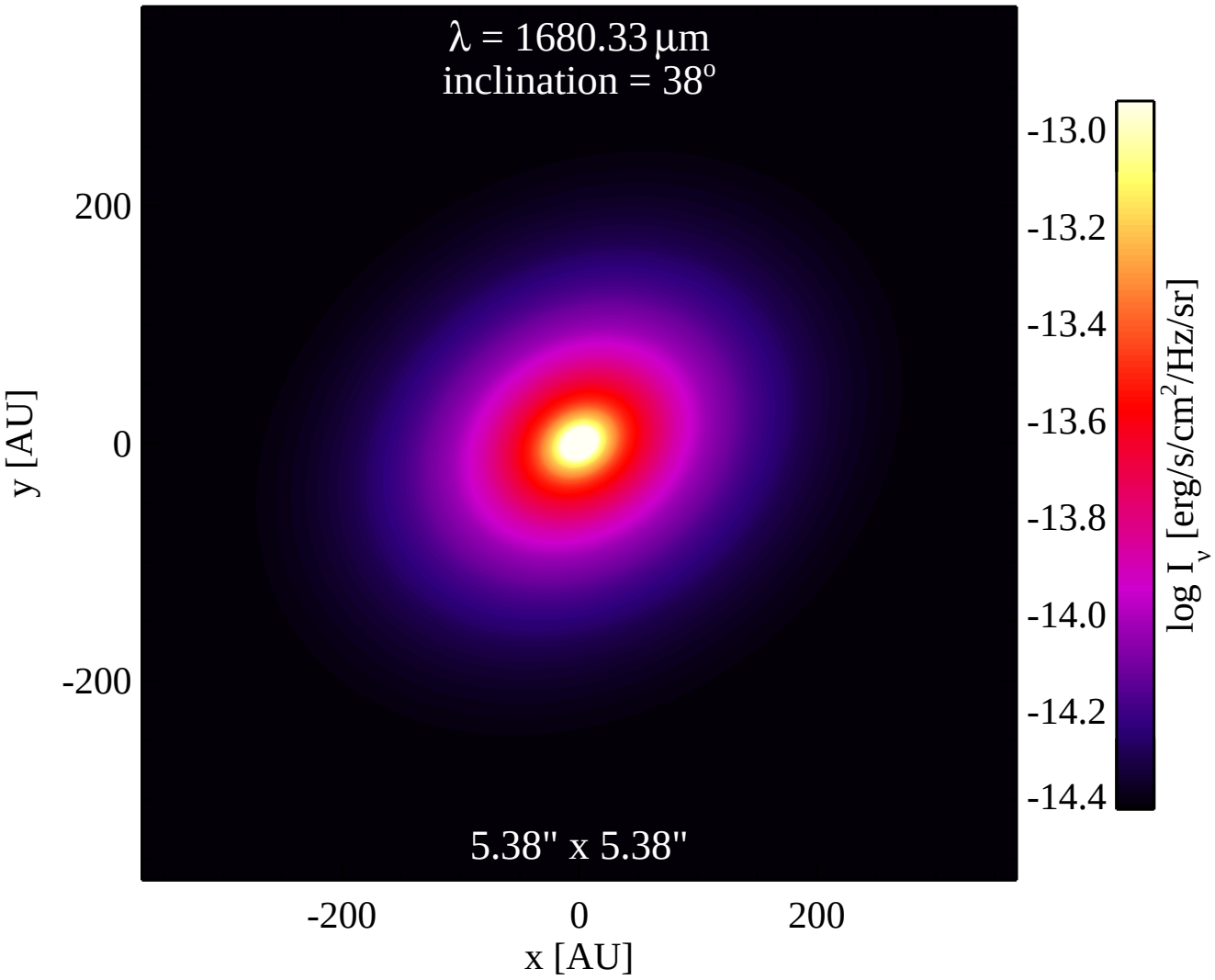

λ = 596.88 μm
inclination = 38°
5.05" x 5.05"
300
200
100
0
-100
-200
-300
y [AU]
-300
-200
-100
0
100
200
300
x [AU]
-12.0
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]

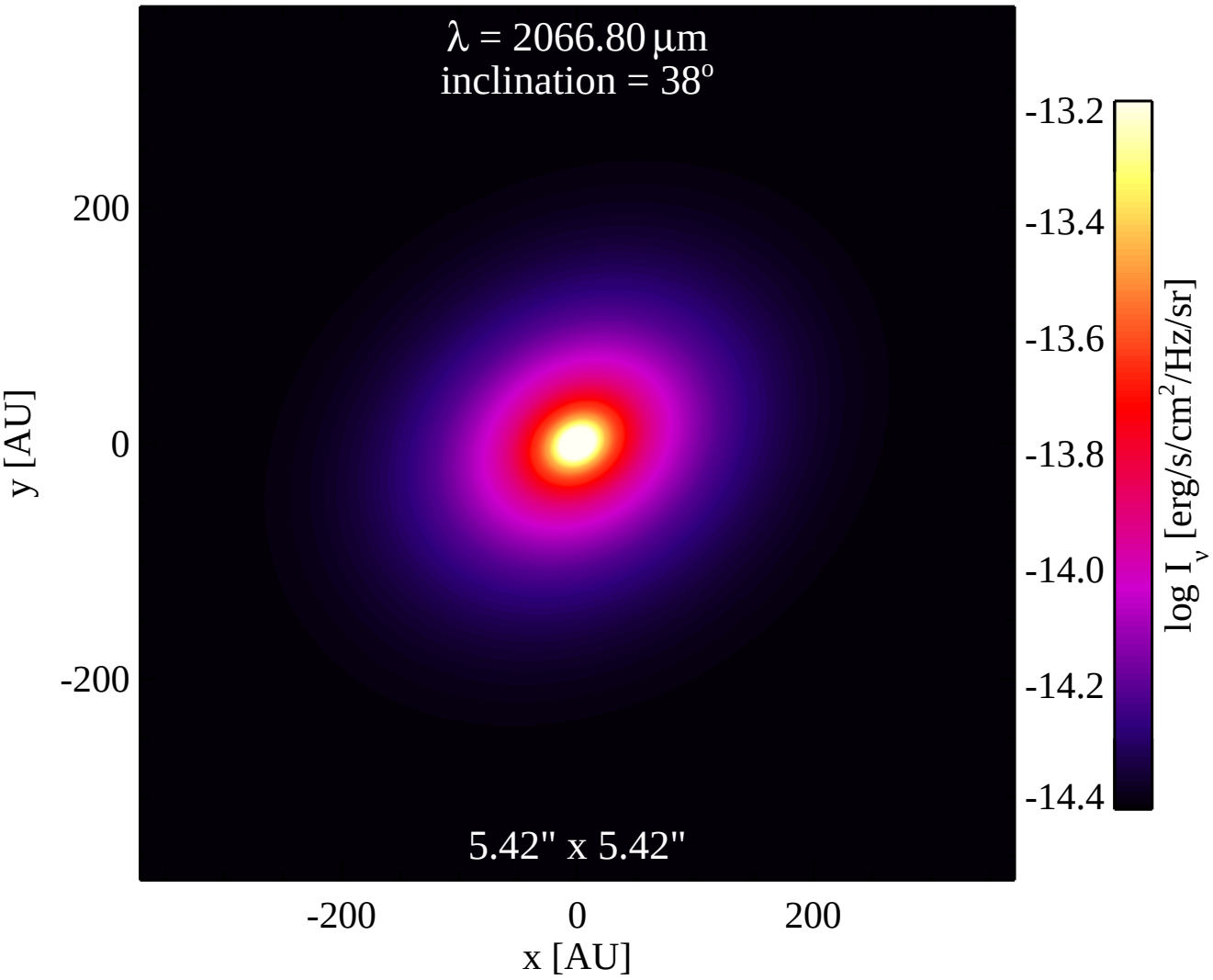

λ = 734.15 μm
inclination = 38°
5.15" x 5.15"
300
200
100
0
-100
-200
-300
y [AU]
-300
-200
-100
0
100
200
300
x [AU]
-12.5
-13.0
-13.5
-14.0
-14.5
log I_ν [erg/s/cm²/Hz/sr]

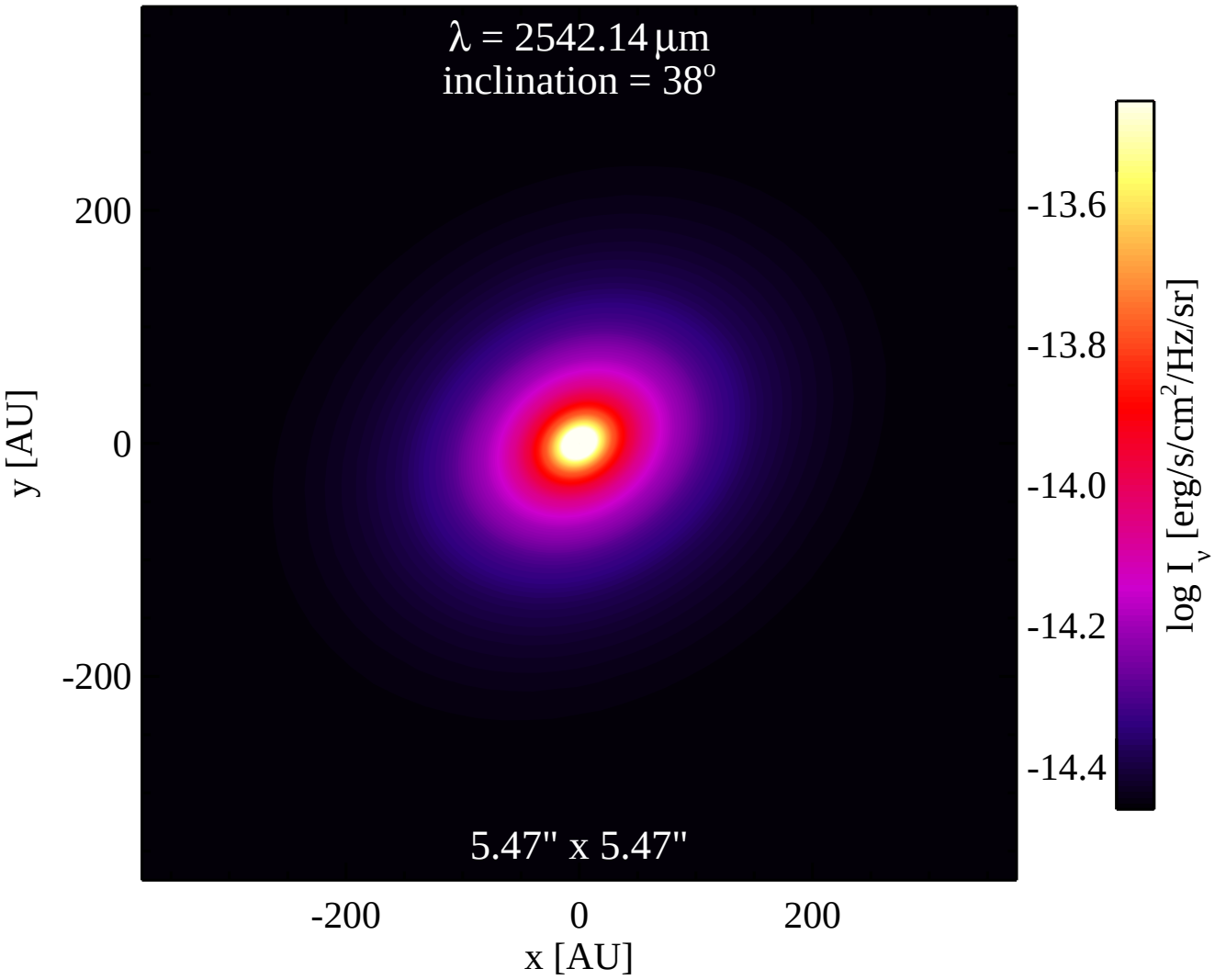

λ = 903.00 μm
inclination = 38°
5.23" x 5.23"
200
0
-200
y [AU]
-200
0
200
x [AU]
-12.5
-13.0
-13.5
-14.0
-14.5
log I_ν [erg/s/cm²/Hz/sr]


λ = 1110.69 μm
inclination = 38°
5.28" x 5.28"
200
0
-200
y [AU]
-200
0
200
x [AU]
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]


λ = 1366.13 μm
inclination = 38°
5.34" x 5.34"
200
0
-200
y [AU]
-200
0
200
x [AU]
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]


λ = 1680.33 μm
inclination = 38°
5.38" x 5.38"
200
0
-200
y [AU]
-200
0
200
x [AU]
-13.0
-13.2
-13.4
-13.6
-13.8
-14.0
-14.2
-14.4
log I_ν [erg/s/cm²/Hz/sr]


λ = 2066.80 μm
inclination = 38°
5.42" x 5.42"
200
0
-200
y [AU]
-200
0
200
x [AU]
-13.2
-13.4
-13.6
-13.8
-14.0
-14.2
-14.4
log I_ν [erg/s/cm²/Hz/sr]


λ = 2542.14 μm
inclination = 38°
5.47" x 5.47"
200
0
-200
y [AU]
-200
0
200
x [AU]
-13.6
-13.8
-14.0
-14.2
-14.4
log I_ν [erg/s/cm²/Hz/sr]