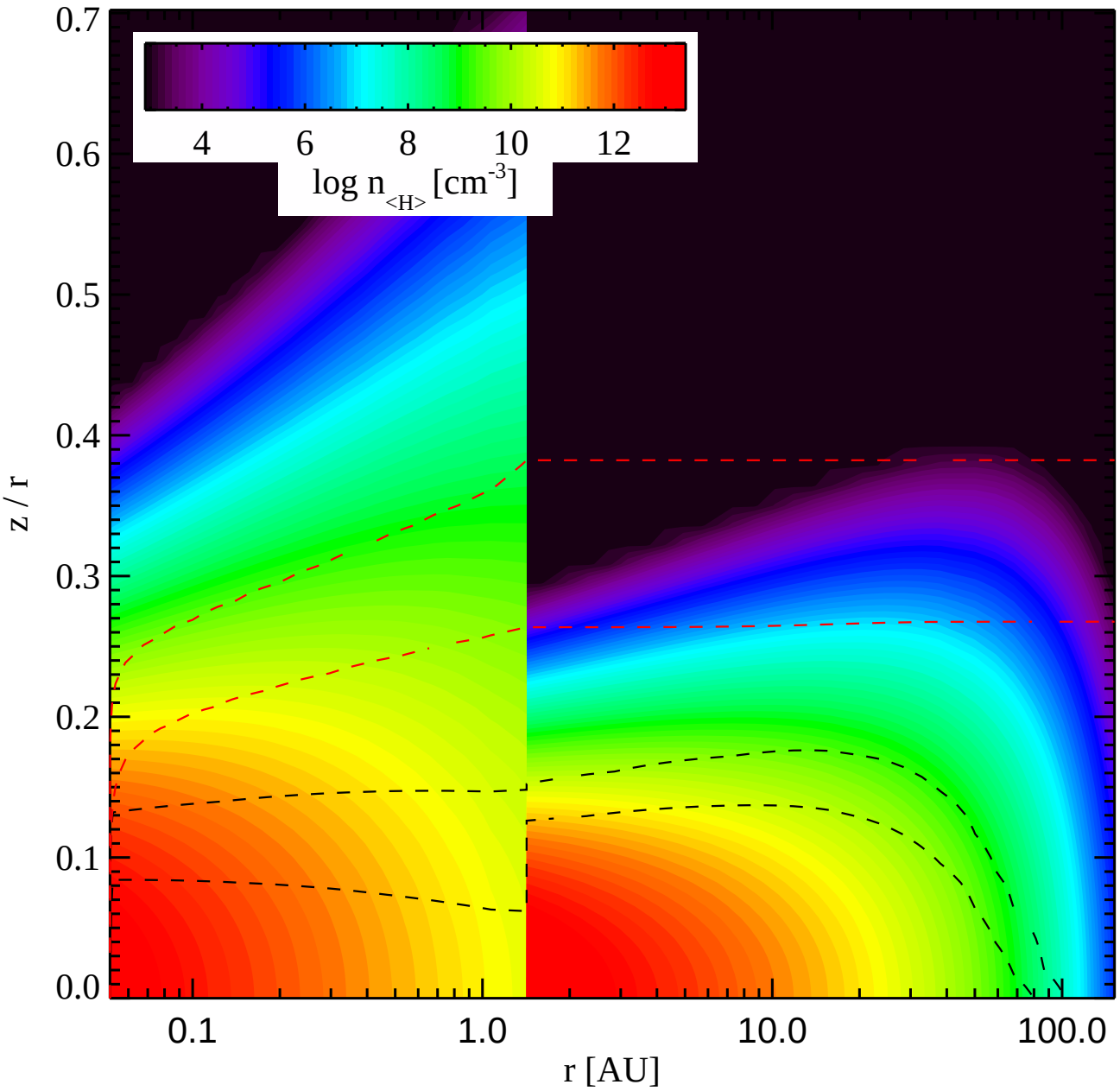
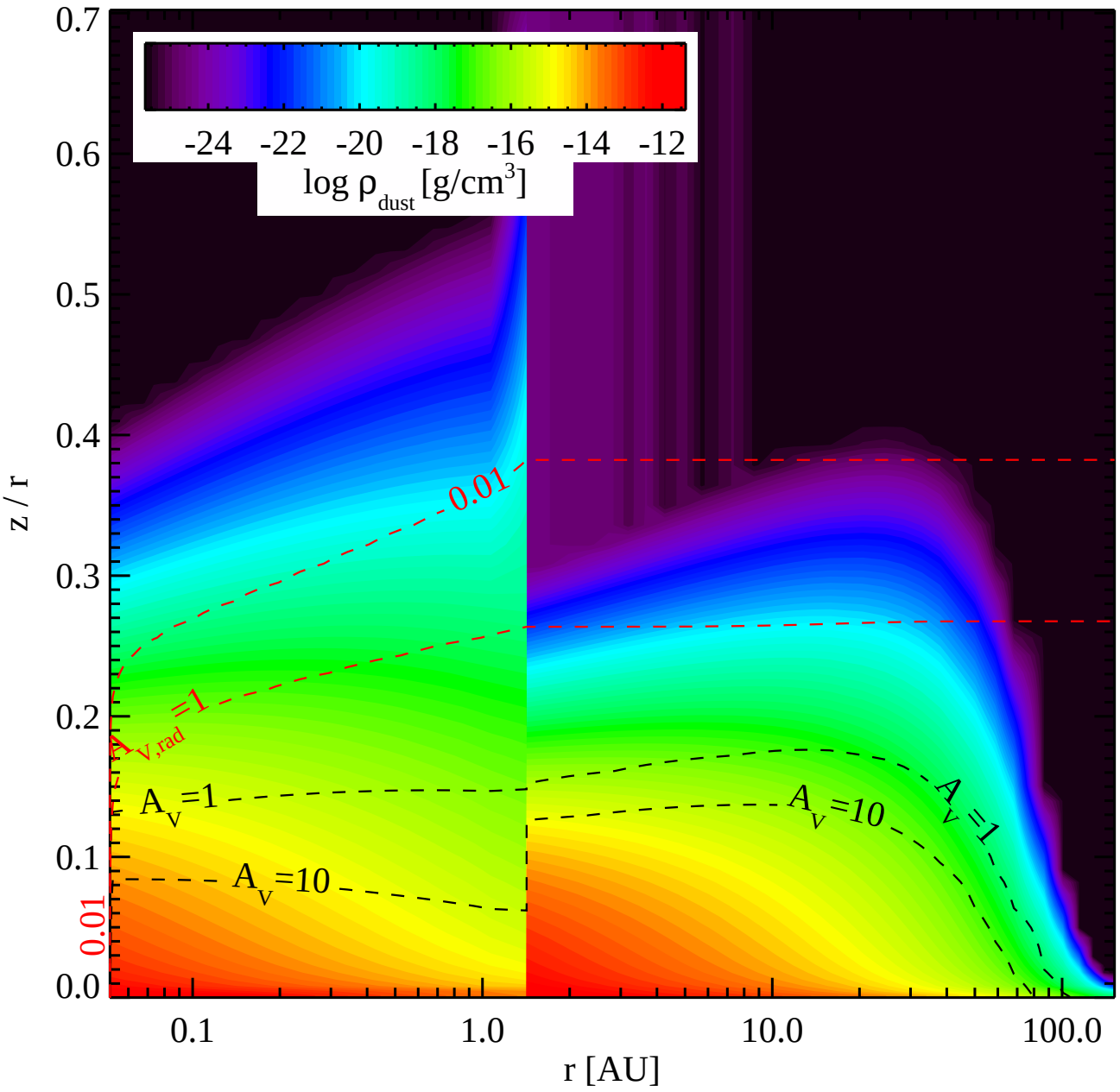
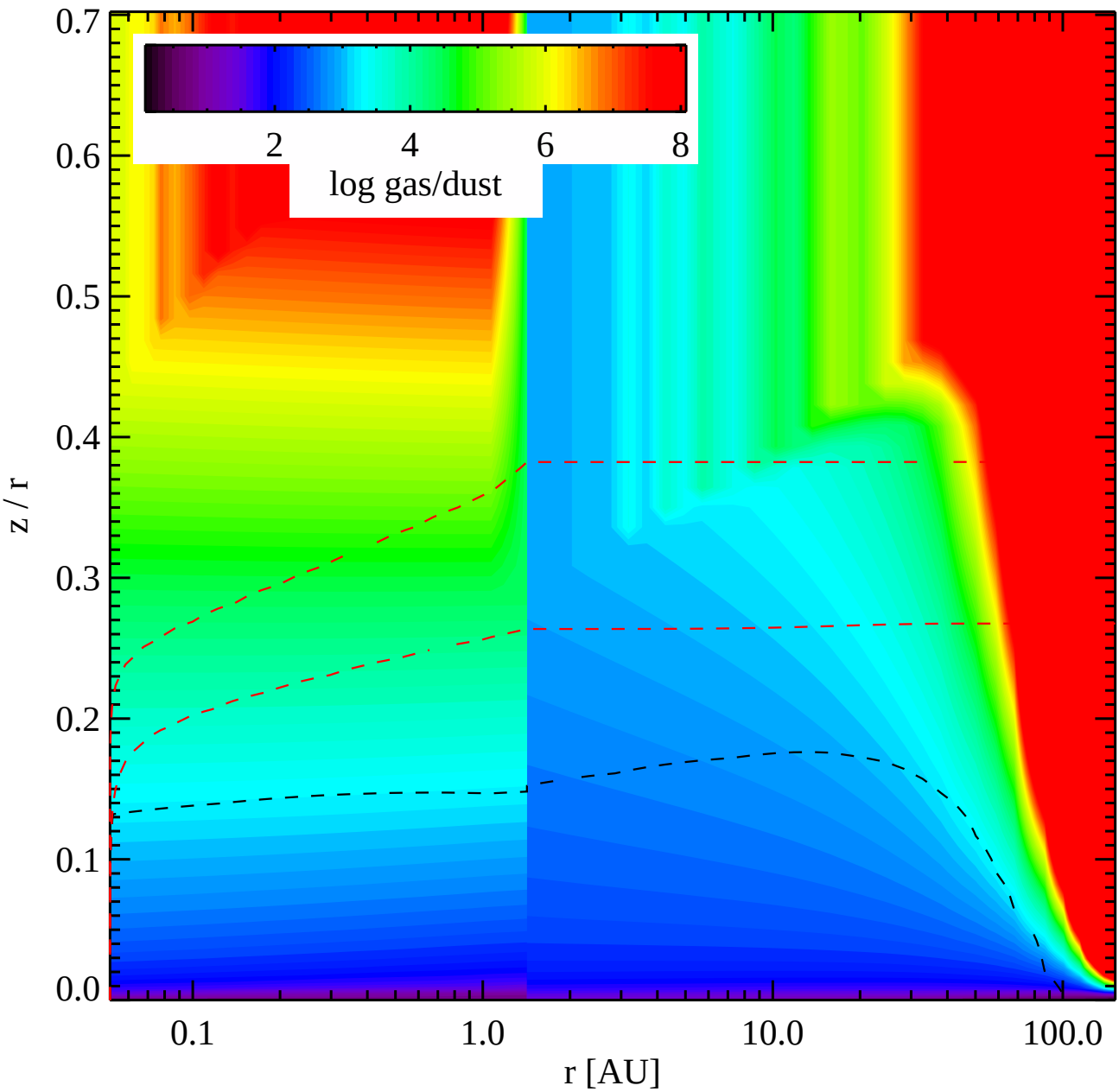
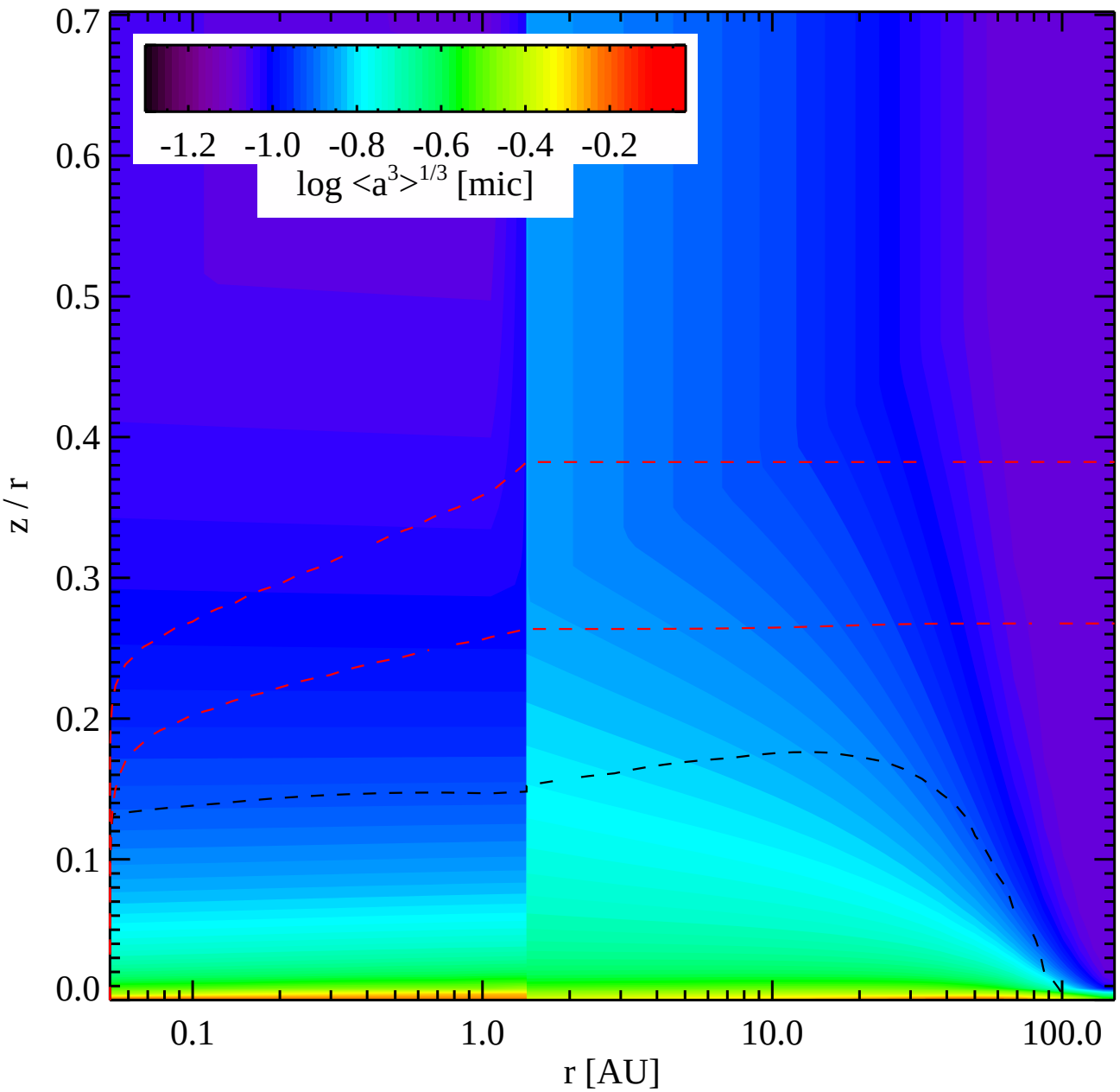
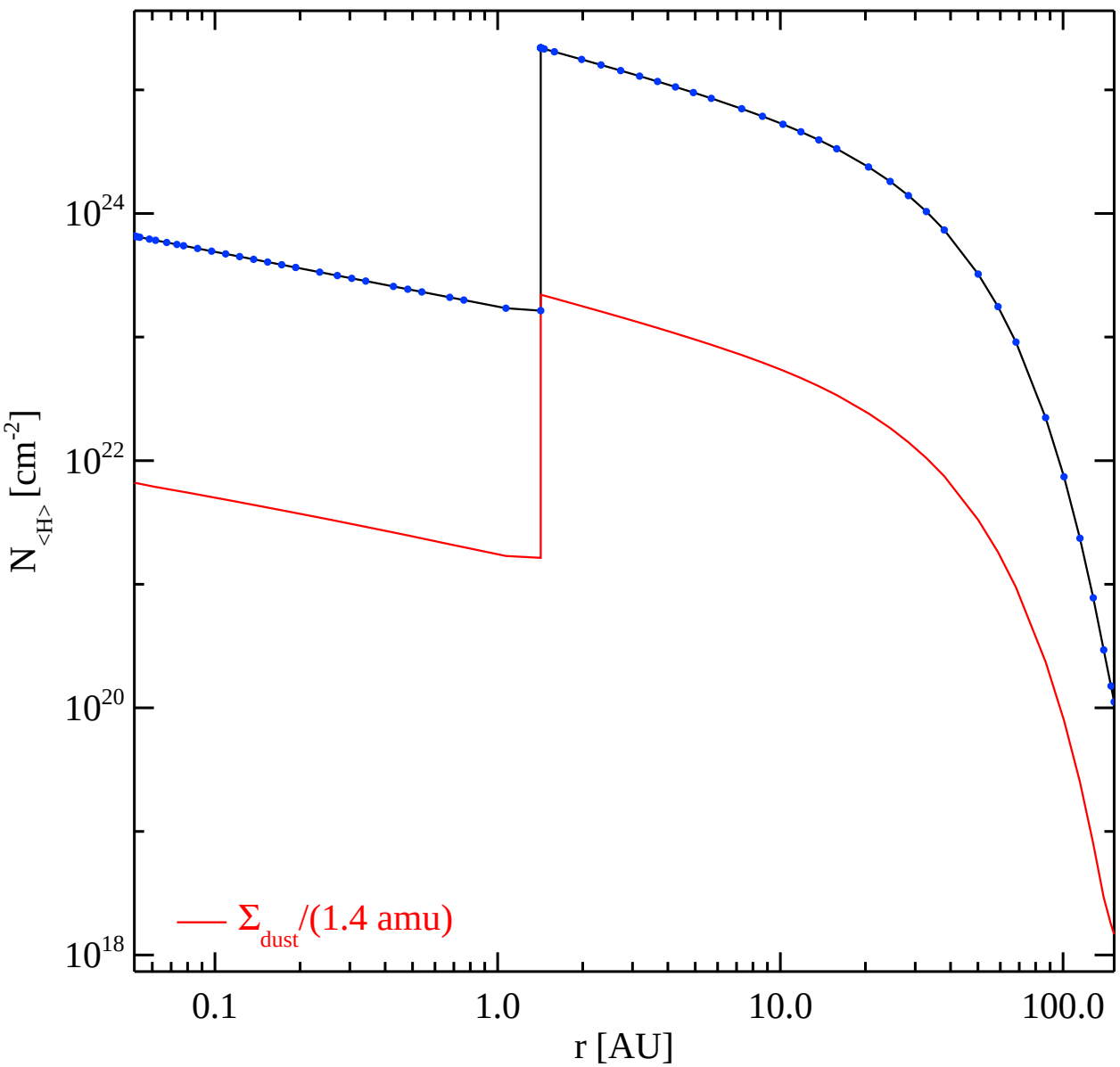
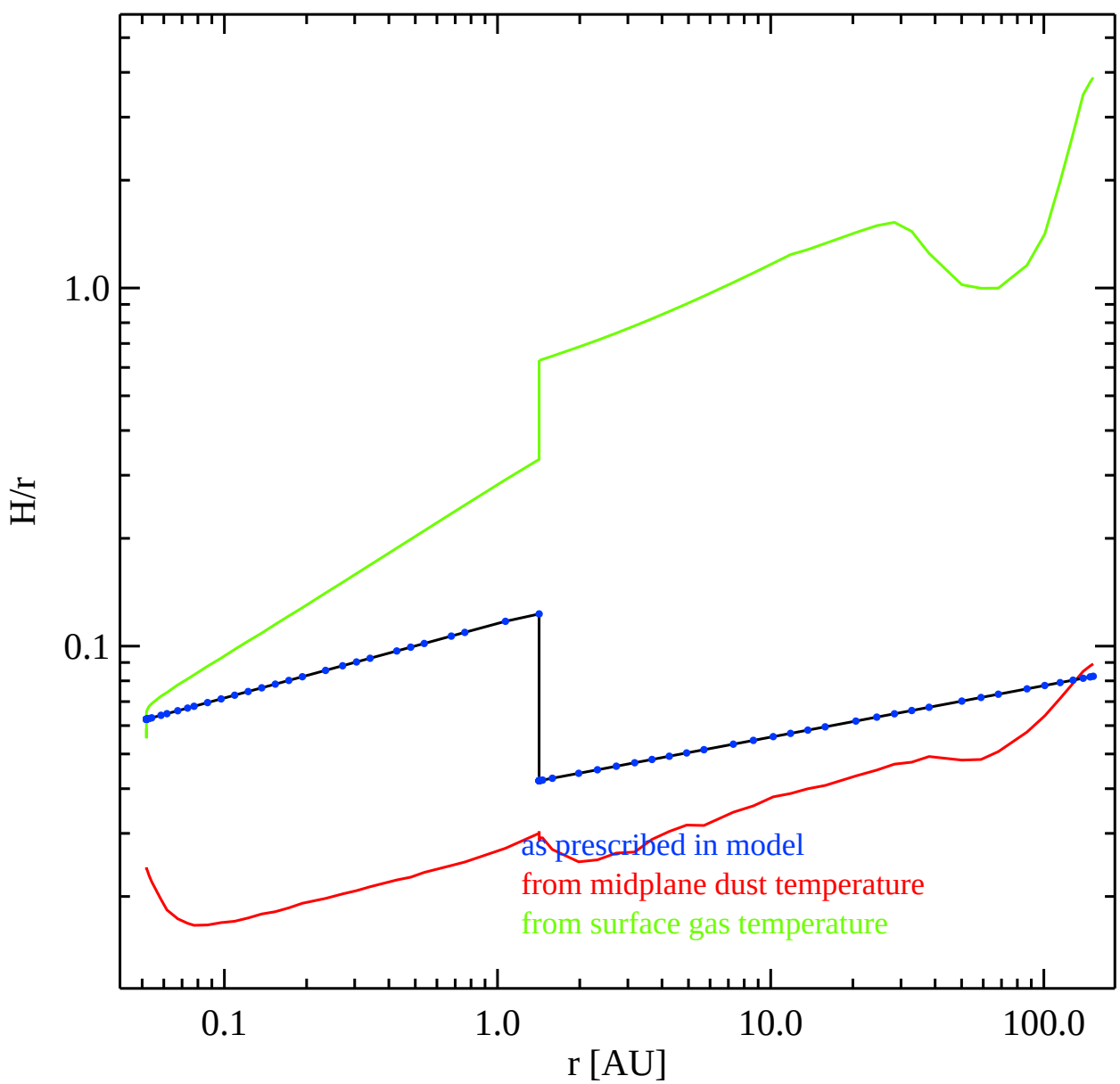

0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
4
6
8
10
12
log n<H> [cm-3]
0.1
1.0
10.0
100.0
r [AU]

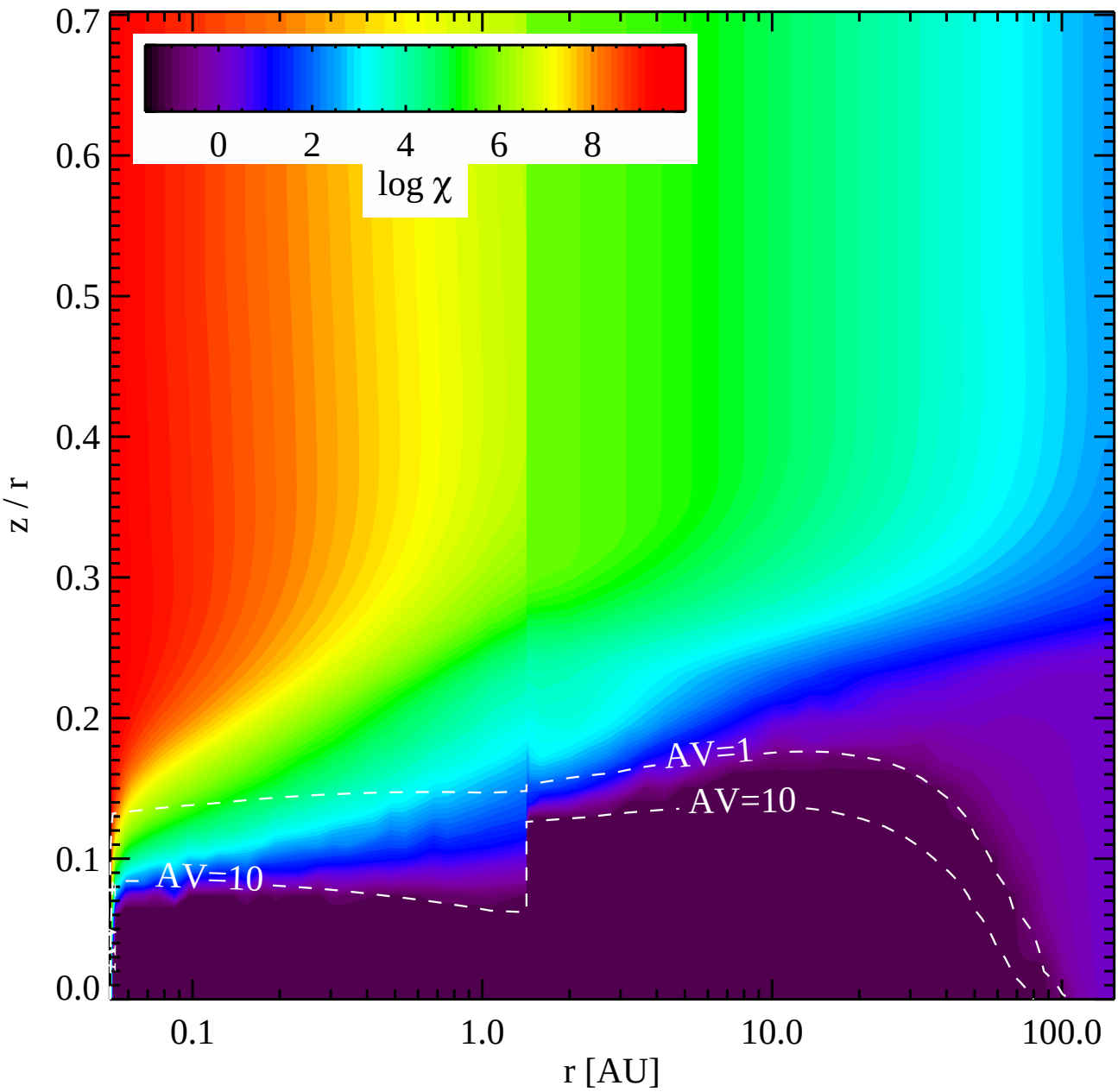

-24 -22 -20 -18 -16 -14 -12
log ρ dust [g/cm3]
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
0.01
A V,rad =1
A V =1
A V =10
A V =1
A V =10
0.01
0.1
1.0
10.0
100.0
r [AU]

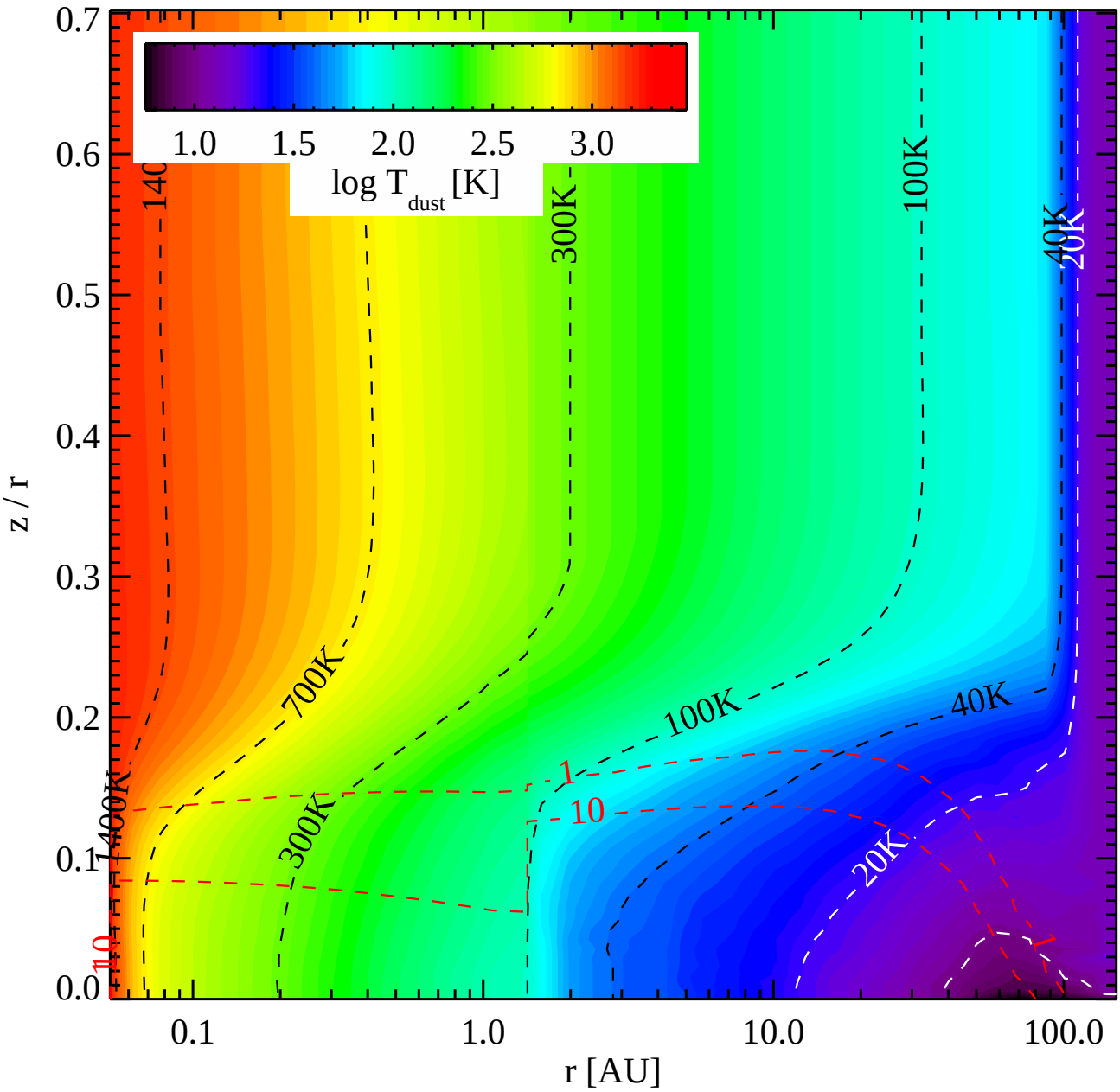

0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
2
4
6
8
log gas/dust
0.1
1.0
10.0
100.0
r [AU]

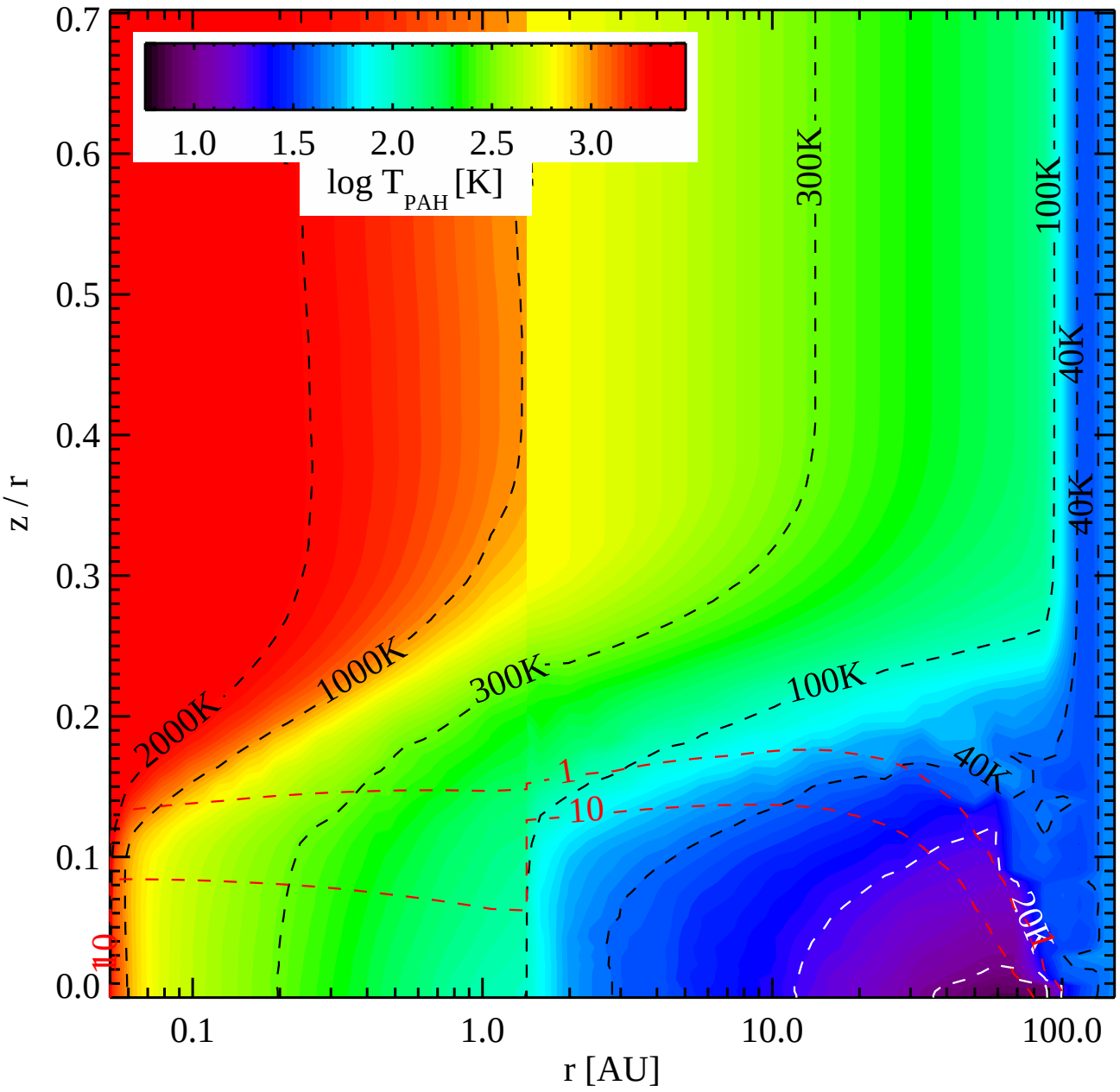

-1.2 -1.0 -0.8 -0.6 -0.4 -0.2
log <a^3>^1/3 [mic]
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
0.1
1.0
10.0
100.0
r [AU]

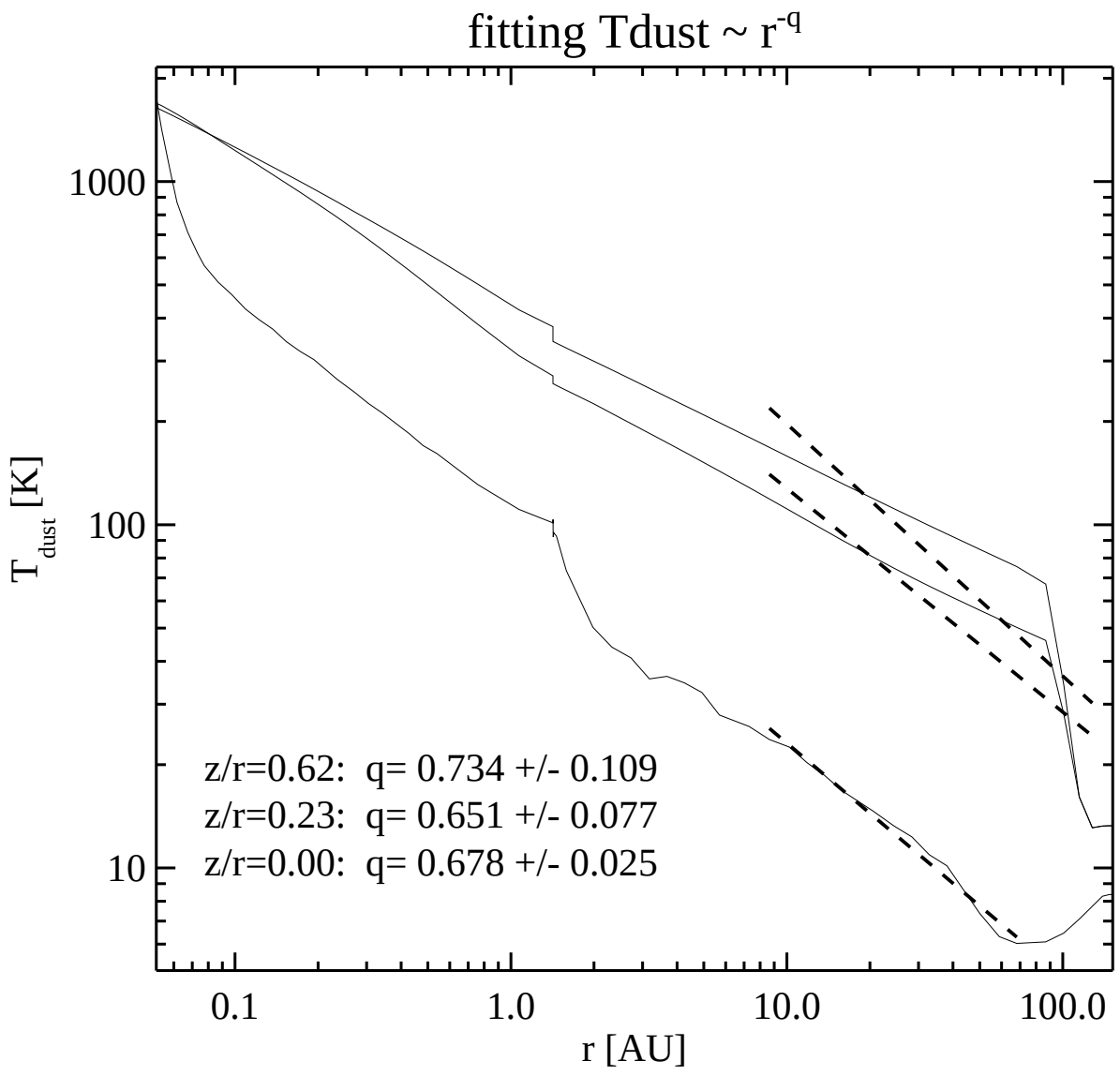

10^{24}
10^{22}
10^{20}
10^{18}
$N_{<H>}$ [cm^{-2}]
0.1
1.0
10.0
100.0
r [AU]
Σ_{dust}/(1.4 amu)

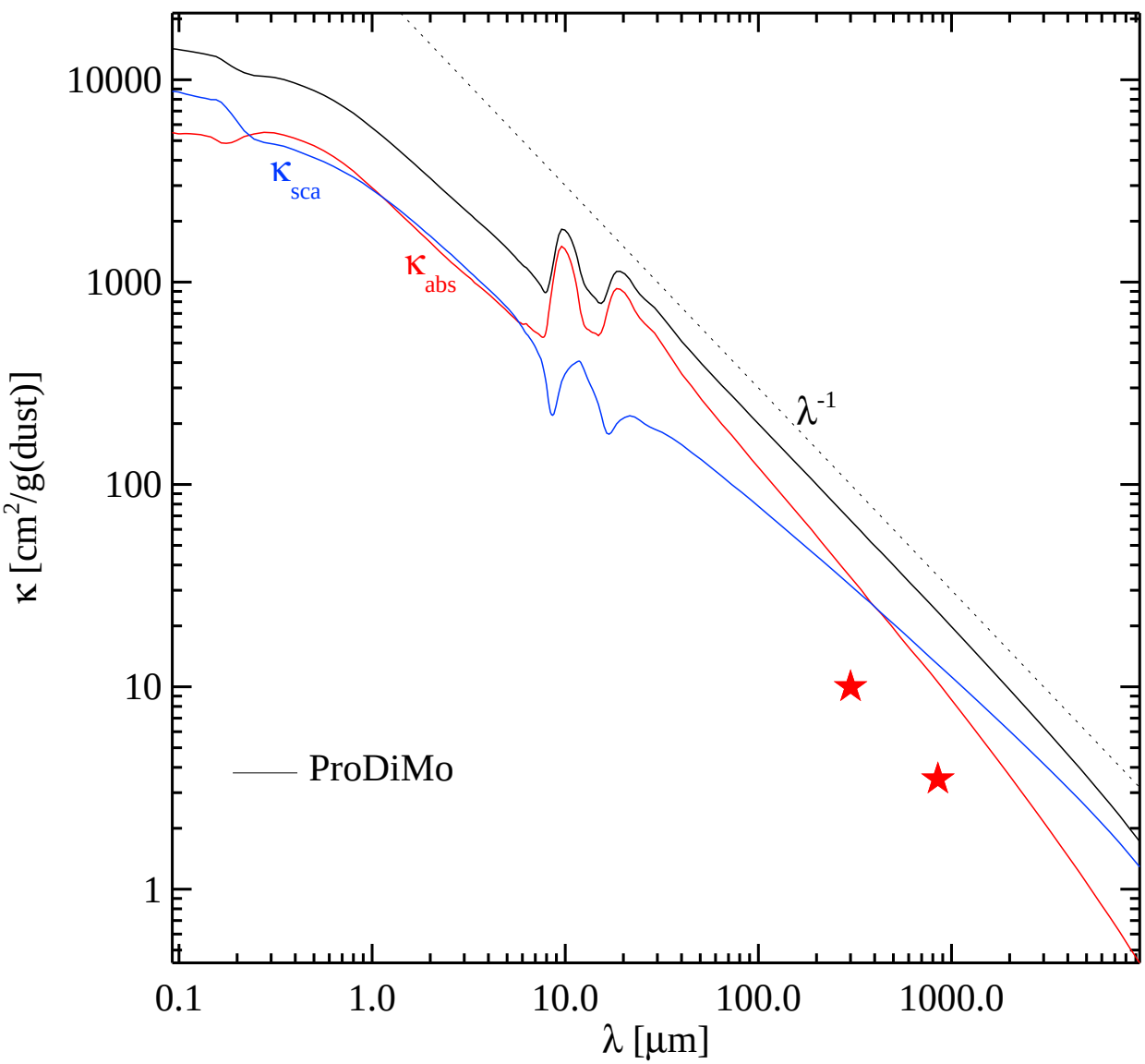

1.0
0.1
H/r
0.1
1.0
10.0
100.0
r [AU]
as prescribed in model
from midplane dust temperature
from surface gas temperature

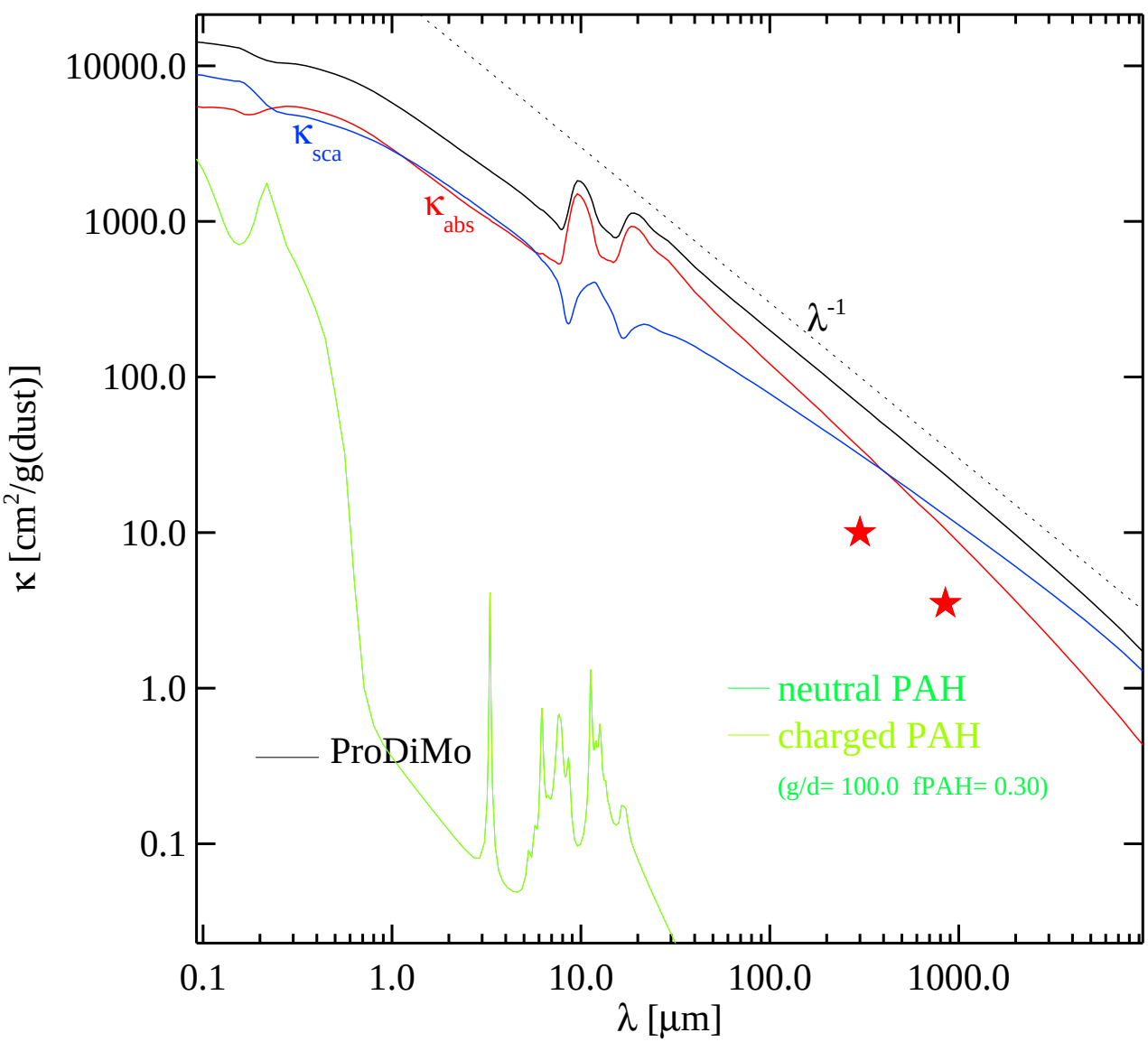

0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
0
2
4
6
8
log χ
AV=1
AV=10
AV=10
0.1
1.0
10.0
100.0
r [AU]

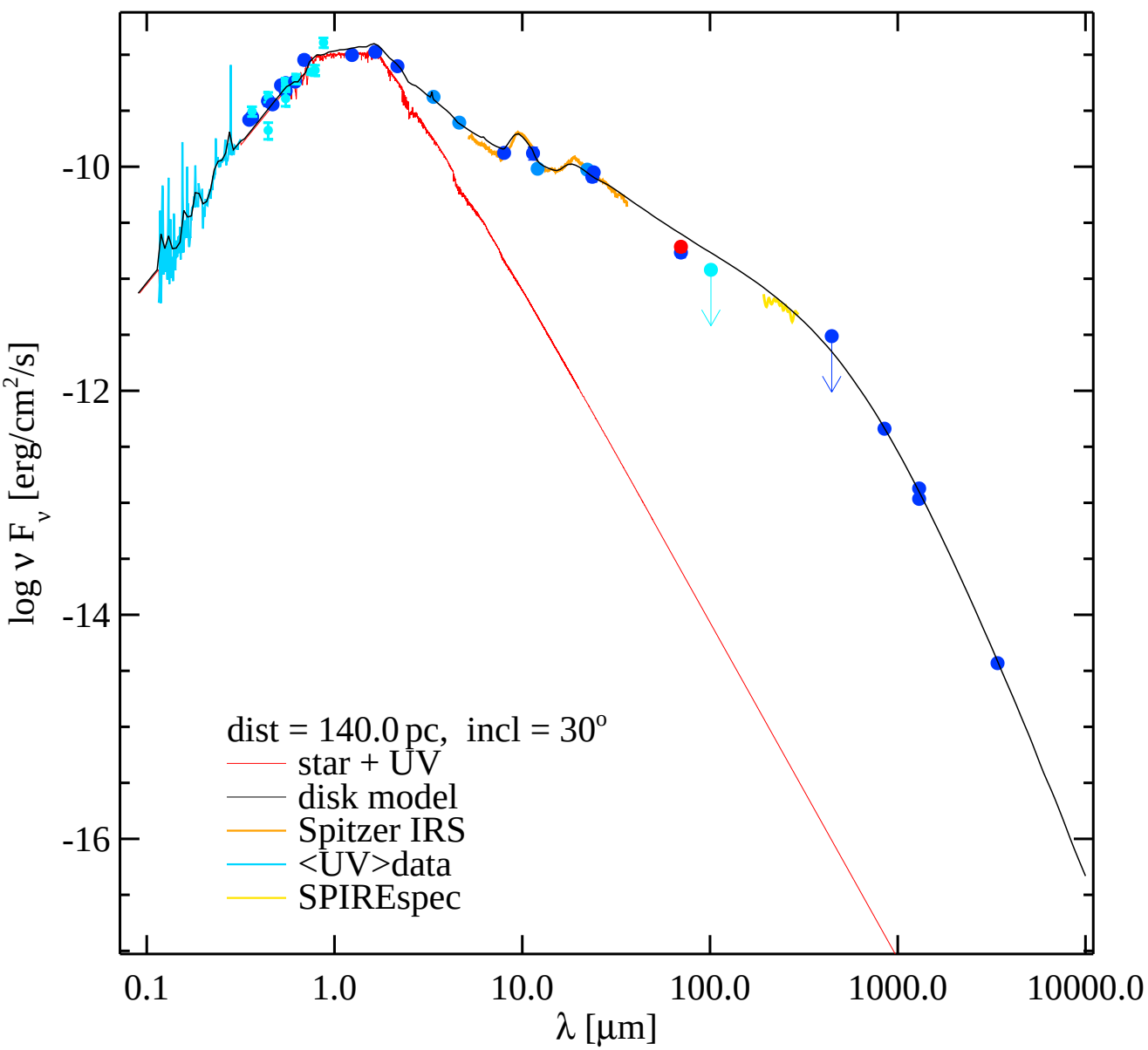

1.0
1.5
2.0
2.5
3.0
log T dust [K]
140
300K
100K
40K
20K
1400K
700K
300K
100K
40K
20K
1
10
1
10
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
0.1
1.0
10.0
100.0
r [AU]

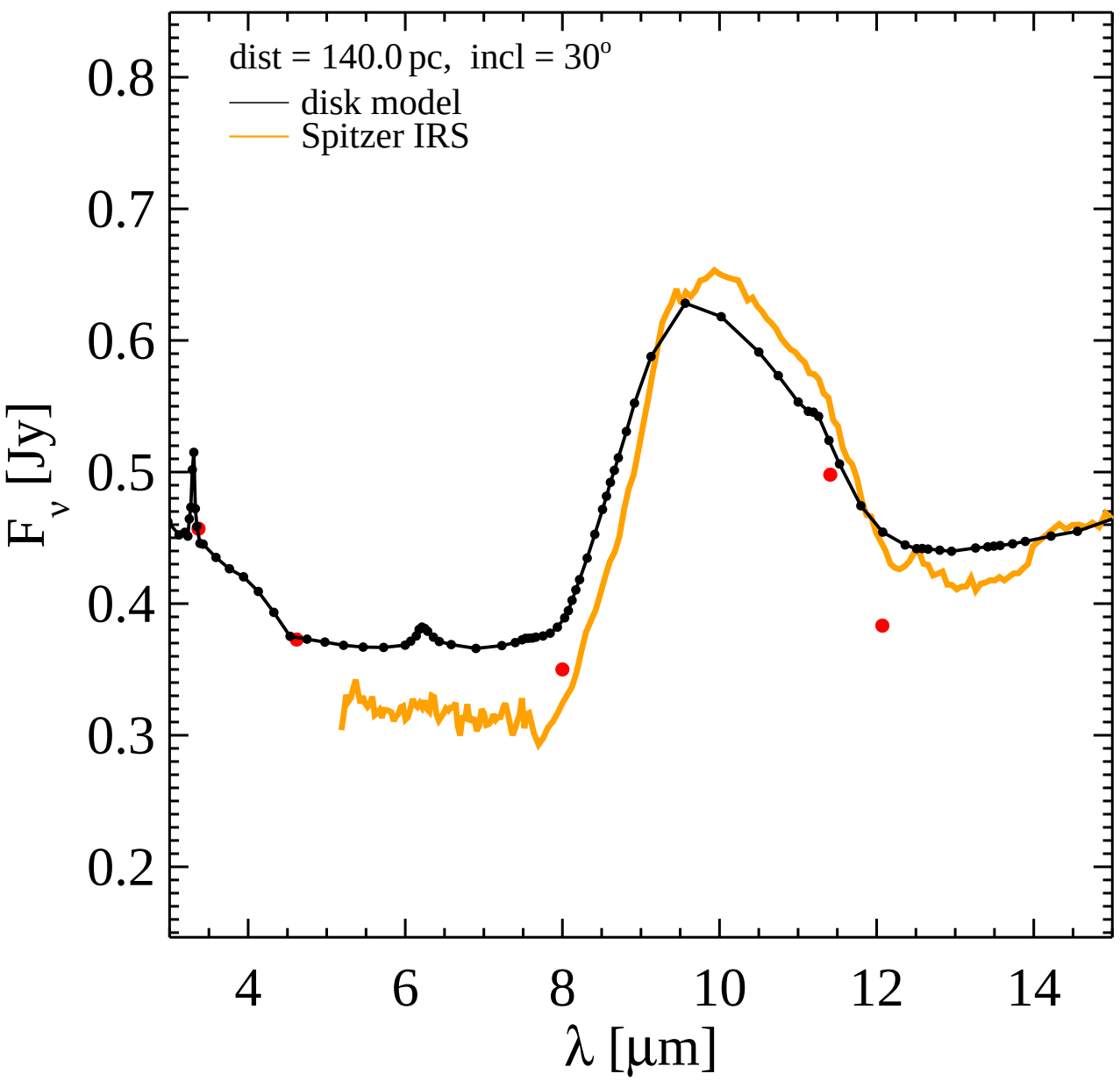

1.0
1.5
2.0
2.5
3.0
log T PAH [K]
2000K
1000K
300K
100K
40K
20K
1
10
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
z / r
0.1
1.0
10.0
100.0
r [AU]

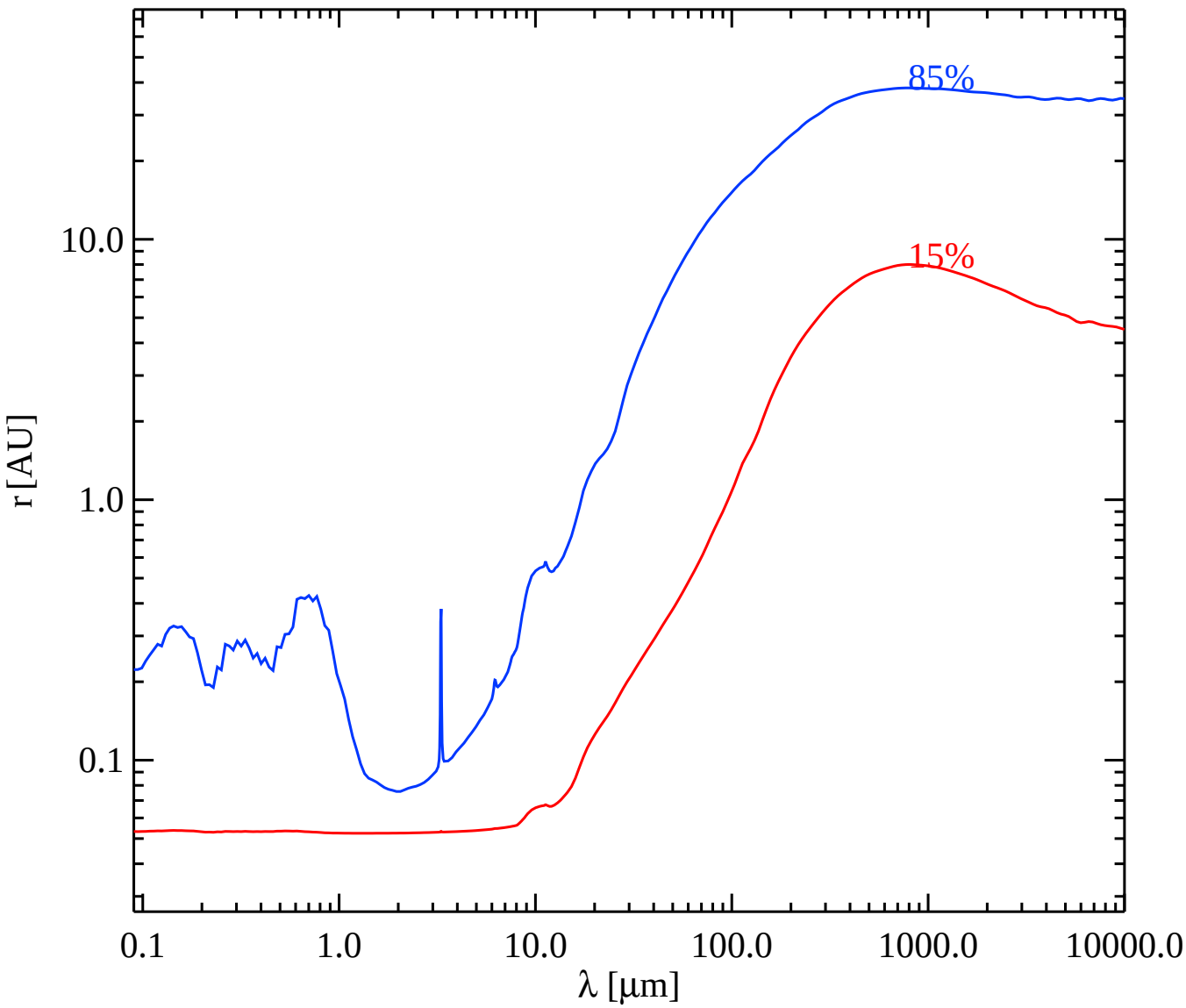

fitting Tdust ~ r^-q
1000
100
10
T dust [K]
0.1
1.0
10.0
100.0
r [AU]
z/r=0.62: q= 0.734 +/- 0.109
z/r=0.23: q= 0.651 +/- 0.077
z/r=0.00: q= 0.678 +/- 0.025

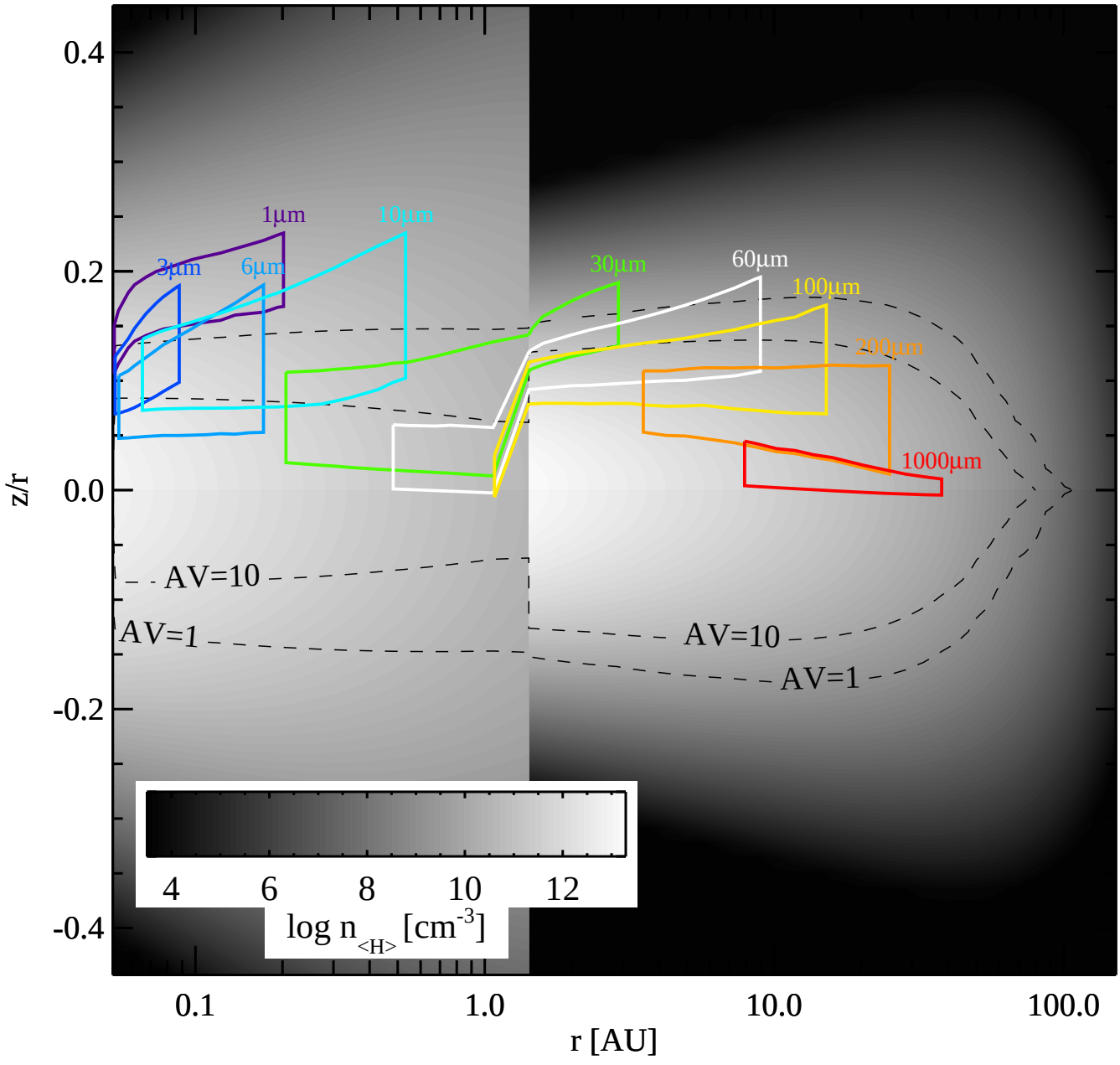

10000
1000
100
10
1
κ [cm²/g(dust)]
κsca
κabs
λ-1
ProDiMo
0.1
1.0
10.0
100.0
1000.0
λ [μm]

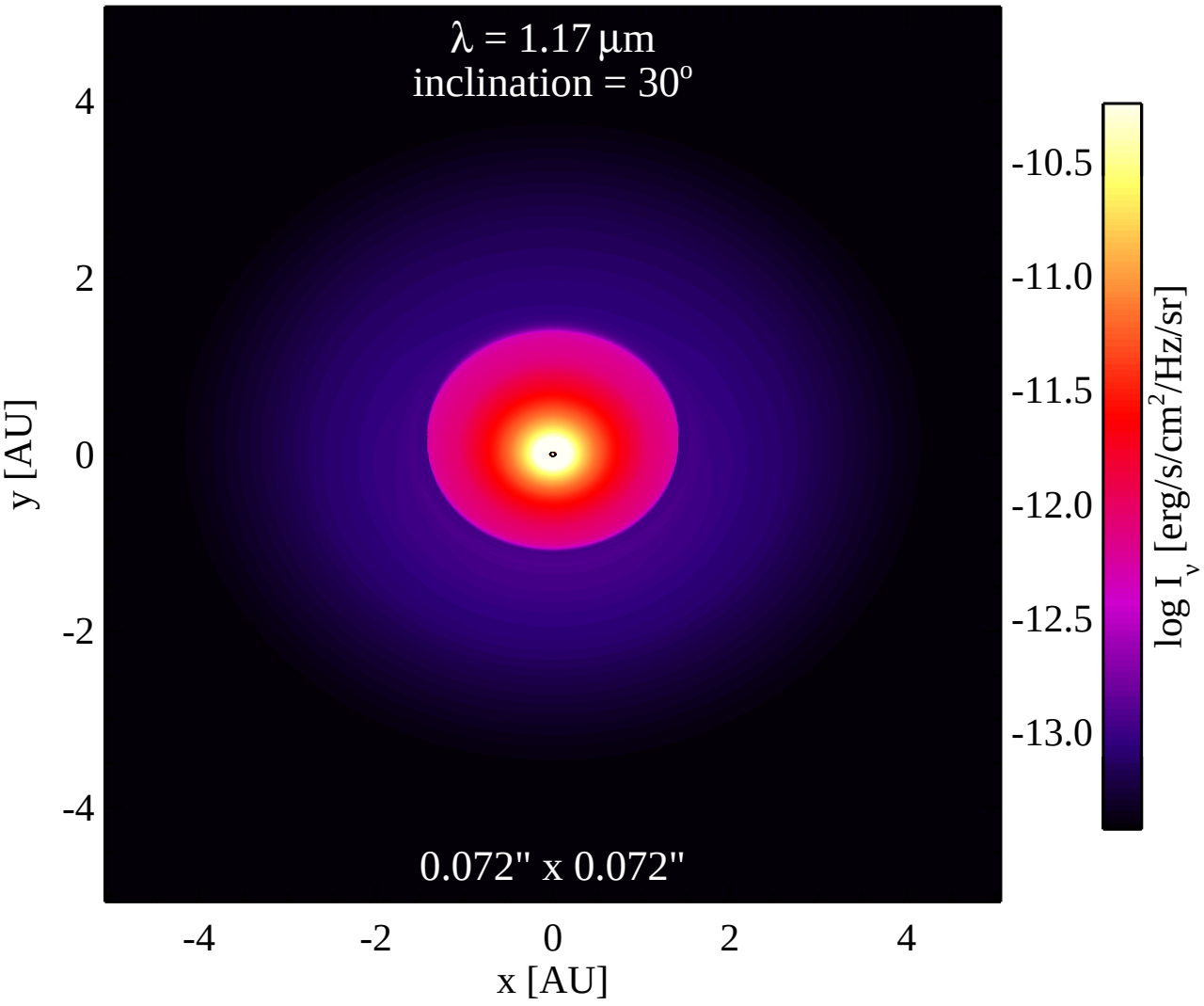

10000.0
1000.0
100.0
10.0
1.0
0.1
κ [cm²/g(dust)]
κsca
κabs
λ-1
ProDiMo
neutral PAH
charged PAH
(g/d= 100.0 fPAH= 0.30)
0.1
1.0
10.0
100.0
1000.0
λ [μm]

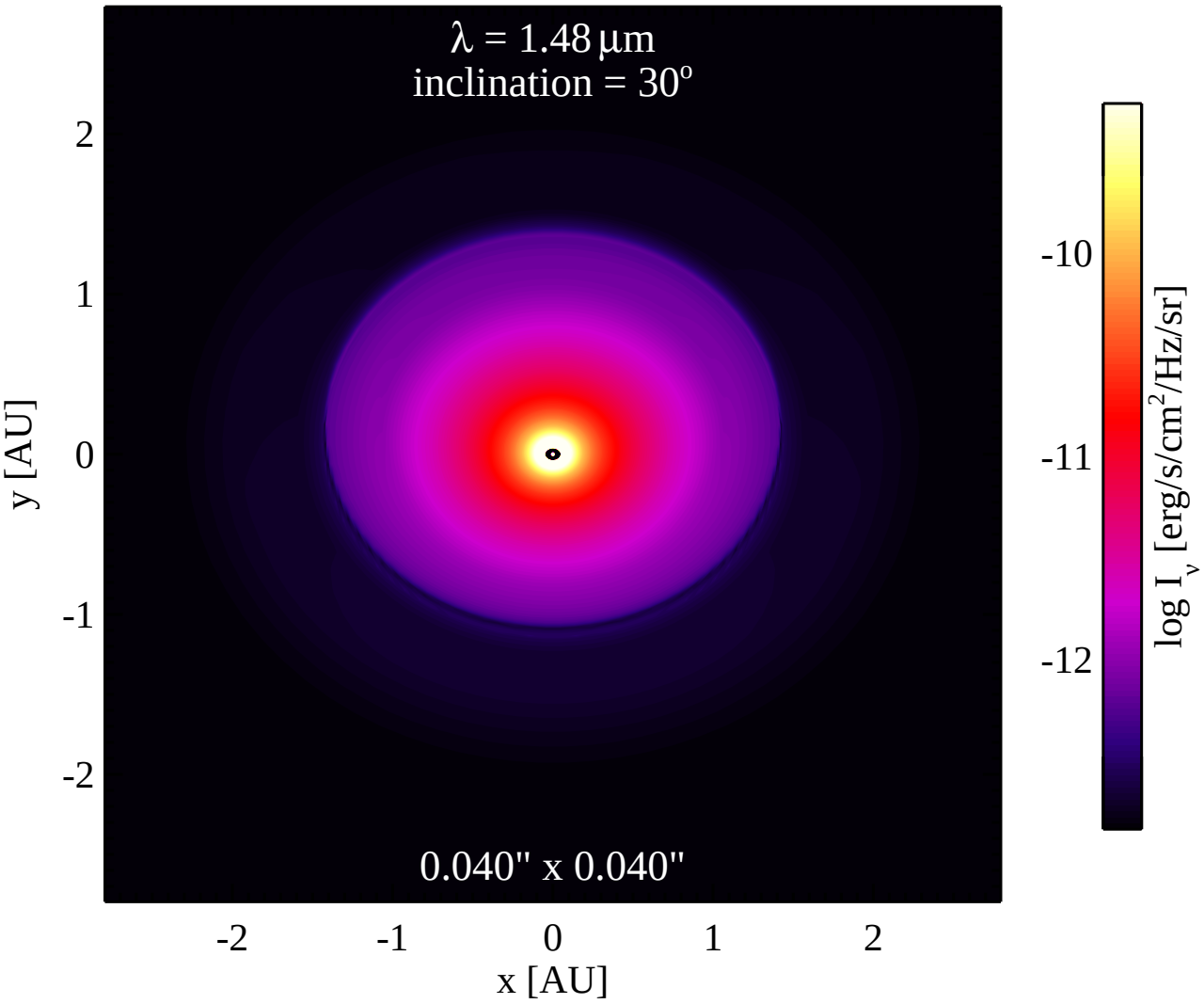

-10
-12
-14
-16
log ν F_ν [erg/cm²/s]
0.1
1.0
10.0
100.0
1000.0
10000.0
λ [μm]
dist = 140.0 pc, incl = 30°
star + UV
disk model
Spitzer IRS
<UV>data
SPIREspec

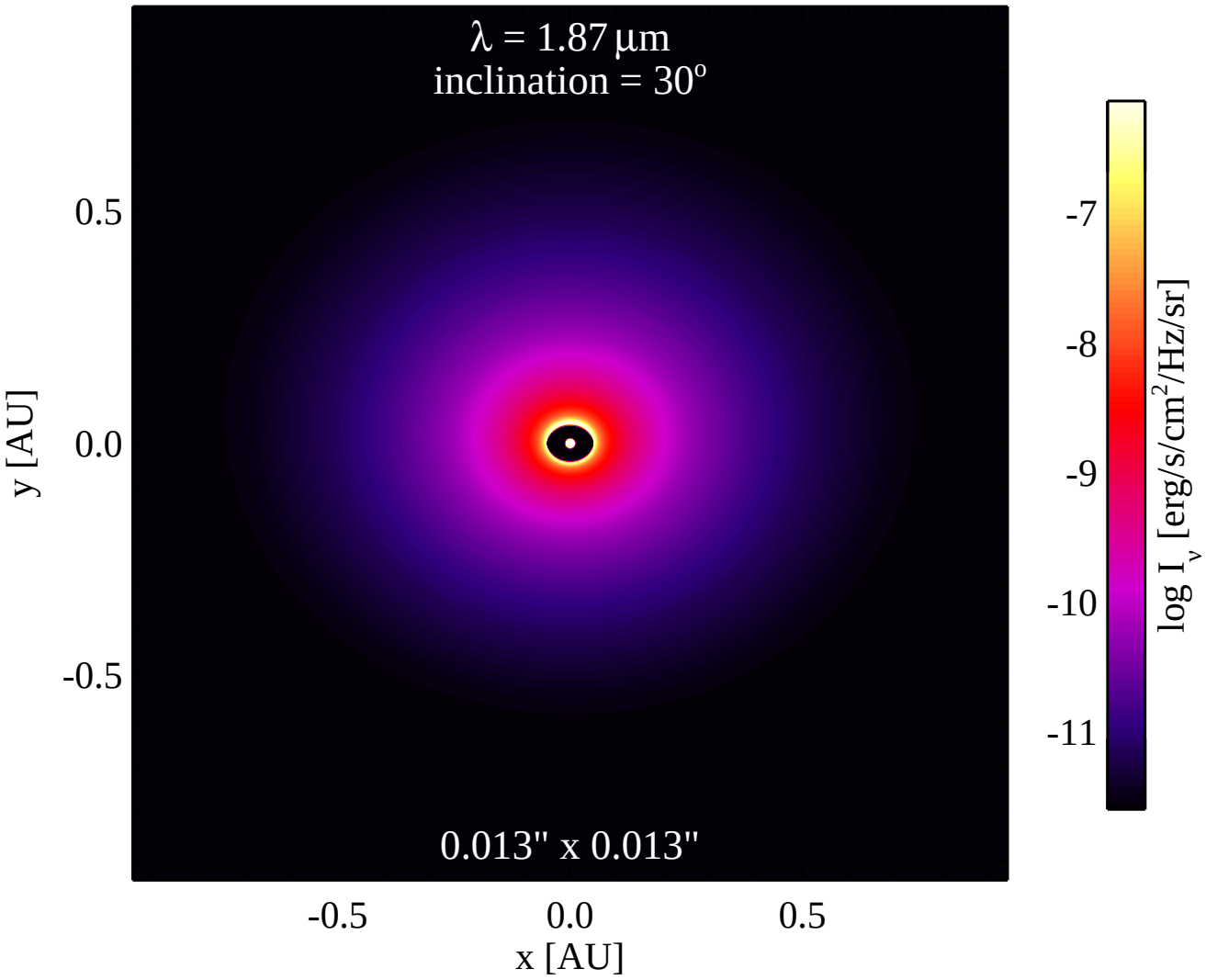

dist = 140.0 pc, incl = 30°
disk model
Spitzer IRS
0.8
0.7
0.6
0.5
0.4
0.3
0.2
F_ν [Jy]
4
6
8
10
12
14
λ [μm]

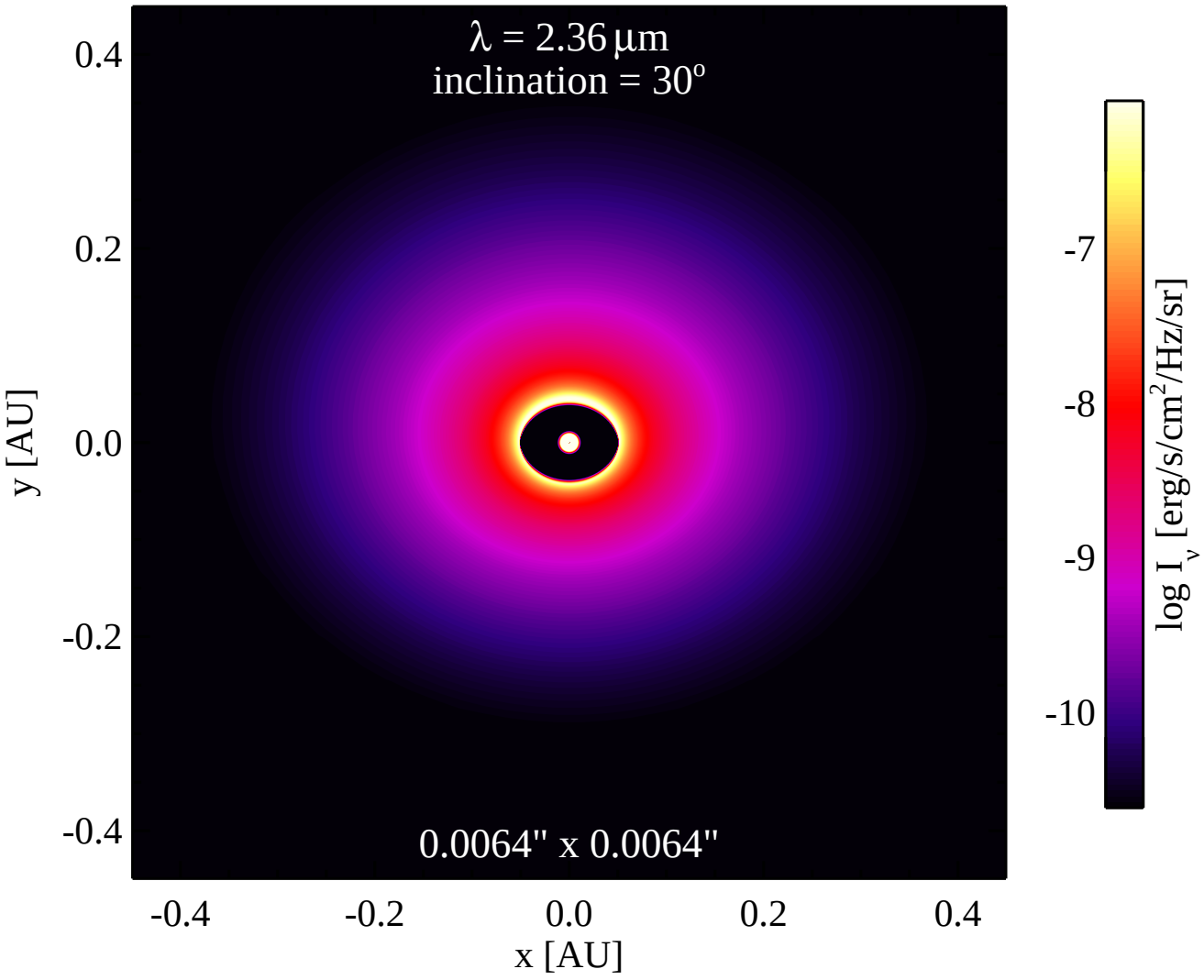

85%
15%
10.0
1.0
0.1
r [AU]
0.1
1.0
10.0
100.0
1000.0
10000.0
λ [μm]

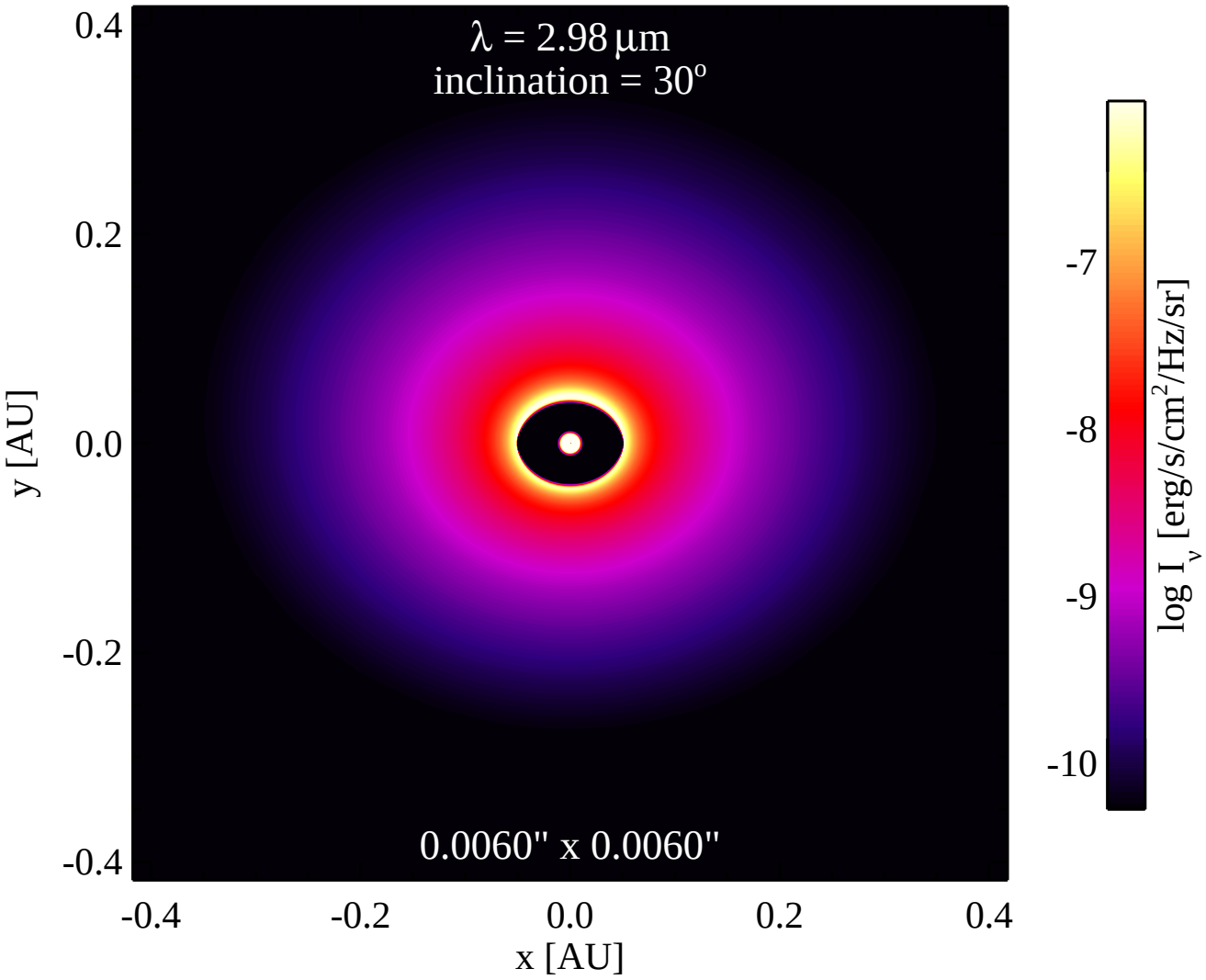

0.4
0.2
0.0
-0.2
-0.4
z/r
1µm
10µm
3µm
6µm
30µm
60µm
100µm
200µm
1000µm
AV=10
AV=1
AV=10
AV=1
4
6
8
10
12
log n<H> [cm-3]
0.1
1.0
10.0
100.0
r [AU]

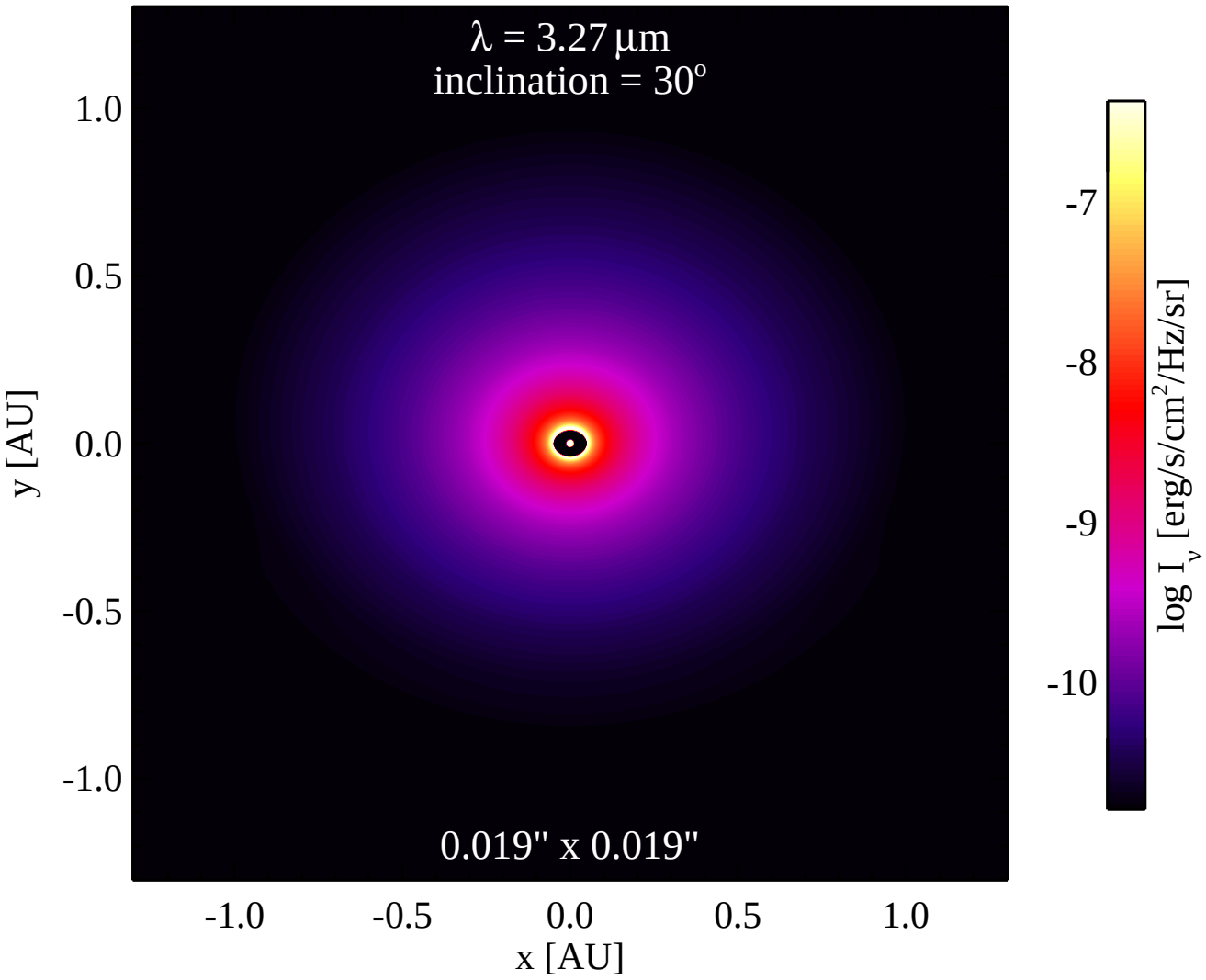

λ = 1.17 μm
inclination = 30°
0.072" x 0.072"
4
2
0
-2
-4
y [AU]
-4
-2
0
2
4
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

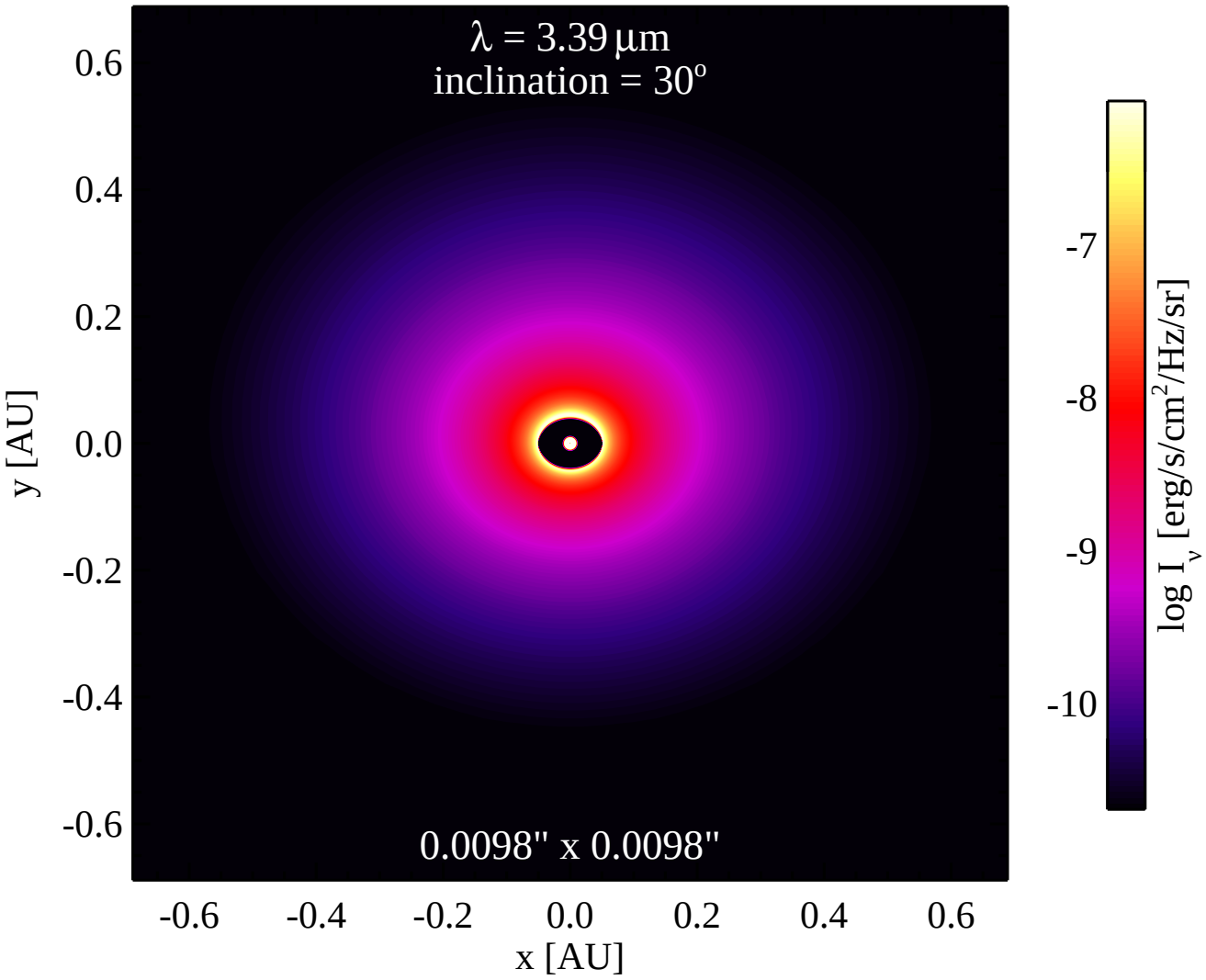

λ = 1.48 μm
inclination = 30°
0.040" x 0.040"
2
1
0
-1
-2
y [AU]
-2
-1
0
1
2
x [AU]
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

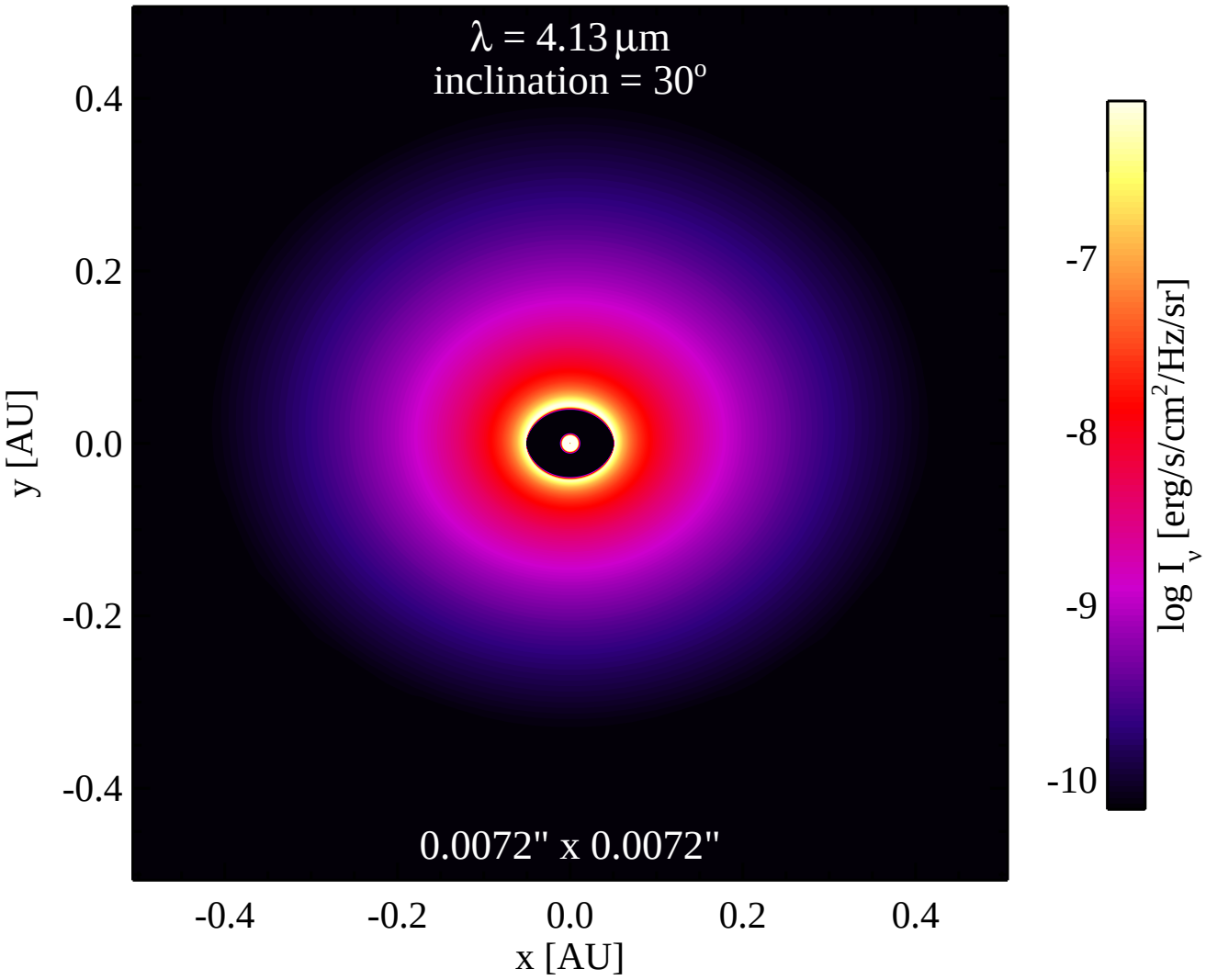

λ = 1.87 μm
inclination = 30°
0.013" x 0.013"
0.5
0.0
-0.5
y [AU]
-0.5
0.0
0.5
x [AU]
-7
-8
-9
-10
-11
log I_ν [erg/s/cm²/Hz/sr]

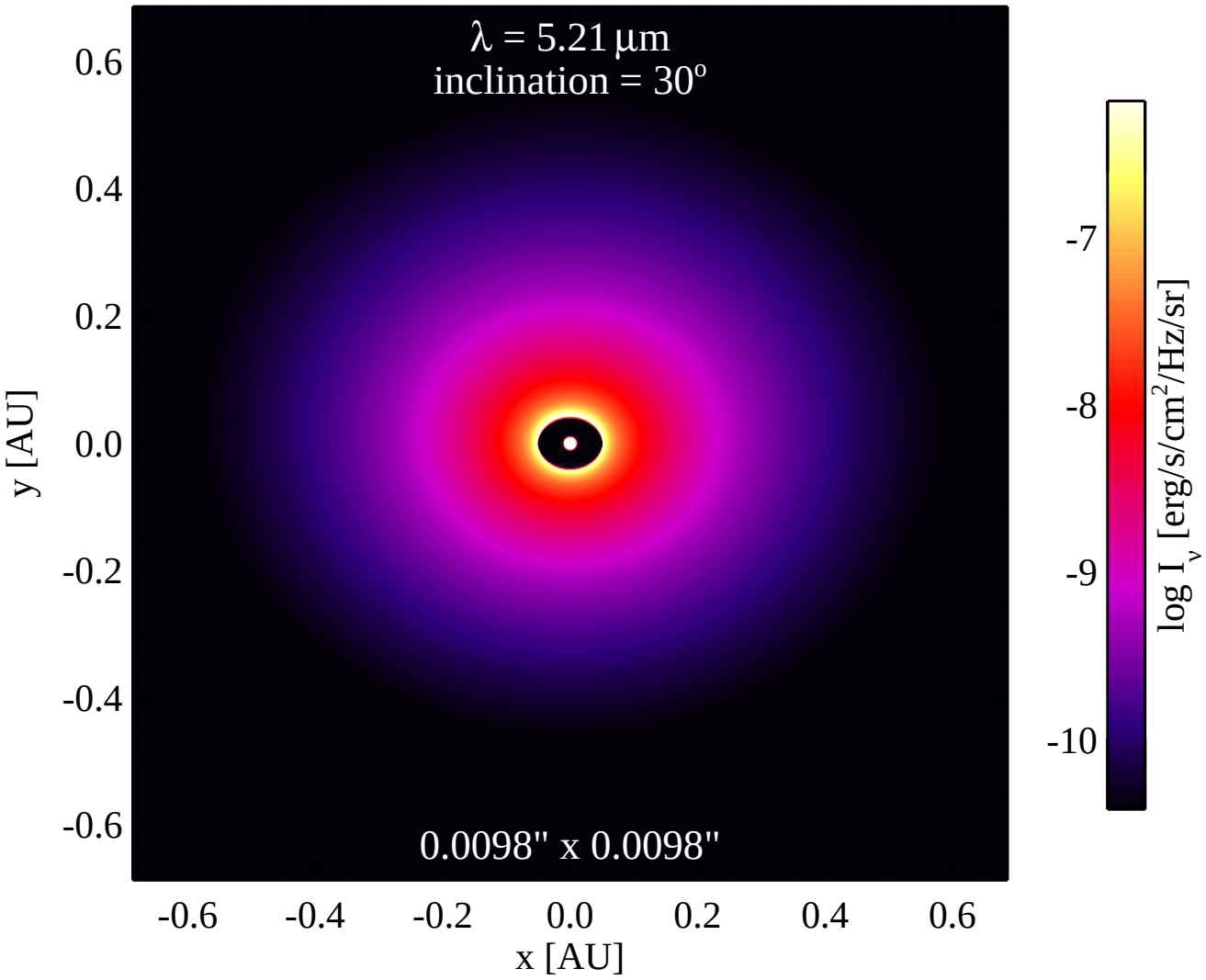

λ = 2.36 μm
inclination = 30°
0.0064" x 0.0064"
0.4
0.2
0.0
-0.2
-0.4
y [AU]
-0.4
-0.2
0.0
0.2
0.4
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

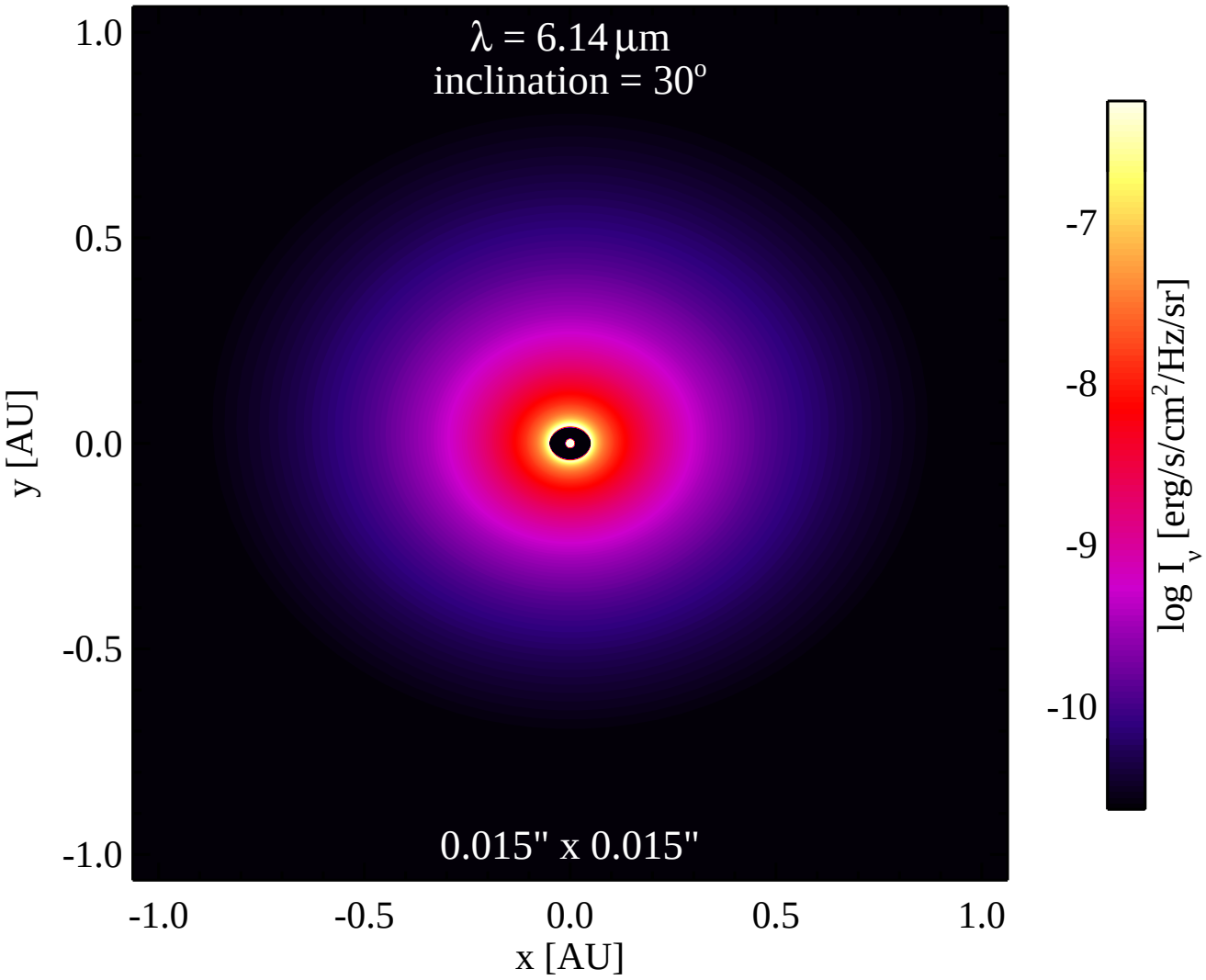

λ = 2.98 μm
inclination = 30°
0.0060" x 0.0060"
0.4
0.2
0.0
-0.2
-0.4
y [AU]
-0.4
-0.2
0.0
0.2
0.4
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

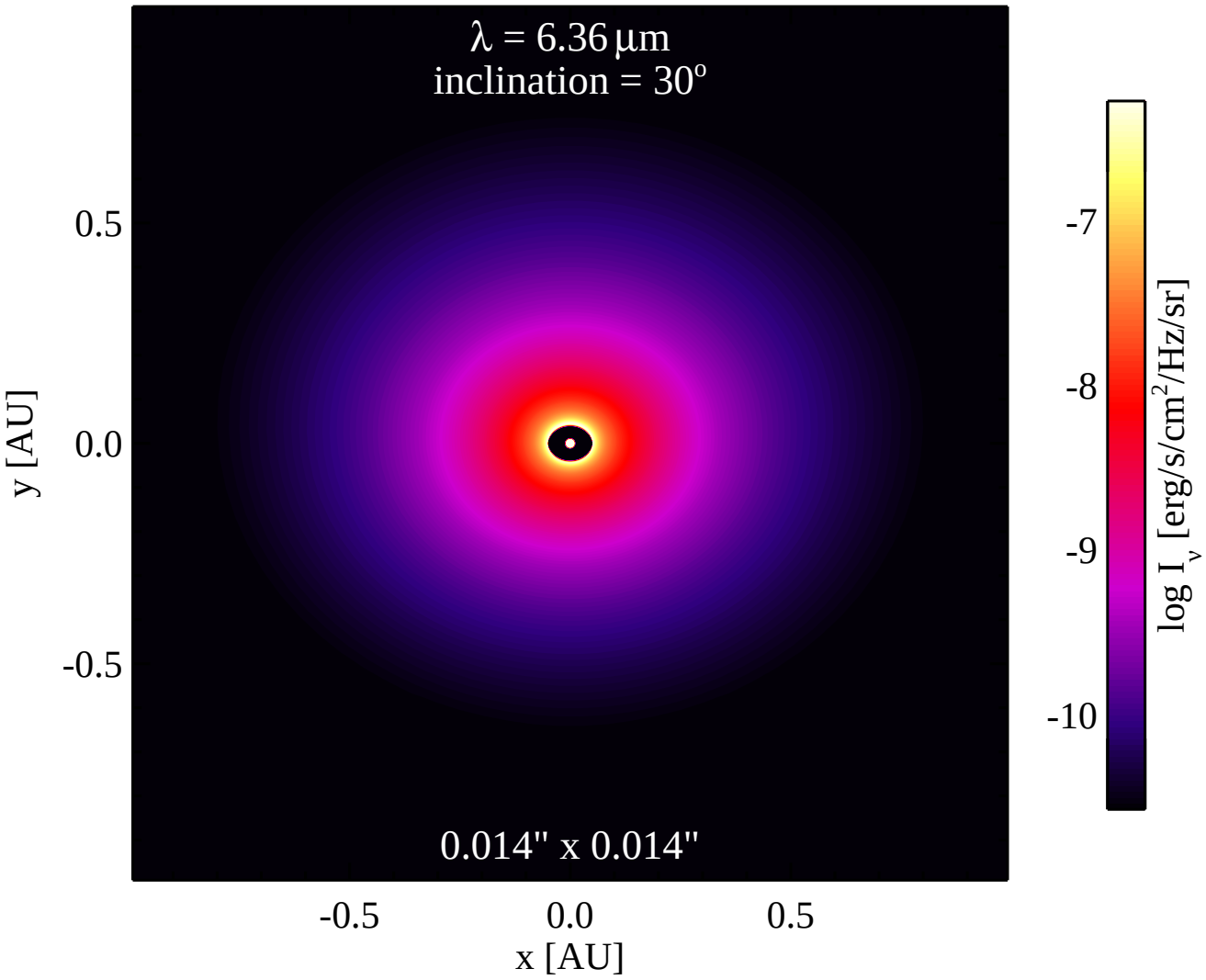

λ = 3.27 μm
inclination = 30°
0.019" x 0.019"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

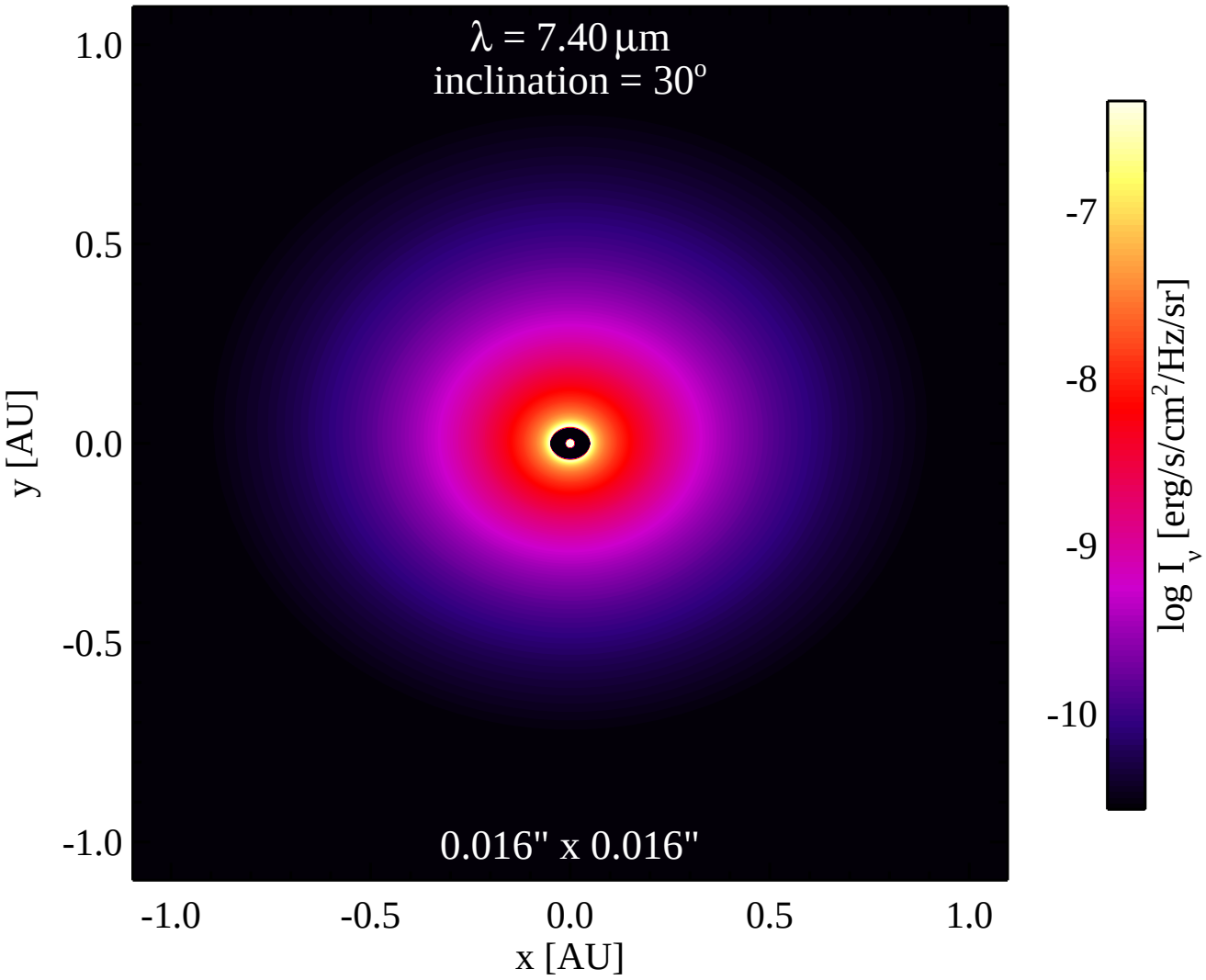

λ = 3.39 μm
inclination = 30°
0.0098" x 0.0098"
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
y [AU]
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

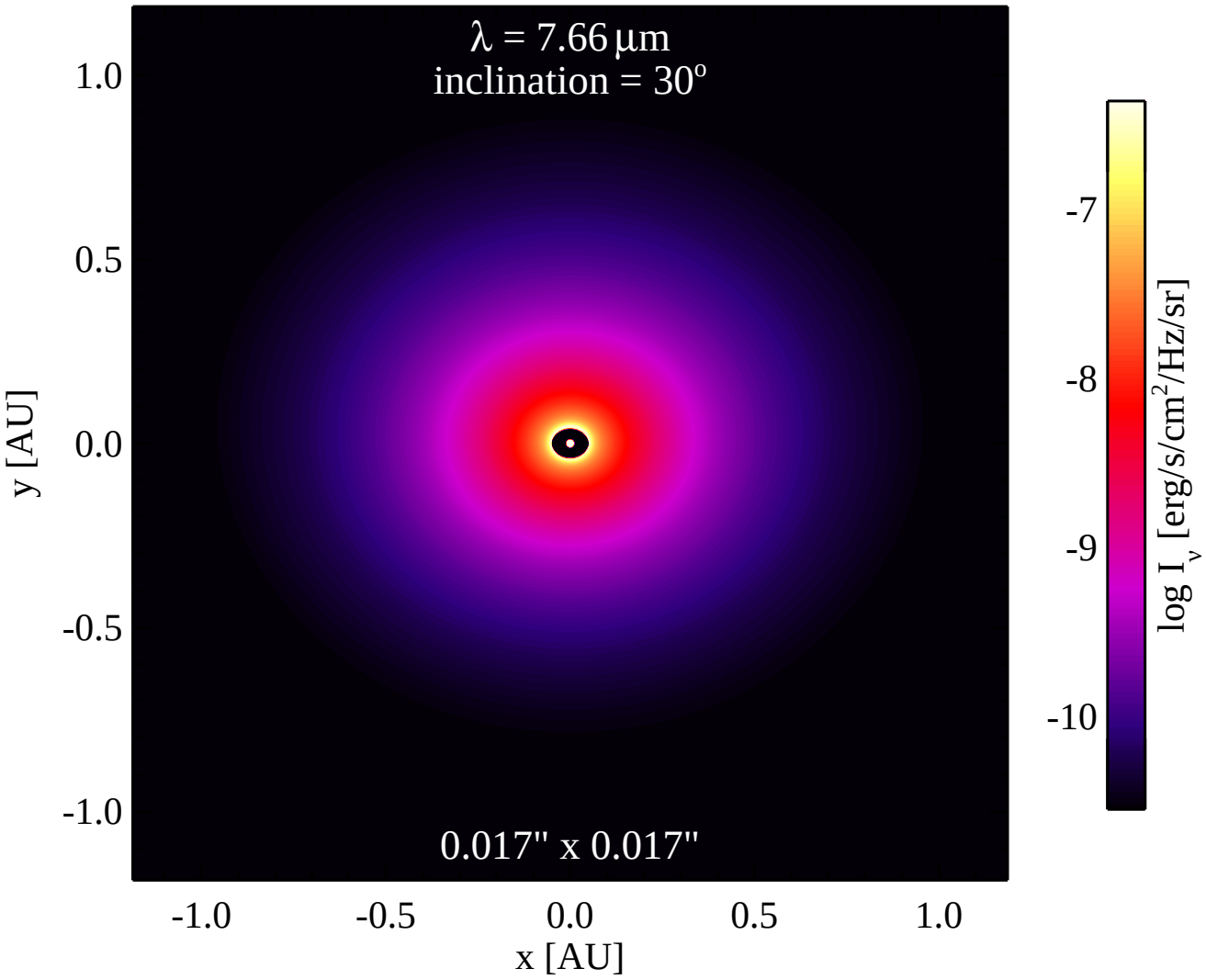

λ = 4.13 μm
inclination = 30°
0.0072" x 0.0072"
0.4
0.2
0.0
-0.2
-0.4
y [AU]
-0.4
-0.2
0.0
0.2
0.4
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

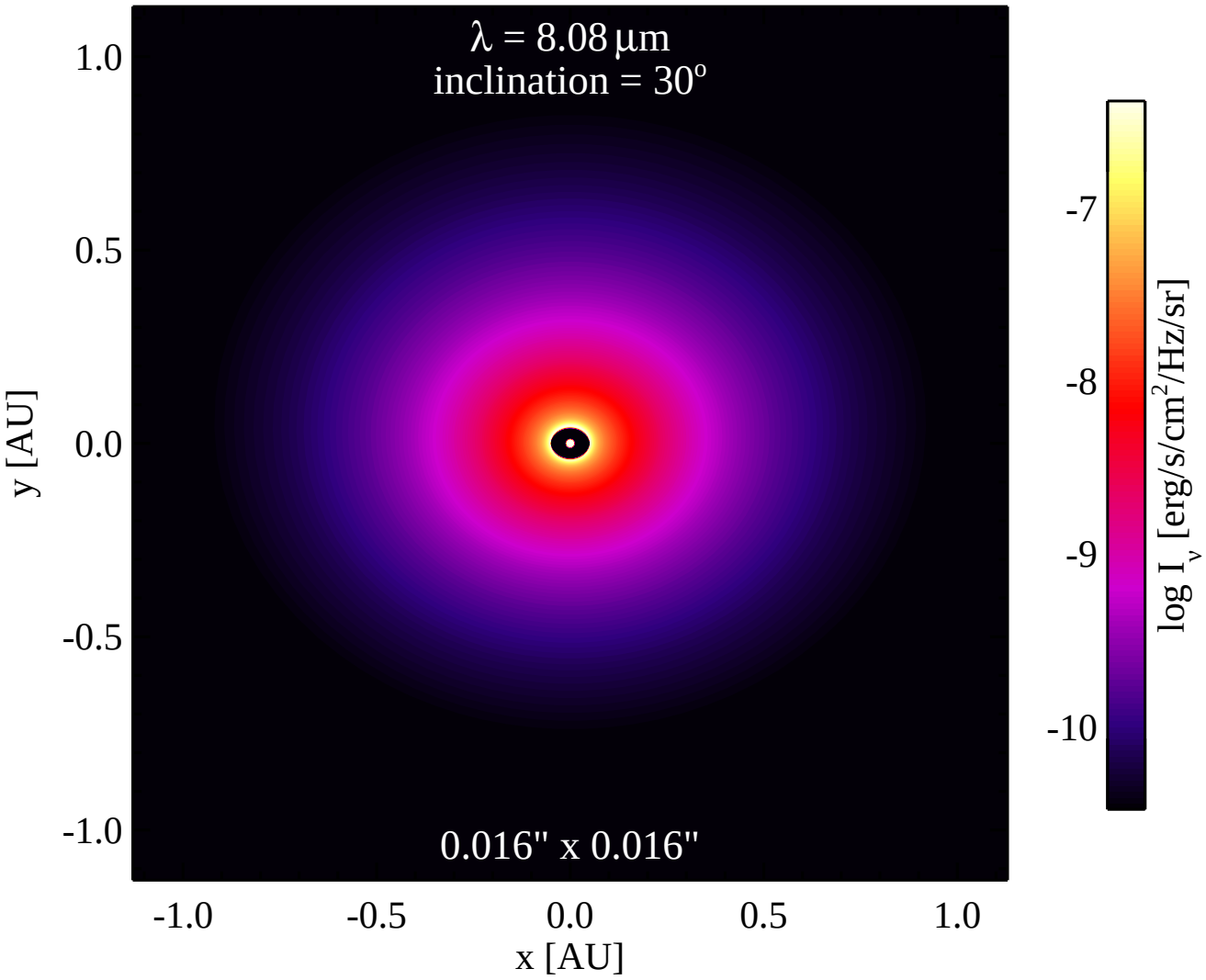

λ = 5.21 μm
inclination = 30°
0.0098" x 0.0098"
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
y [AU]
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

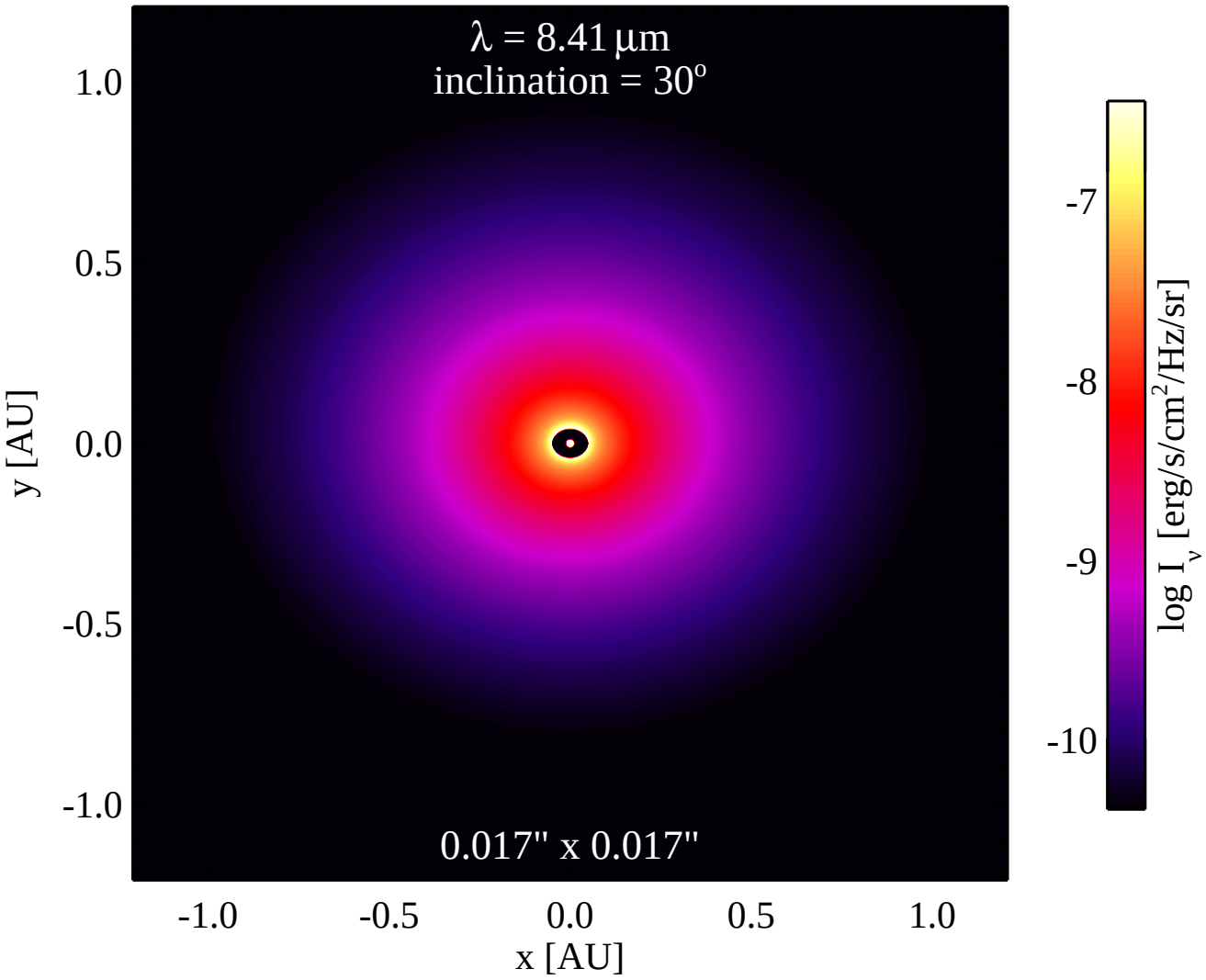

λ = 6.14 μm
inclination = 30°
0.015" x 0.015"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

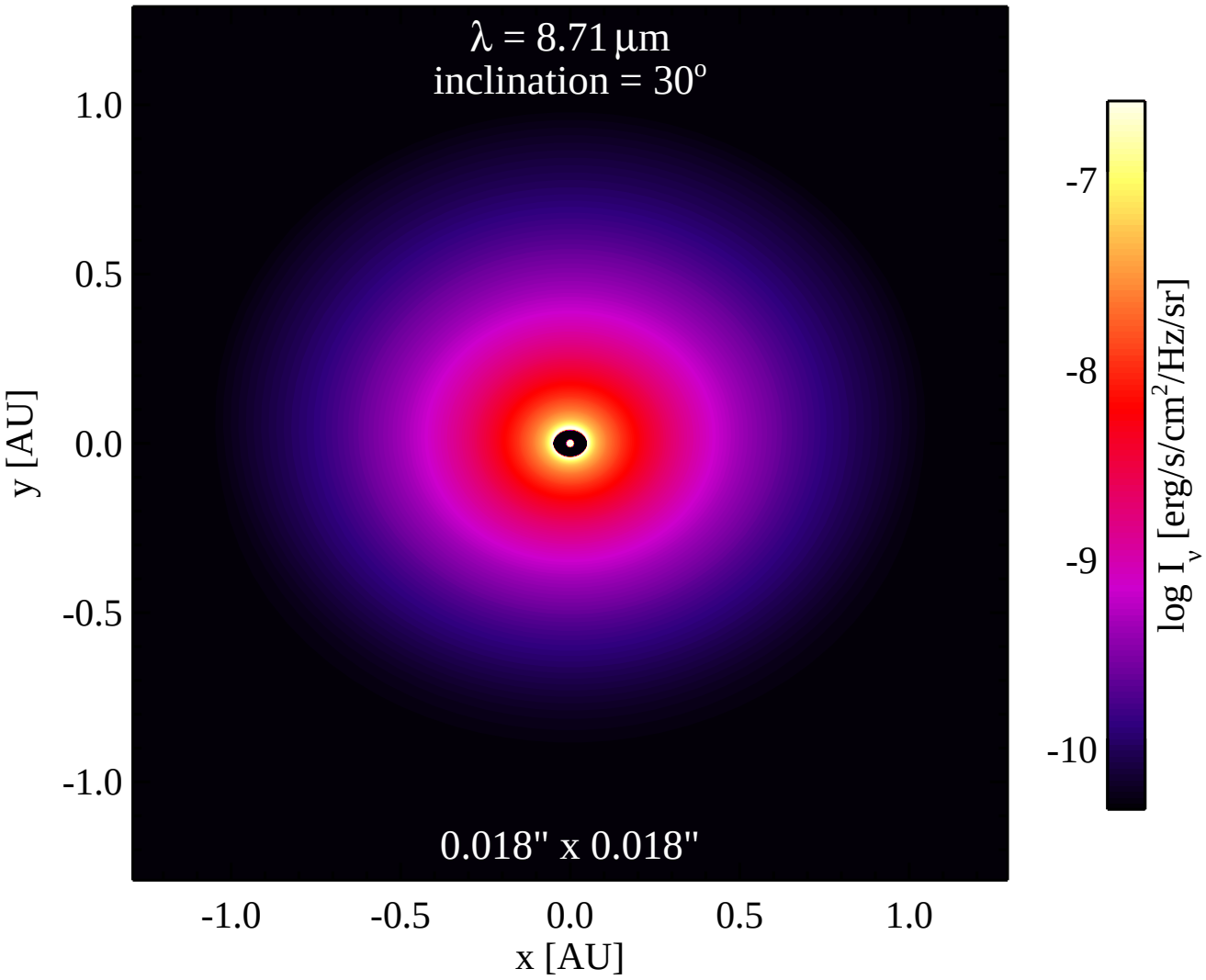

λ = 6.36 μm
inclination = 30°
0.014" x 0.014"
0.5
0.0
-0.5
y [AU]
-0.5
0.0
0.5
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

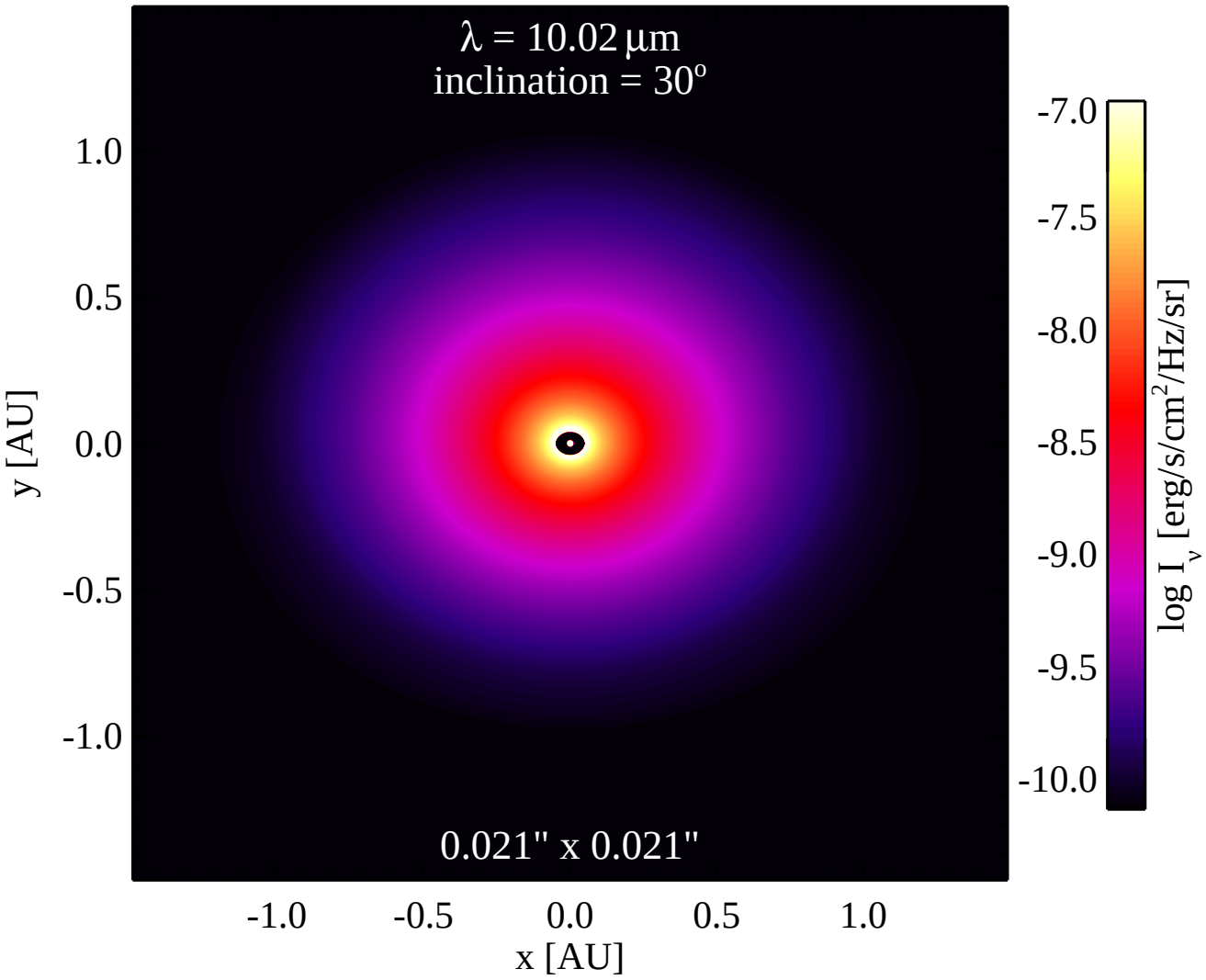

λ = 7.40 μm
inclination = 30°
0.016" x 0.016"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

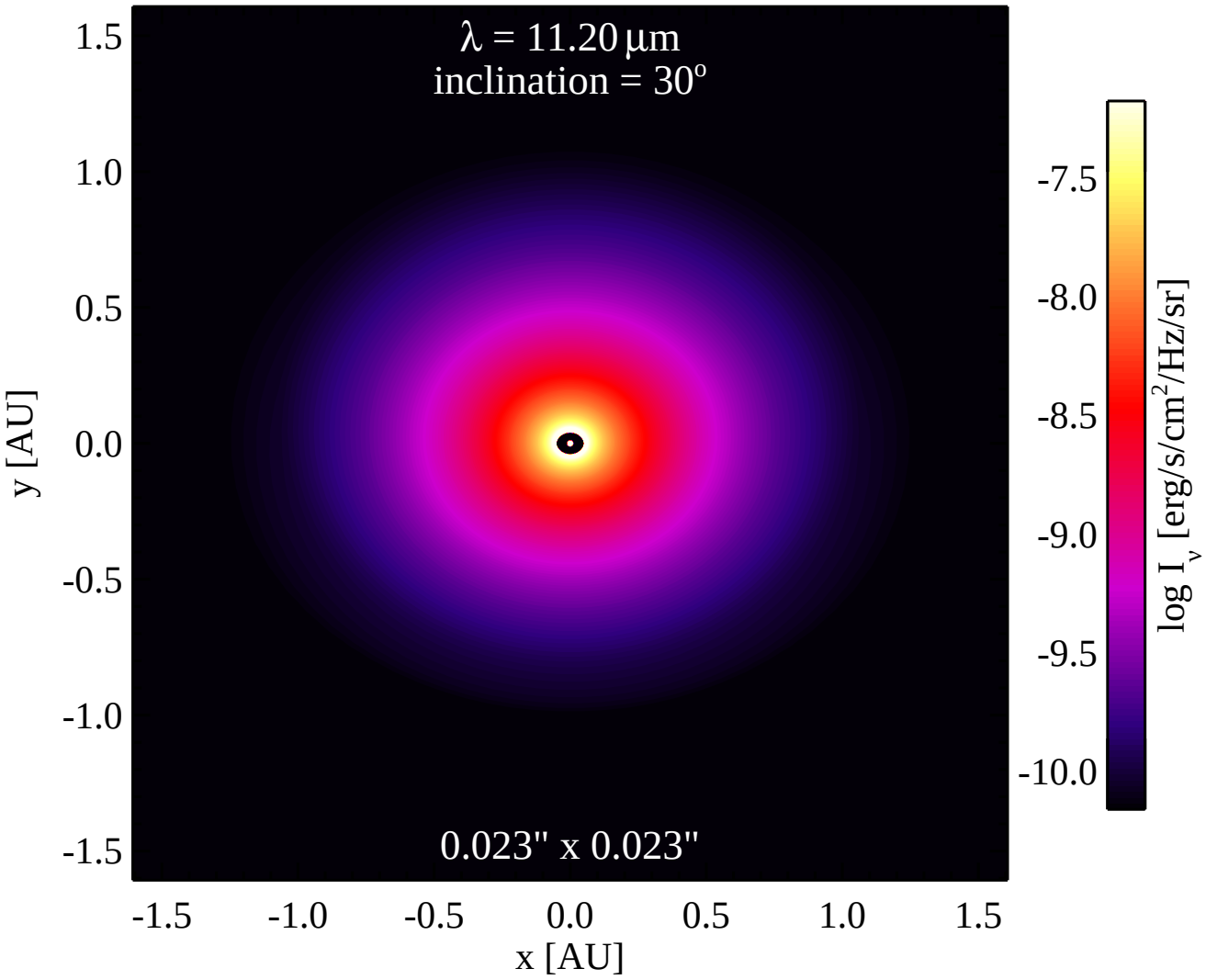

λ = 7.66 μm
inclination = 30°
0.017" x 0.017"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

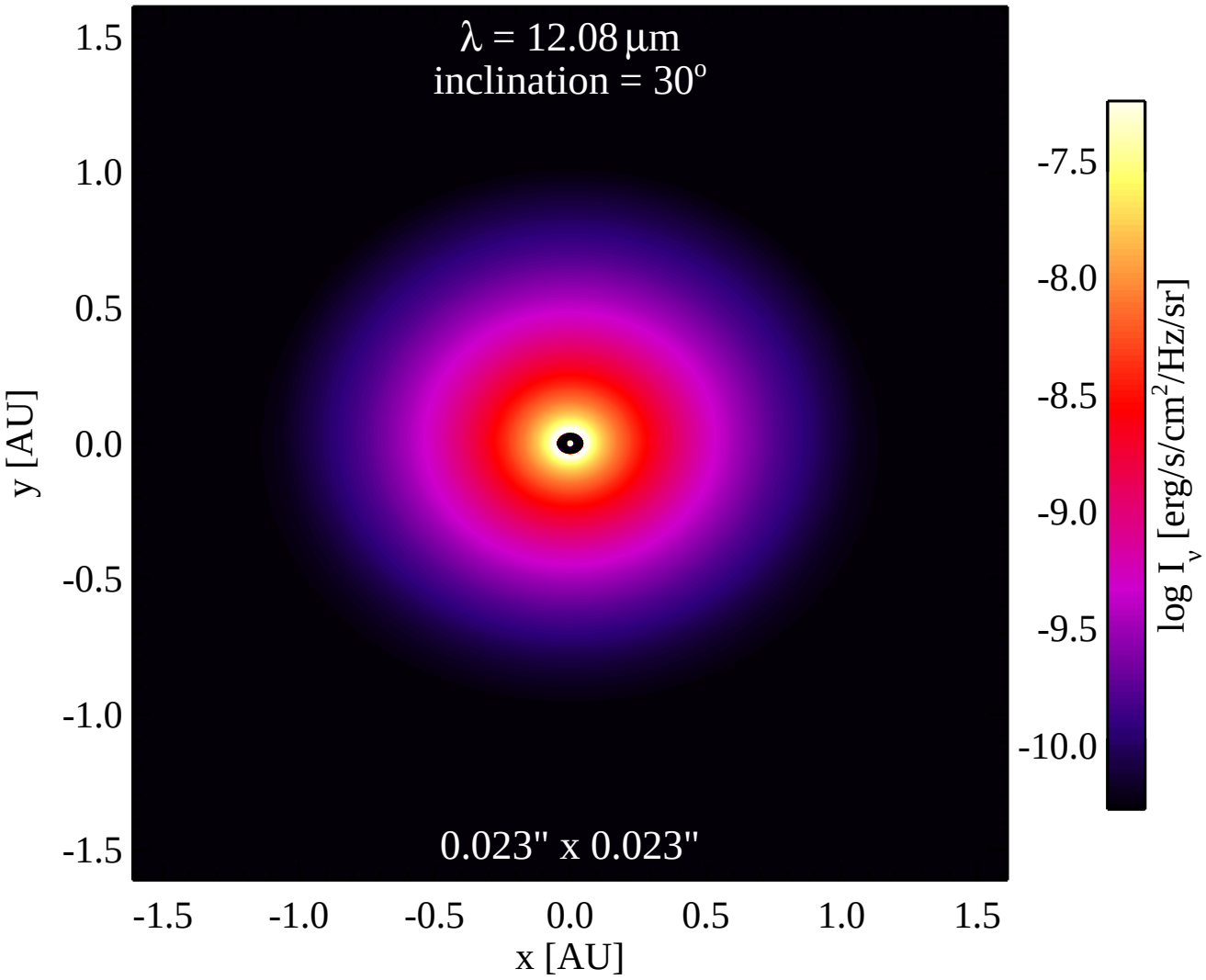

λ = 8.08 μm
inclination = 30°
0.016" x 0.016"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

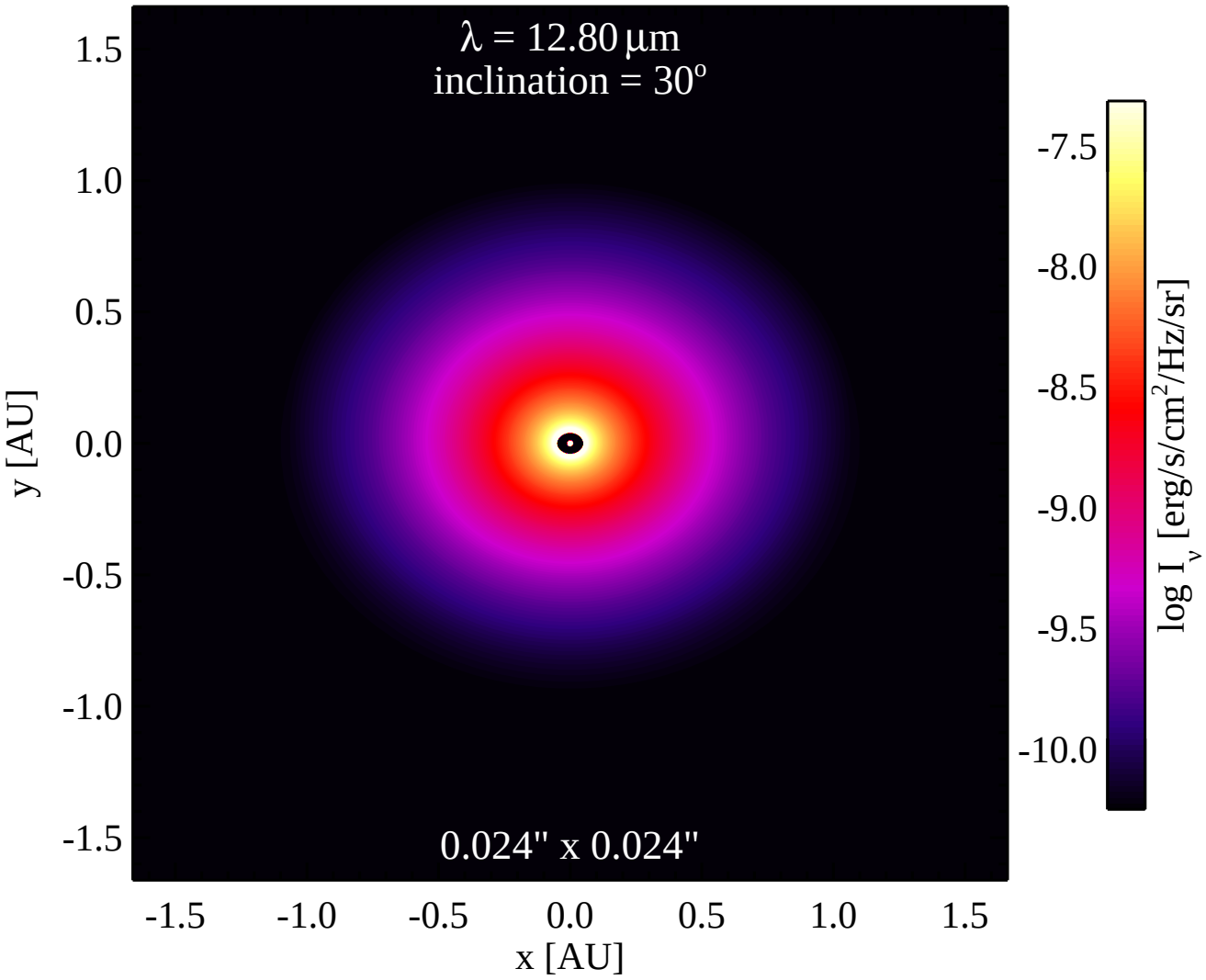

λ = 8.41 μm
inclination = 30°
0.017" x 0.017"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

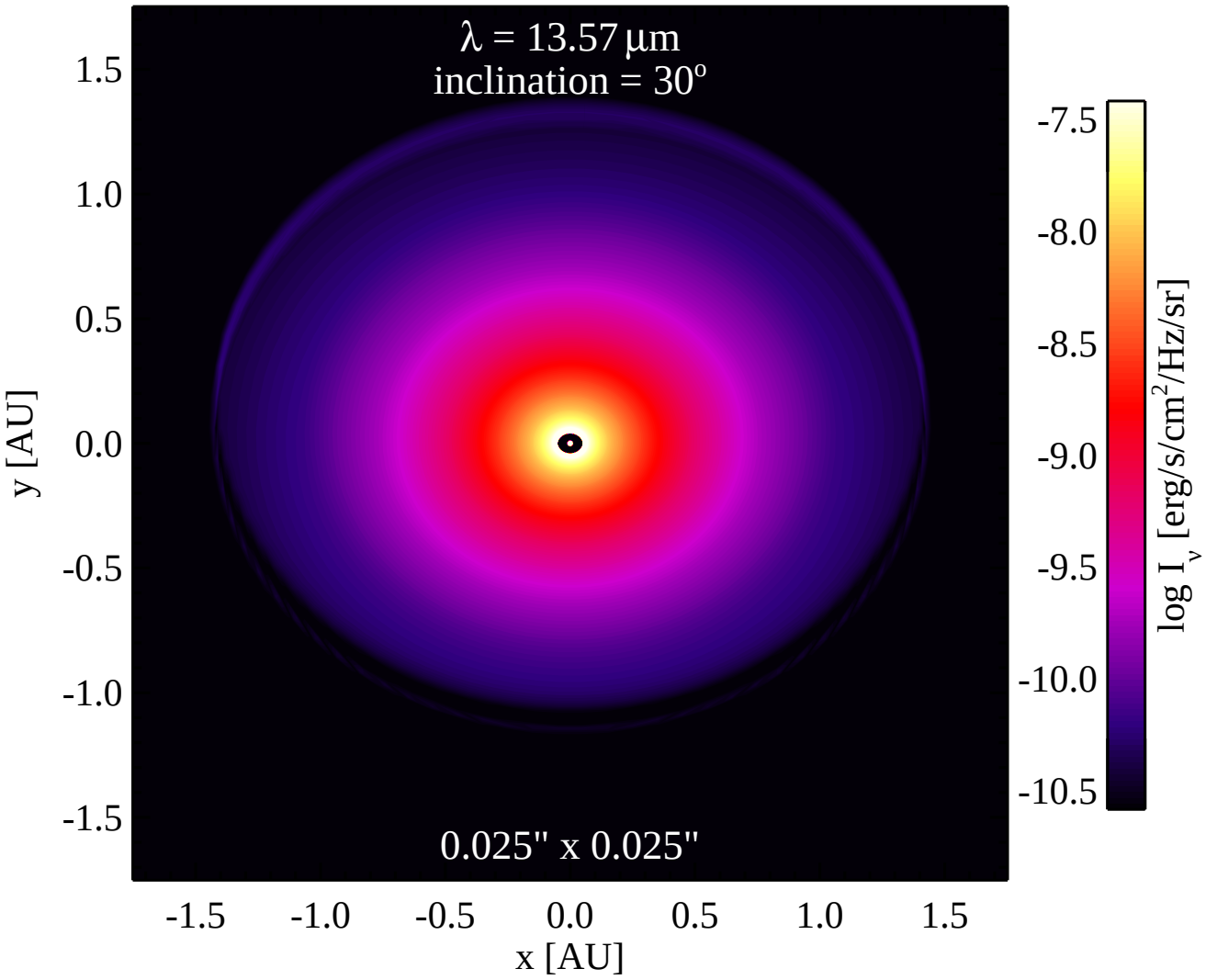

λ = 8.71 μm
inclination = 30°
0.018" x 0.018"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

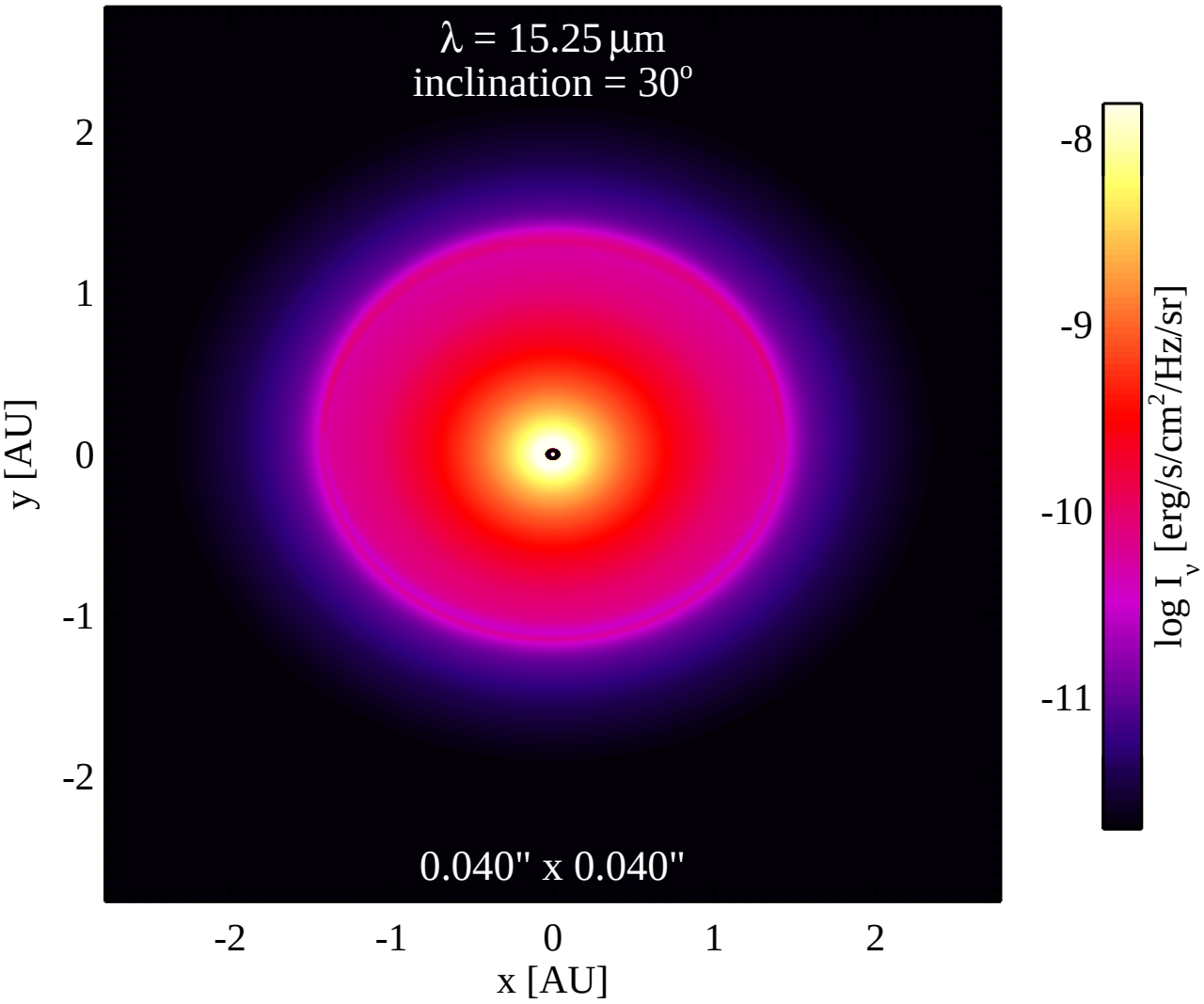

λ = 10.02 μm
inclination = 30°
0.021" x 0.021"
1.0
0.5
0.0
-0.5
-1.0
y [AU]
-1.0
-0.5
0.0
0.5
1.0
x [AU]
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
-10.0
log I_ν [erg/s/cm²/Hz/sr]

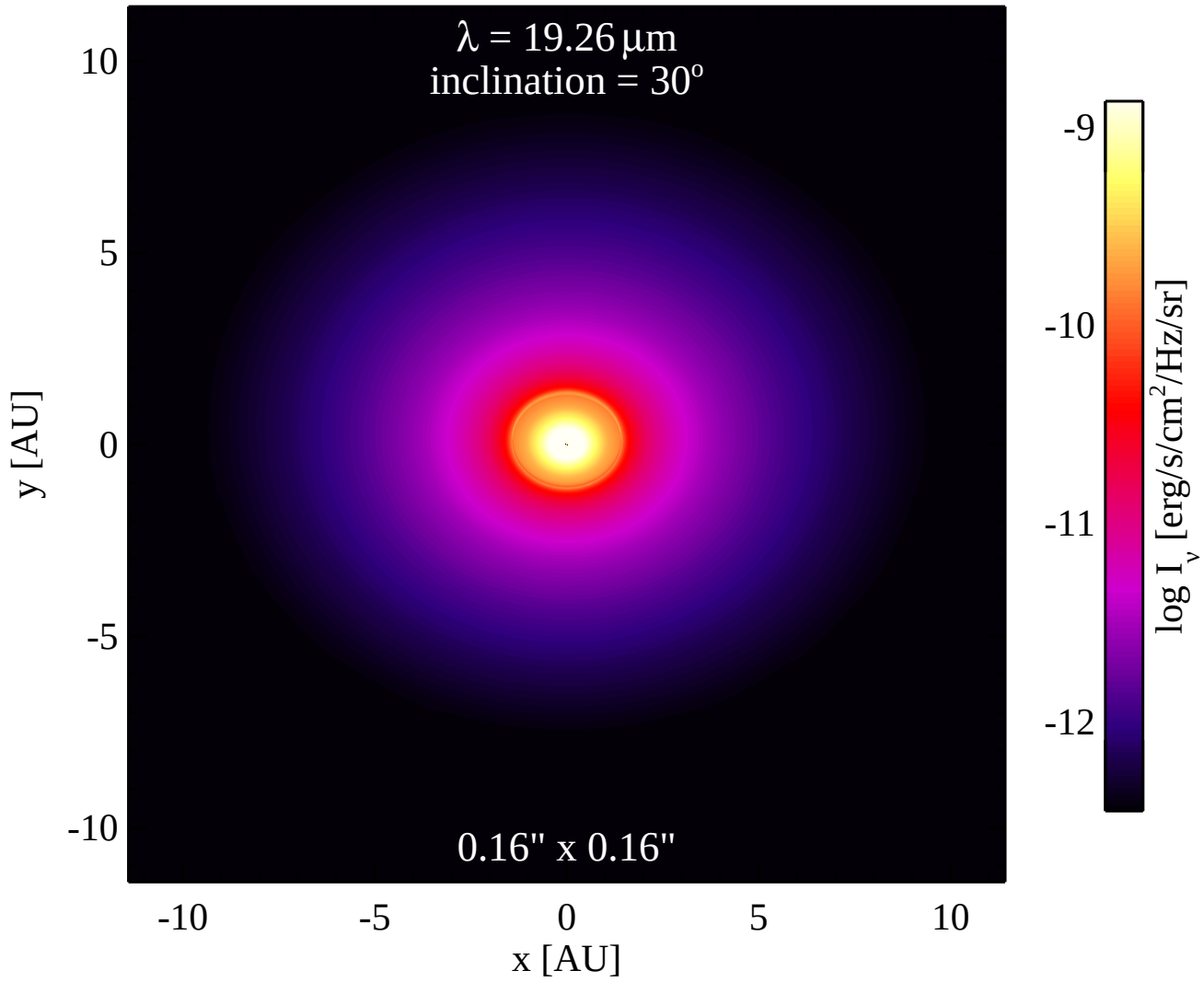

λ = 11.20 μm
inclination = 30°
0.023" x 0.023"
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
y [AU]
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
x [AU]
-7.5
-8.0
-8.5
-9.0
-9.5
-10.0
log I_ν [erg/s/cm²/Hz/sr]

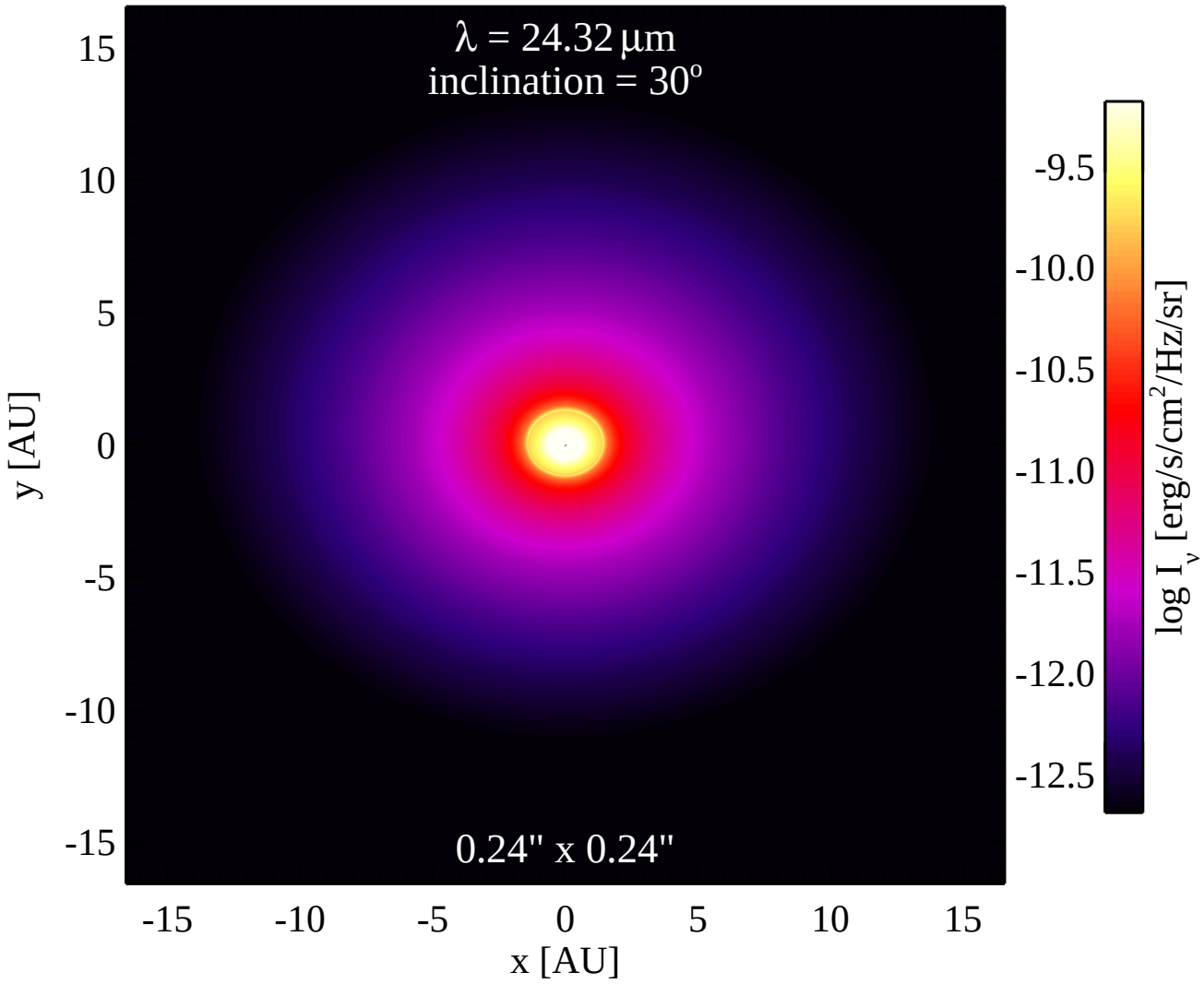

λ = 12.08 μm
inclination = 30°
0.023" x 0.023"
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
y [AU]
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
x [AU]
-7.5
-8.0
-8.5
-9.0
-9.5
-10.0
log I_ν [erg/s/cm²/Hz/sr]

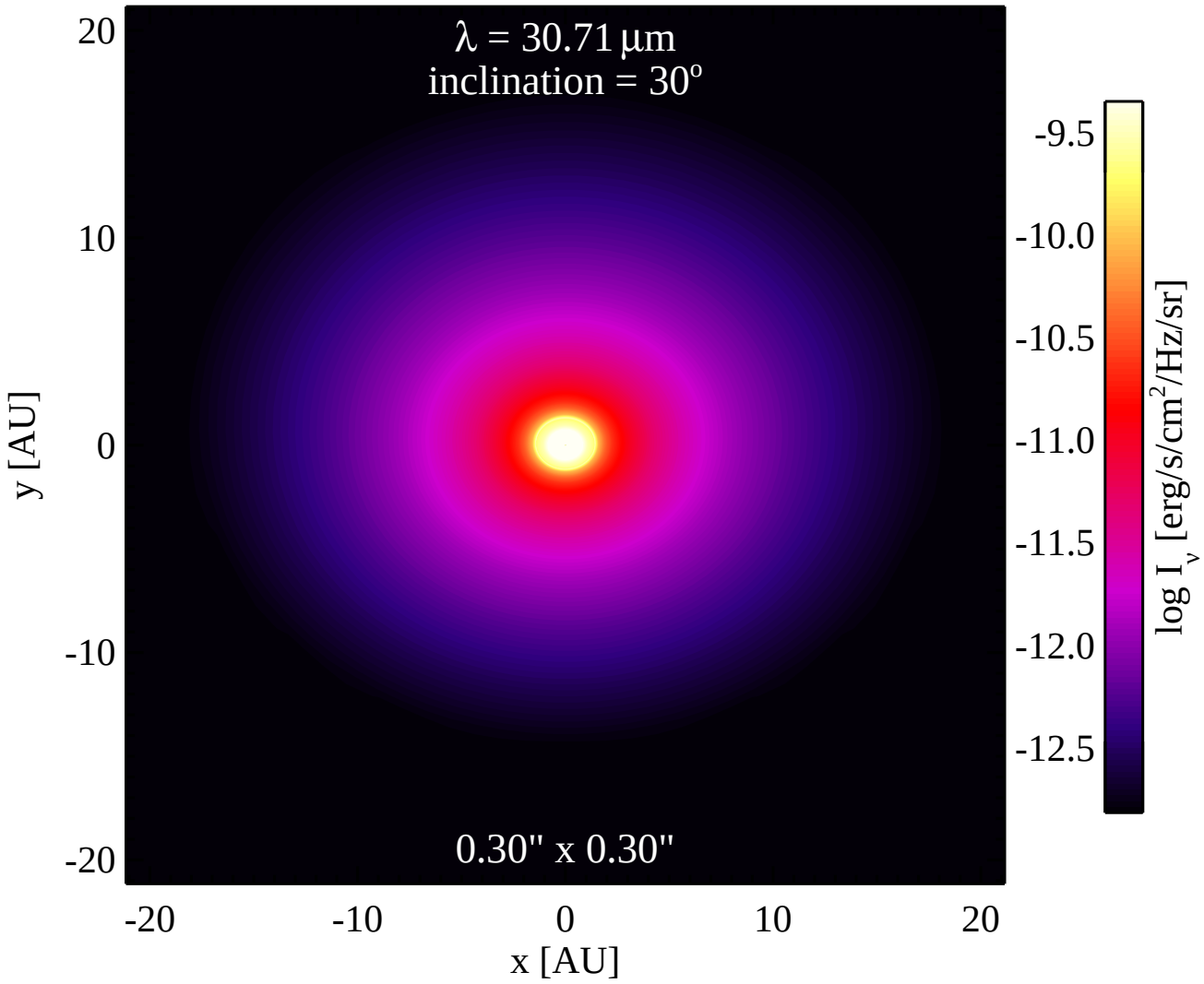

λ = 12.80 μm
inclination = 30°
0.024" x 0.024"
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
y [AU]
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
x [AU]
-7.5
-8.0
-8.5
-9.0
-9.5
-10.0
log I_ν [erg/s/cm²/Hz/sr]

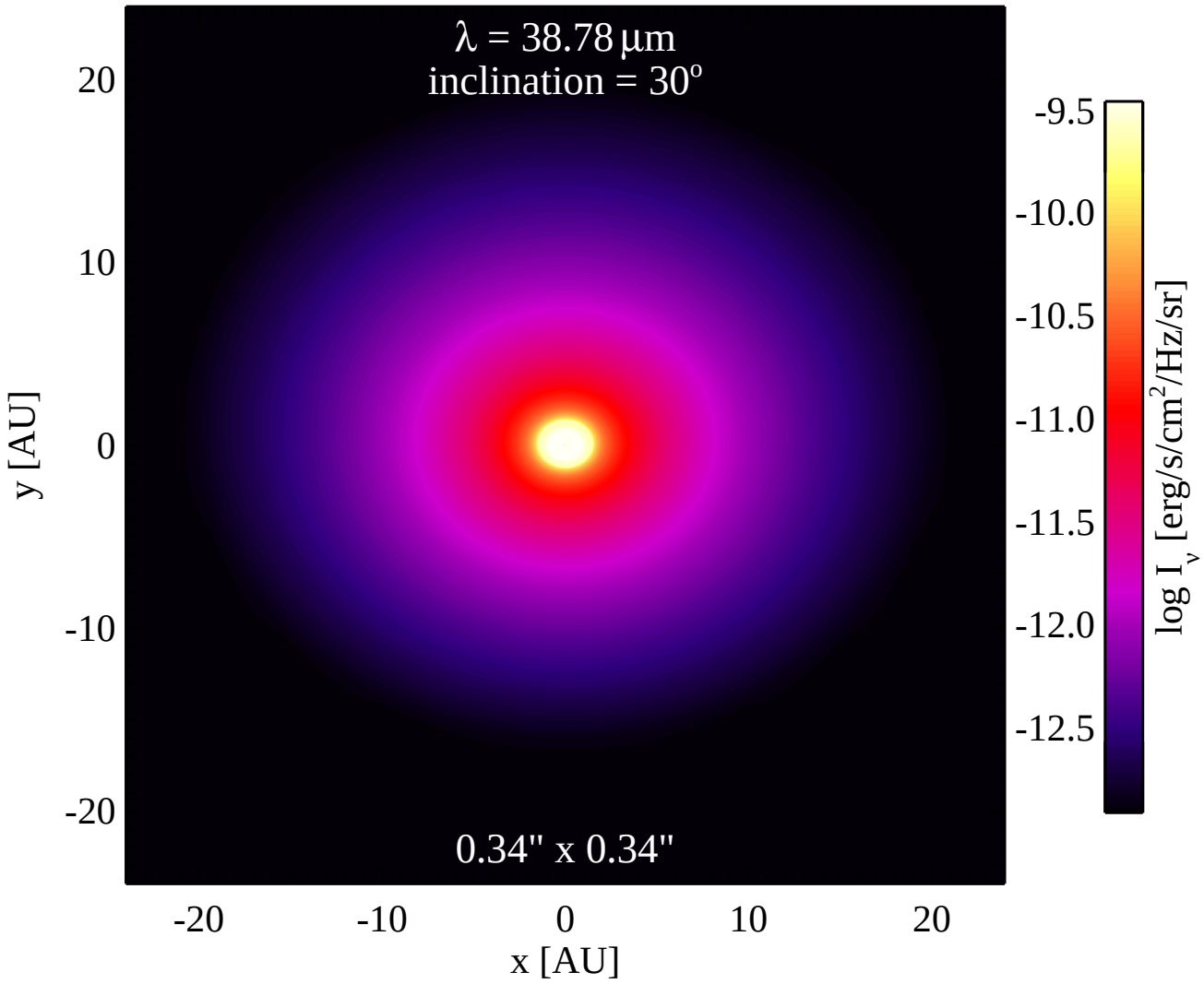

λ = 13.57 μm
inclination = 30°
0.025" x 0.025"
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
y [AU]
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
x [AU]
-7.5
-8.0
-8.5
-9.0
-9.5
-10.0
-10.5
log I_ν [erg/s/cm²/Hz/sr]

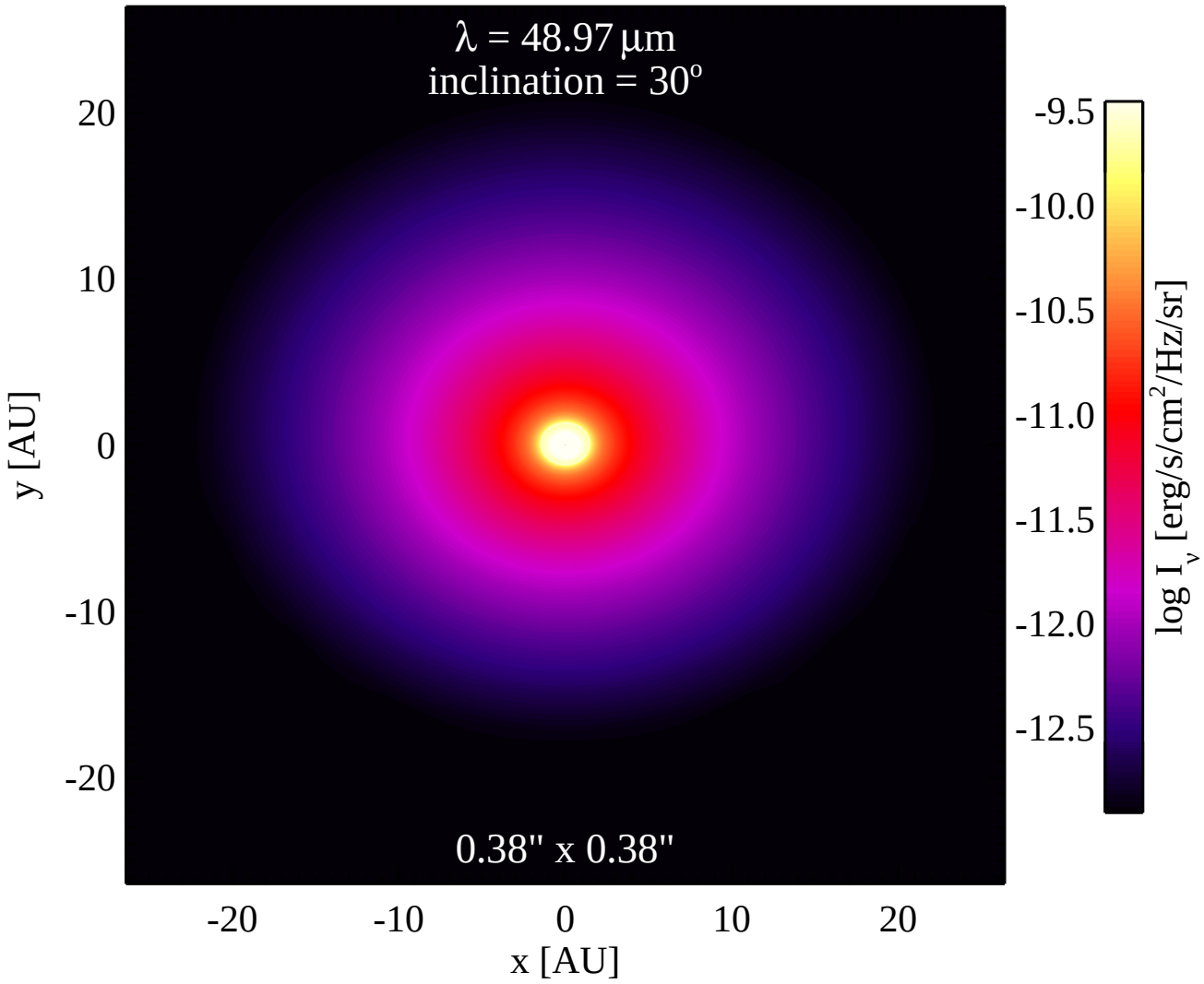

λ = 15.25 μm
inclination = 30°
0.040" x 0.040"
y [AU]
x [AU]
2
1
0
-1
-2
-2
-1
0
1
2
-8
-9
-10
-11
log I_ν [erg/s/cm²/Hz/sr]

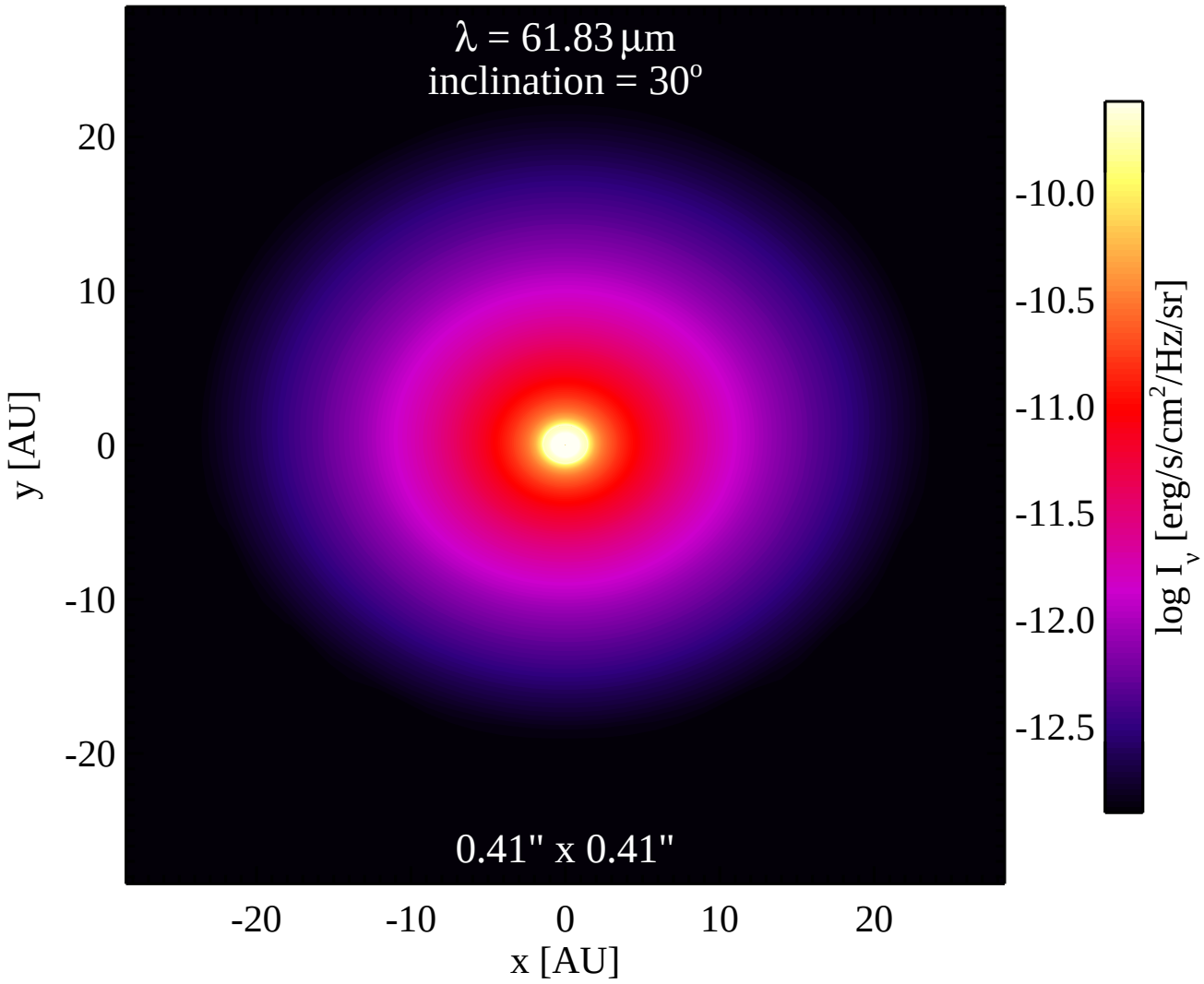

λ = 19.26 μm
inclination = 30°
0.16" x 0.16"
10
5
0
-5
-10
y [AU]
-10
-5
0
5
10
x [AU]
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

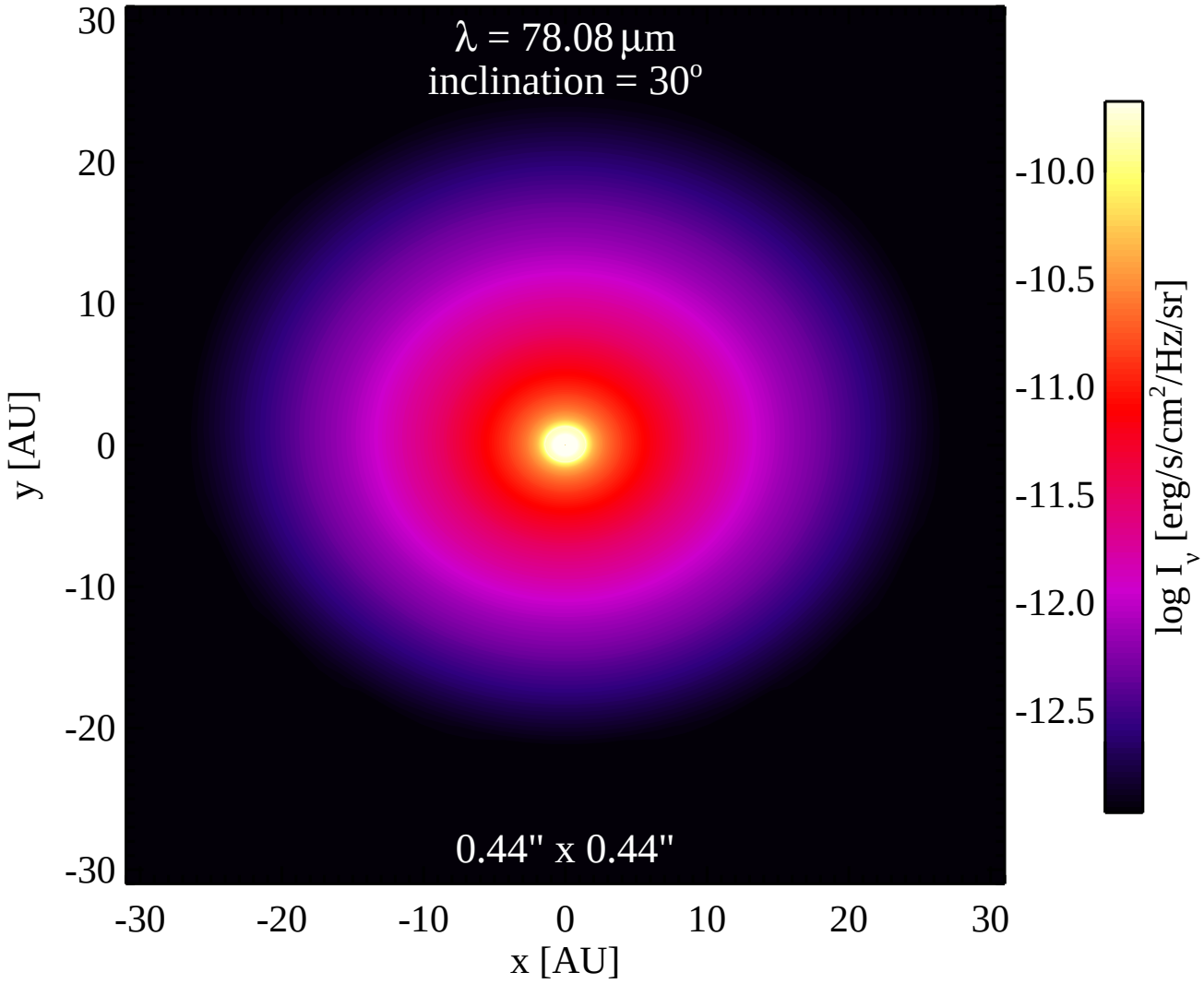

λ = 24.32 μm
inclination = 30°
0.24" x 0.24"
15
10
5
0
-5
-10
-15
y [AU]
-15
-10
-5
0
5
10
15
x [AU]
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

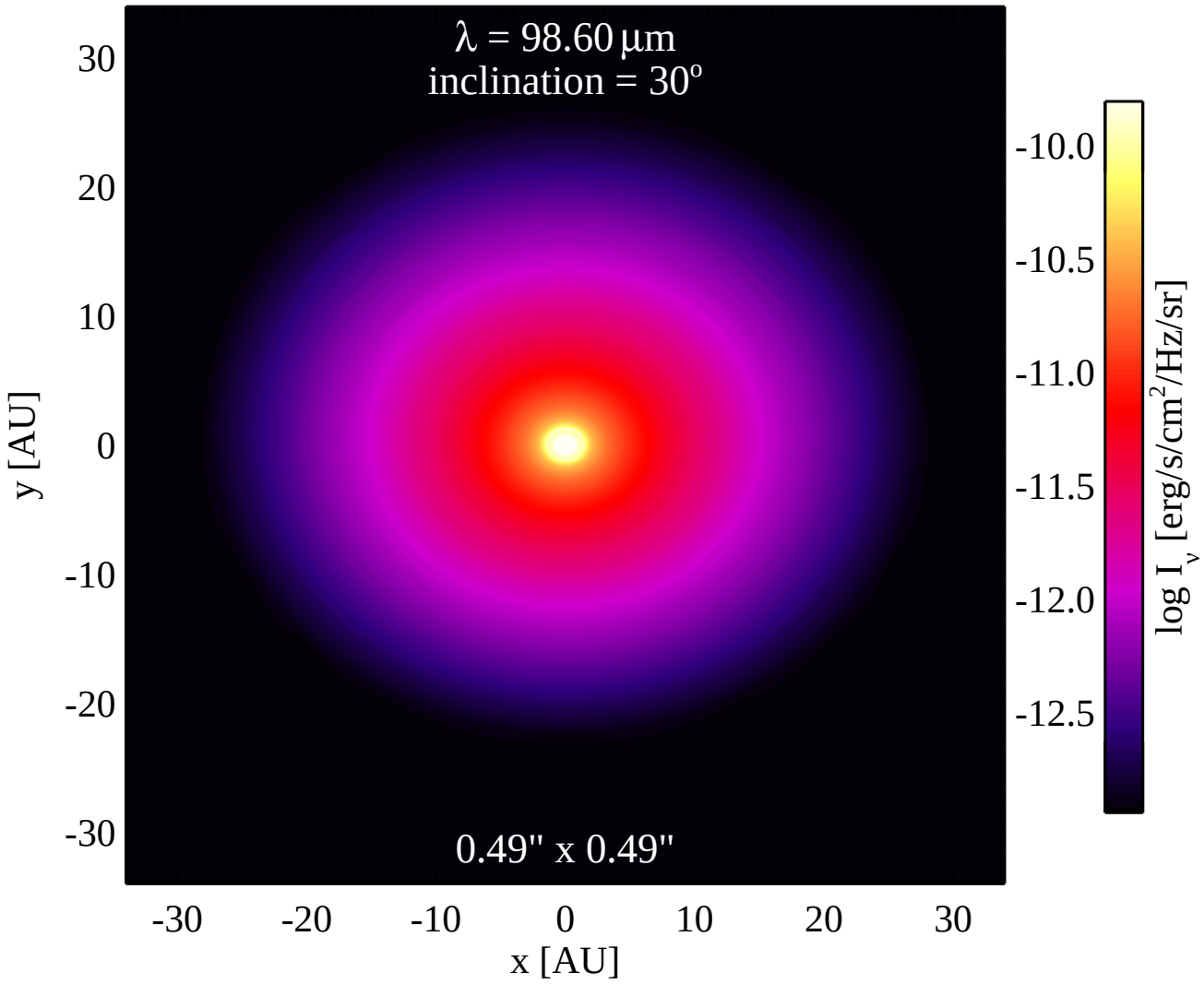

λ = 30.71 μm
inclination = 30°
0.30" x 0.30"
20
10
0
-10
-20
y [AU]
-20
-10
0
10
20
x [AU]
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

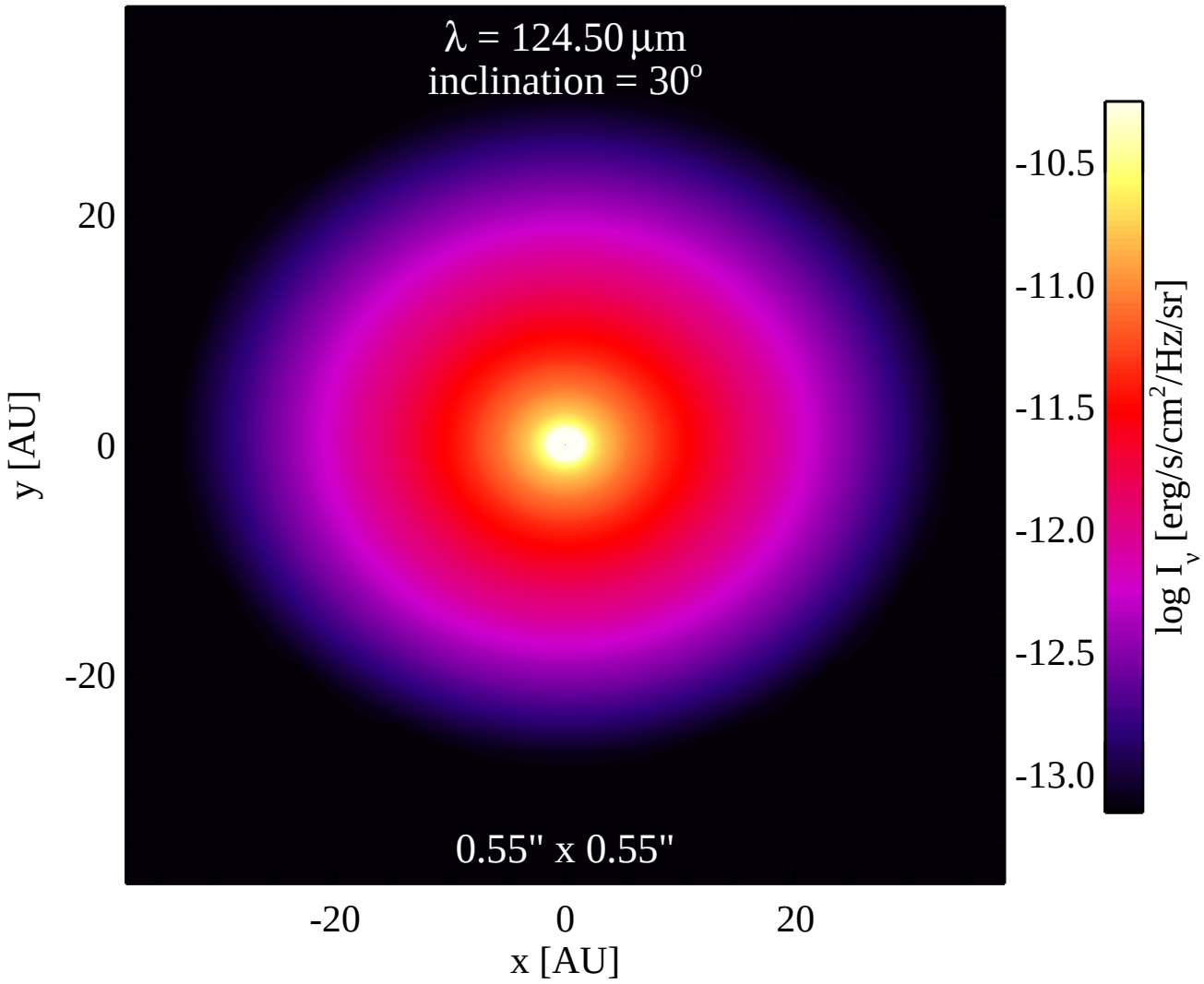

λ = 38.78 μm
inclination = 30°
0.34" x 0.34"
20
10
0
-10
-20
y [AU]
-20
-10
0
10
20
x [AU]
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

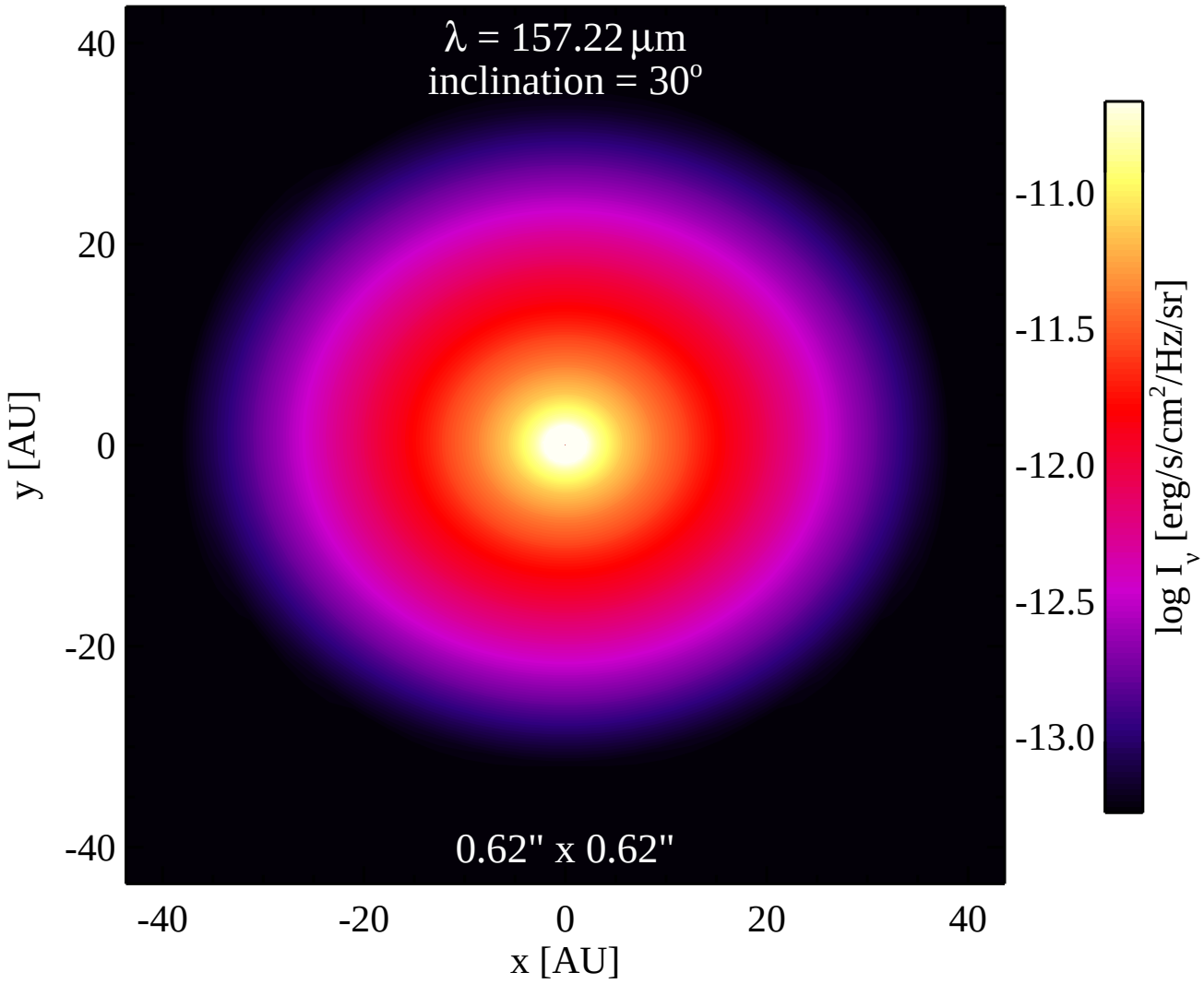

λ = 48.97 μm
inclination = 30°
0.38" x 0.38"
20
10
0
-10
-20
y [AU]
-20
-10
0
10
20
x [AU]
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

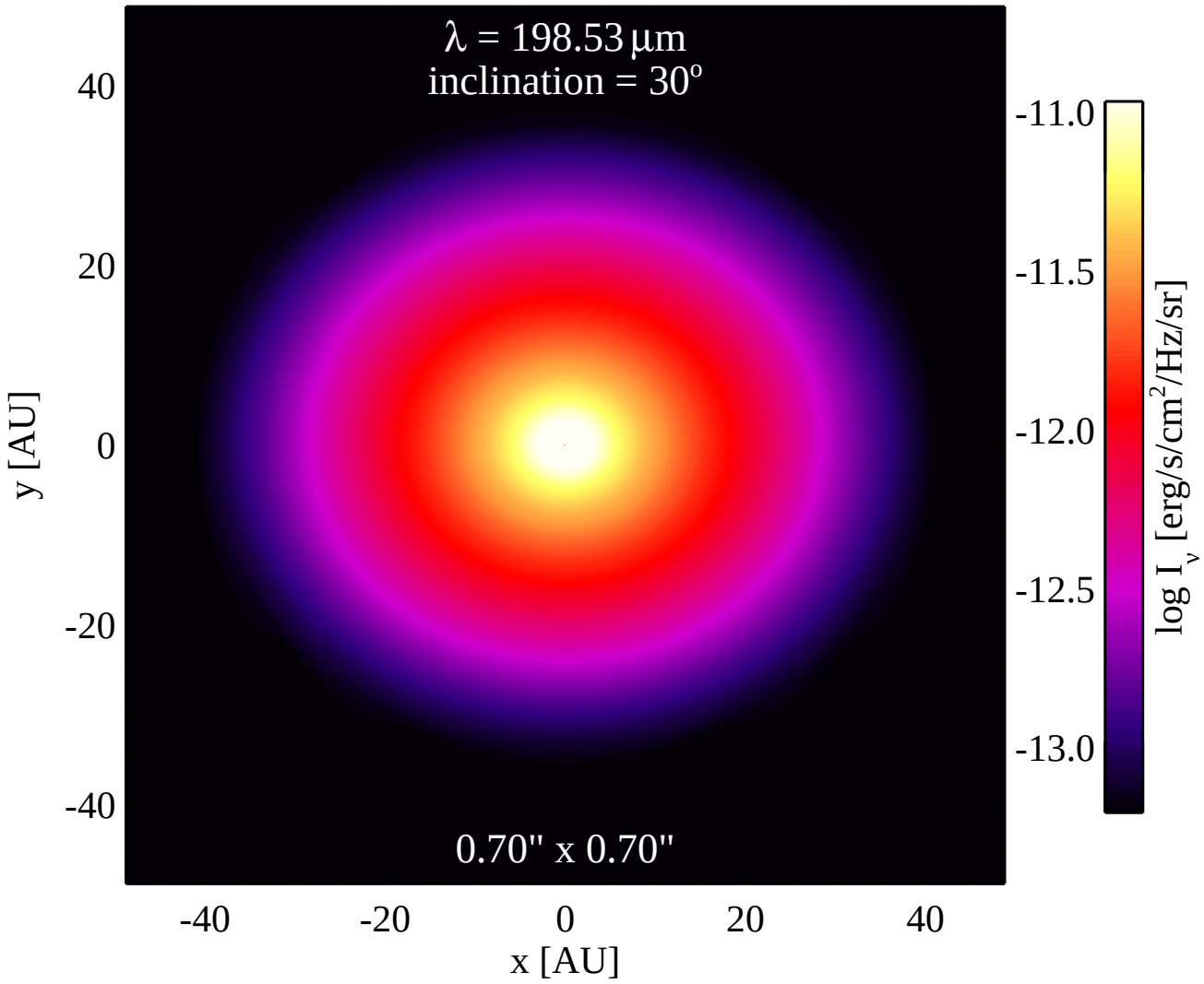

λ = 61.83 μm
inclination = 30°
0.41" x 0.41"
20
10
0
-10
-20
y [AU]
-20
-10
0
10
20
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

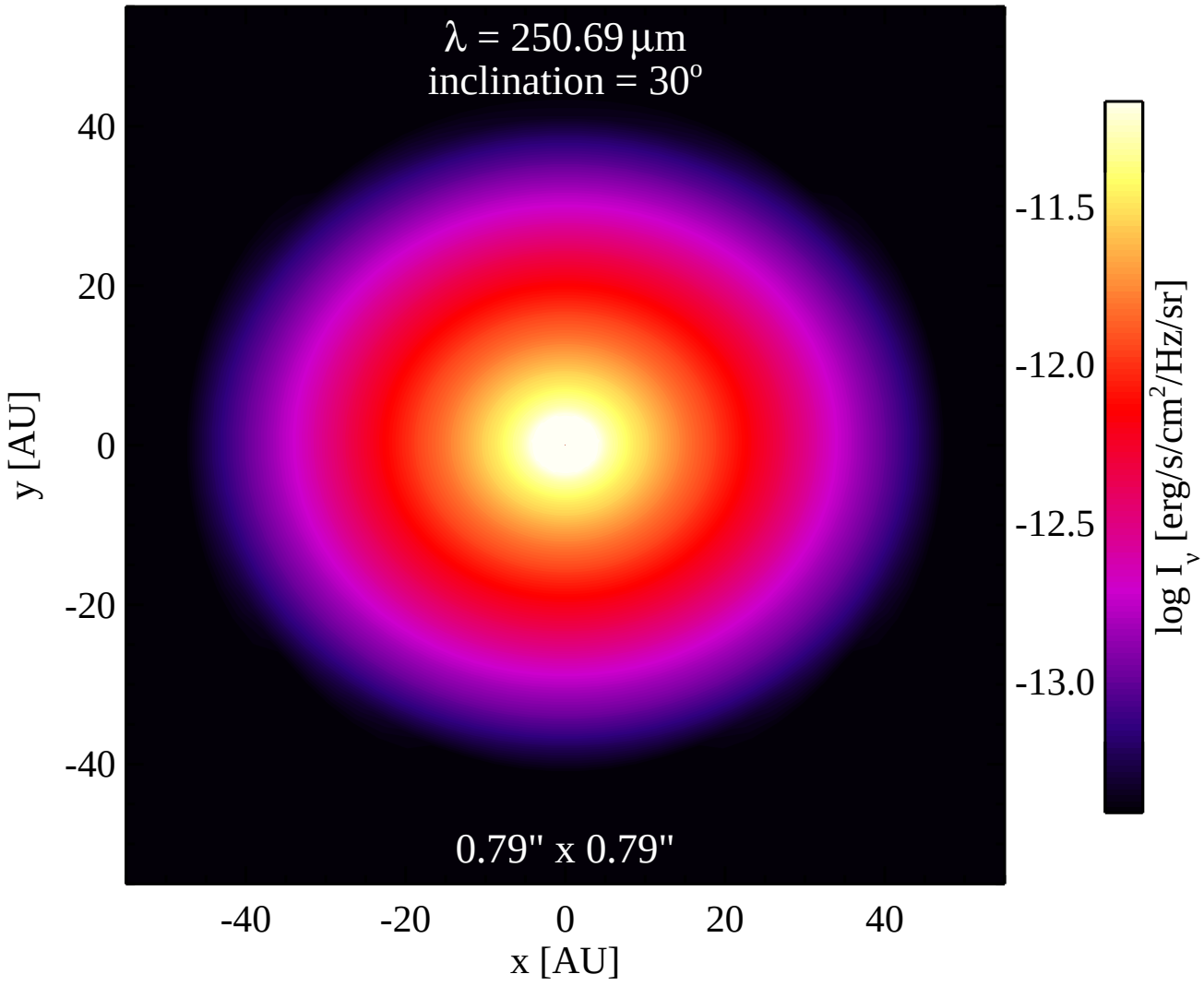

λ = 78.08 μm
inclination = 30°
0.44" x 0.44"
30
20
10
0
-10
-20
-30
y [AU]
-30
-20
-10
0
10
20
30
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

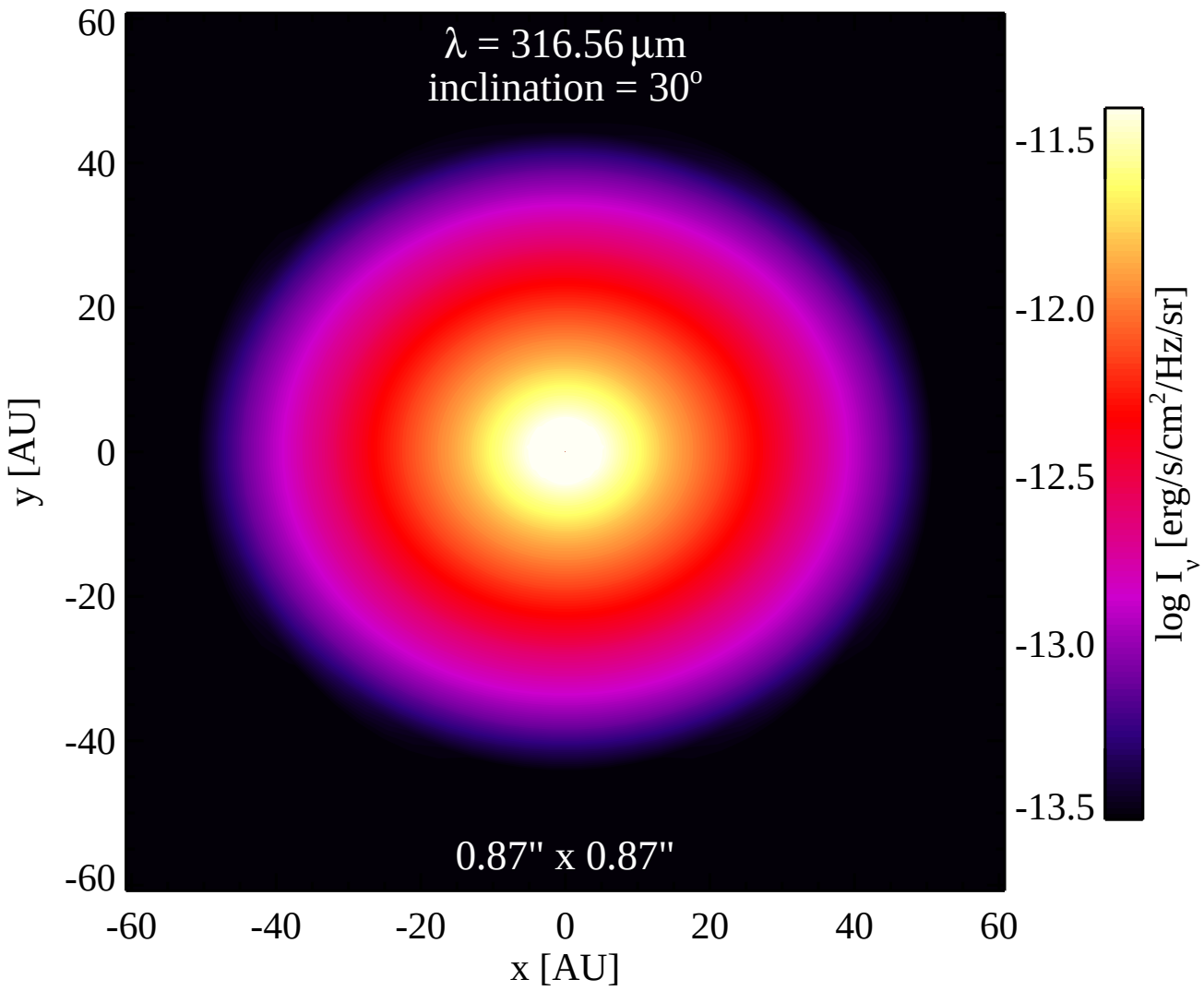

λ = 98.60 μm
inclination = 30°
0.49" x 0.49"
30
20
10
0
-10
-20
-30
y [AU]
-30
-20
-10
0
10
20
30
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

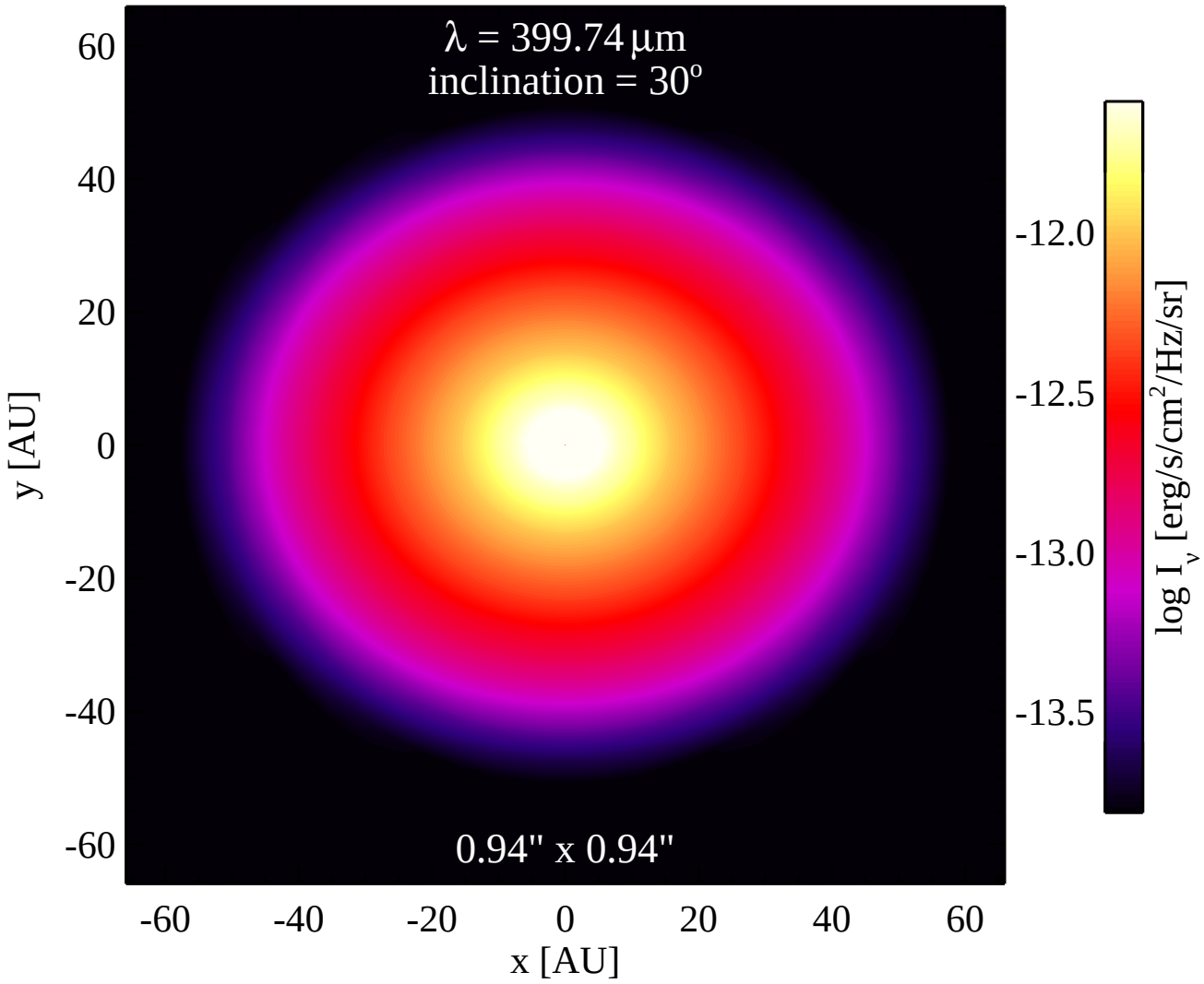

λ = 124.50 μm
inclination = 30°
0.55" x 0.55"
20
0
-20
y [AU]
-20
0
20
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

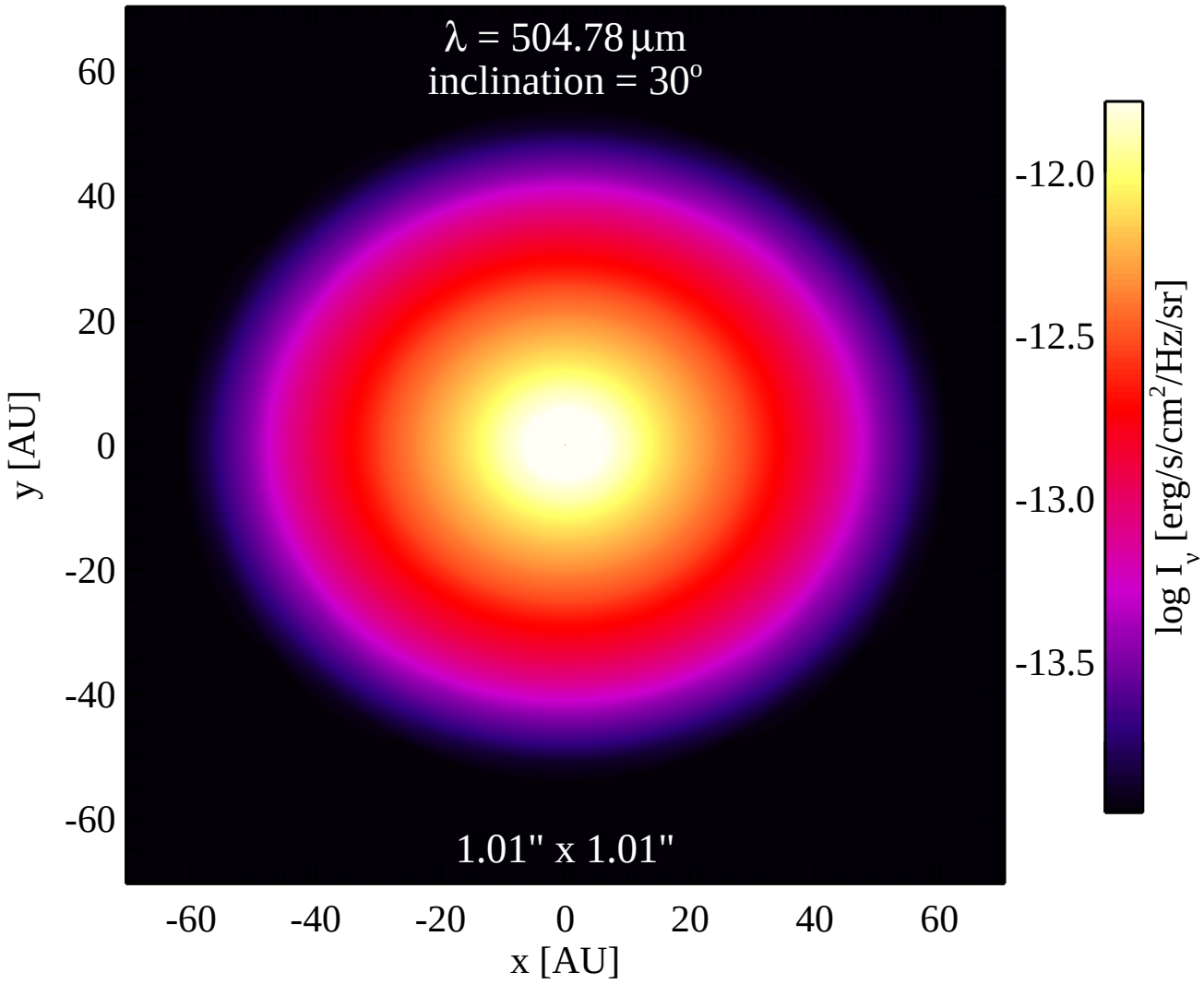

λ = 157.22 μm
inclination = 30°
0.62" x 0.62"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

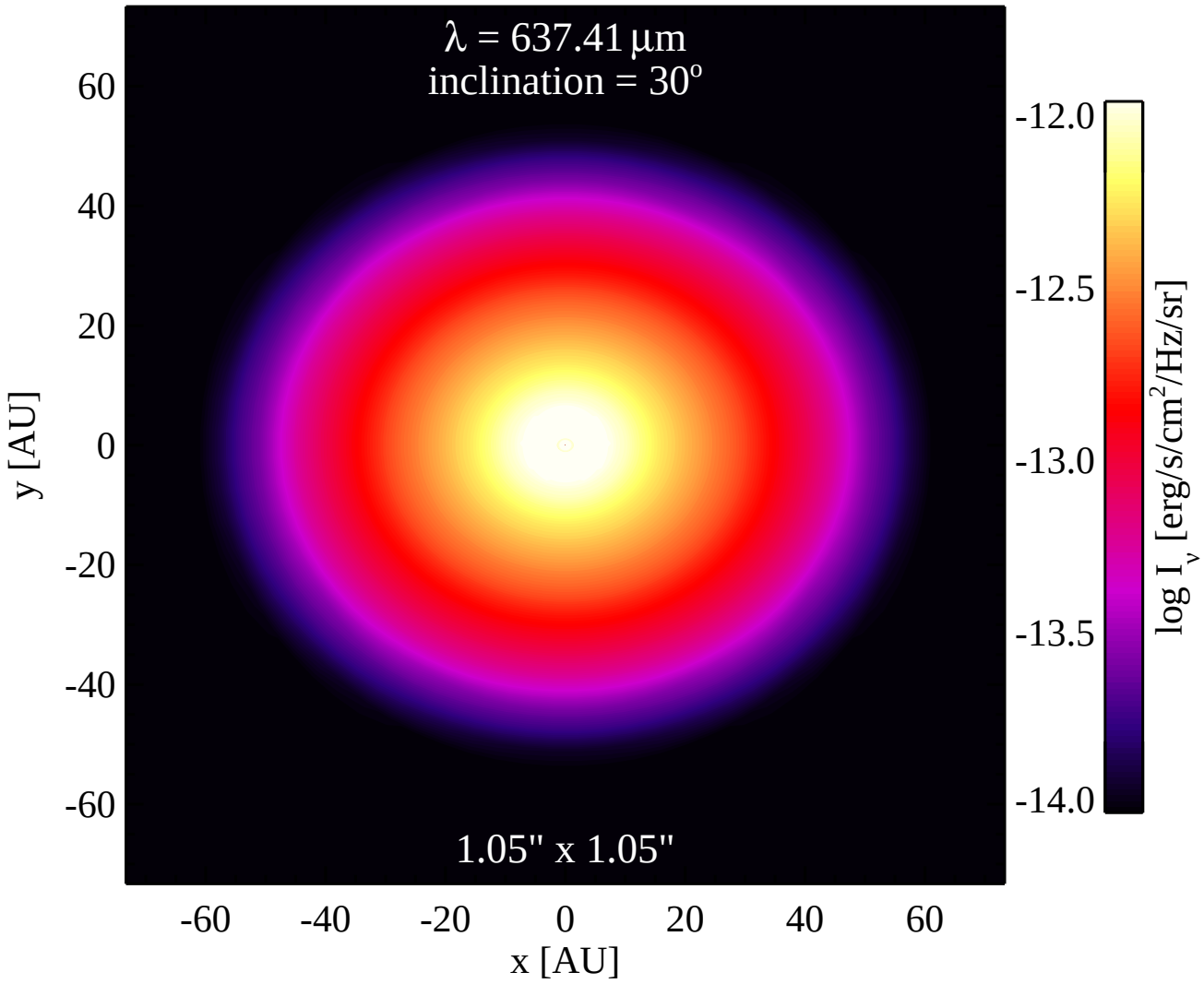

λ = 198.53 μm
inclination = 30°
0.70" x 0.70"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

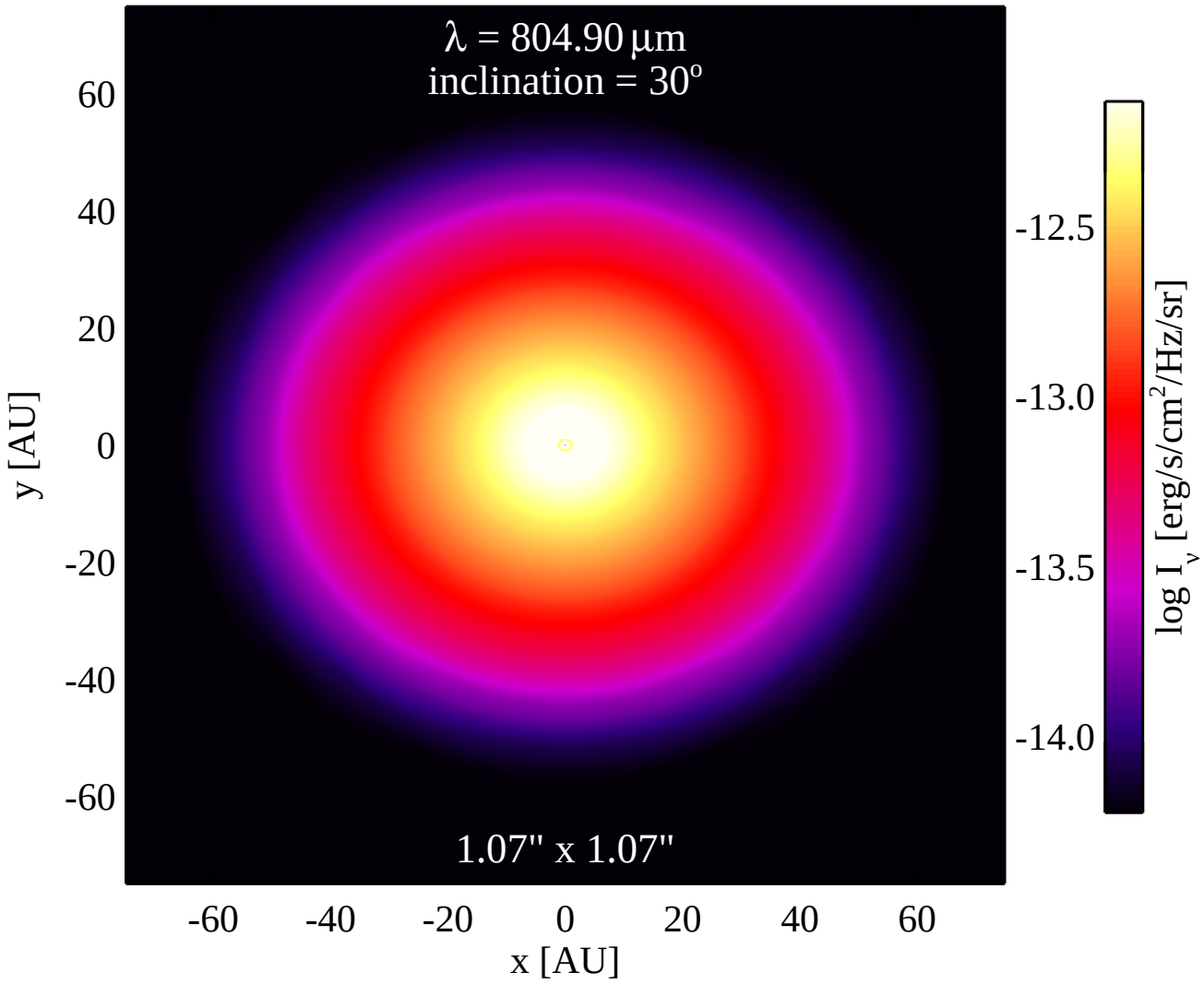

λ = 250.69 μm
inclination = 30°
0.79" x 0.79"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

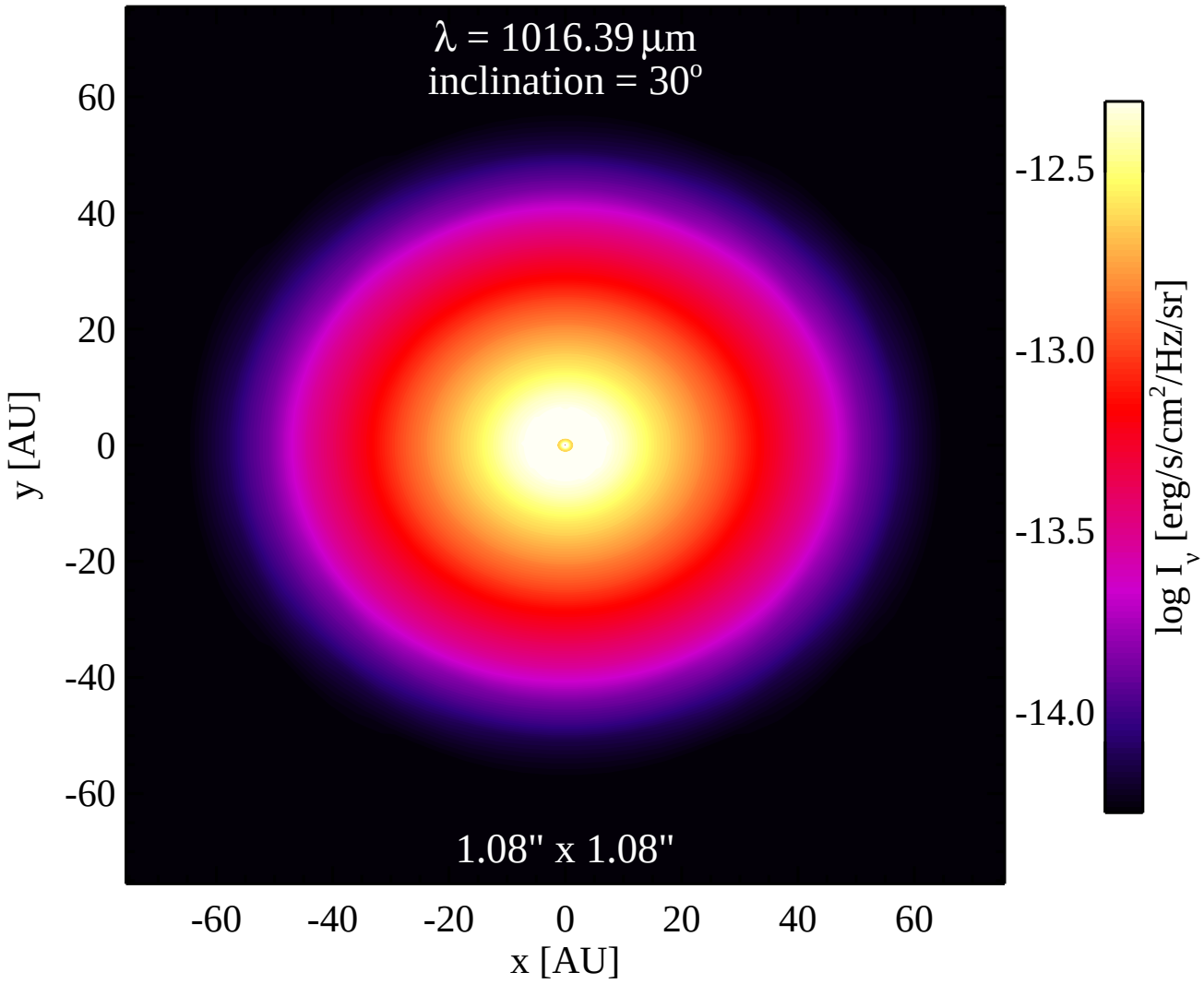

λ = 316.56 μm
inclination = 30°
0.87" x 0.87"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

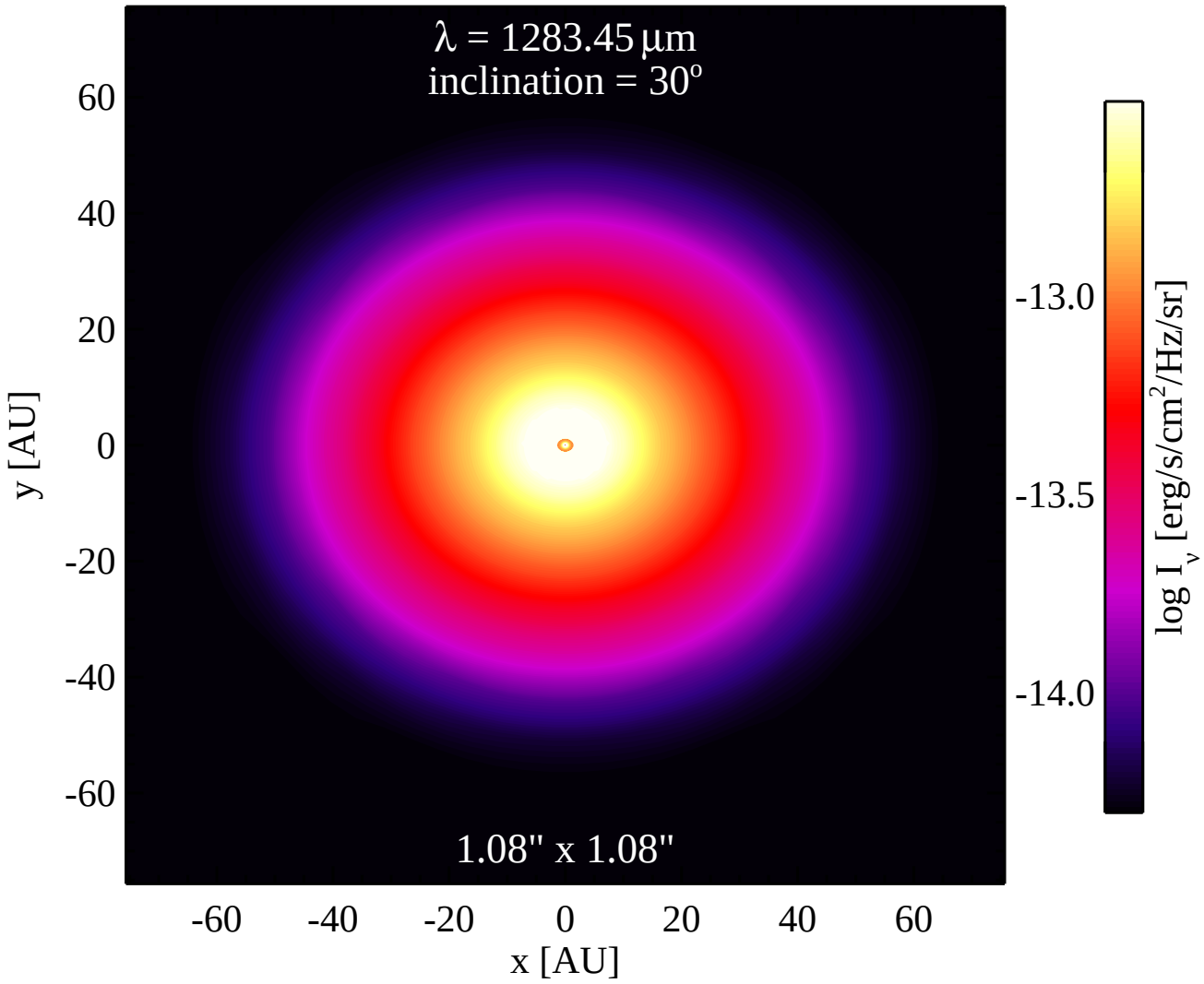

λ = 399.74 μm
inclination = 30°
0.94" x 0.94"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

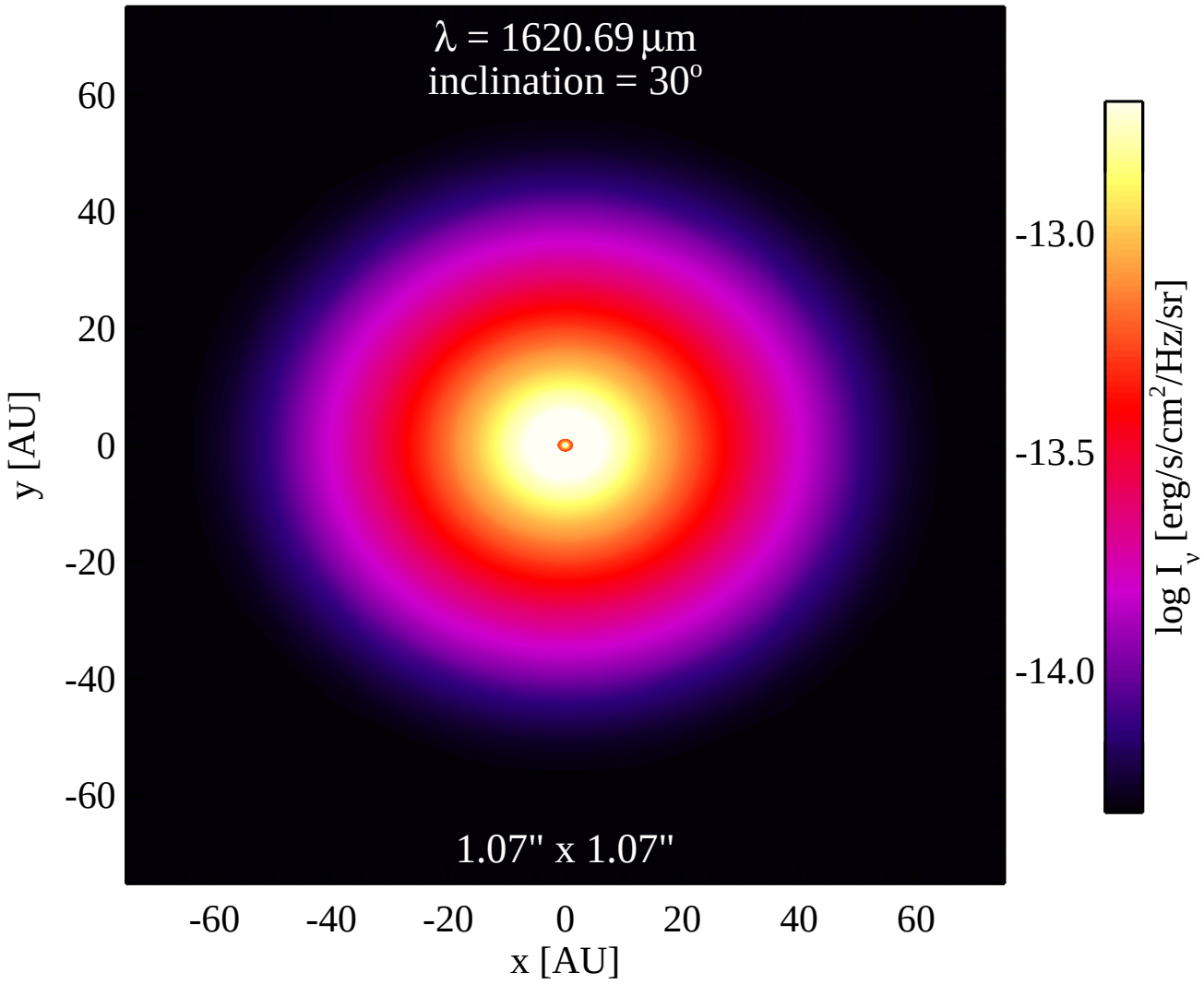

λ = 504.78 μm
inclination = 30°
1.01" x 1.01"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

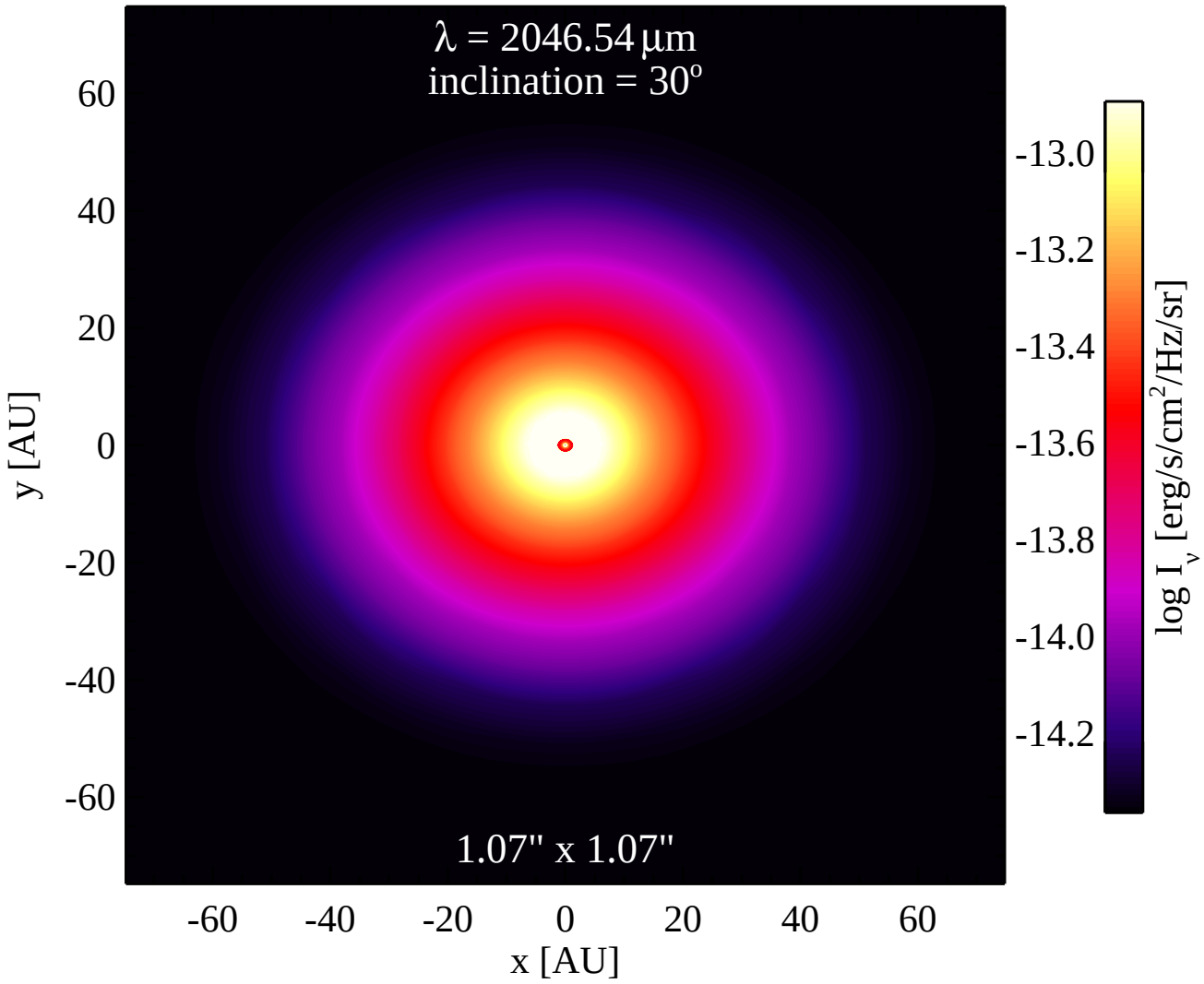

λ = 637.41 μm
inclination = 30°
1.05" x 1.05"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-12.0
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]

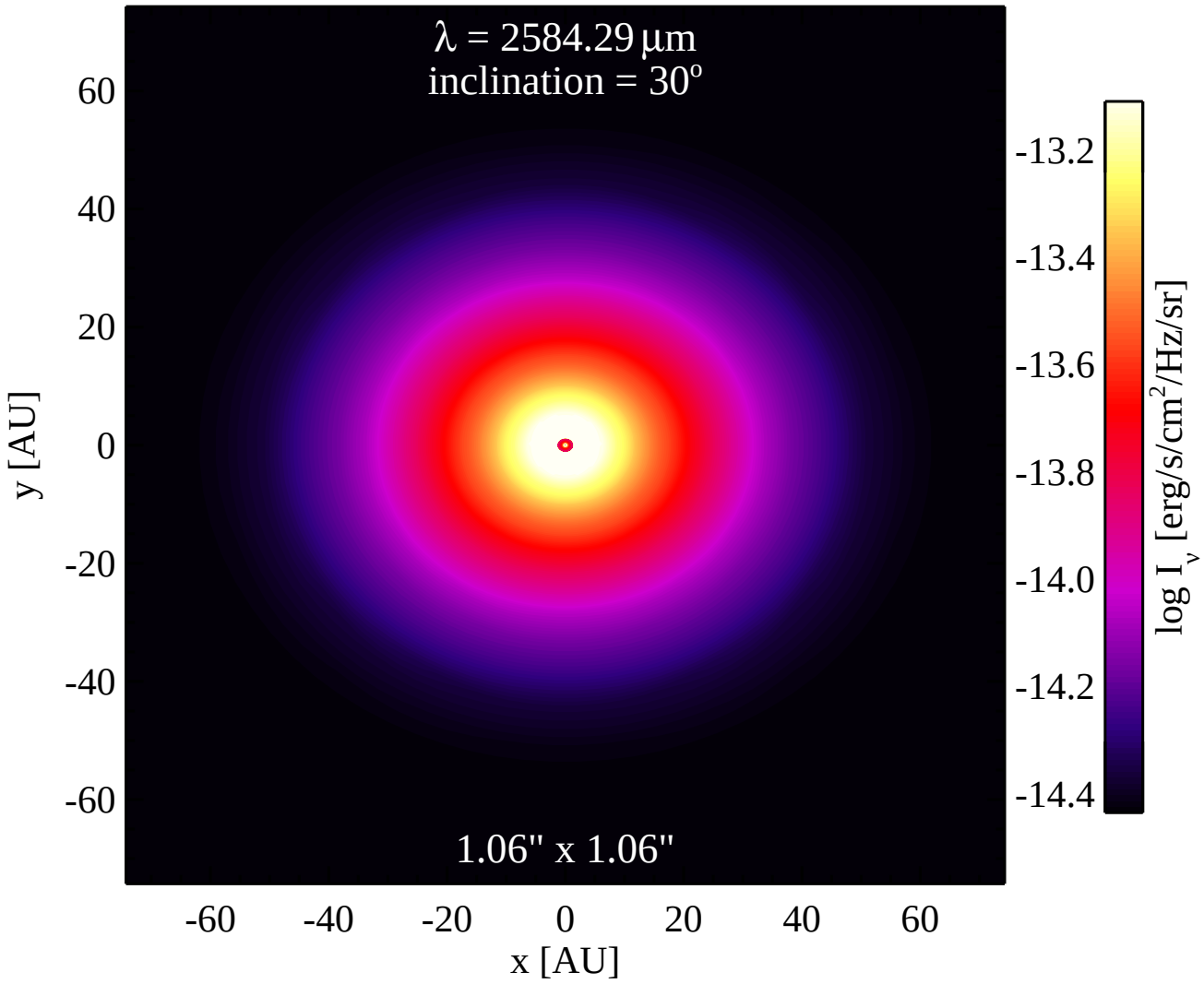

λ = 804.90 μm
inclination = 30°
1.07" x 1.07"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]

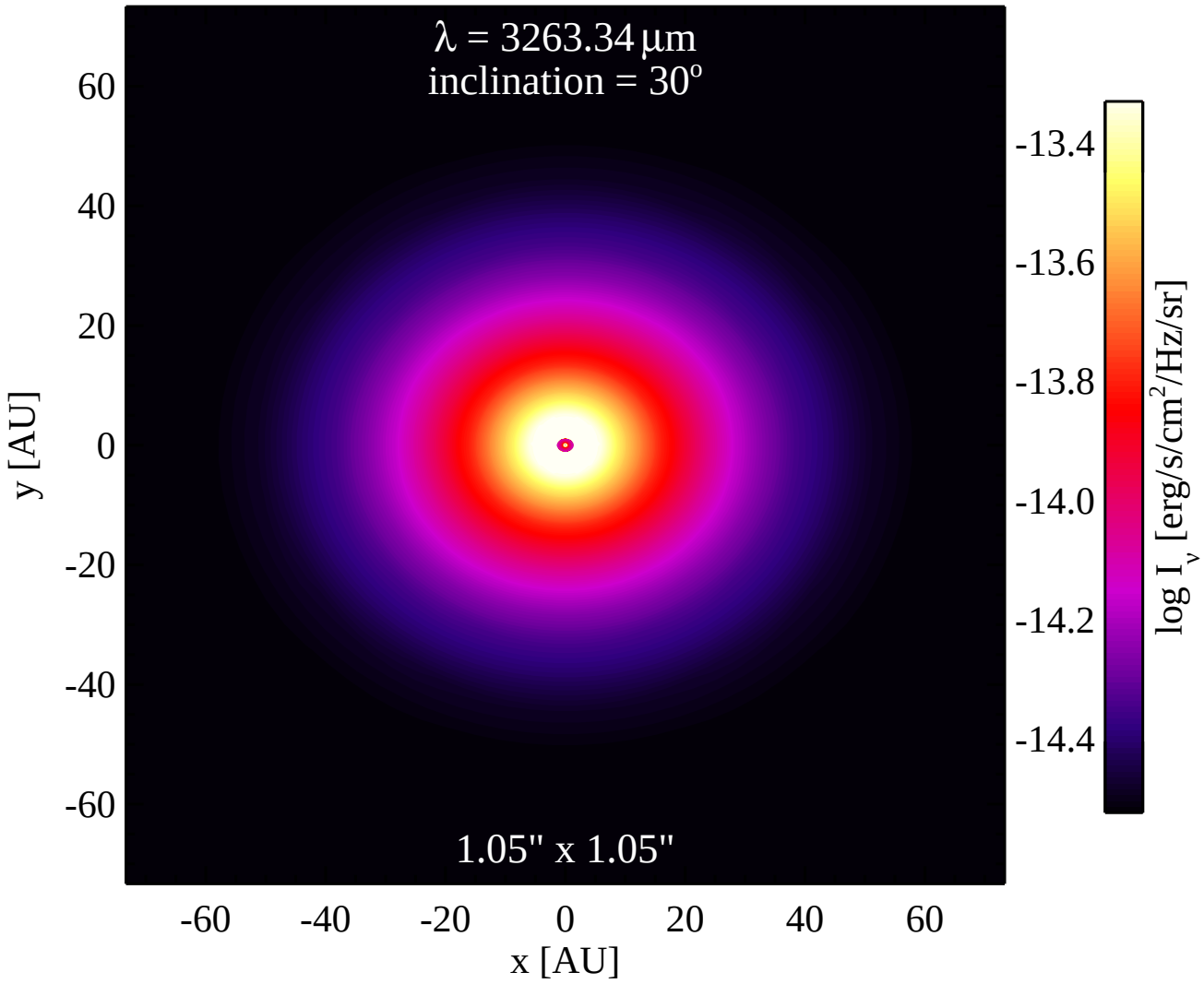

λ = 1016.39 μm
inclination = 30°
1.08" x 1.08"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]

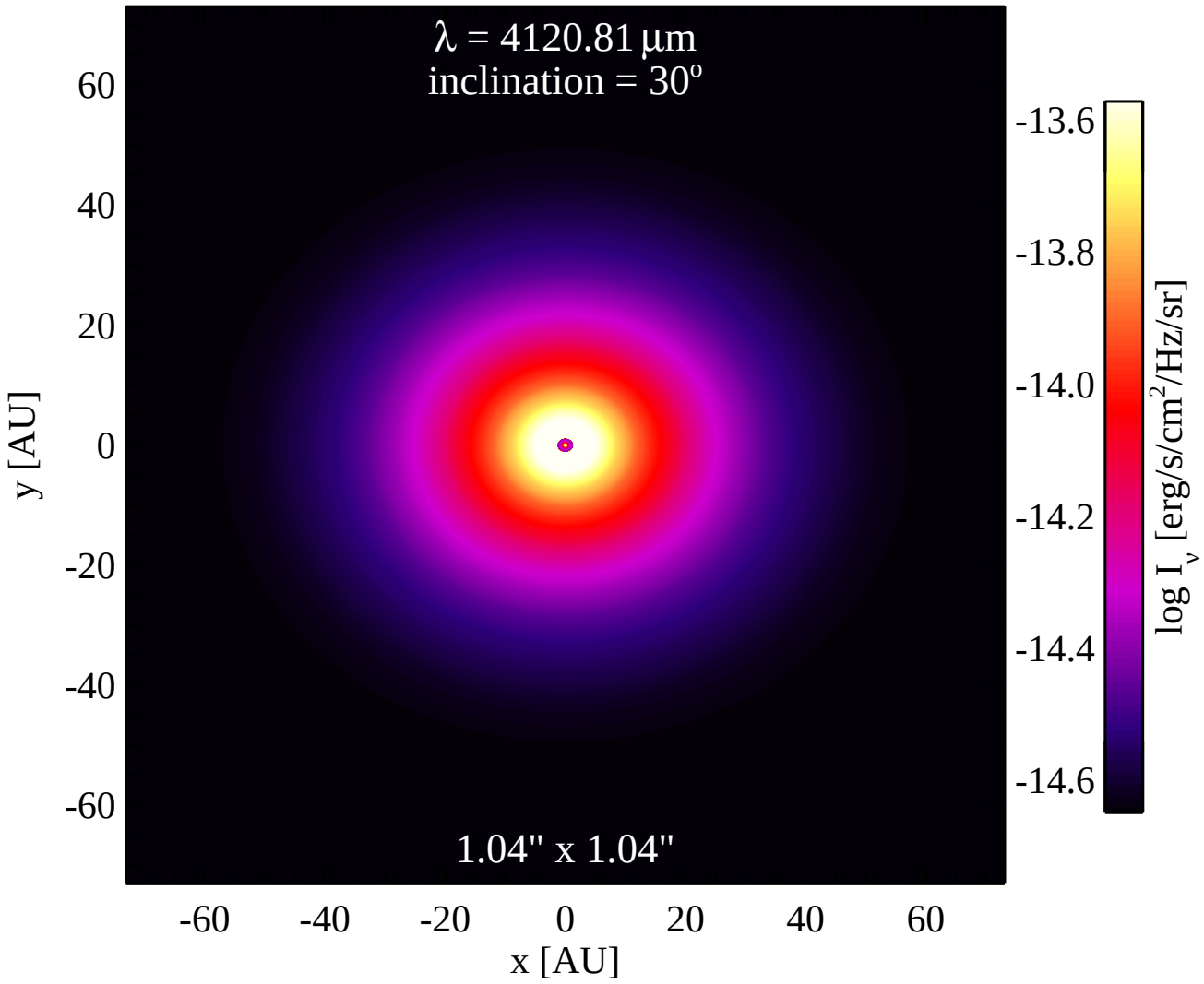

λ = 1283.45 μm
inclination = 30°
1.08" x 1.08"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]


λ = 1620.69 μm
inclination = 30°
1.07" x 1.07"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]


λ = 2046.54 μm
inclination = 30°
1.07" x 1.07"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-13.0
-13.2
-13.4
-13.6
-13.8
-14.0
-14.2
log I_ν [erg/s/cm²/Hz/sr]


λ = 2584.29 μm
inclination = 30°
1.06" x 1.06"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
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 = 3263.34 μm
inclination = 30°
1.05" x 1.05"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-13.4
-13.6
-13.8
-14.0
-14.2
-14.4
log I_ν [erg/s/cm²/Hz/sr]


λ = 4120.81 μm
inclination = 30°
1.04" x 1.04"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-13.6
-13.8
-14.0
-14.2
-14.4
-14.6
log I_ν [erg/s/cm²/Hz/sr]