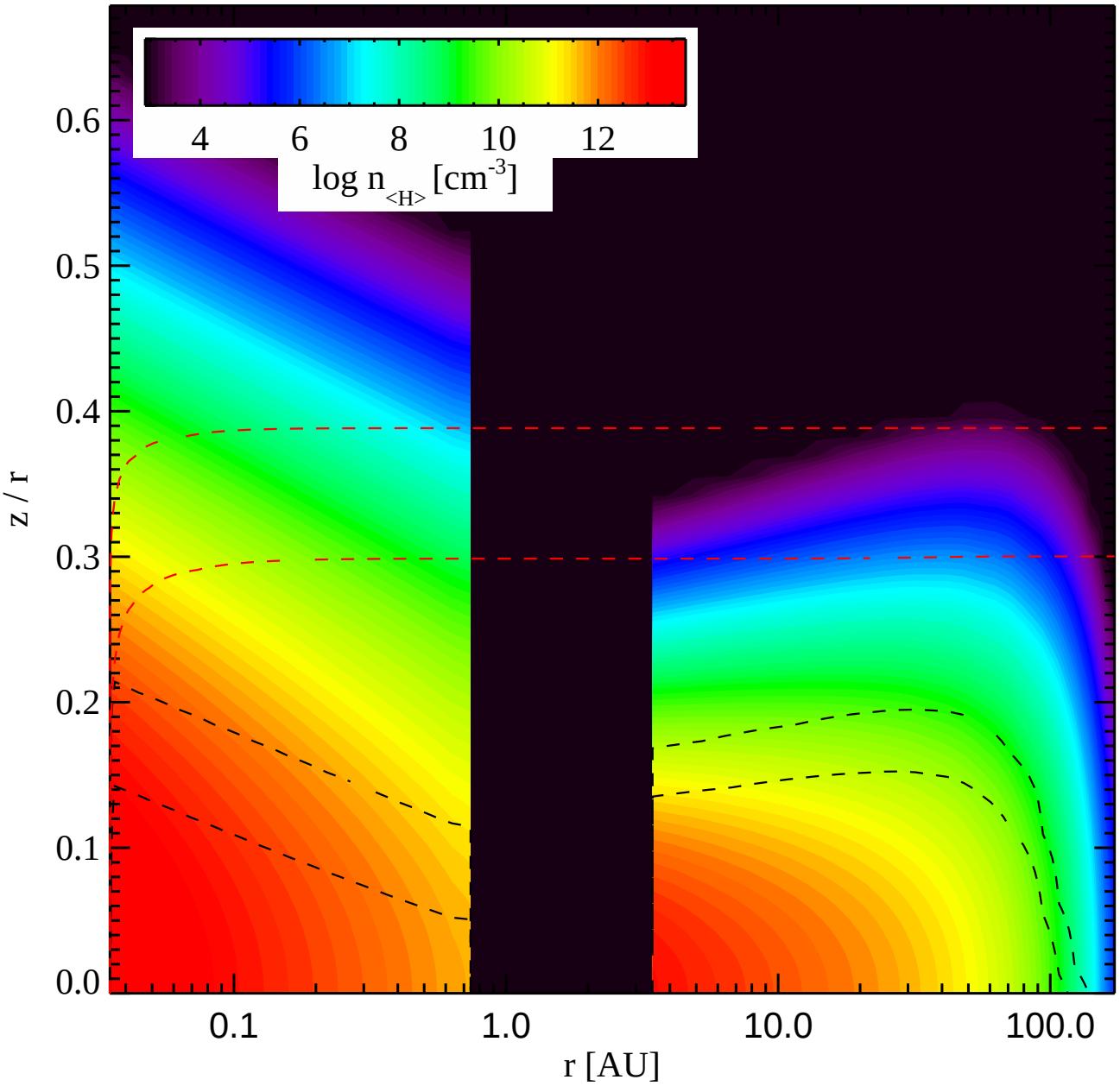
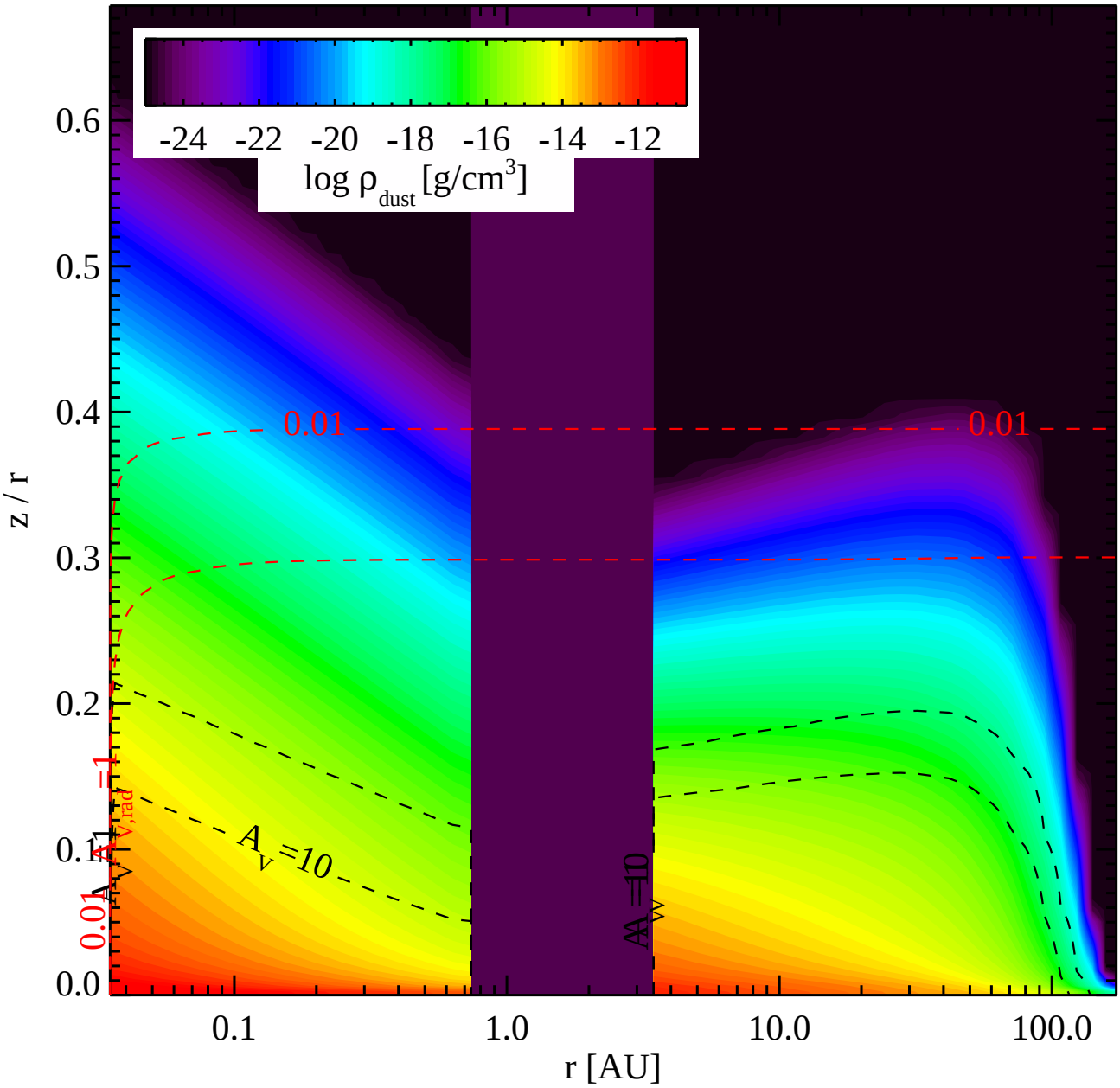
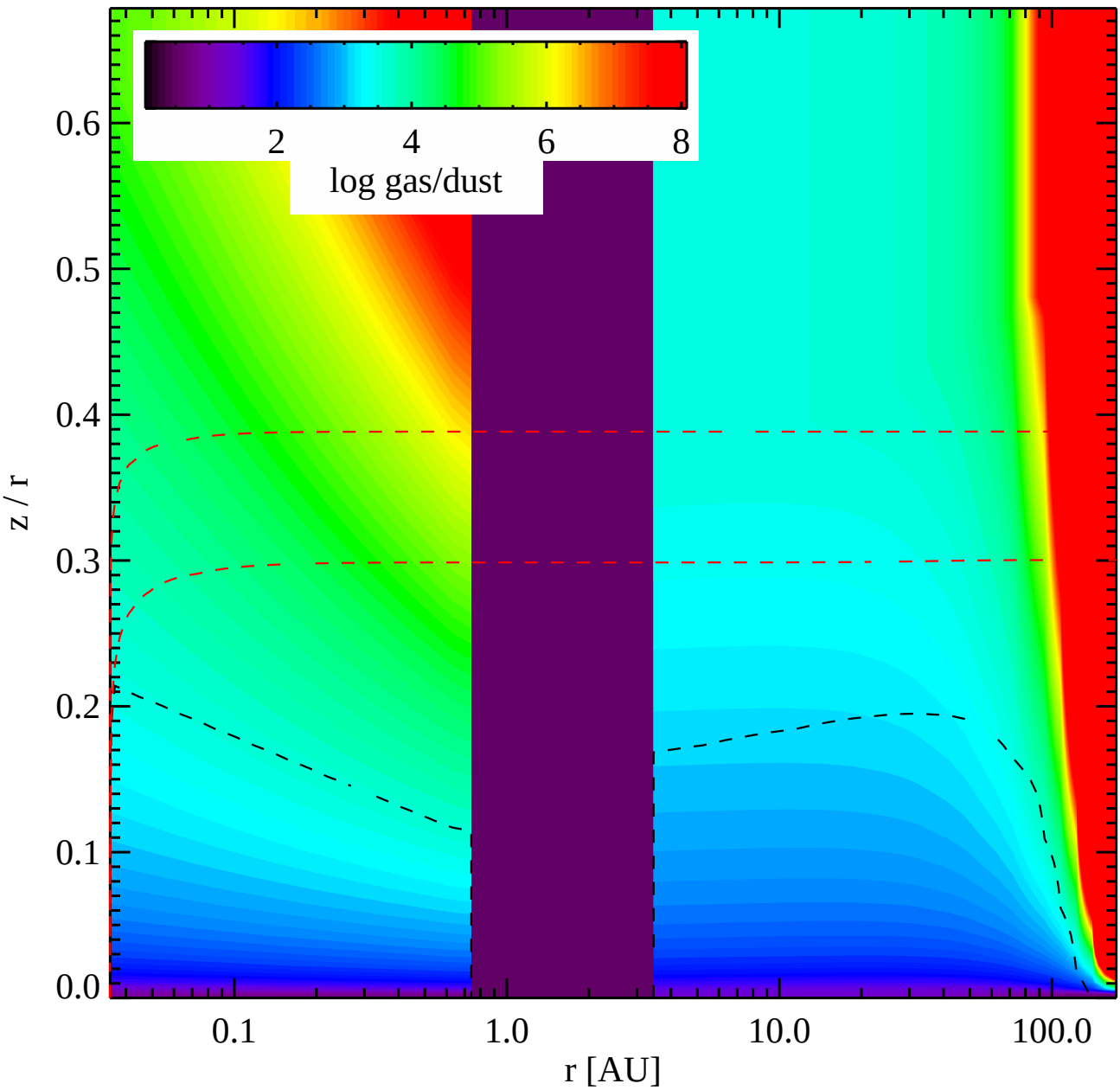
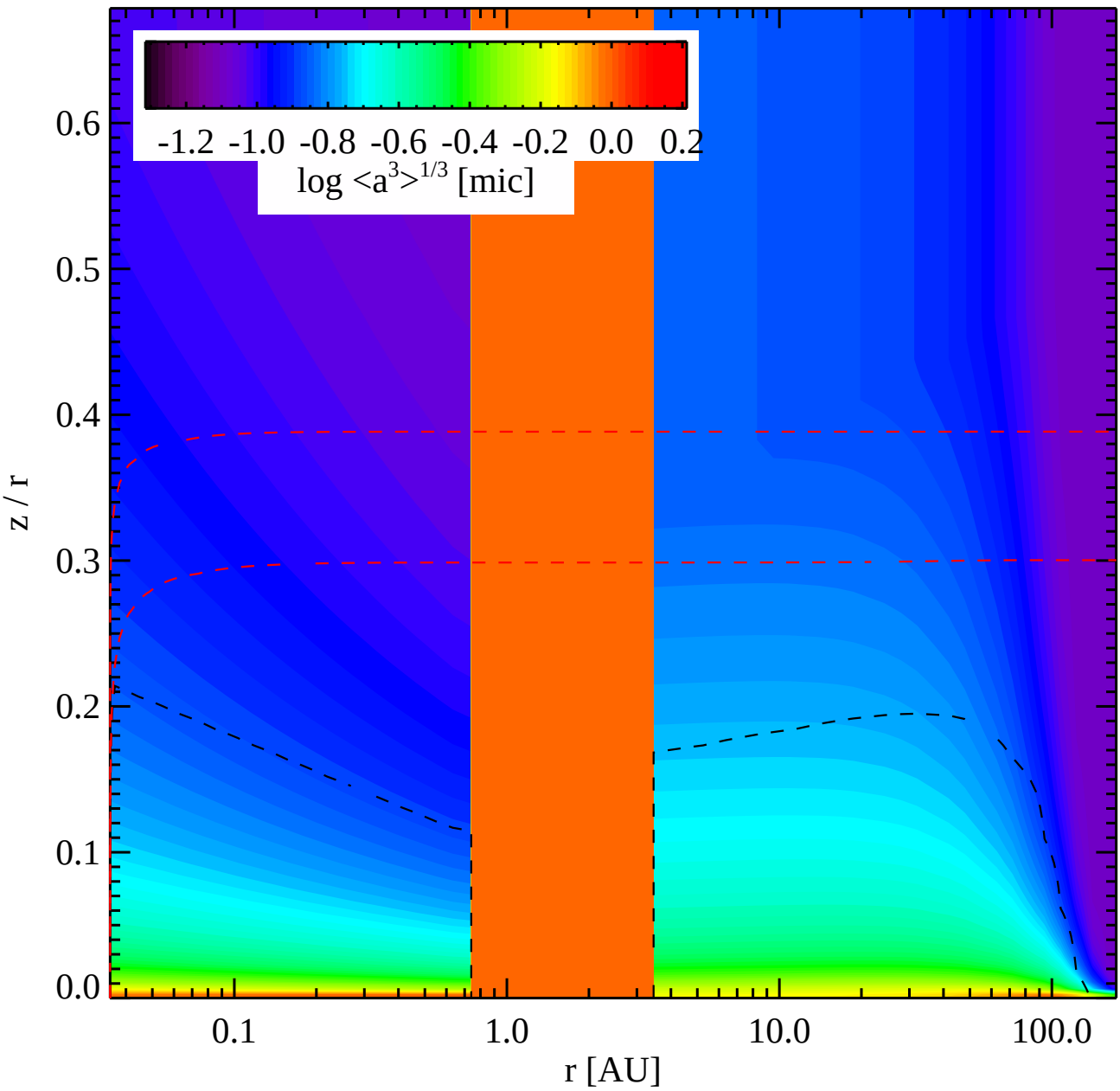
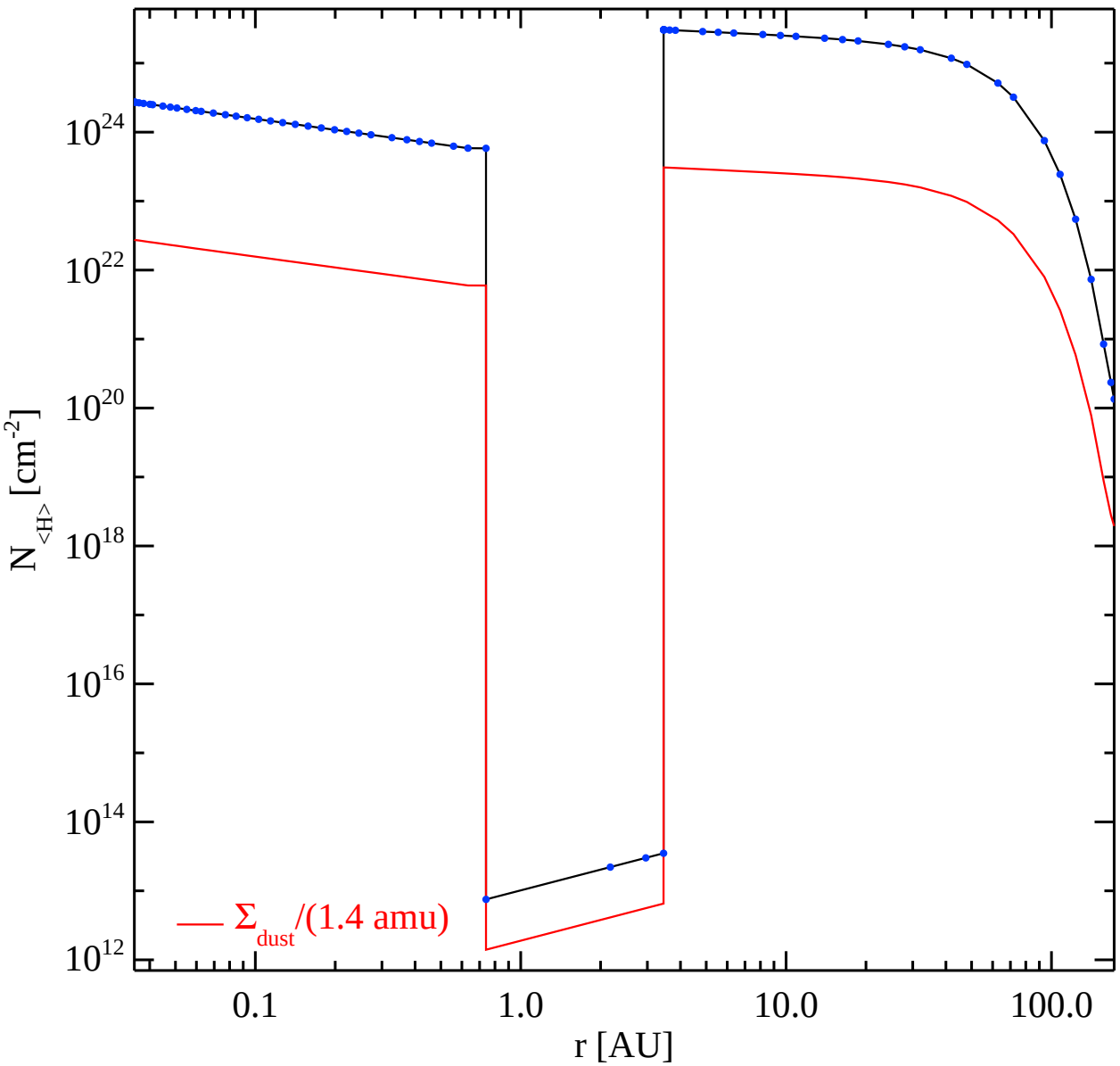

4
6
8
10
12
log n<H> [cm-3]
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
0.1
1.0
10.0
100.0
r [AU]

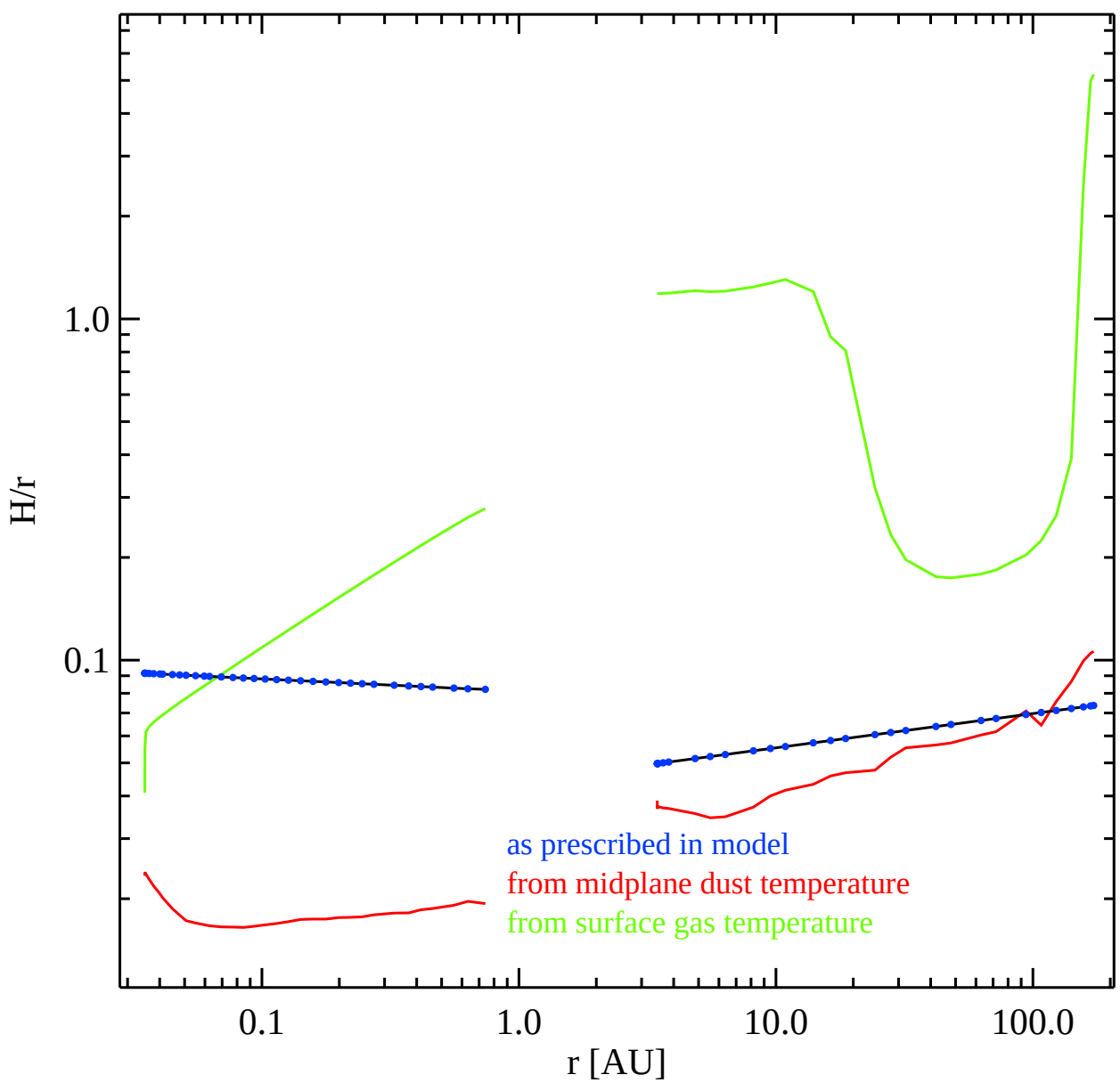


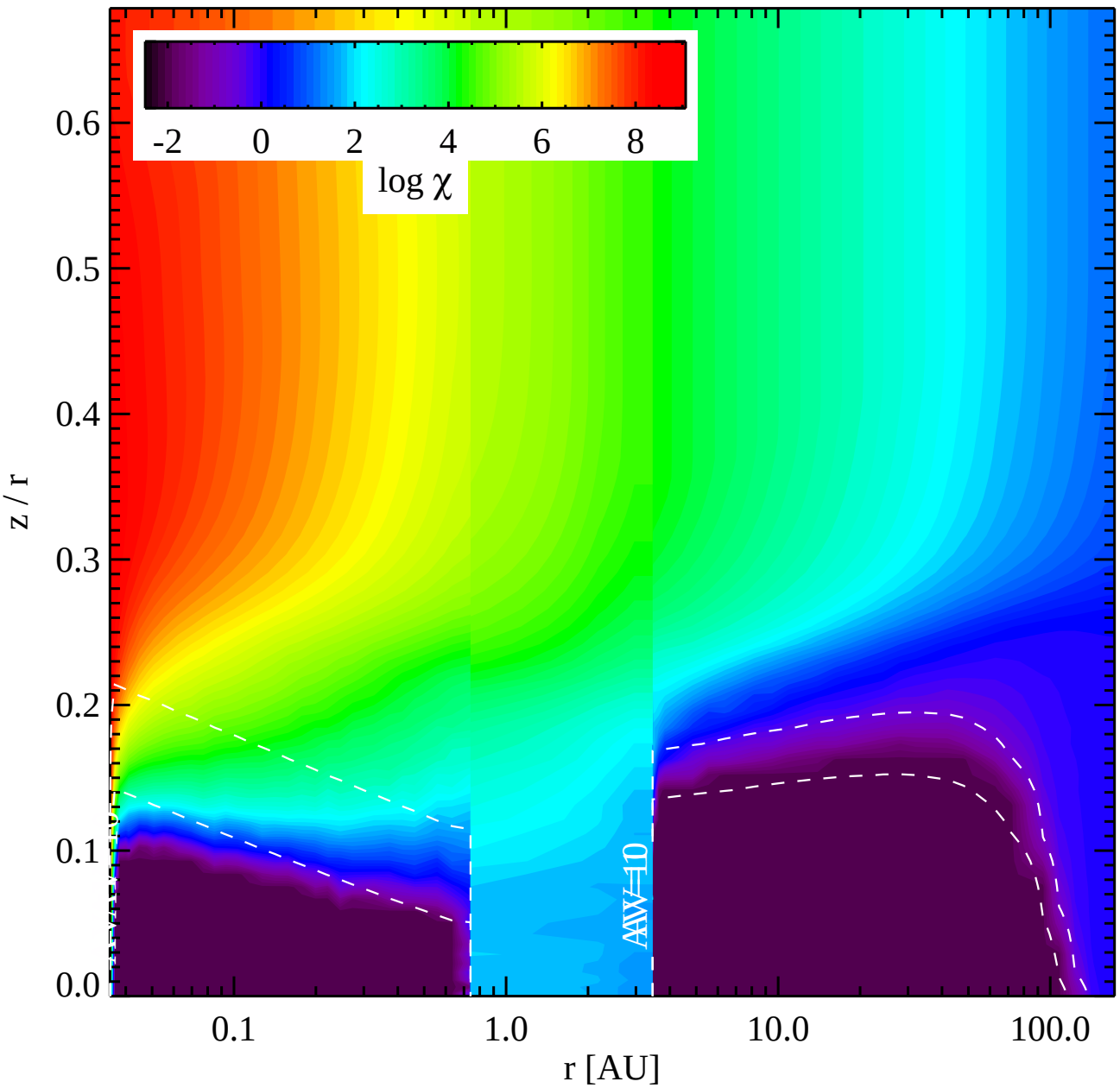
-24 -22 -20 -18 -16 -14 -12
log ρ dust [g/cm3]
0.01
0.01
0.01
A V =10
A V =10
A V =10
A V =1
A V,rad =1
z / r
r [AU]
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.1
1.0
10.0
100.0

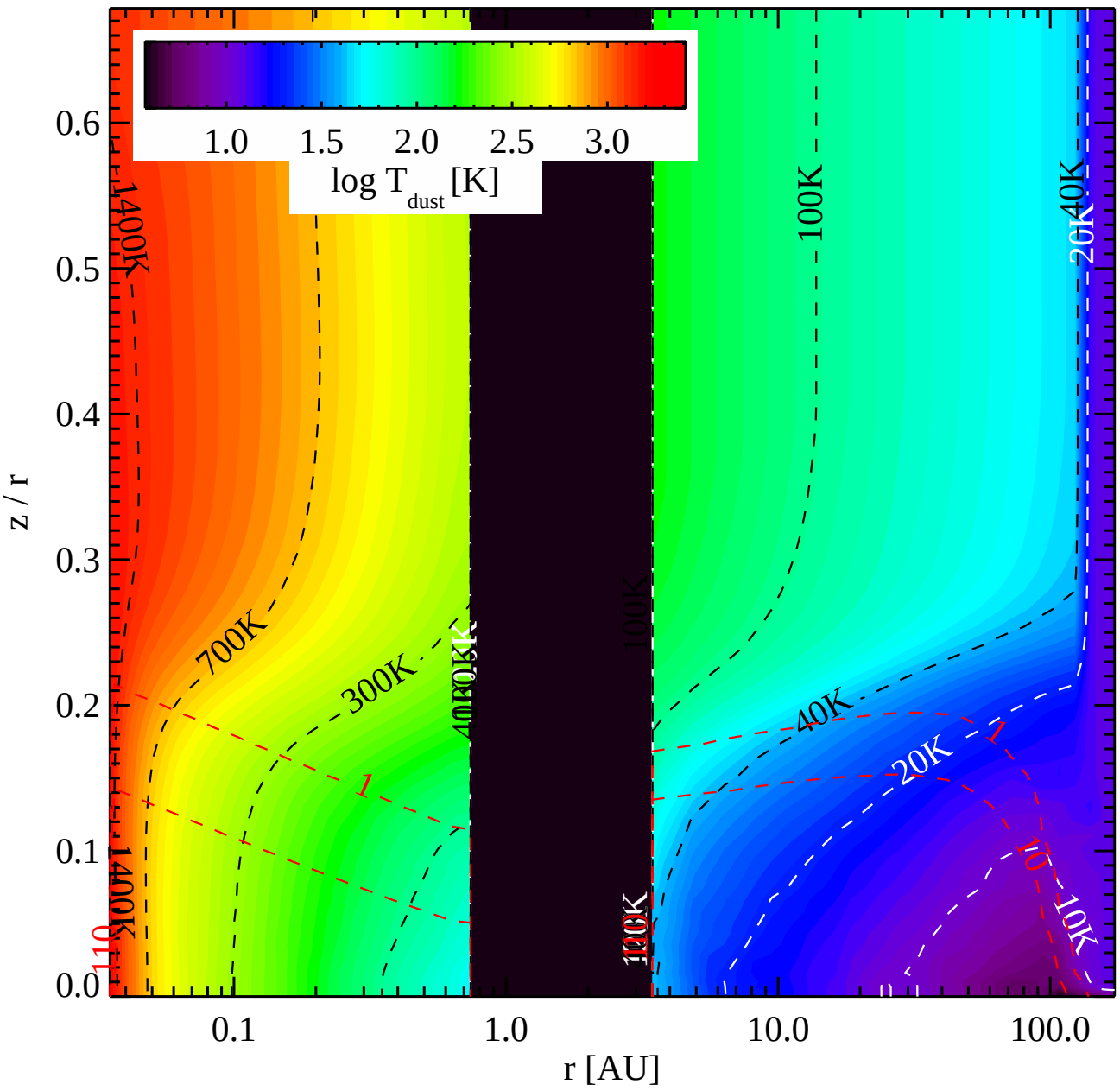

2
4
6
8
log gas/dust
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
0.1
1.0
10.0
100.0
r [AU]

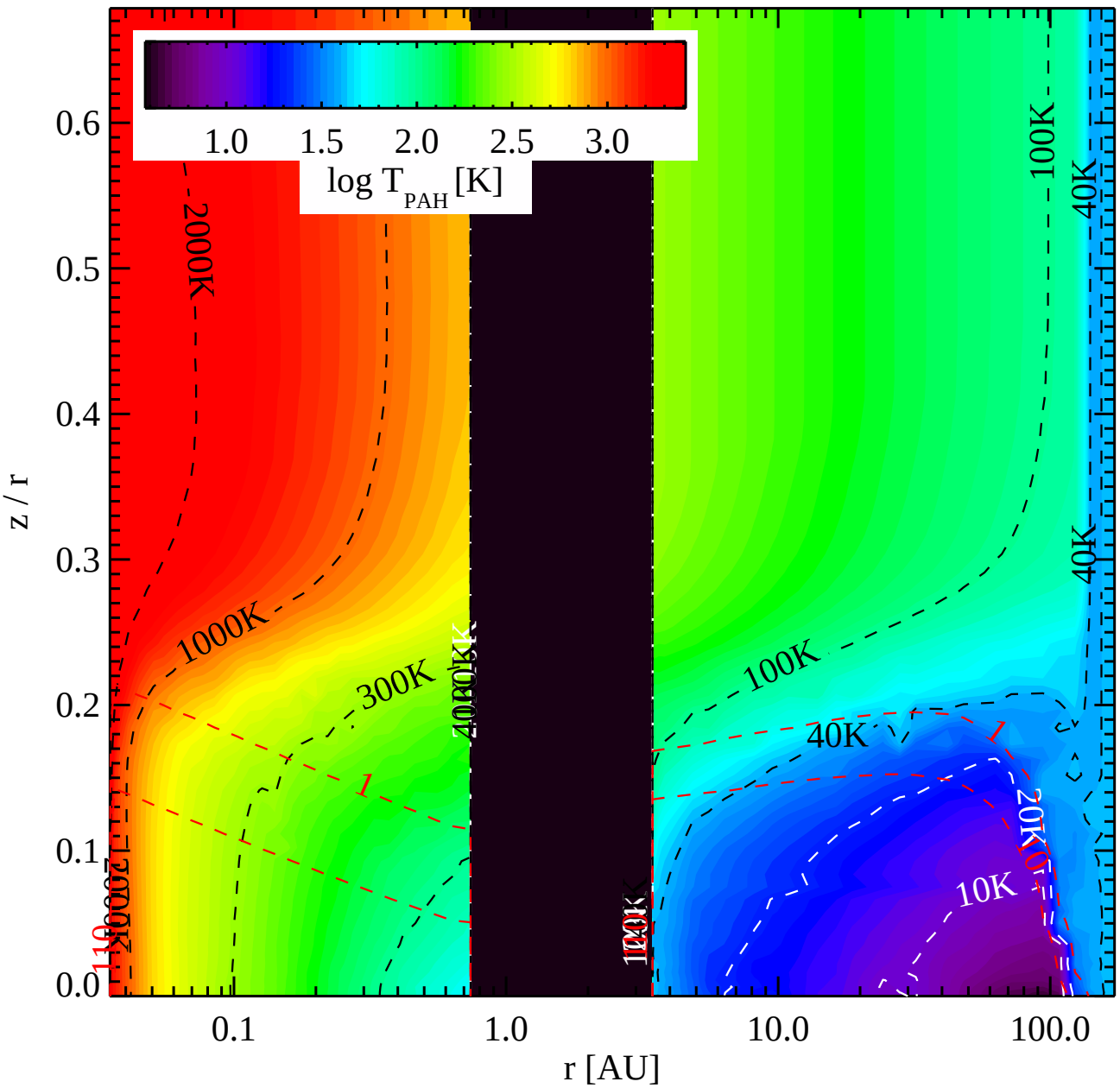

-1.2 -1.0 -0.8 -0.6 -0.4 -0.2 0.0 0.2
log <a^3>^1/3 [mic]
z / r
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.1
1.0
10.0
100.0
r [AU]

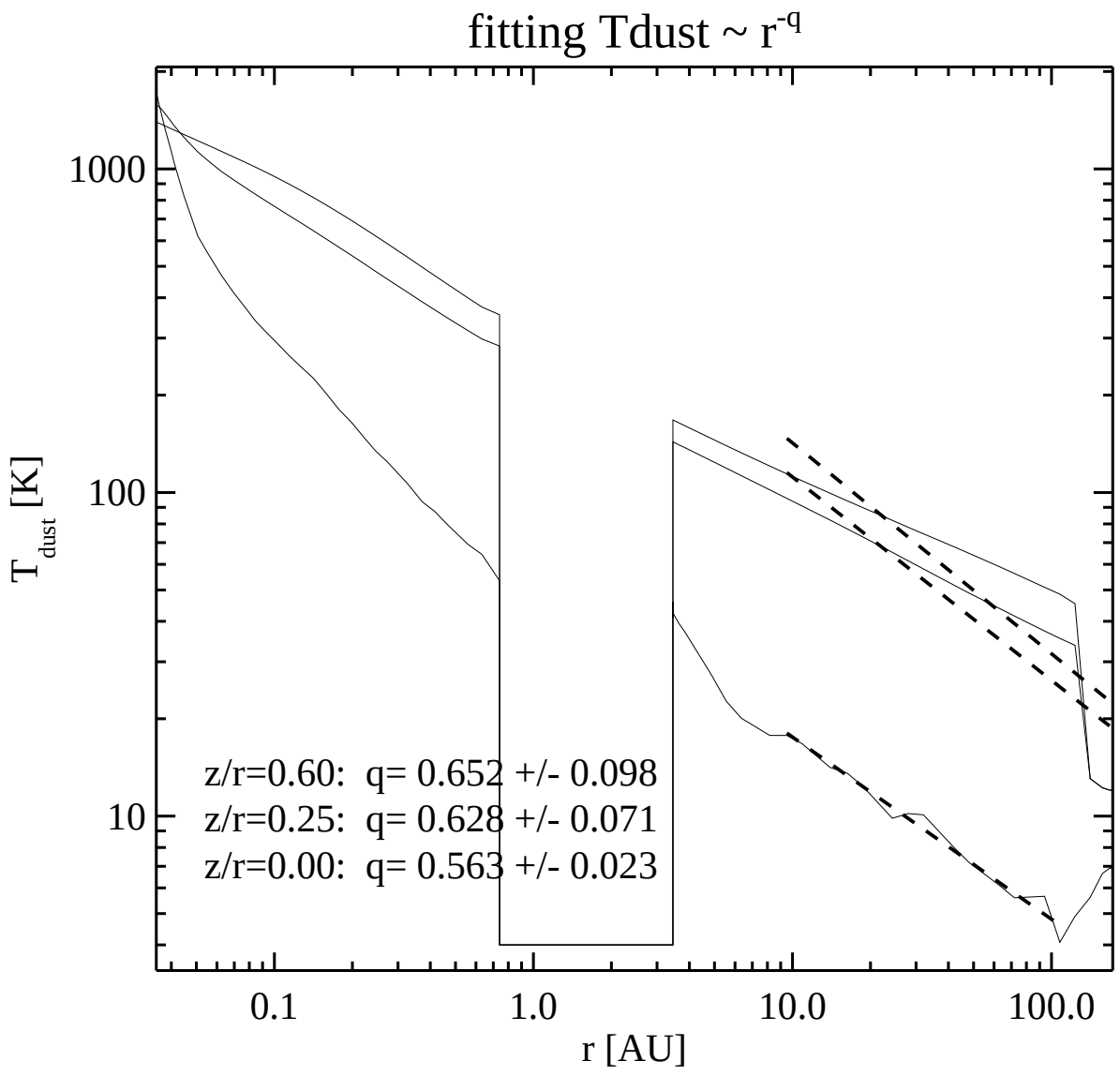

10^{24}
10^{22}
10^{20}
10^{18}
10^{16}
10^{14}
10^{12}
$N_{<H>}$ [cm^{-2}]
0.1
1.0
10.0
100.0
r [AU]
— Σ_{dust}/(1.4 amu)

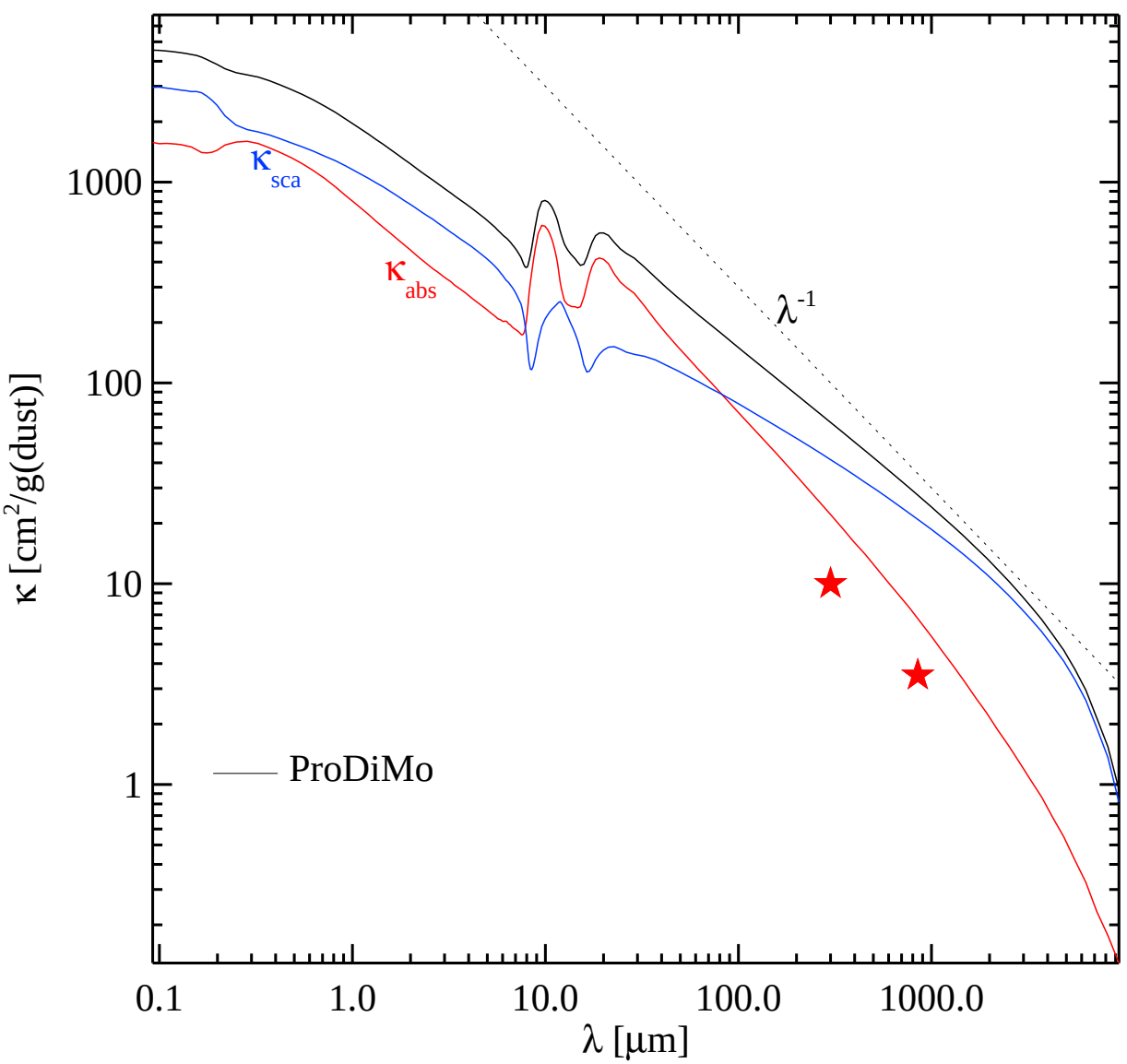

1.0
0.1
H/r
0.1
1.0
10.0
100.0
r [AU]
as prescribed in model
from midplane dust temperature
from surface gas temperature

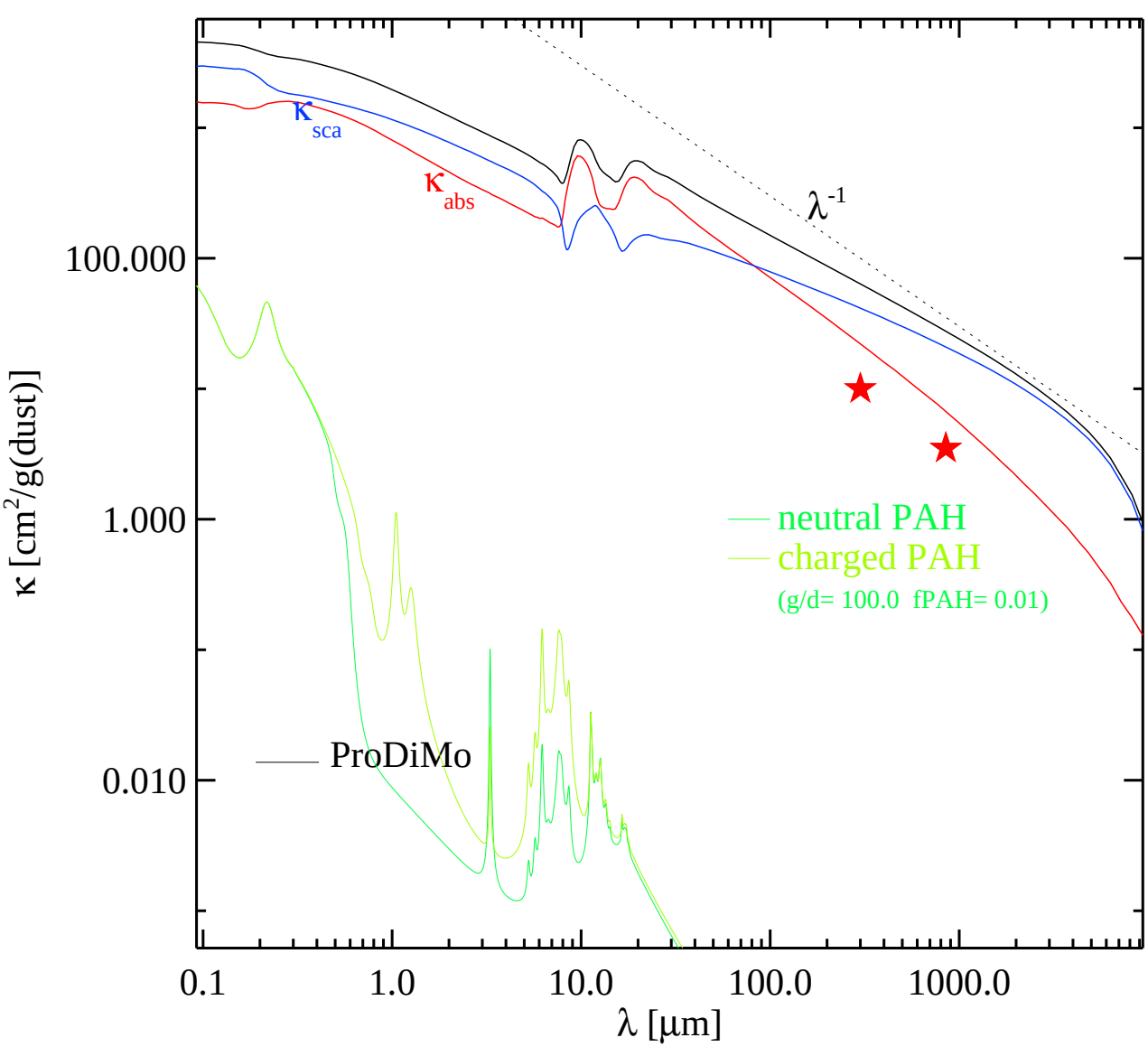

-2
0
2
4
6
8
log χ
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
0.1
1.0
10.0
100.0
r [AU]
AV=10

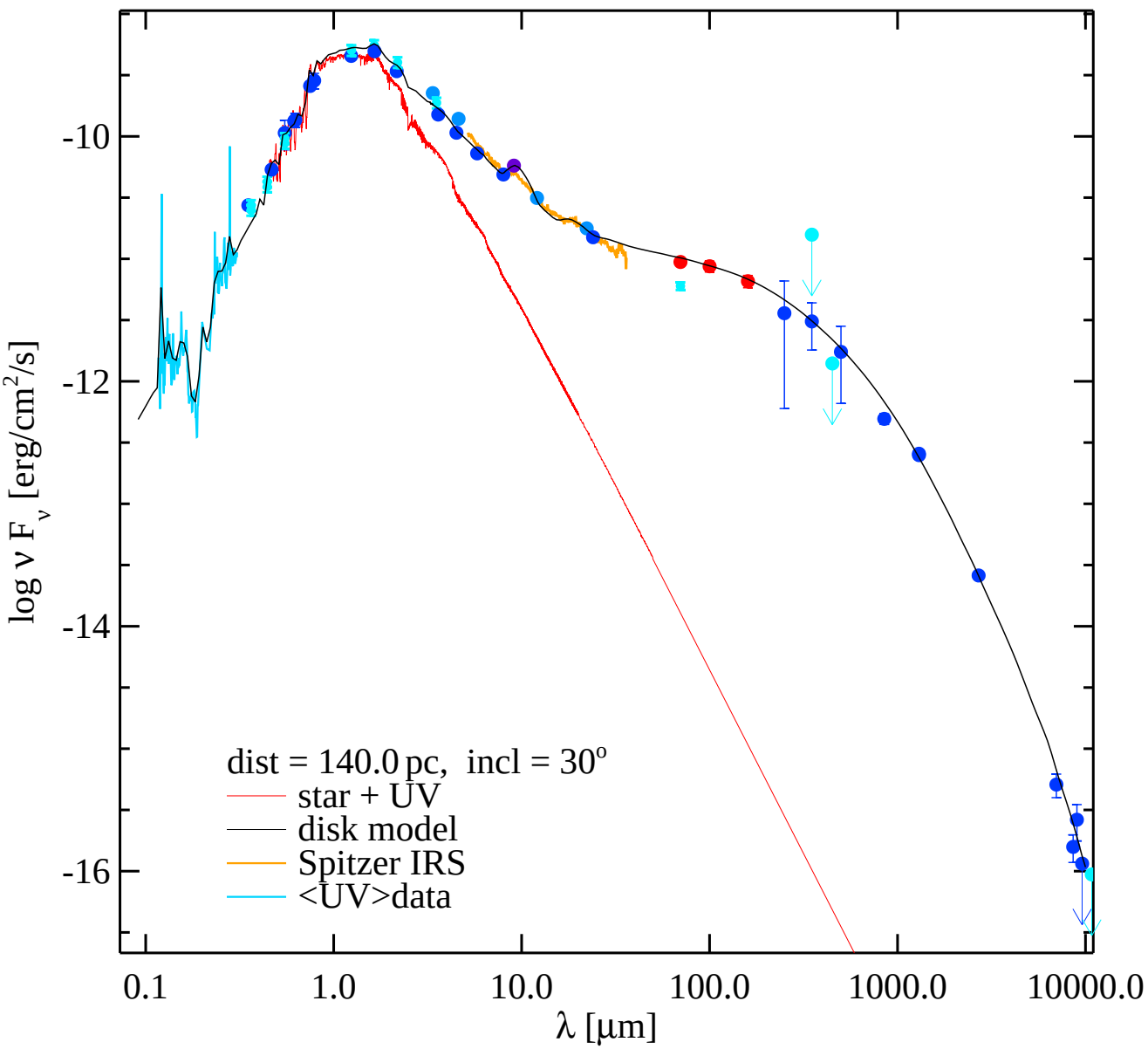

1.0
1.5
2.0
2.5
3.0
log T dust [K]
1400K
700K
300K
100K
40K
20K
10K
1
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
0.1
1.0
10.0
100.0
r [AU]

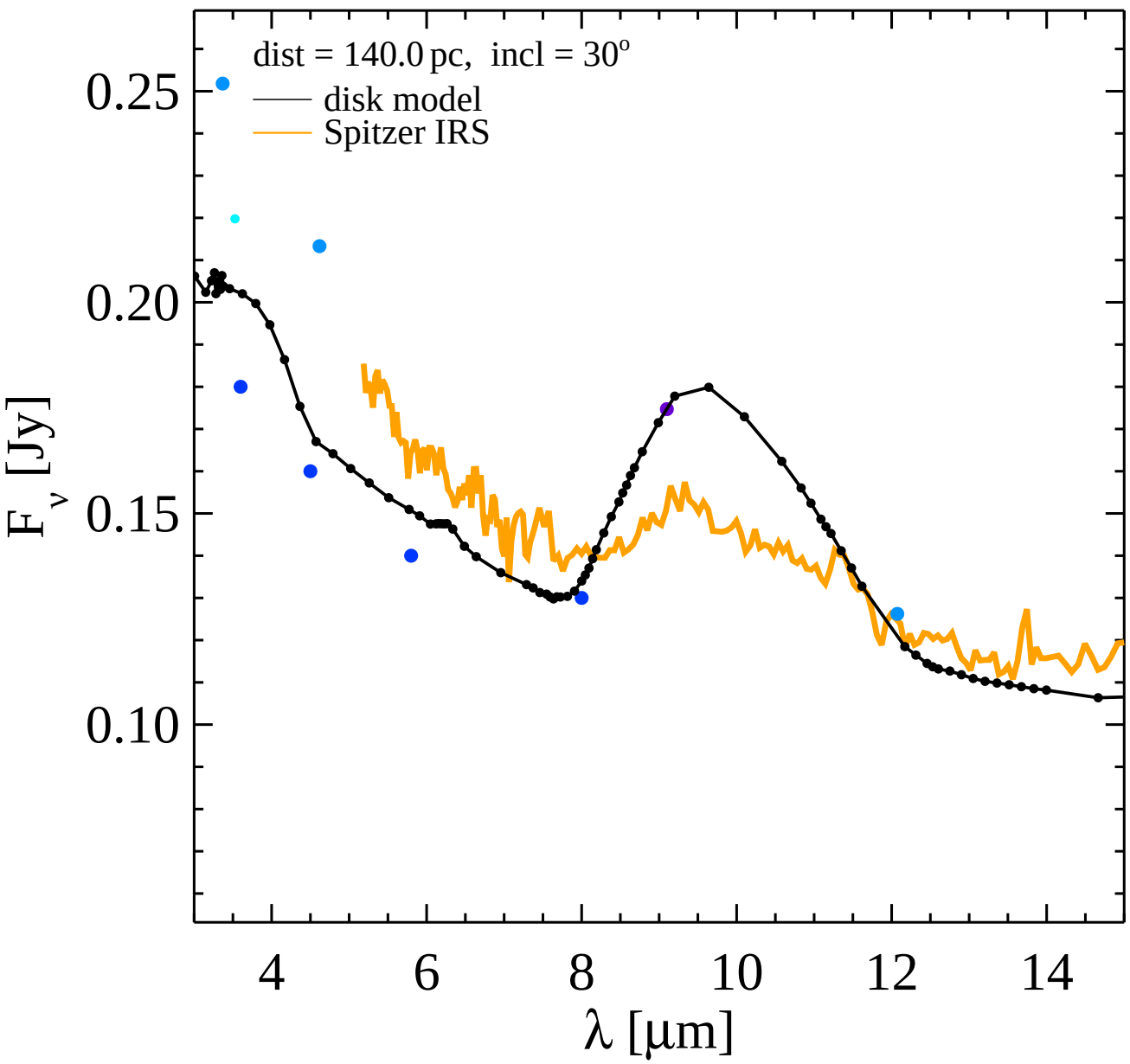

1.0
1.5
2.0
2.5
3.0
log T PAH [K]
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
0.1
1.0
10.0
100.0
r [AU]
200K
1000K
300K
100K
40K
20K
10K
1

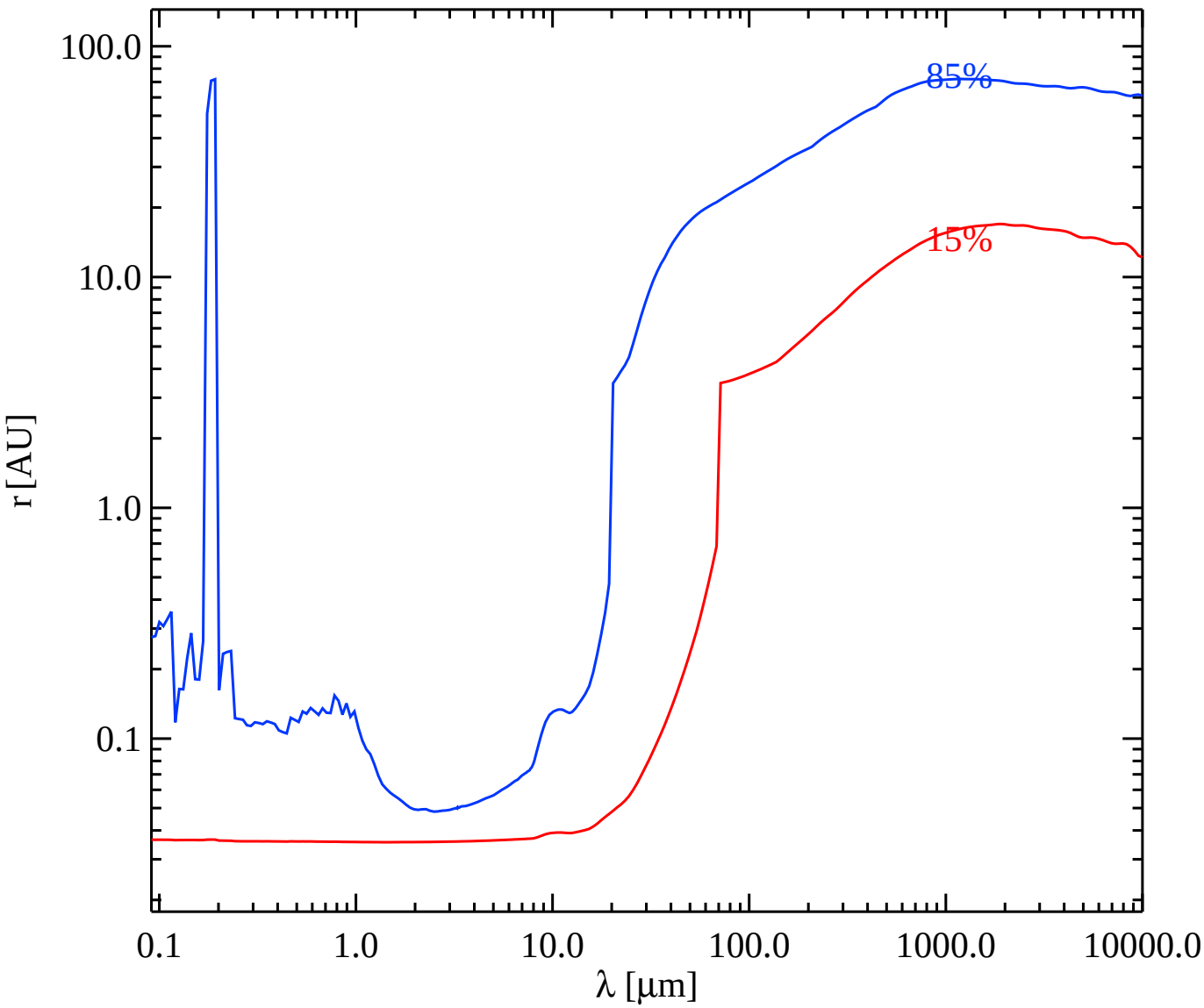

fitting Tdust ~ r^-q
1000
100
10
T dust [K]
0.1
1.0
10.0
100.0
r [AU]
z/r=0.60: q= 0.652 +/- 0.098
z/r=0.25: q= 0.628 +/- 0.071
z/r=0.00: q= 0.563 +/- 0.023

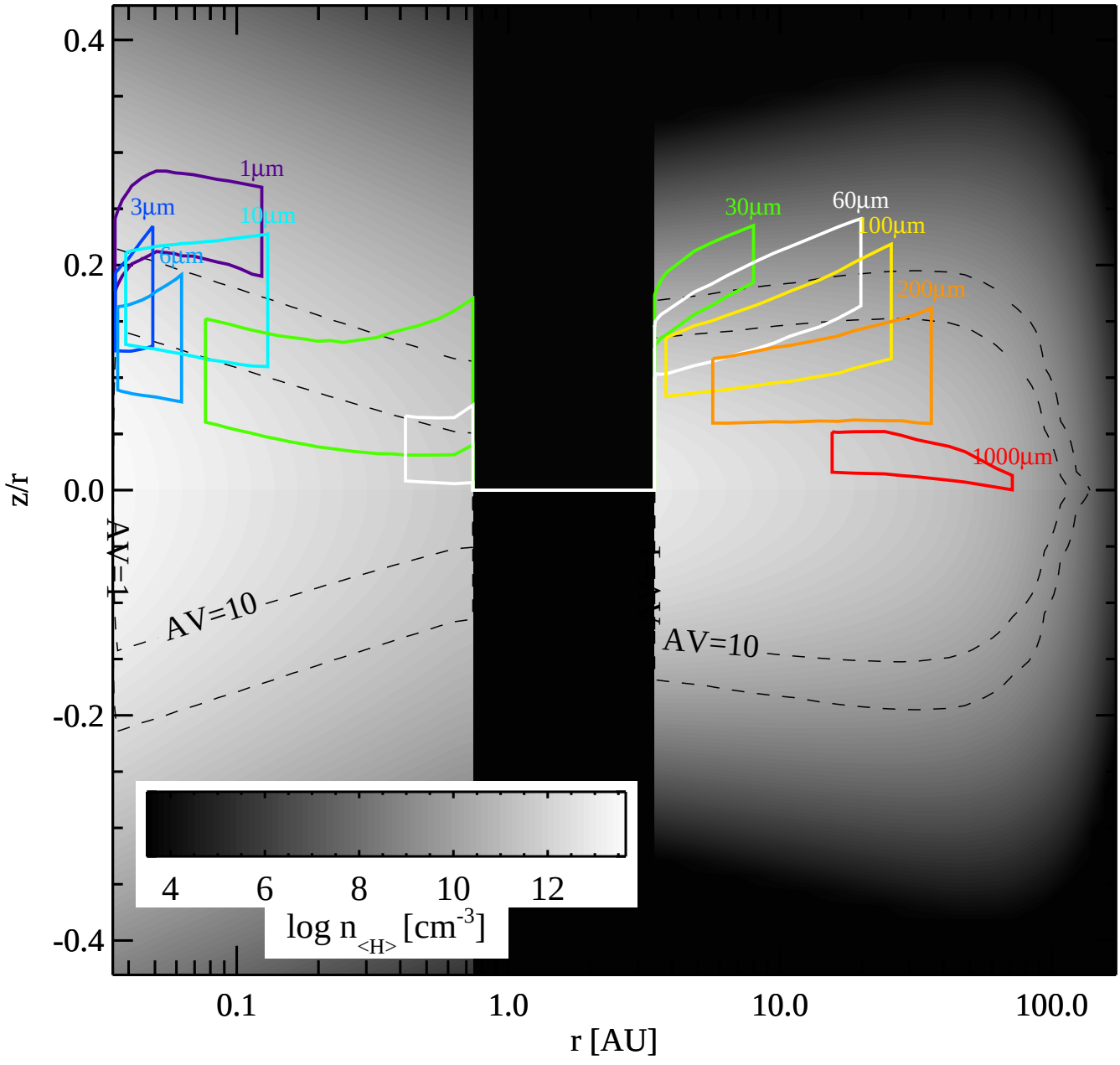

κ [cm²/g(dust)]
1000
100
10
1
0.1
1.0
10.0
100.0
1000.0
λ [μm]
κsca
κabs
λ-1
ProDiMo

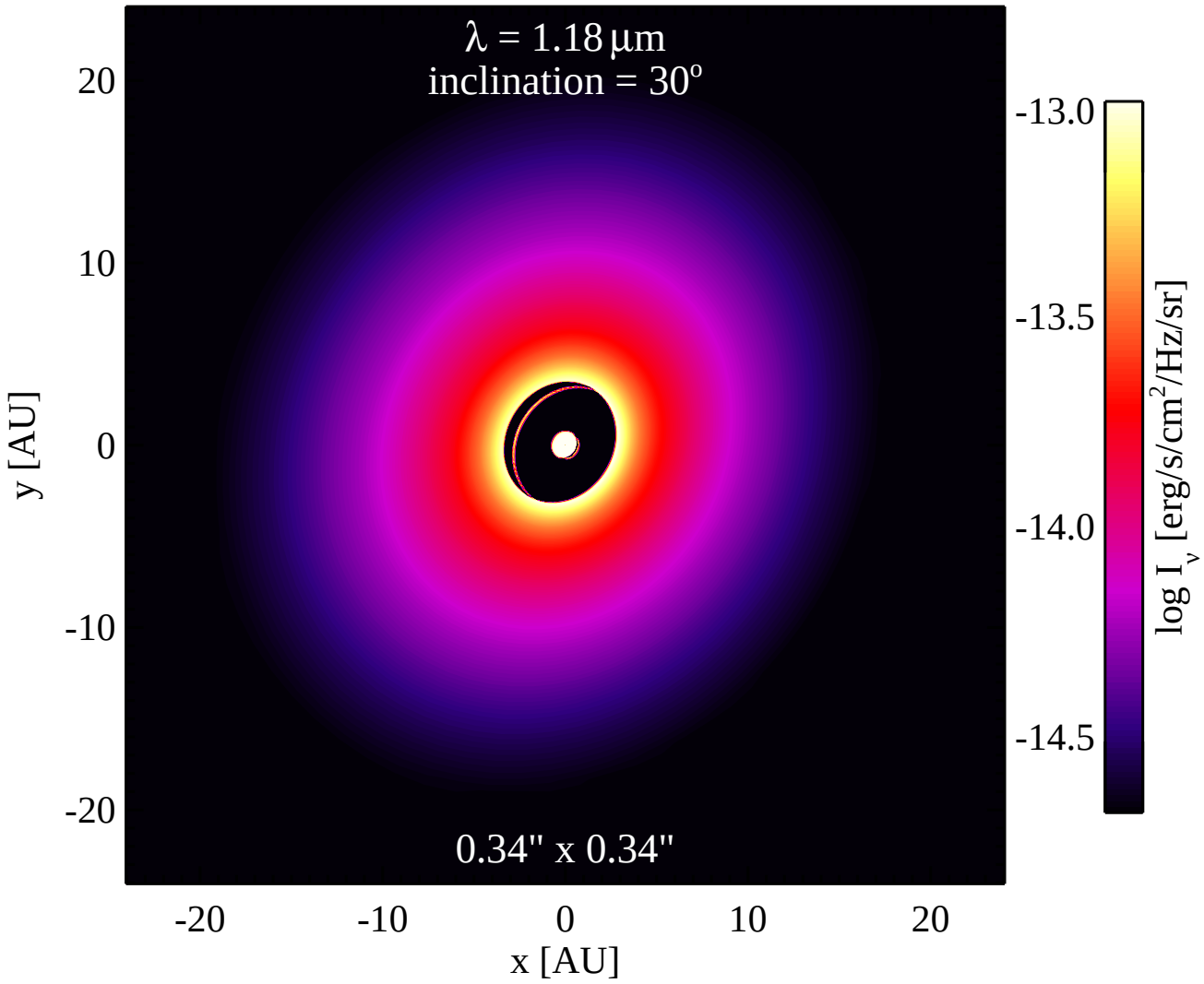

κ [cm²/g(dust)]
100.000
1.000
0.010
0.1
1.0
10.0
100.0
1000.0
λ [μm]
κsca
κabs
λ-1
neutral PAH
charged PAH
(g/d= 100.0 fPAH= 0.01)
ProDiMo

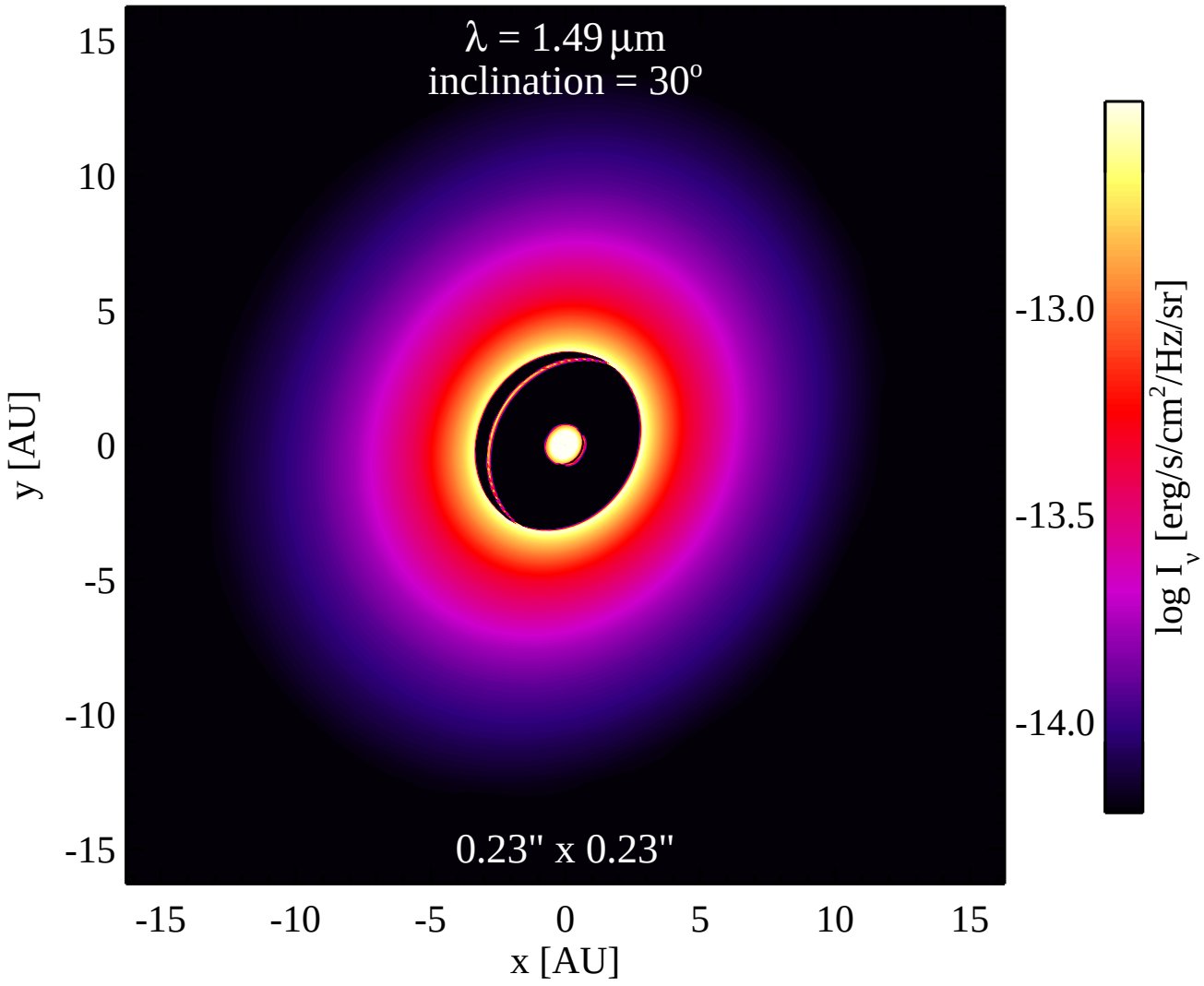

-10
-12
-14
-16
log ν F_ν [erg/cm²/s]
0.1
1.0
10.0
100.0
1000.0
10000.0
λ [μm]
dist = 140.0 pc, incl = 30°
star + UV
disk model
Spitzer IRS
<UV>data

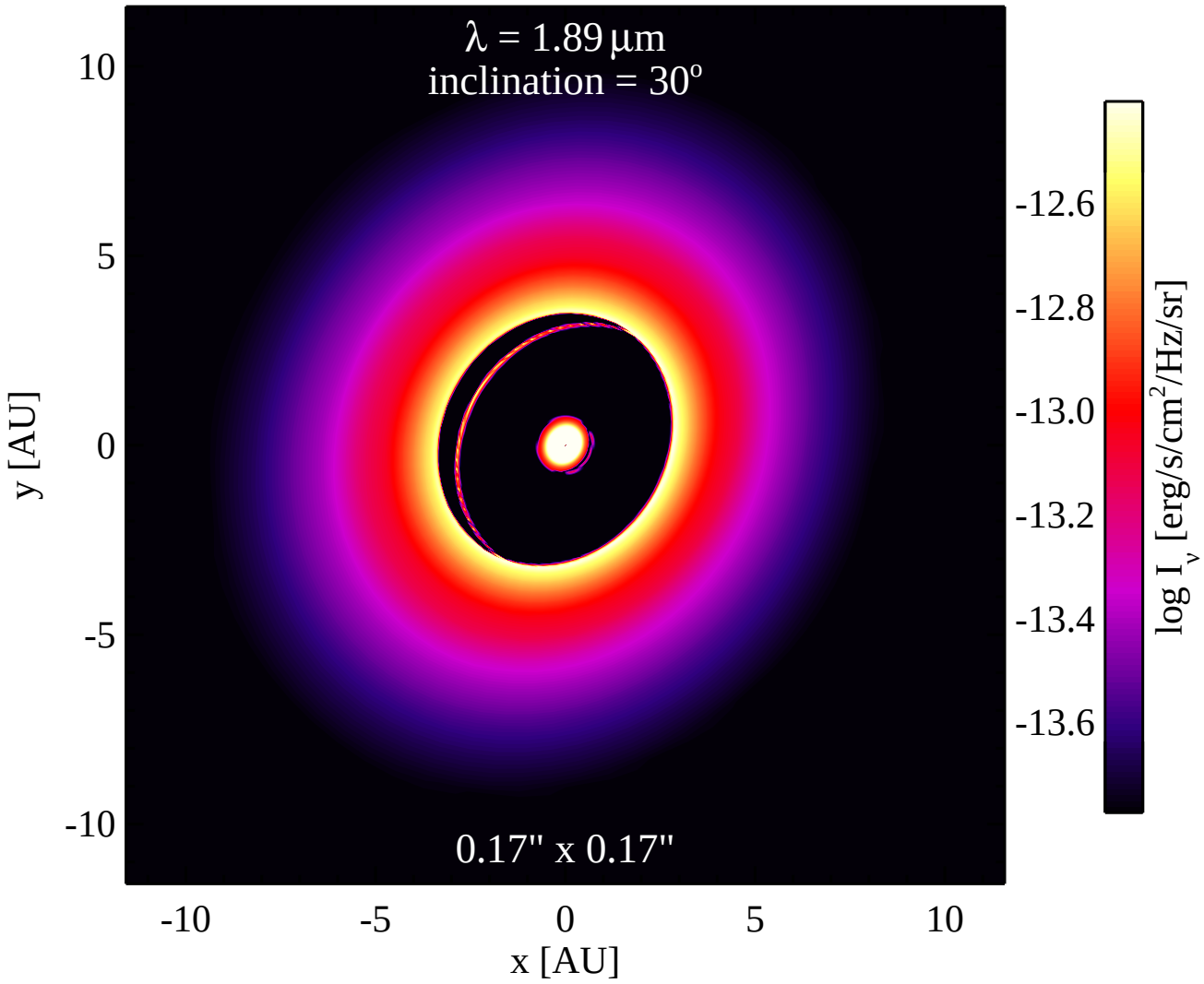

dist = 140.0 pc, incl = 30°
disk model
Spitzer IRS
0.25
0.20
0.15
0.10
F_ν [Jy]
4
6
8
10
12
14
λ [μm]

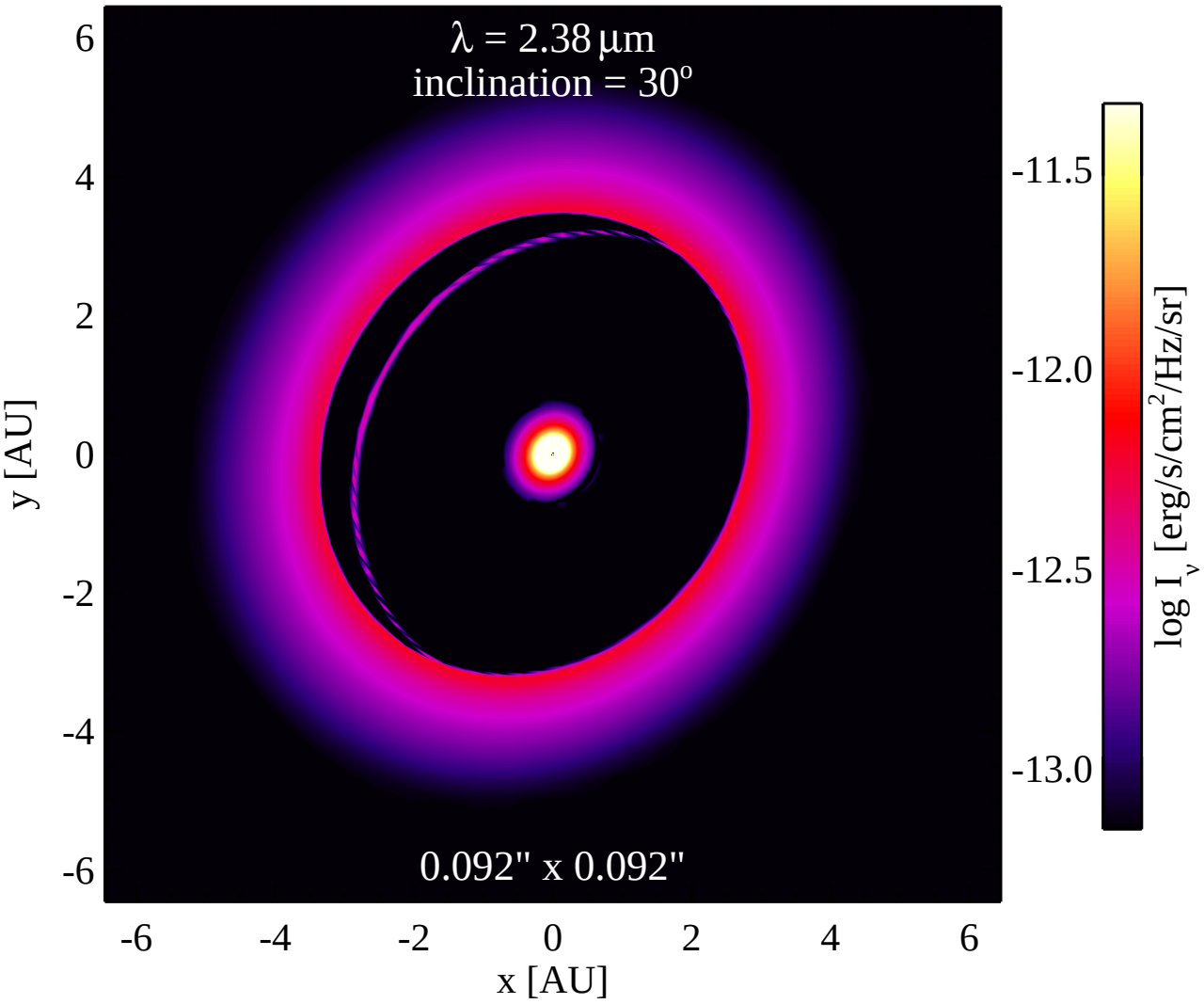

100.0
10.0
1.0
0.1
r [AU]
85%
15%
0.1
1.0
10.0
100.0
1000.0
10000.0
λ [μm]

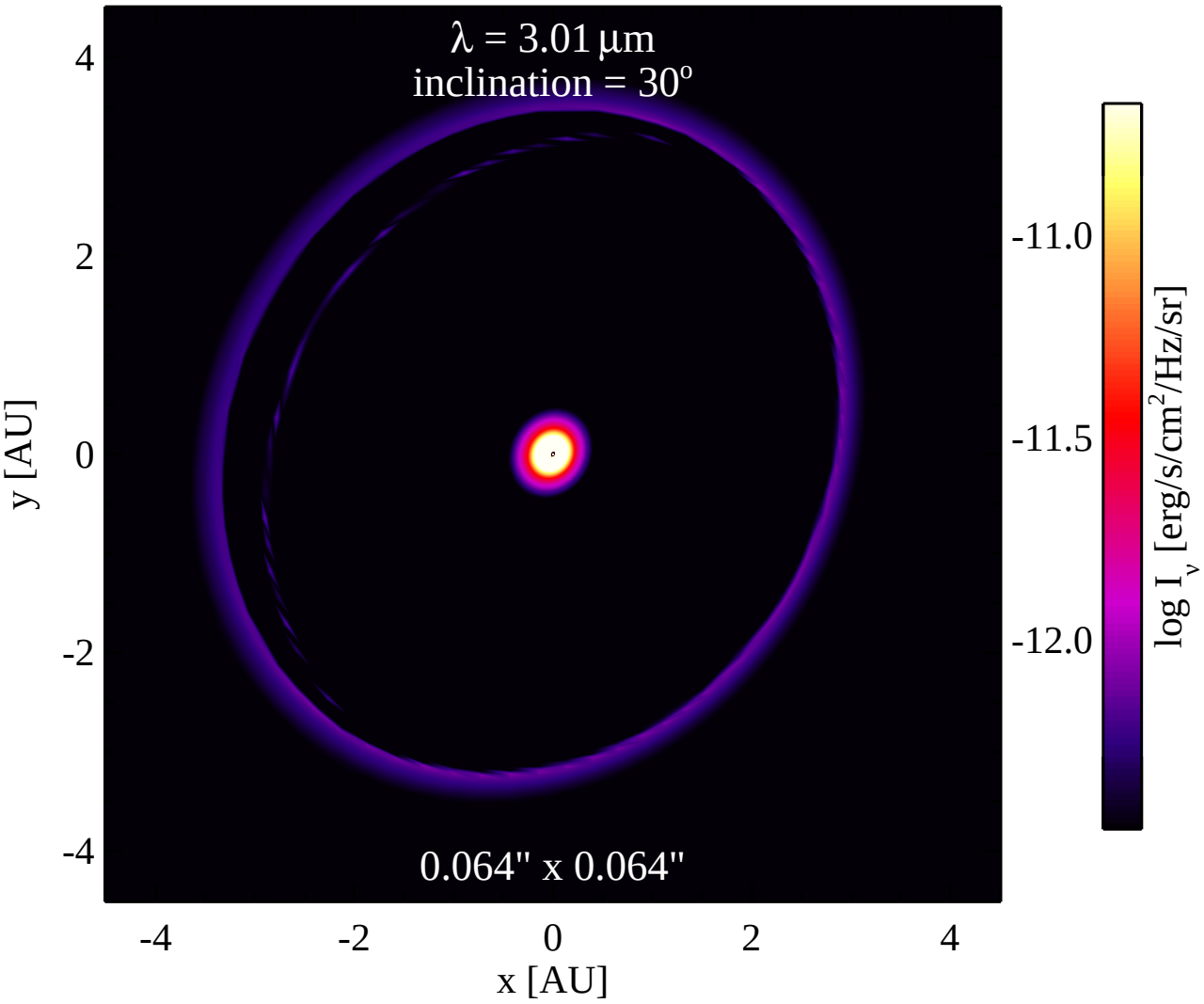

0.4
0.2
0.0
-0.2
-0.4
z/r
0.1
1.0
10.0
100.0
r [AU]
1µm
3µm
10µm
6µm
30µm
60µm
100µm
200µm
1000µm
AV=10
AV=10
AV=1
4
6
8
10
12
log n<H> [cm-3]

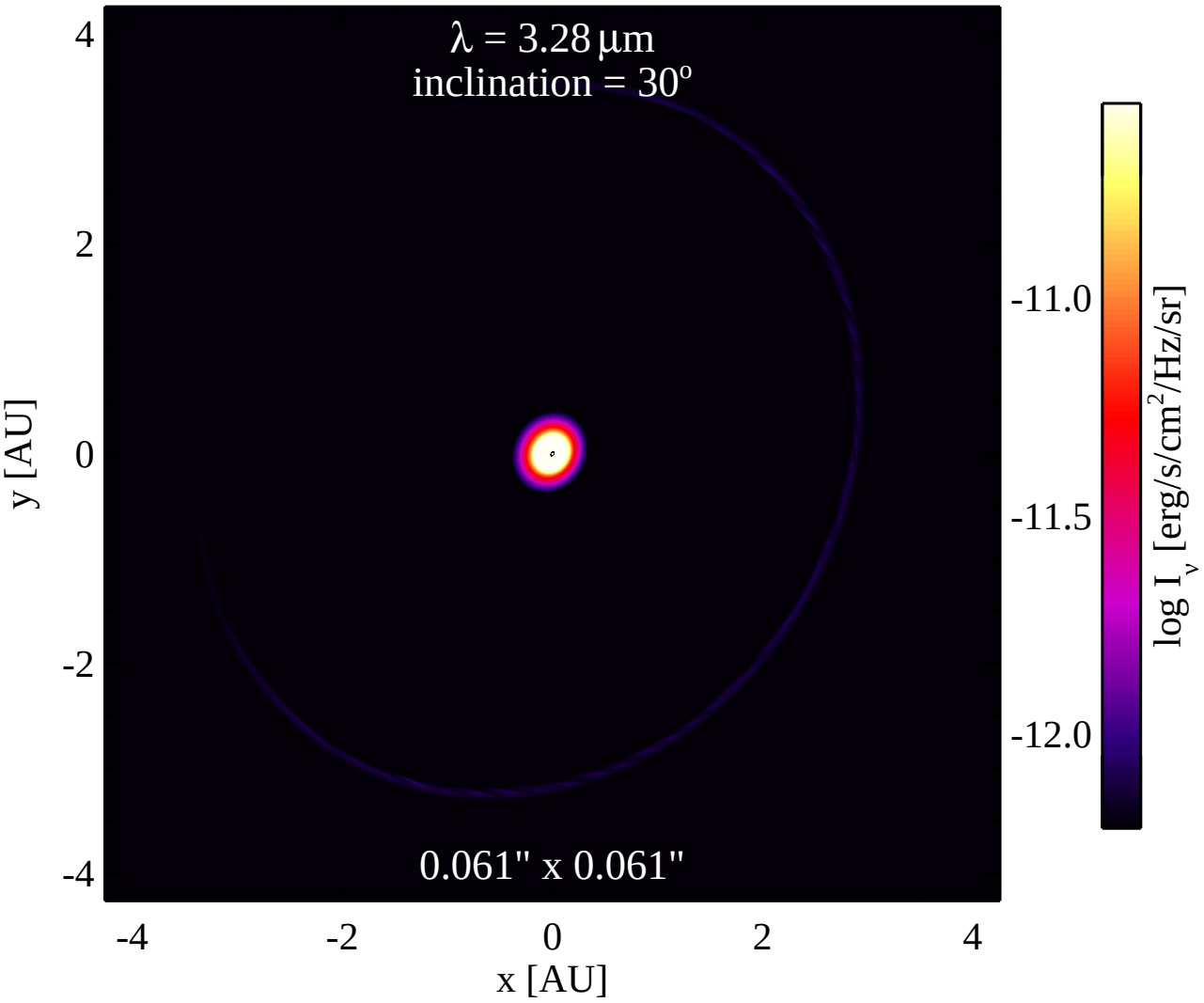

λ = 1.18 μm
inclination = 30°
0.34" x 0.34"
20
10
0
-10
-20
y [AU]
-20
-10
0
10
20
x [AU]
-13.0
-13.5
-14.0
-14.5
log I_ν [erg/s/cm²/Hz/sr]

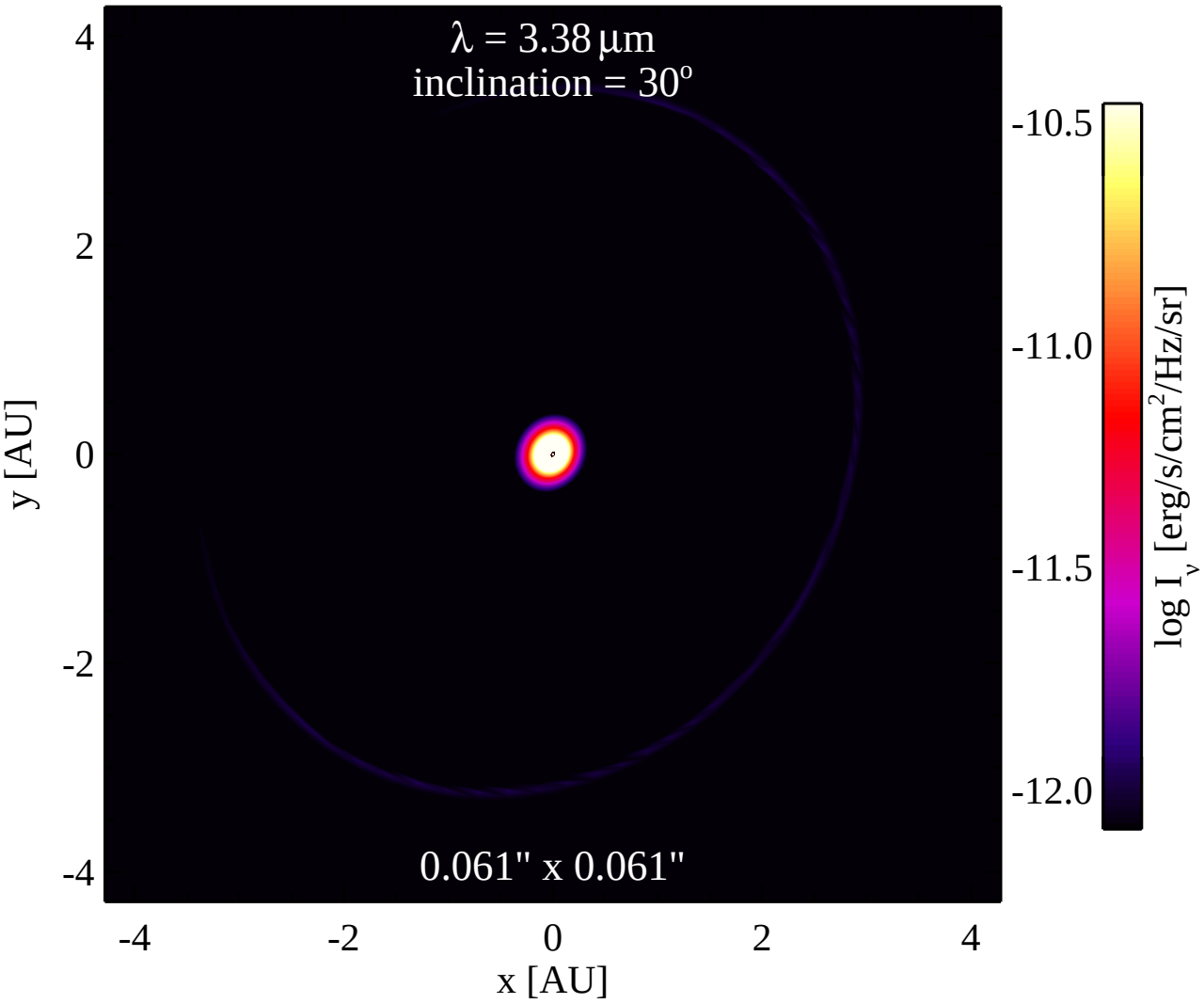

λ = 1.49 μm
inclination = 30°
0.23" x 0.23"
15
10
5
0
-5
-10
-15
y [AU]
-15
-10
-5
0
5
10
15
x [AU]
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]

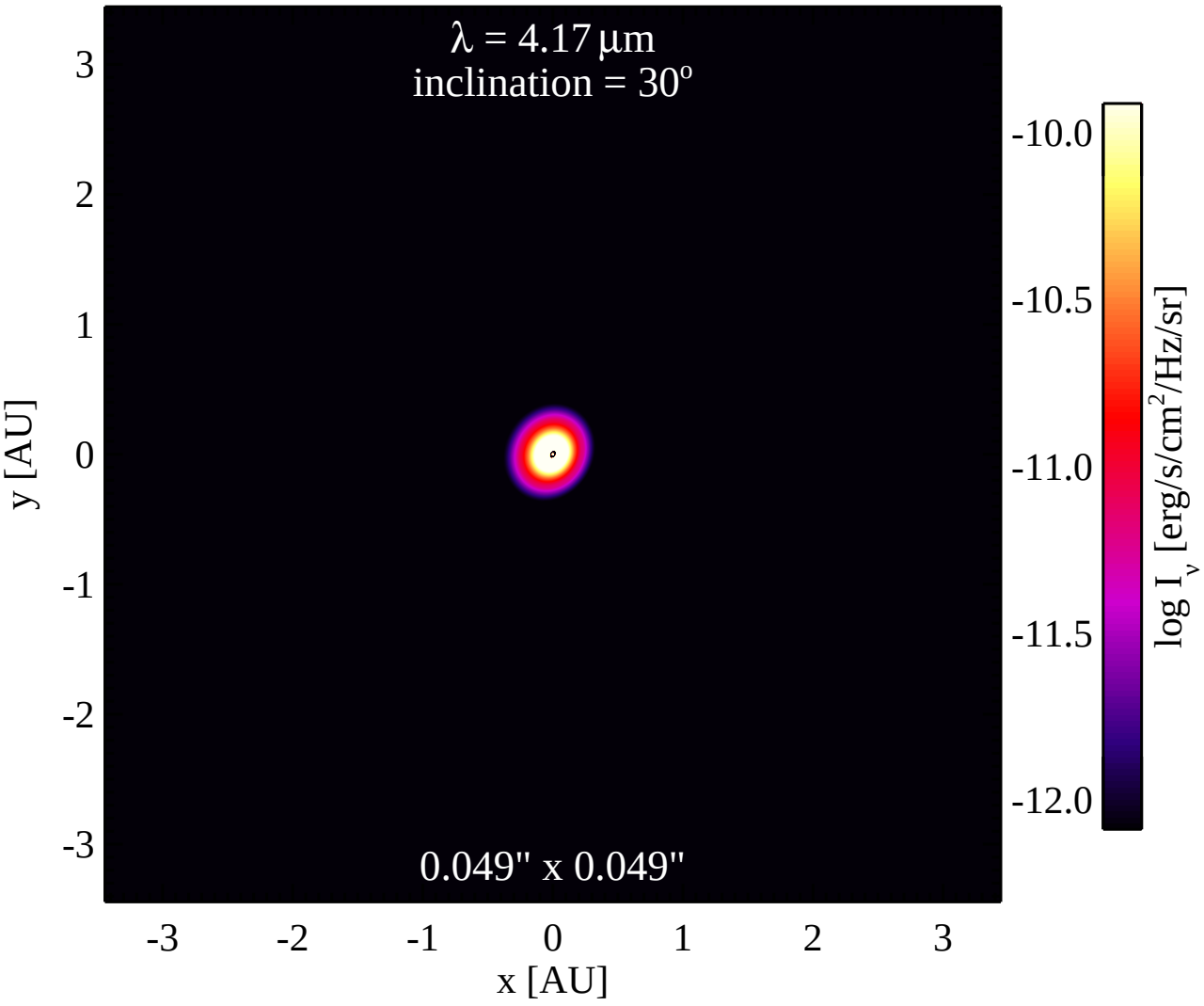

λ = 1.89 μm
inclination = 30°
0.17" x 0.17"
10
5
0
-5
-10
y [AU]
-10
-5
0
5
10
x [AU]
-12.6
-12.8
-13.0
-13.2
-13.4
-13.6
log I_ν [erg/s/cm²/Hz/sr]

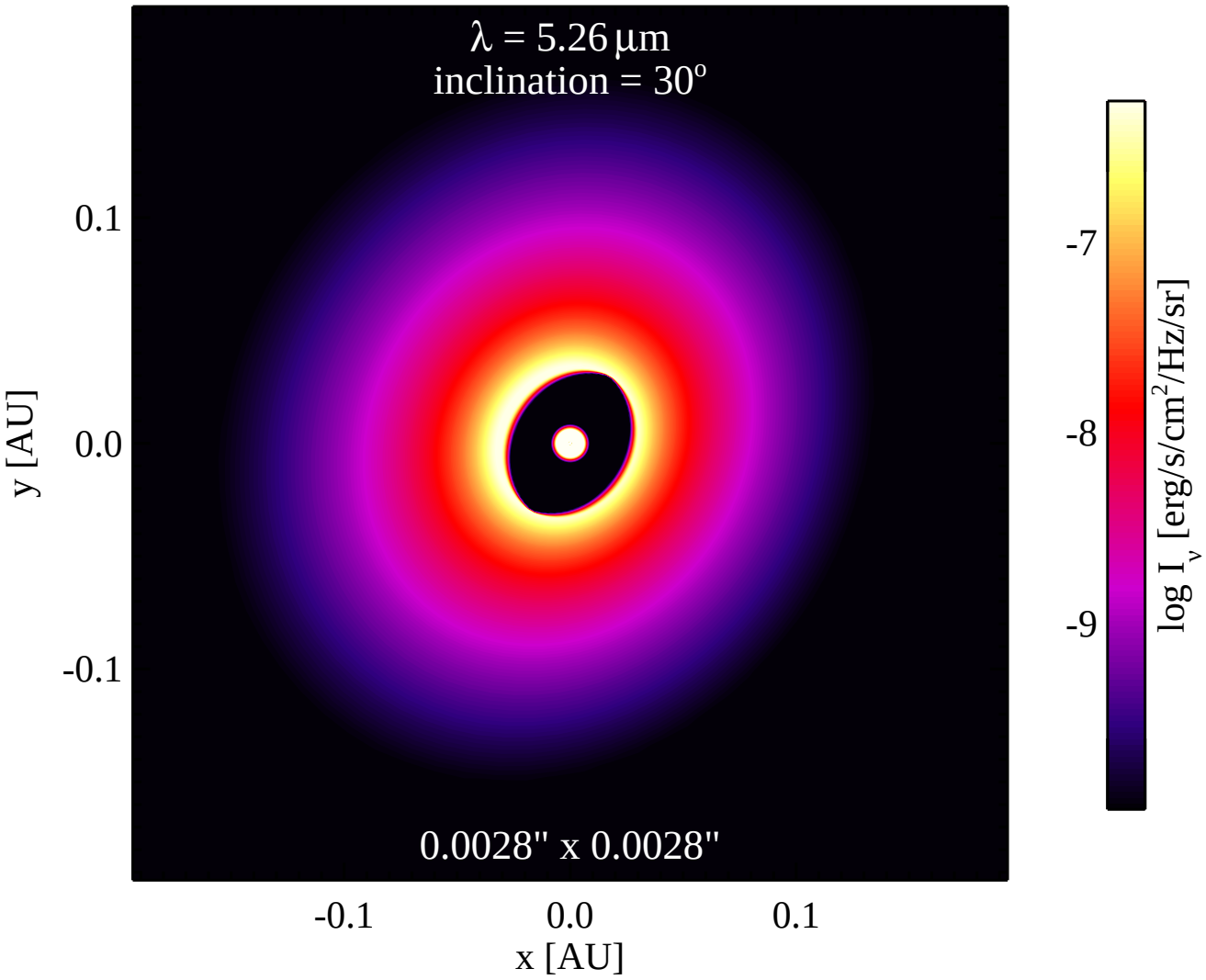

λ = 2.38 μm
inclination = 30°
0.092" x 0.092"
y [AU]
x [AU]
6
4
2
0
-2
-4
-6
-6
-4
-2
0
2
4
6
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

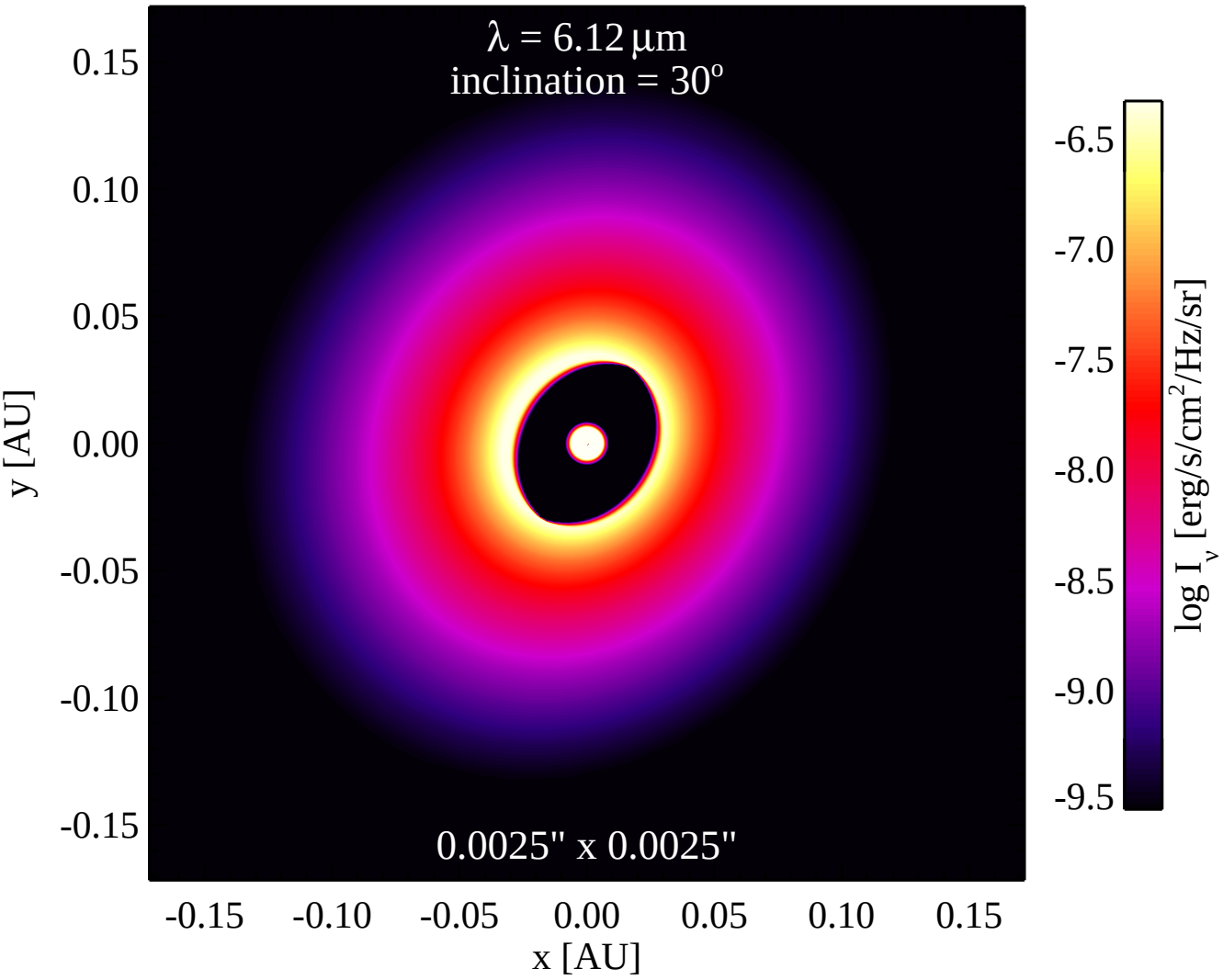

λ = 3.01 μm
inclination = 30°
0.064" x 0.064"
4
2
0
-2
-4
y [AU]
-4
-2
0
2
4
x [AU]
-11.0
-11.5
-12.0
log I_ν [erg/s/cm²/Hz/sr]

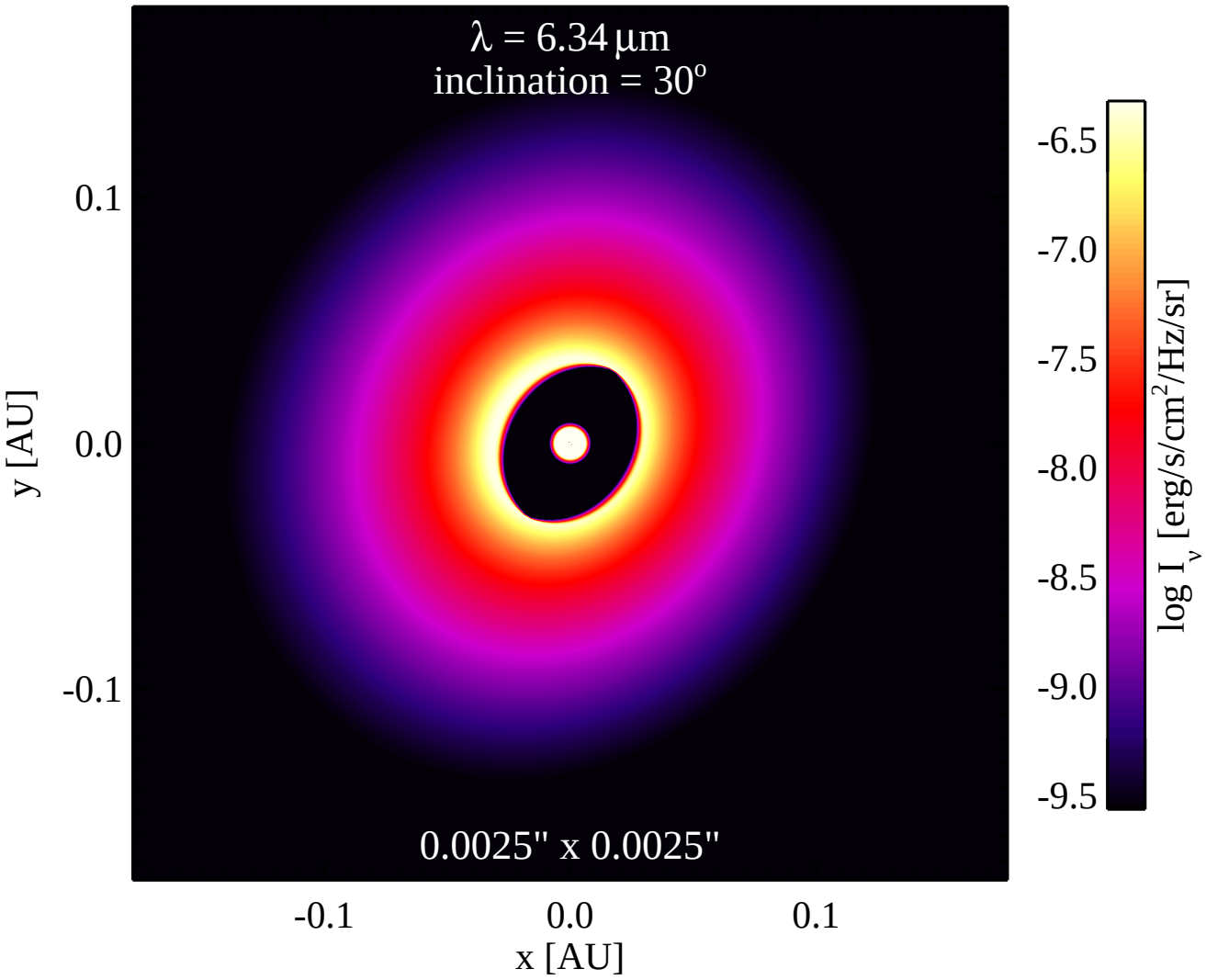

λ = 3.28 μm
inclination = 30°
0.061" x 0.061"
y [AU]
x [AU]
4
2
0
-2
-4
-4
-2
0
2
4
-11.0
-11.5
-12.0
log I_ν [erg/s/cm²/Hz/sr]

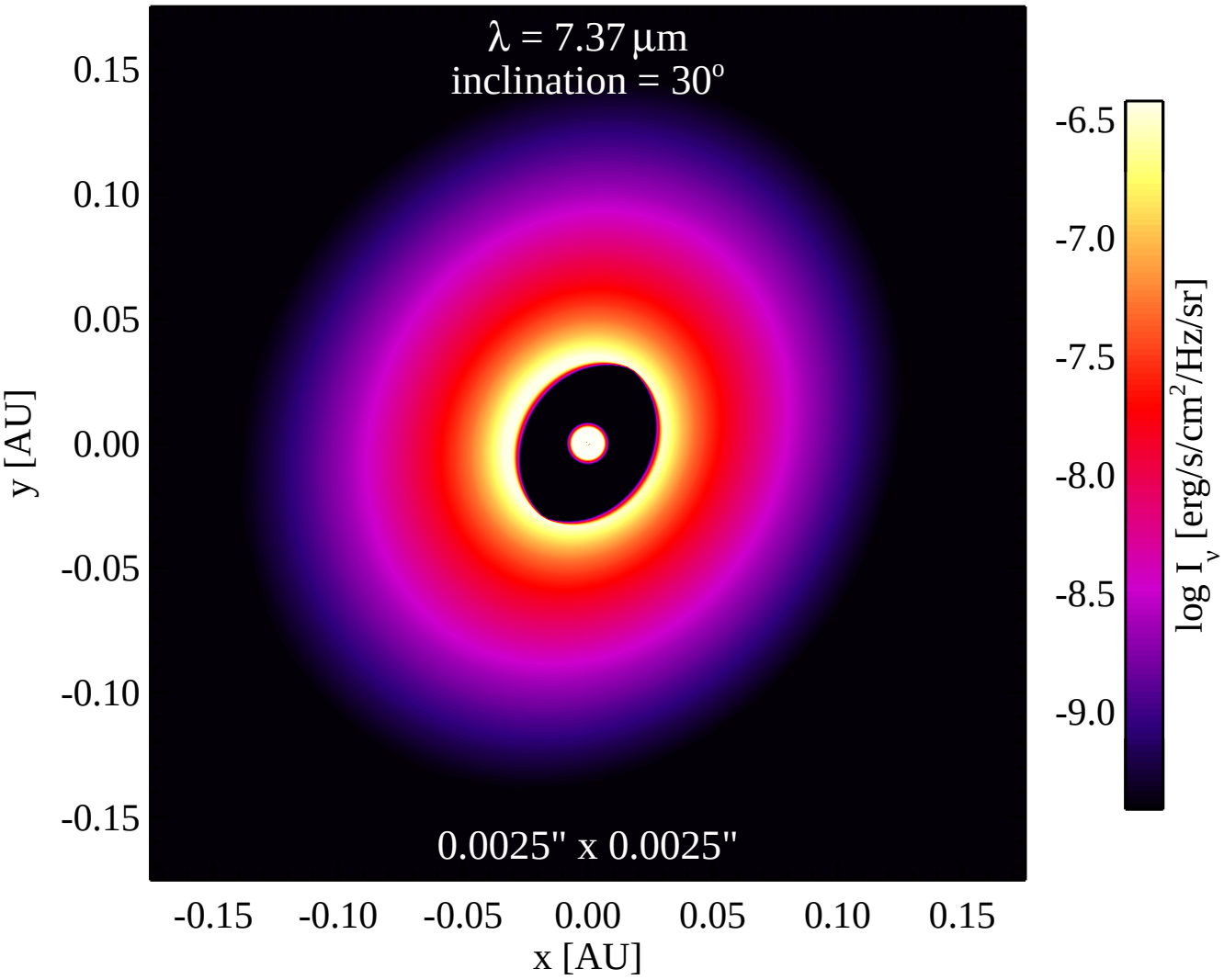

λ = 3.38 μm
inclination = 30°
0.061" x 0.061"
y [AU]
x [AU]
4
2
0
-2
-4
-4
-2
0
2
4
-10.5
-11.0
-11.5
-12.0
log I_ν [erg/s/cm²/Hz/sr]

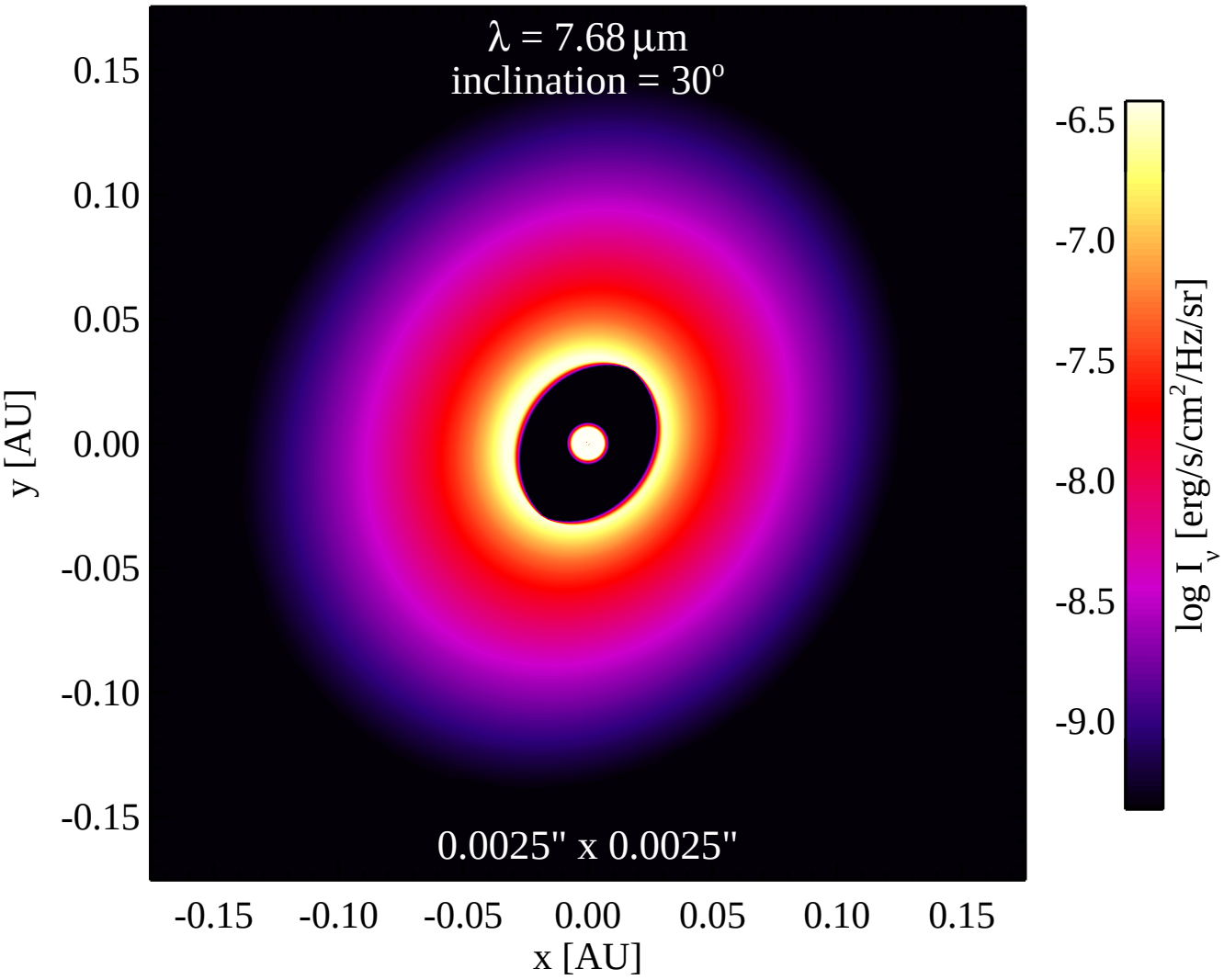

λ = 4.17 μm
inclination = 30°
0.049" x 0.049"
y [AU]
x [AU]
3
2
1
0
-1
-2
-3
-10.0
-10.5
-11.0
-11.5
-12.0
log I_ν [erg/s/cm²/Hz/sr]

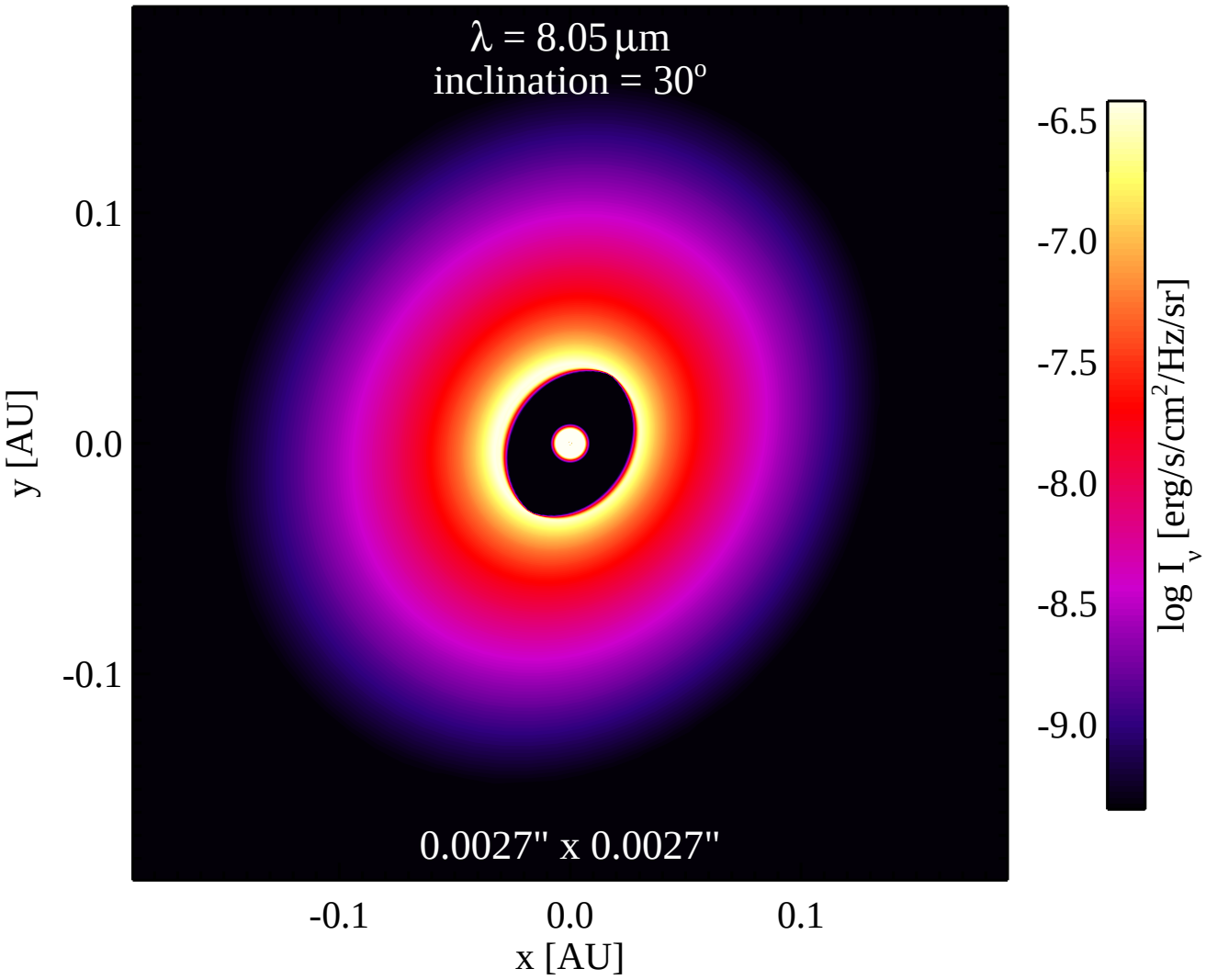

λ = 5.26 μm
inclination = 30°
0.0028" x 0.0028"
0.1
0.0
-0.1
y [AU]
-0.1
0.0
0.1
x [AU]
-7
-8
-9
log I_ν [erg/s/cm²/Hz/sr]

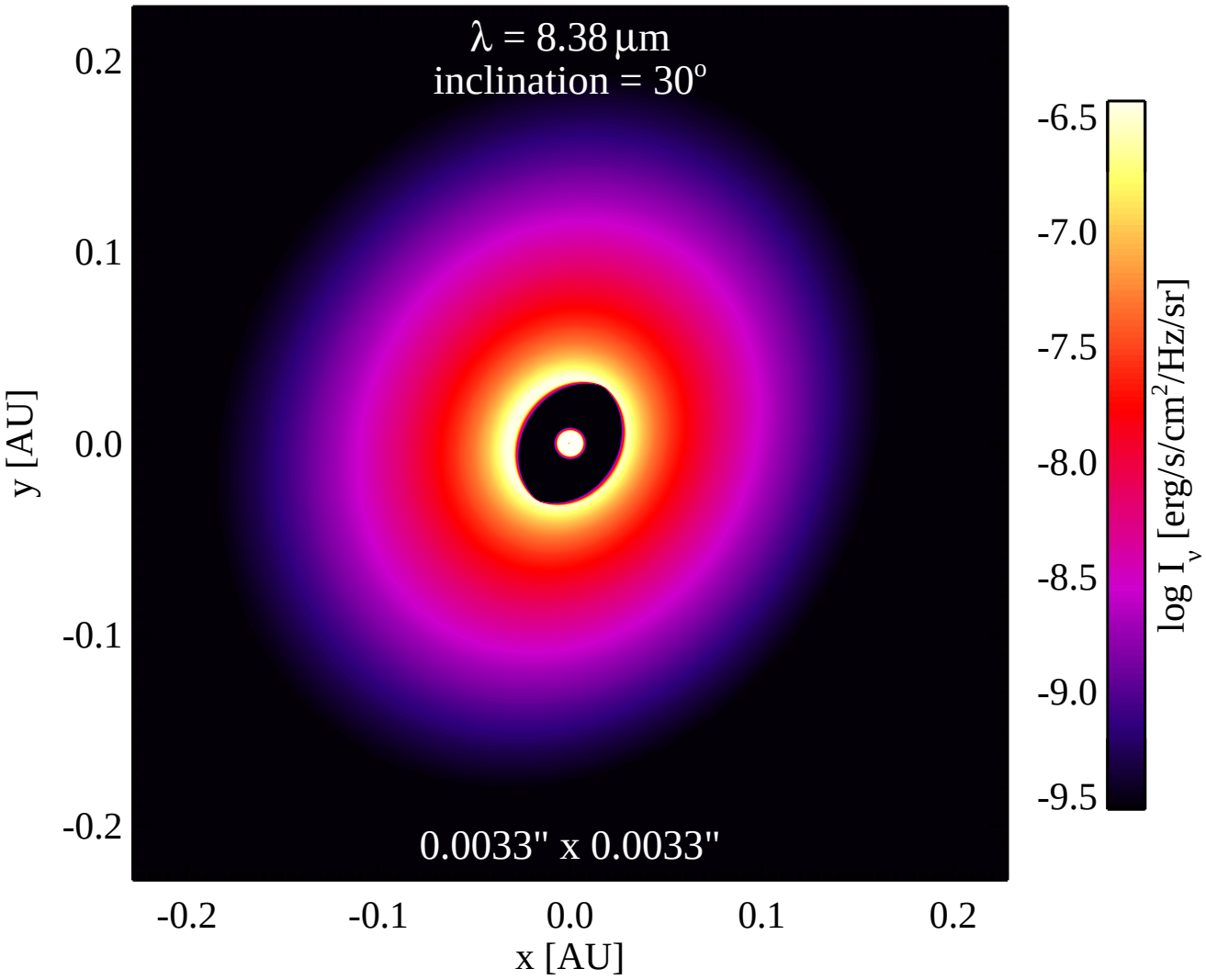

λ = 6.12 μm
inclination = 30°
0.0025" x 0.0025"
0.15
0.10
0.05
0.00
-0.05
-0.10
-0.15
y [AU]
-0.15
-0.10
-0.05
0.00
0.05
0.10
0.15
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

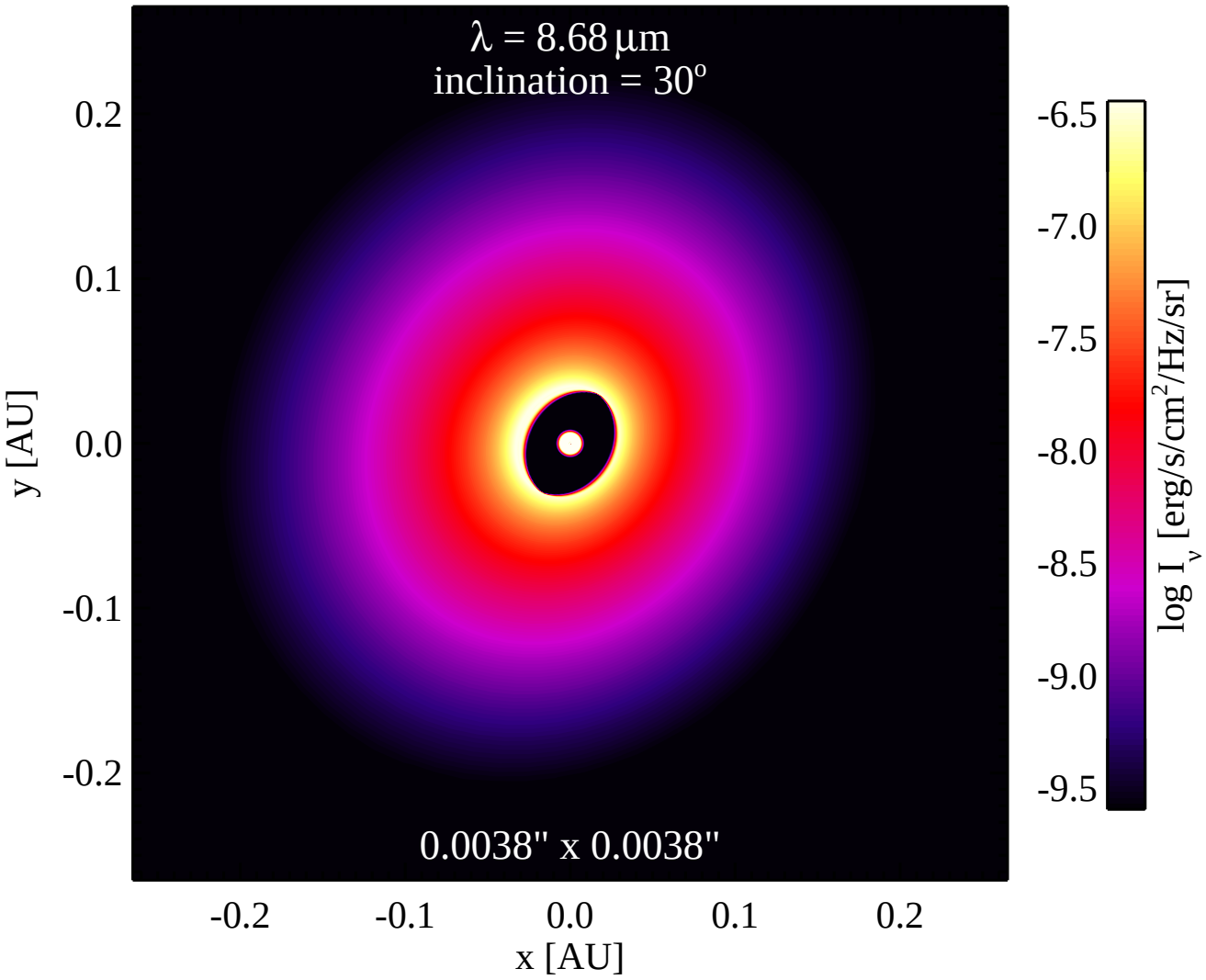

λ = 6.34 μm
inclination = 30°
0.0025" x 0.0025"
0.1
0.0
-0.1
y [AU]
-0.1
0.0
0.1
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

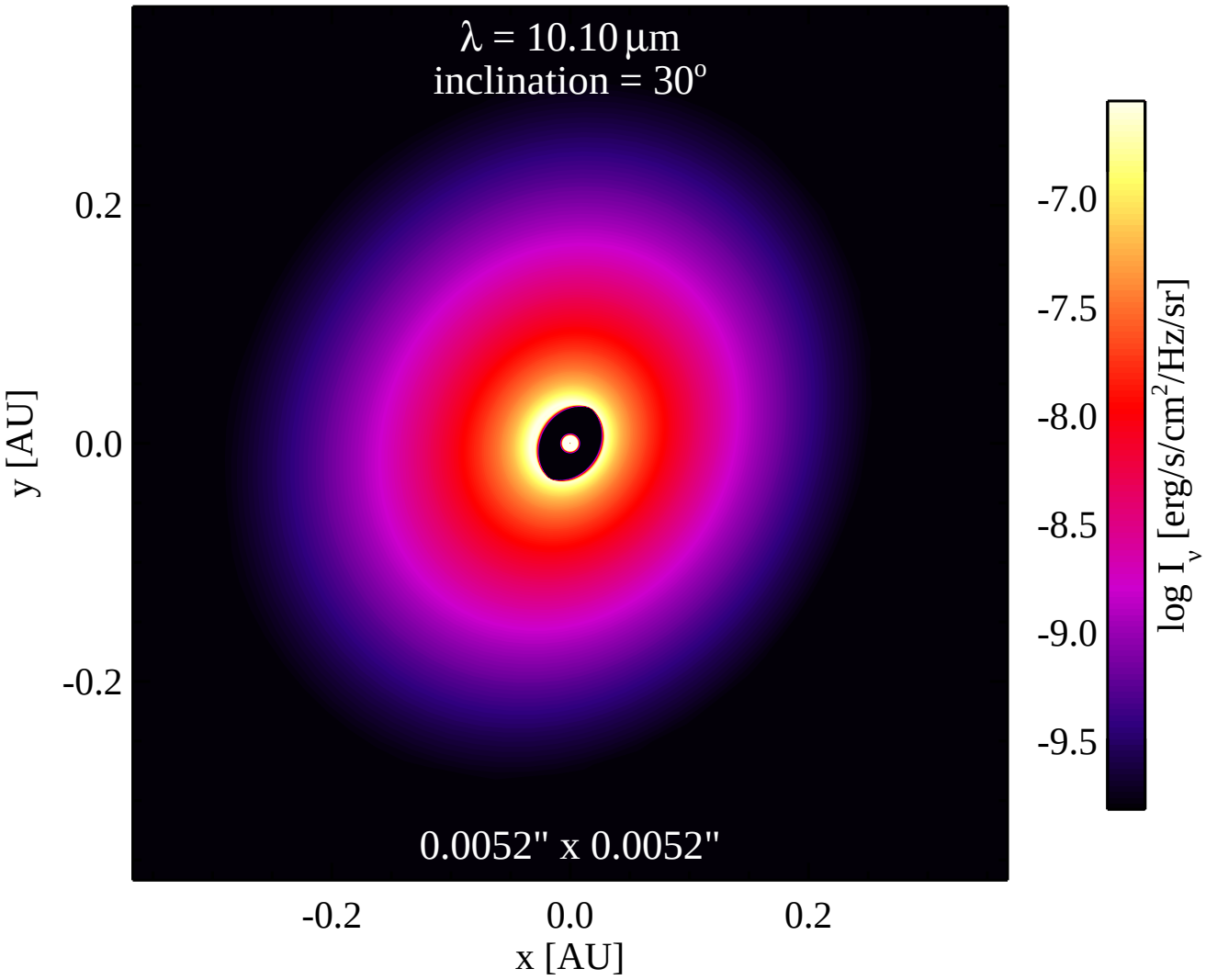

λ = 7.37 μm
inclination = 30°
0.0025" x 0.0025"
0.15
0.10
0.05
0.00
-0.05
-0.10
-0.15
y [AU]
-0.15
-0.10
-0.05
0.00
0.05
0.10
0.15
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
log I_ν [erg/s/cm²/Hz/sr]

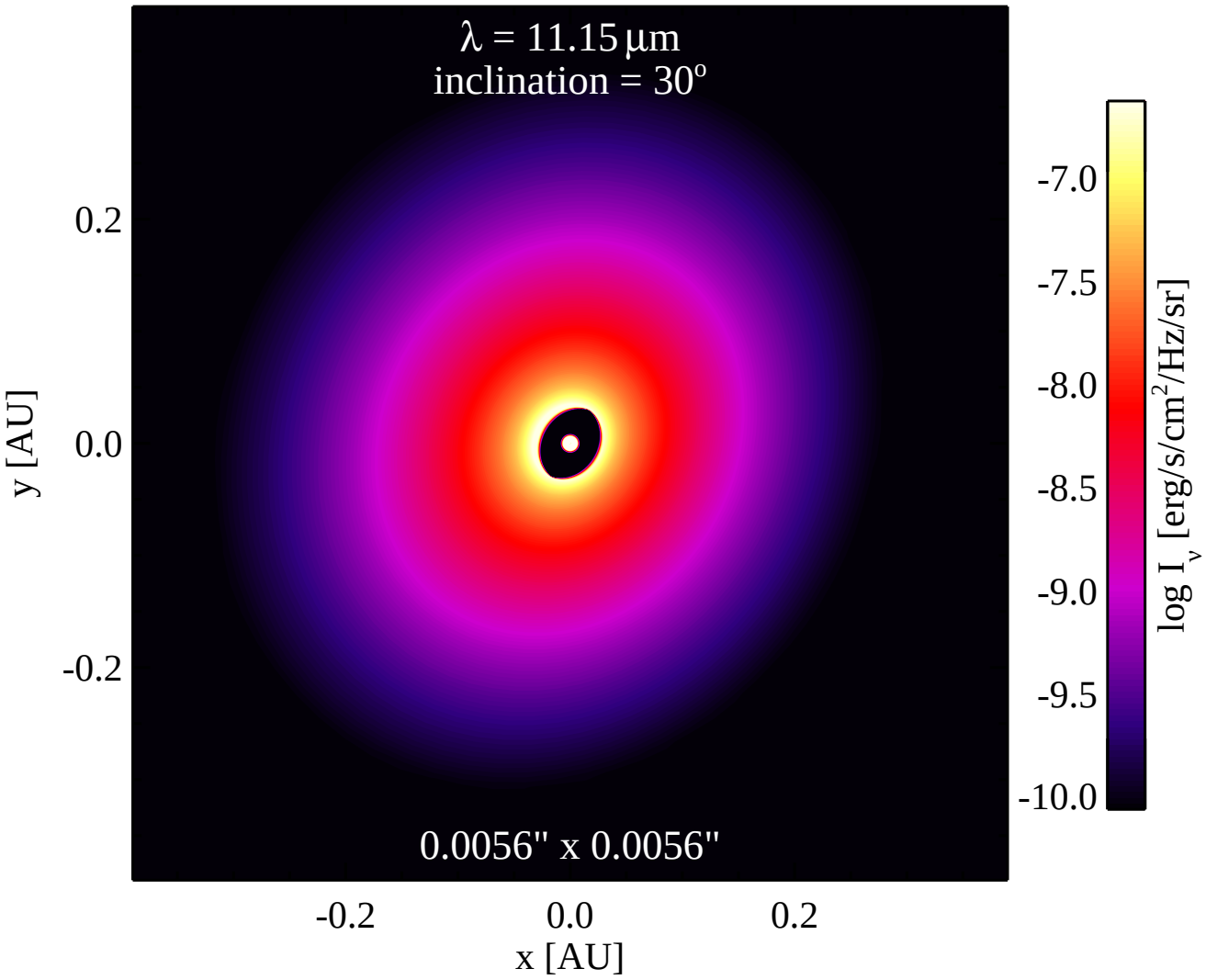

λ = 7.68 μm
inclination = 30°
0.0025" x 0.0025"
0.15
0.10
0.05
0.00
-0.05
-0.10
-0.15
y [AU]
-0.15
-0.10
-0.05
0.00
0.05
0.10
0.15
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
log I_ν [erg/s/cm²/Hz/sr]

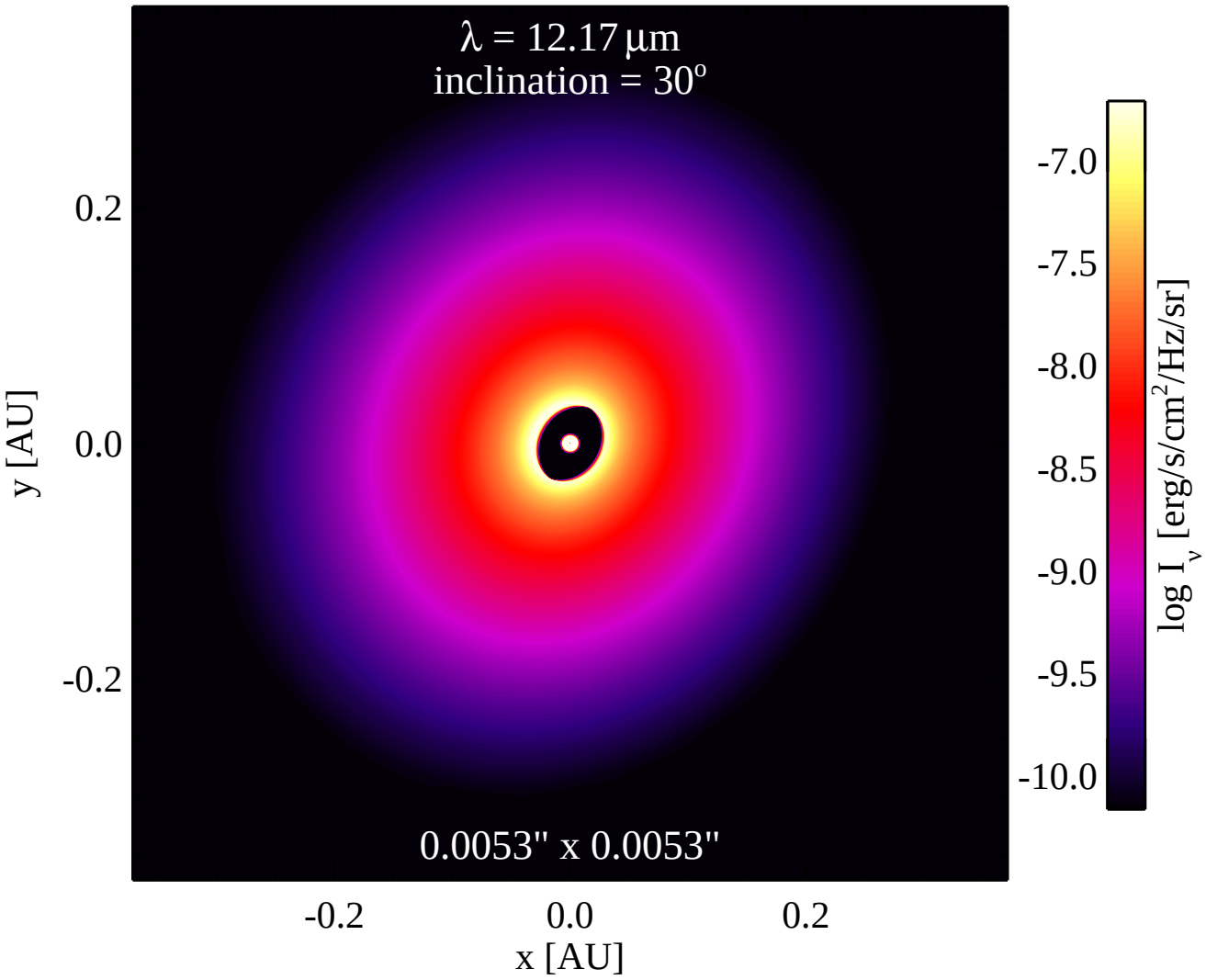

λ = 8.05 μm
inclination = 30°
0.0027" x 0.0027"
0.1
0.0
-0.1
y [AU]
-0.1
0.0
0.1
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
log I_ν [erg/s/cm²/Hz/sr]

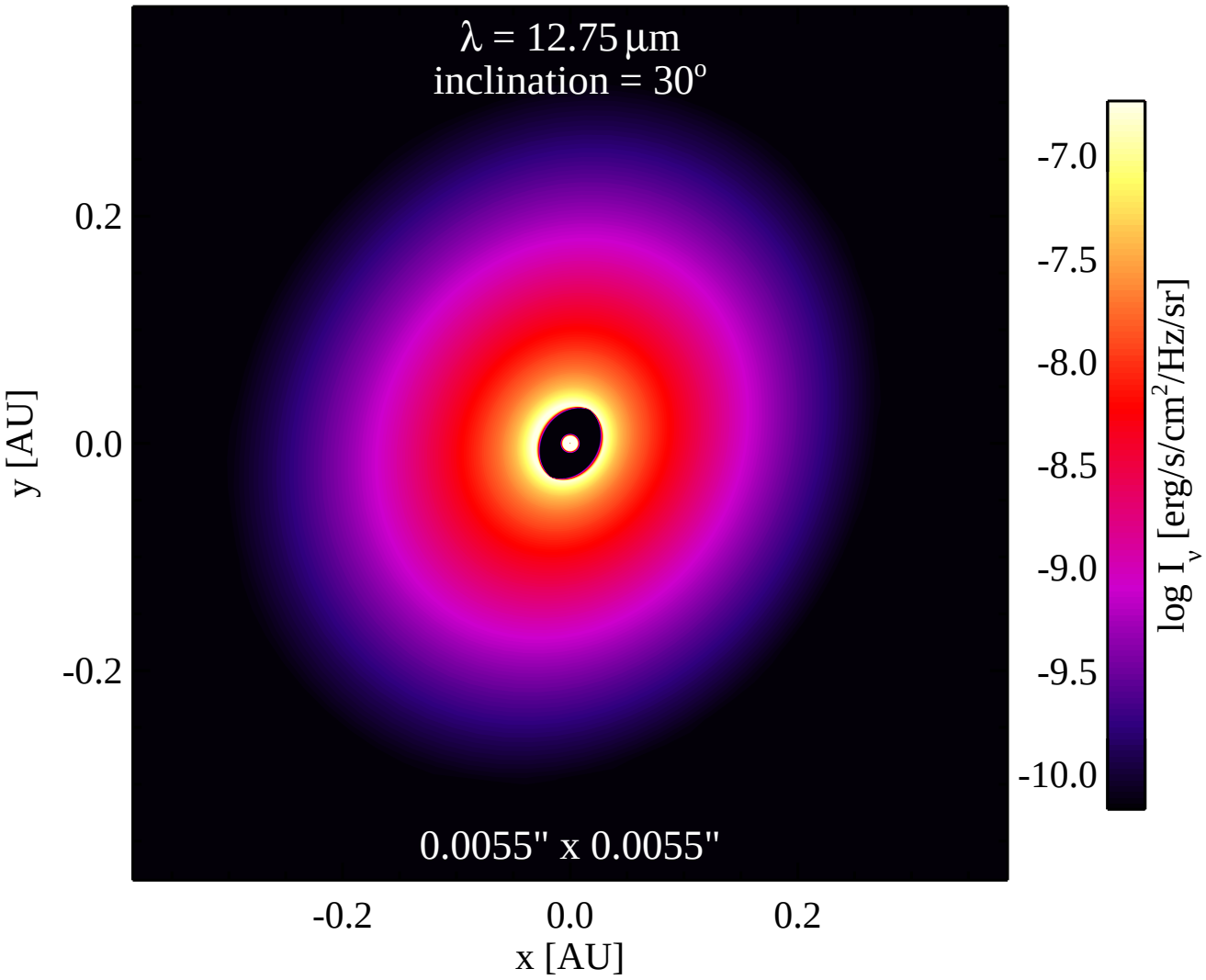

λ = 8.38 μm
inclination = 30°
0.0033" x 0.0033"
0.2
0.1
0.0
-0.1
-0.2
y [AU]
-0.2
-0.1
0.0
0.1
0.2
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

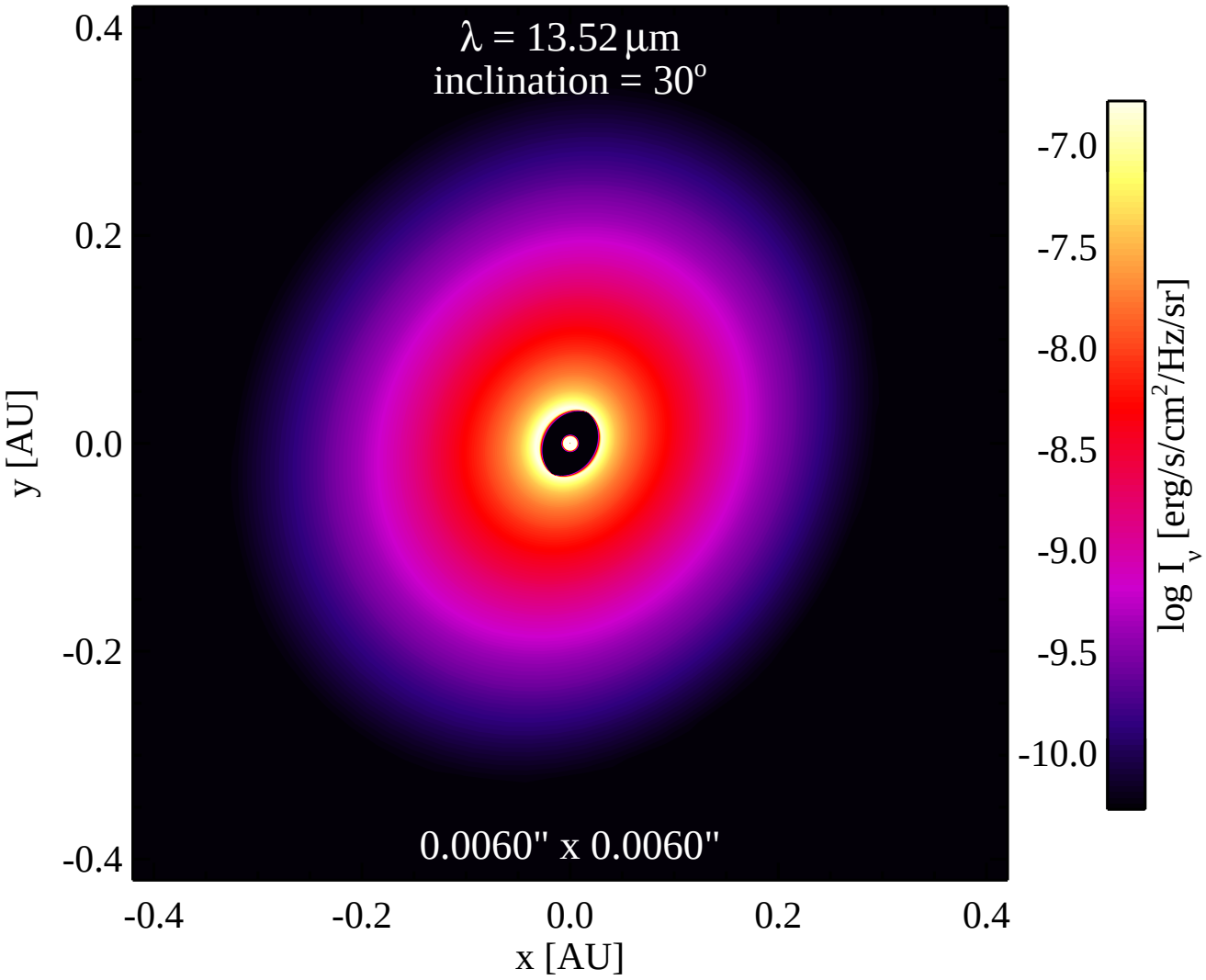

λ = 8.68 μm
inclination = 30°
0.0038" x 0.0038"
0.2
0.1
0.0
-0.1
-0.2
y [AU]
-0.2
-0.1
0.0
0.1
0.2
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

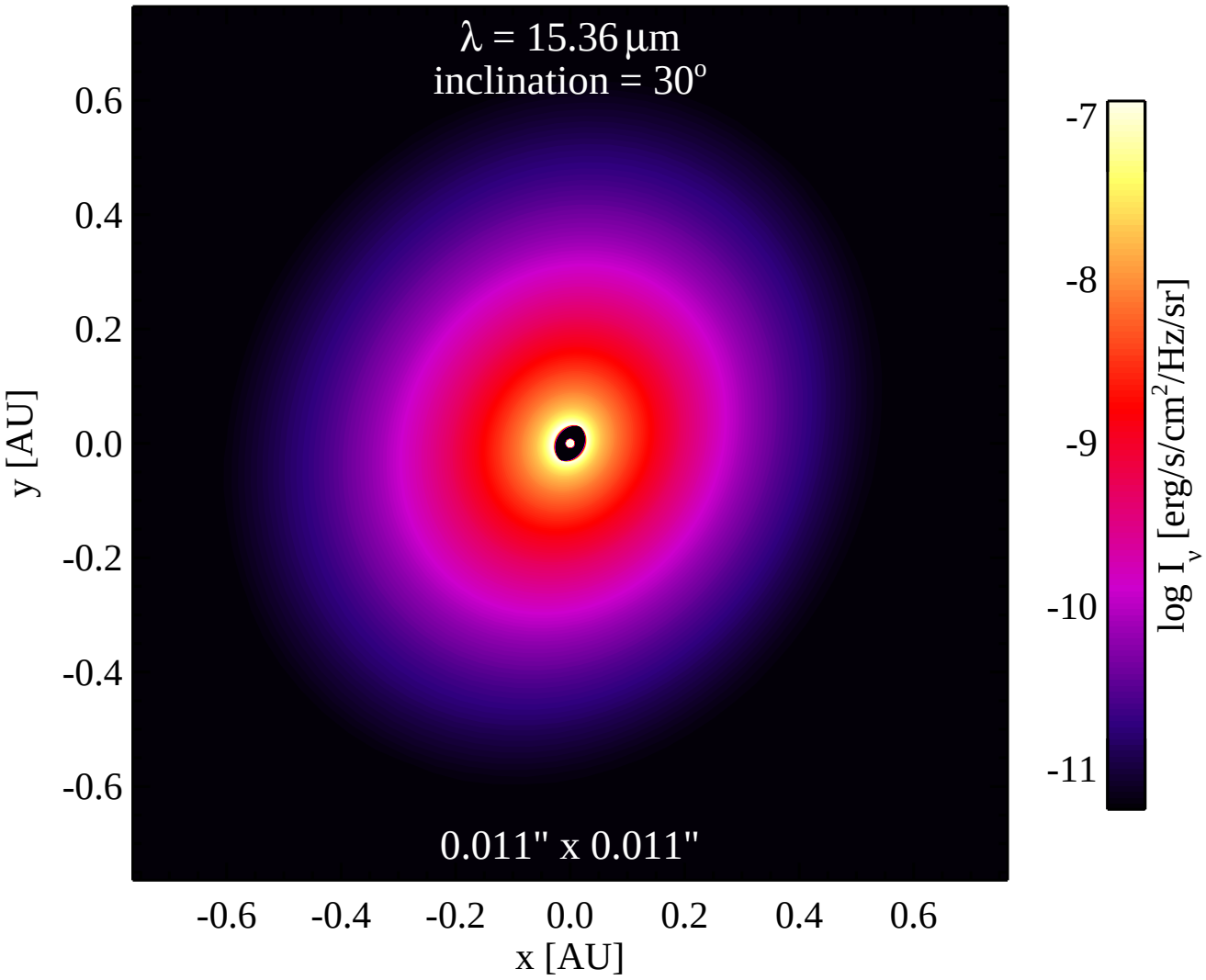

λ = 10.10 μm
inclination = 30°
0.0052" x 0.0052"
0.2
0.0
-0.2
y [AU]
-0.2
0.0
0.2
x [AU]
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

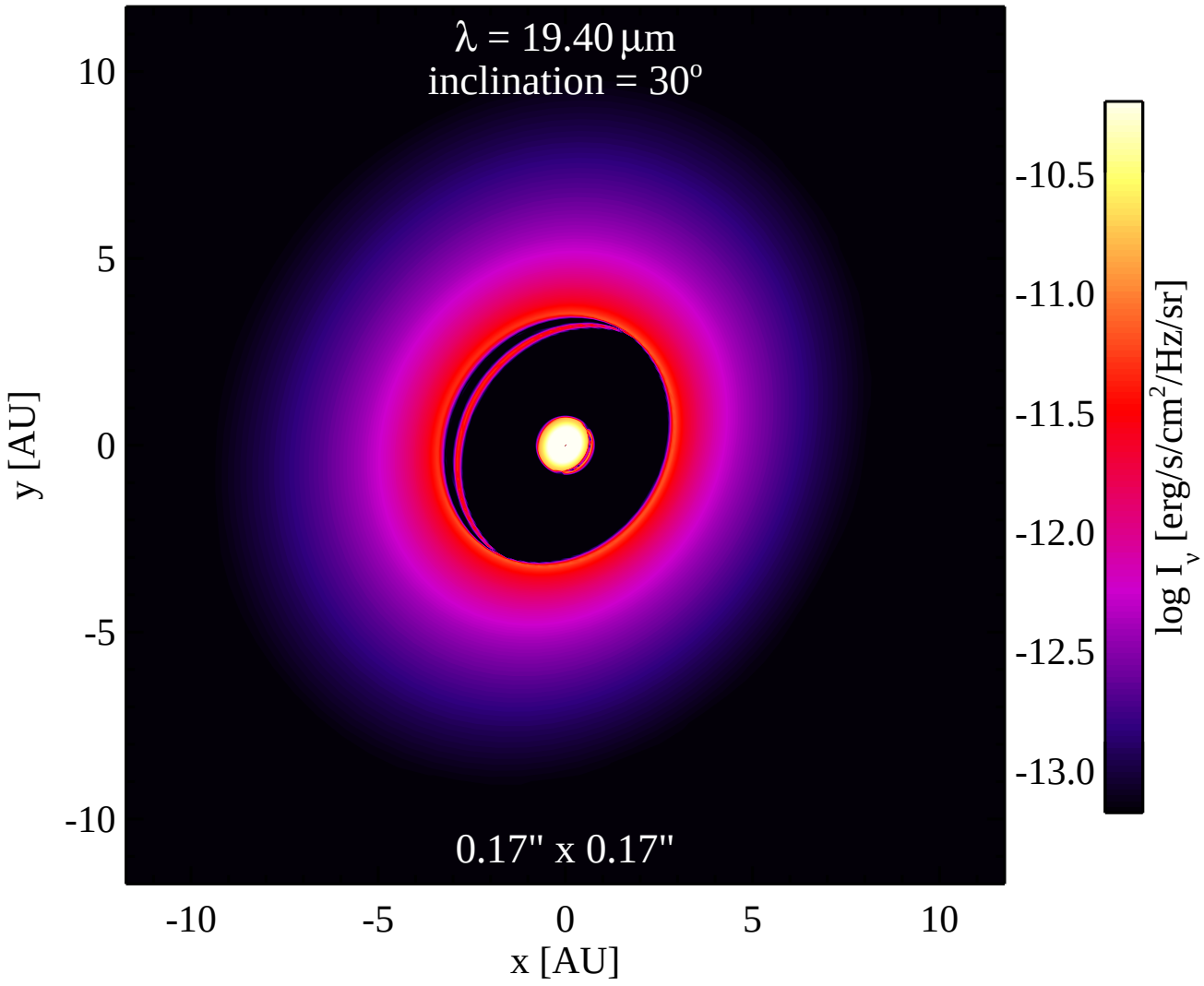

λ = 11.15 μm
inclination = 30°
0.0056" x 0.0056"
0.2
0.0
-0.2
y [AU]
-0.2
0.0
0.2
x [AU]
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
-10.0
log I_ν [erg/s/cm²/Hz/sr]

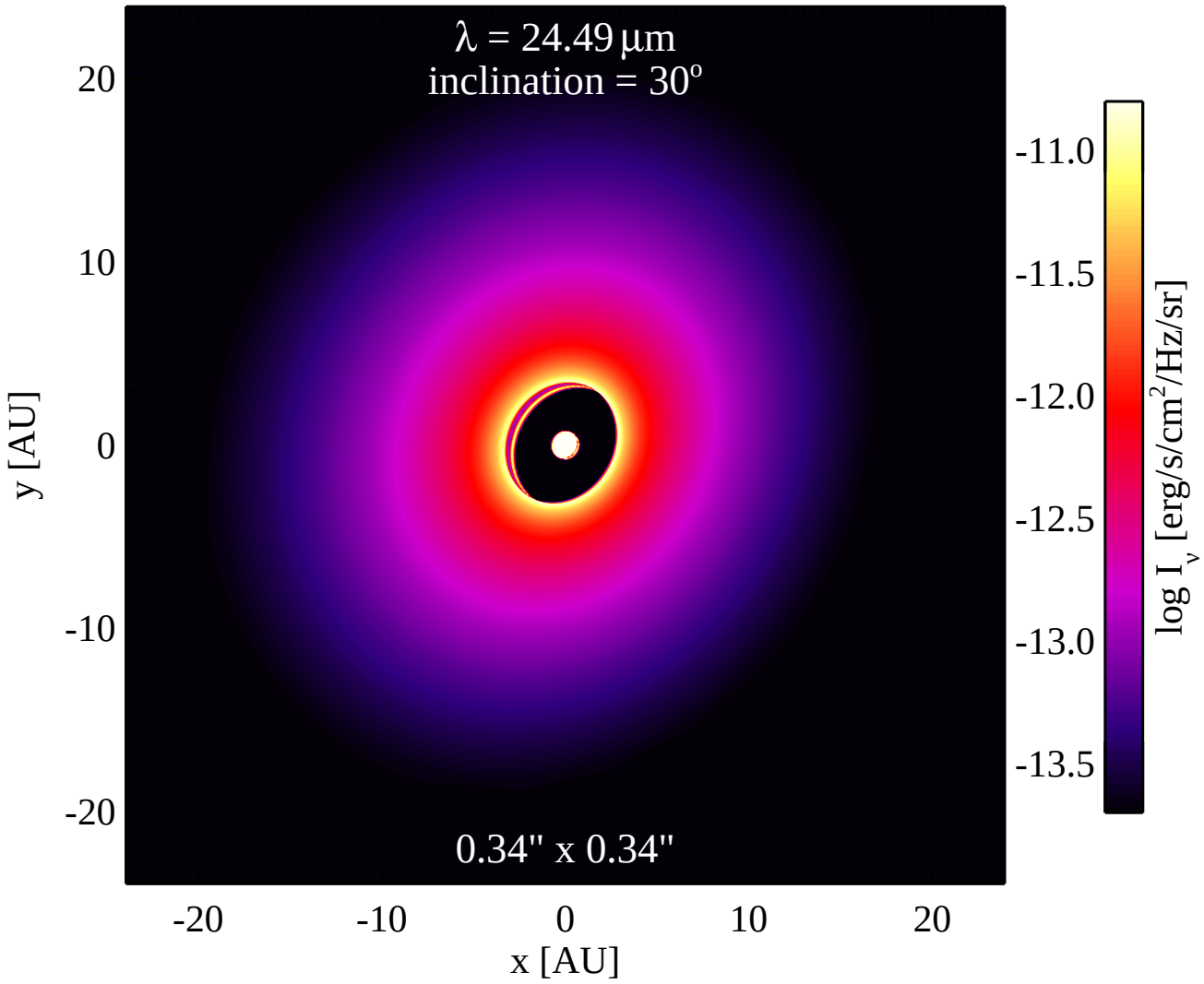

λ = 12.17 μm
inclination = 30°
0.0053" x 0.0053"
0.2
0.0
-0.2
y [AU]
-0.2
0.0
0.2
x [AU]
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
-10.0
log I_ν [erg/s/cm²/Hz/sr]

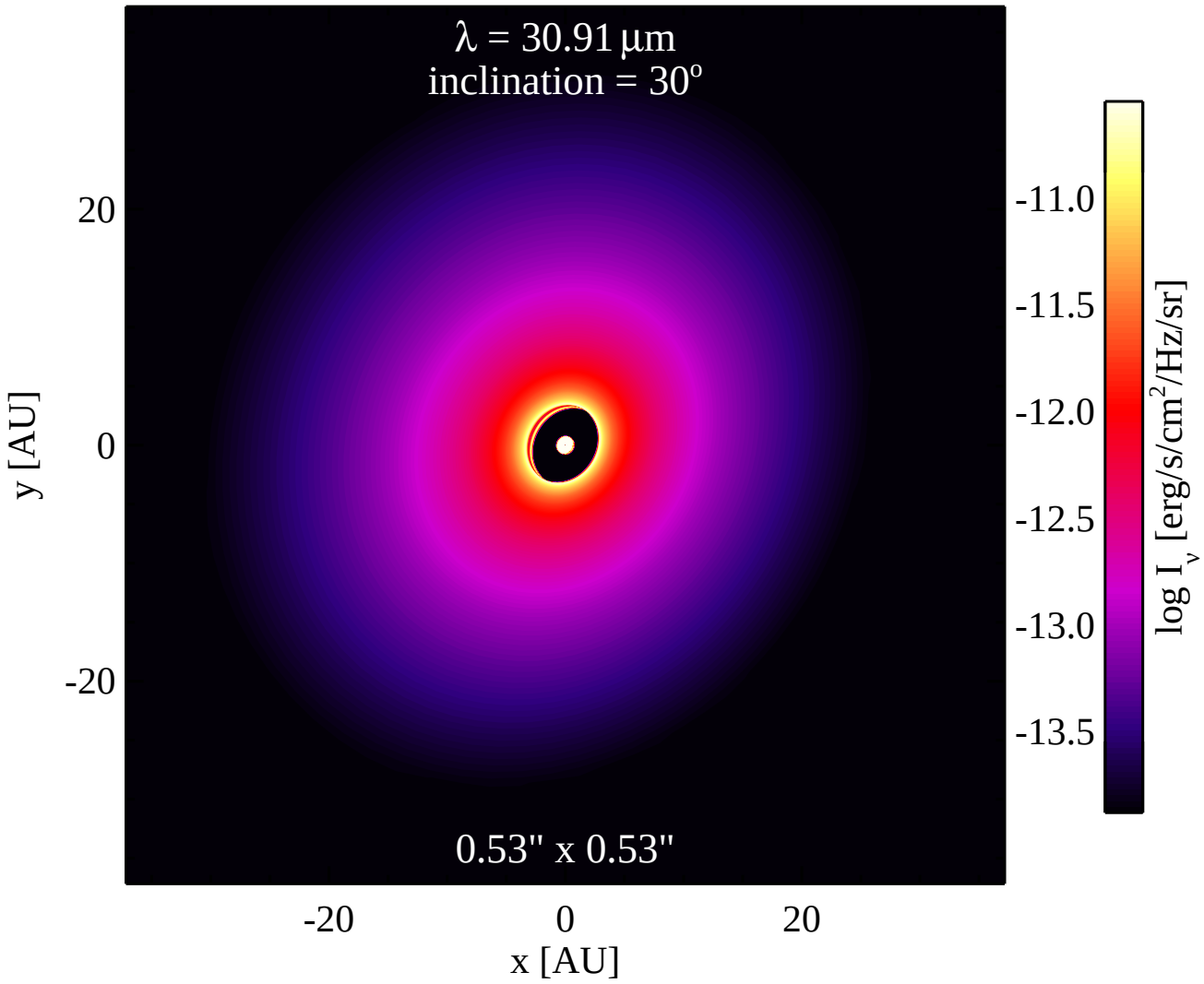

λ = 12.75 μm
inclination = 30°
0.0055" x 0.0055"
0.2
0.0
-0.2
y [AU]
-0.2
0.0
0.2
x [AU]
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
-10.0
log I_ν [erg/s/cm²/Hz/sr]

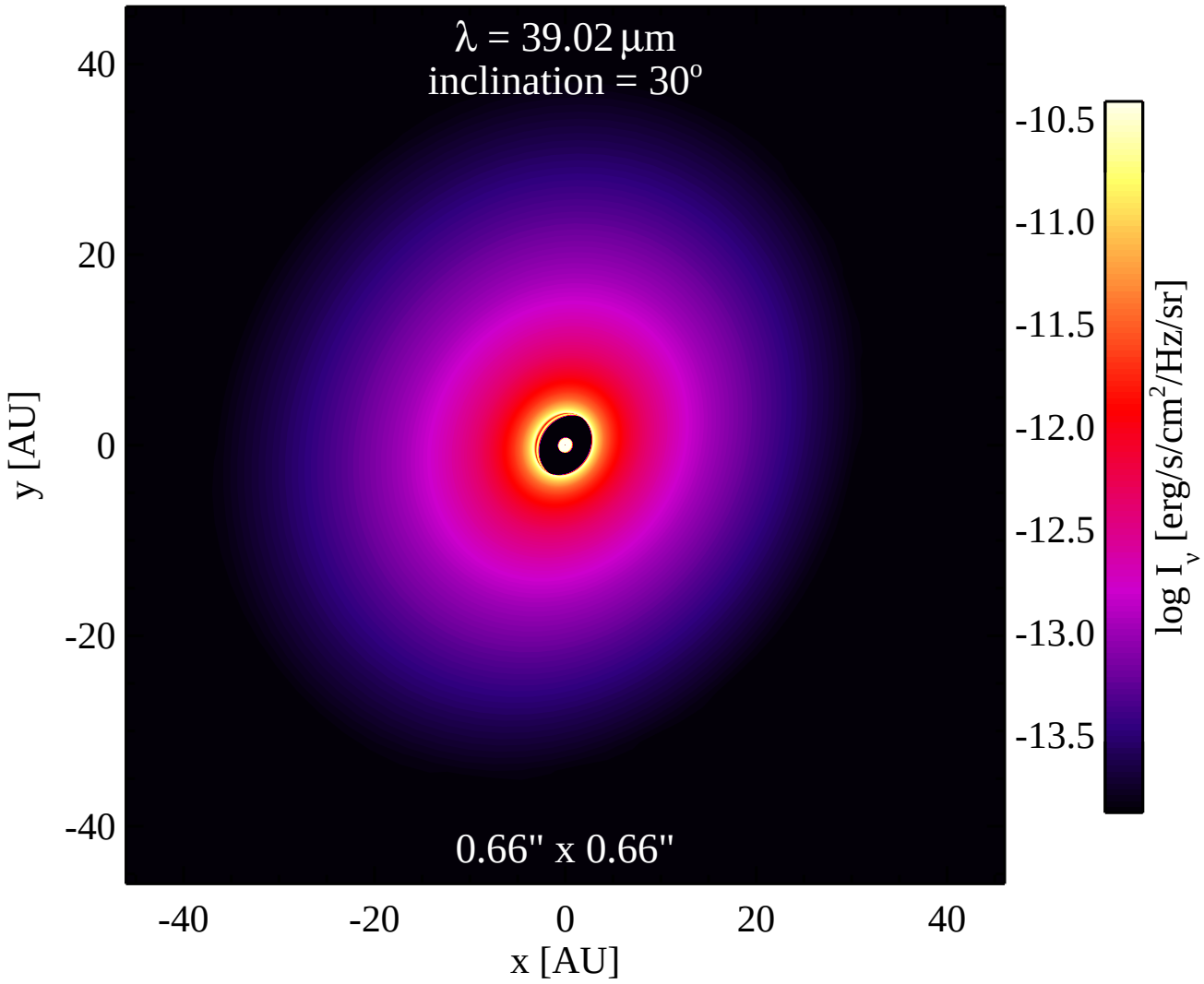

λ = 13.52 μm
inclination = 30°
0.0060" x 0.0060"
0.4
0.2
0.0
-0.2
-0.4
y [AU]
-0.4
-0.2
0.0
0.2
0.4
x [AU]
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
-10.0
log I_ν [erg/s/cm²/Hz/sr]

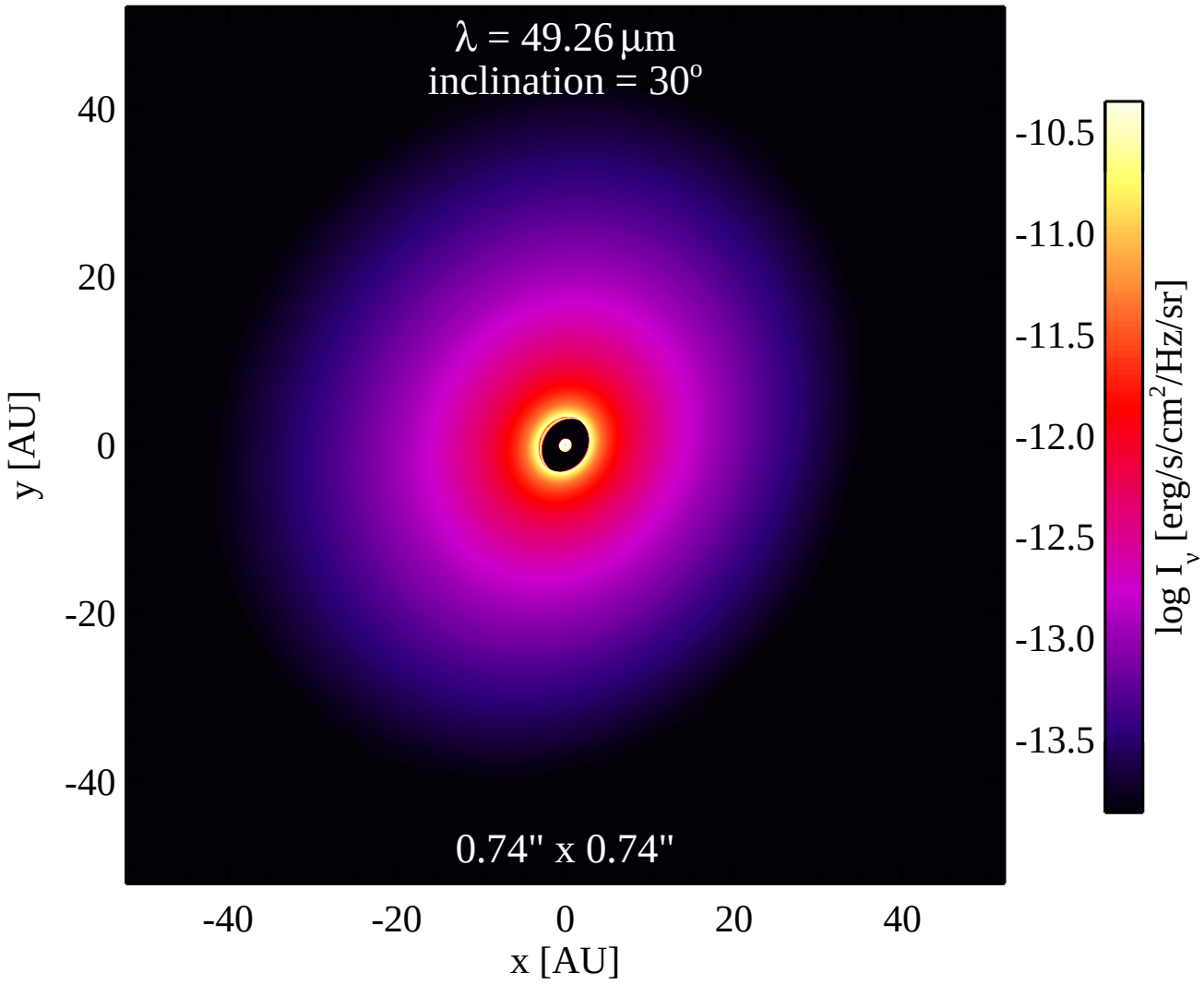

λ = 15.36 μm
inclination = 30°
0.011" x 0.011"
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
y [AU]
-0.6
-0.4
-0.2
0.0
0.2
0.4
0.6
x [AU]
-7
-8
-9
-10
-11
log I_ν [erg/s/cm²/Hz/sr]

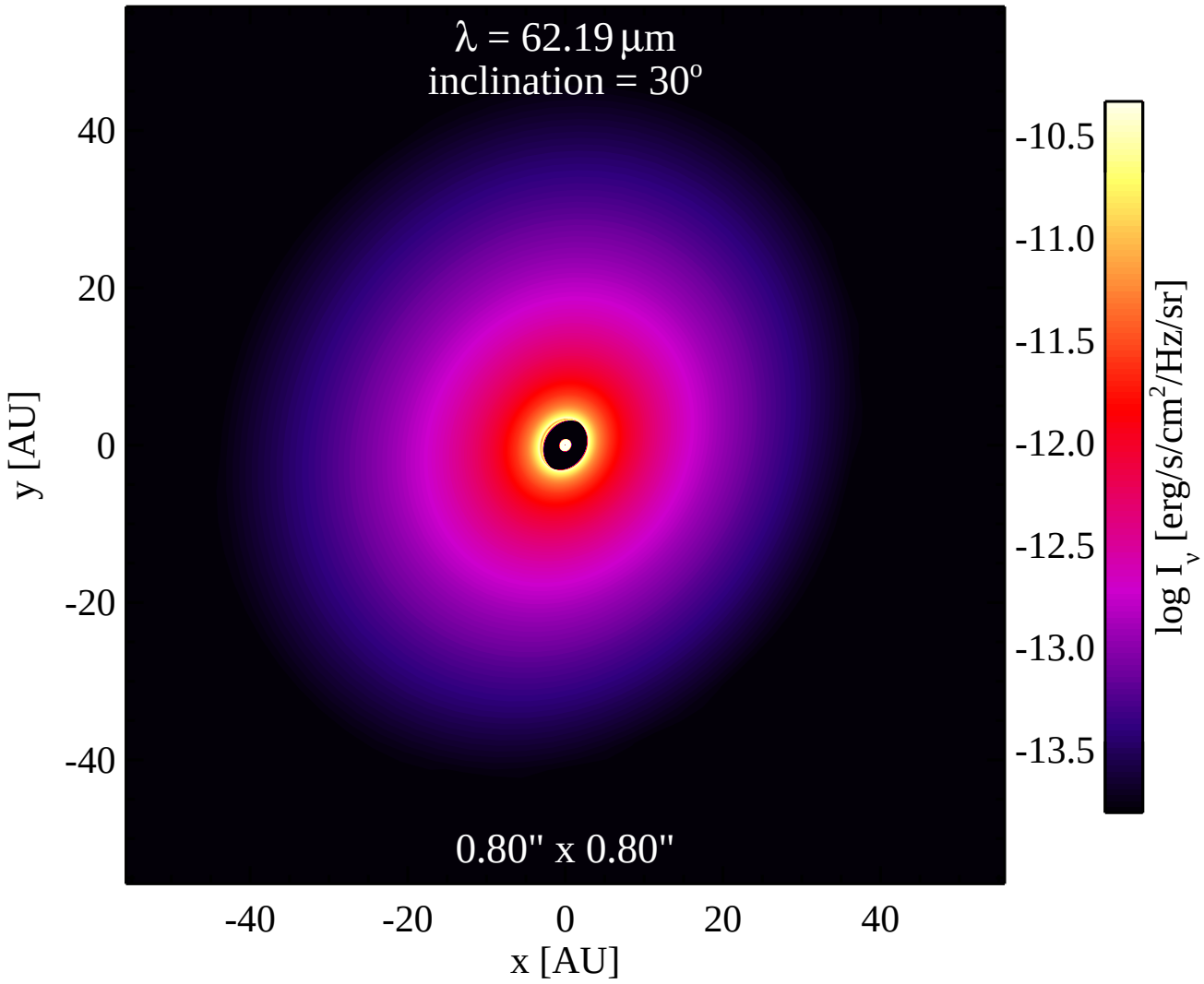

λ = 19.40 μm
inclination = 30°
0.17" x 0.17"
10
5
0
-5
-10
y [AU]
-10
-5
0
5
10
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

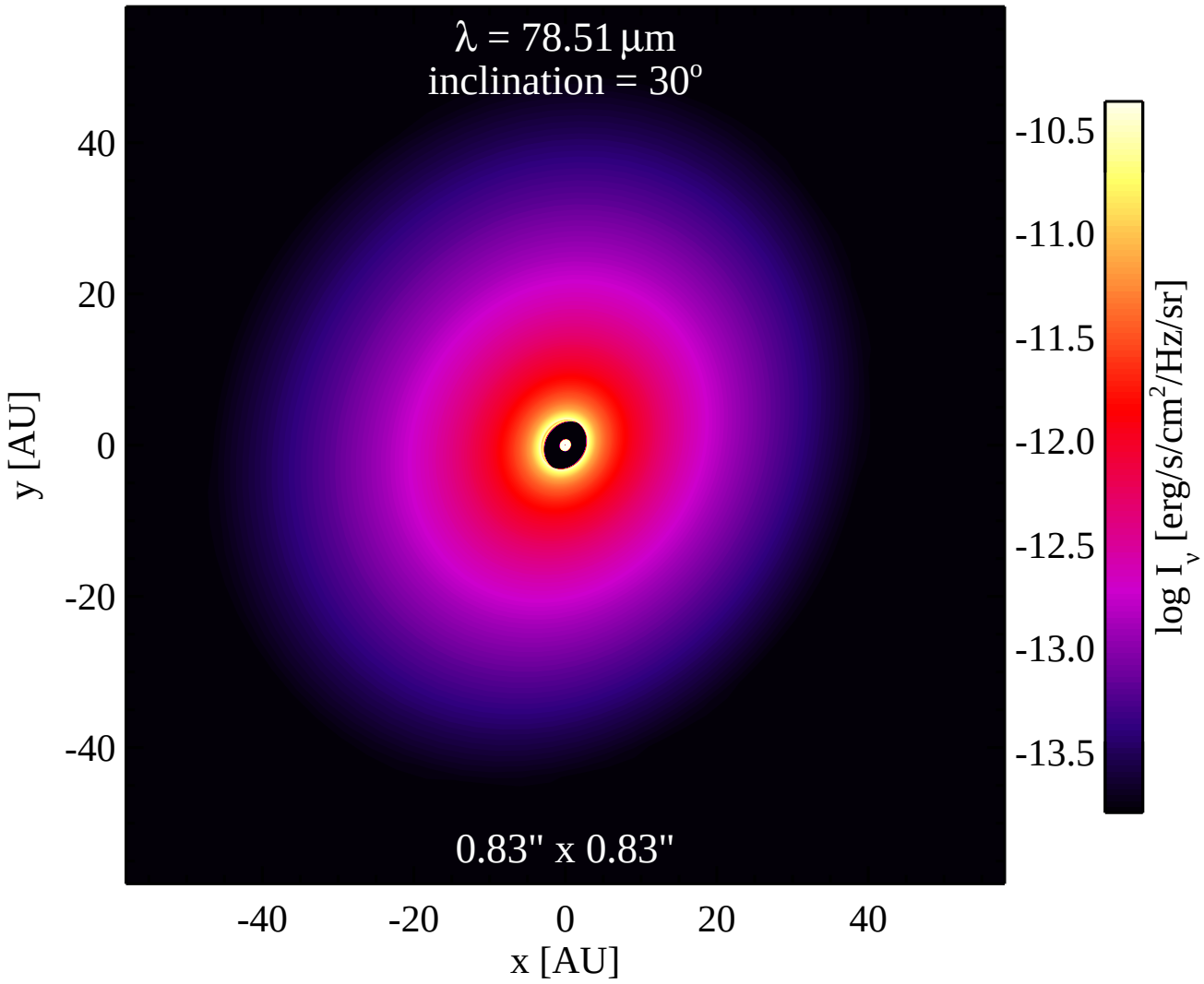

λ = 24.49 μm
inclination = 30°
0.34" x 0.34"
20
10
0
-10
-20
y [AU]
-20
-10
0
10
20
x [AU]
-11.0
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

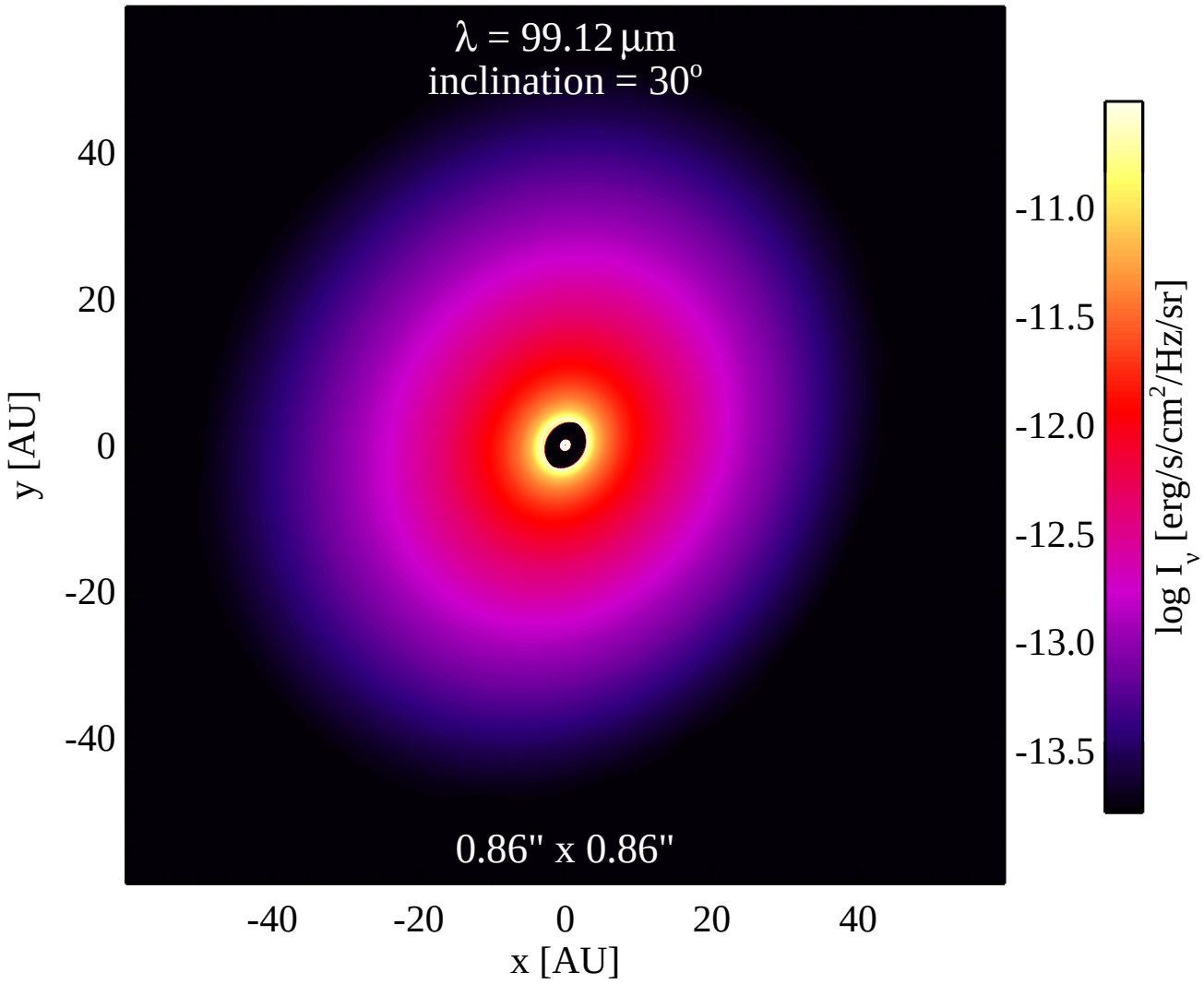

λ = 30.91 μm
inclination = 30°
0.53" x 0.53"
20
0
-20
y [AU]
-20
0
20
x [AU]
-11.0
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

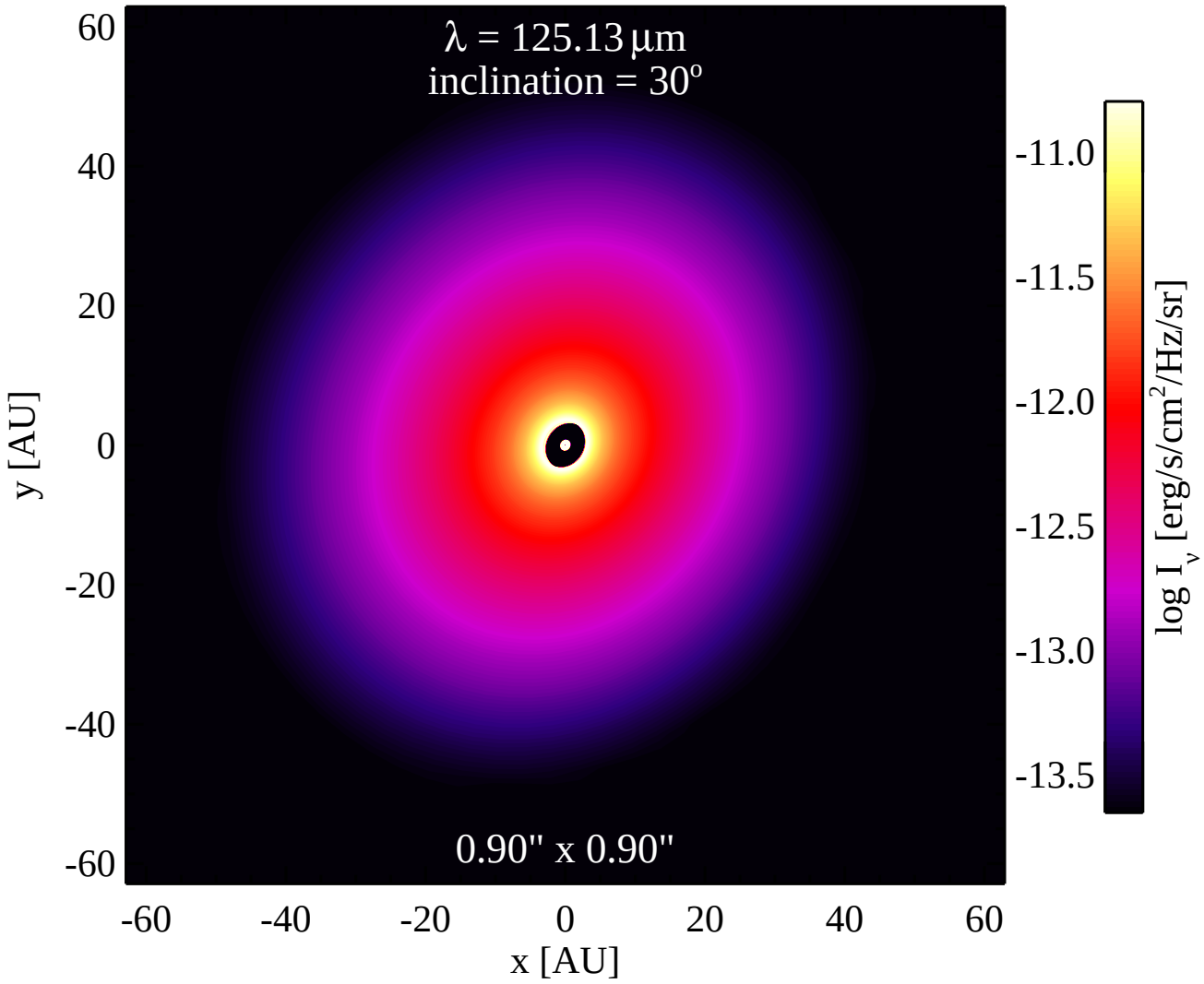

λ = 39.02 μm
inclination = 30°
0.66" x 0.66"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

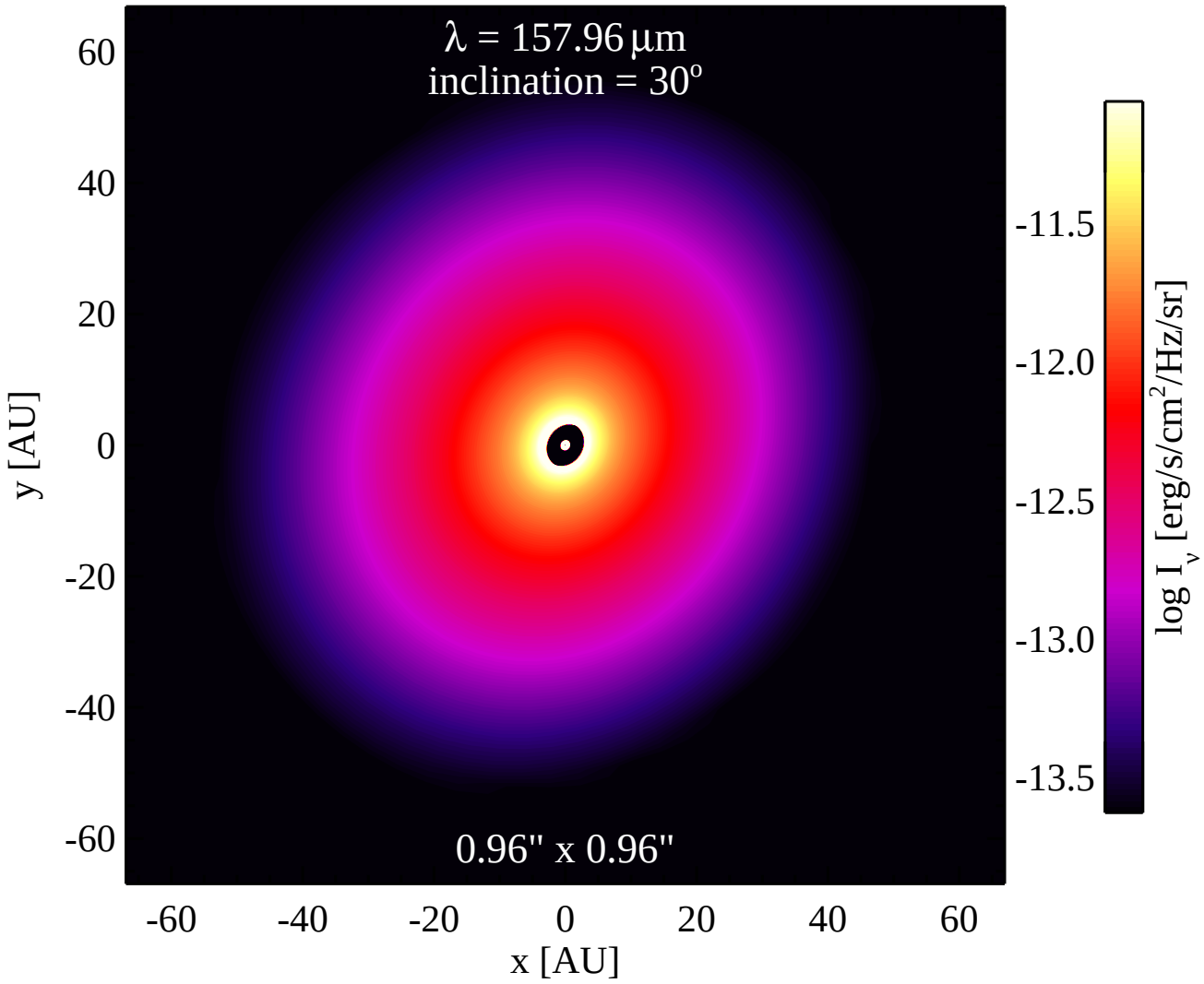

λ = 49.26 μm
inclination = 30°
0.74" x 0.74"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

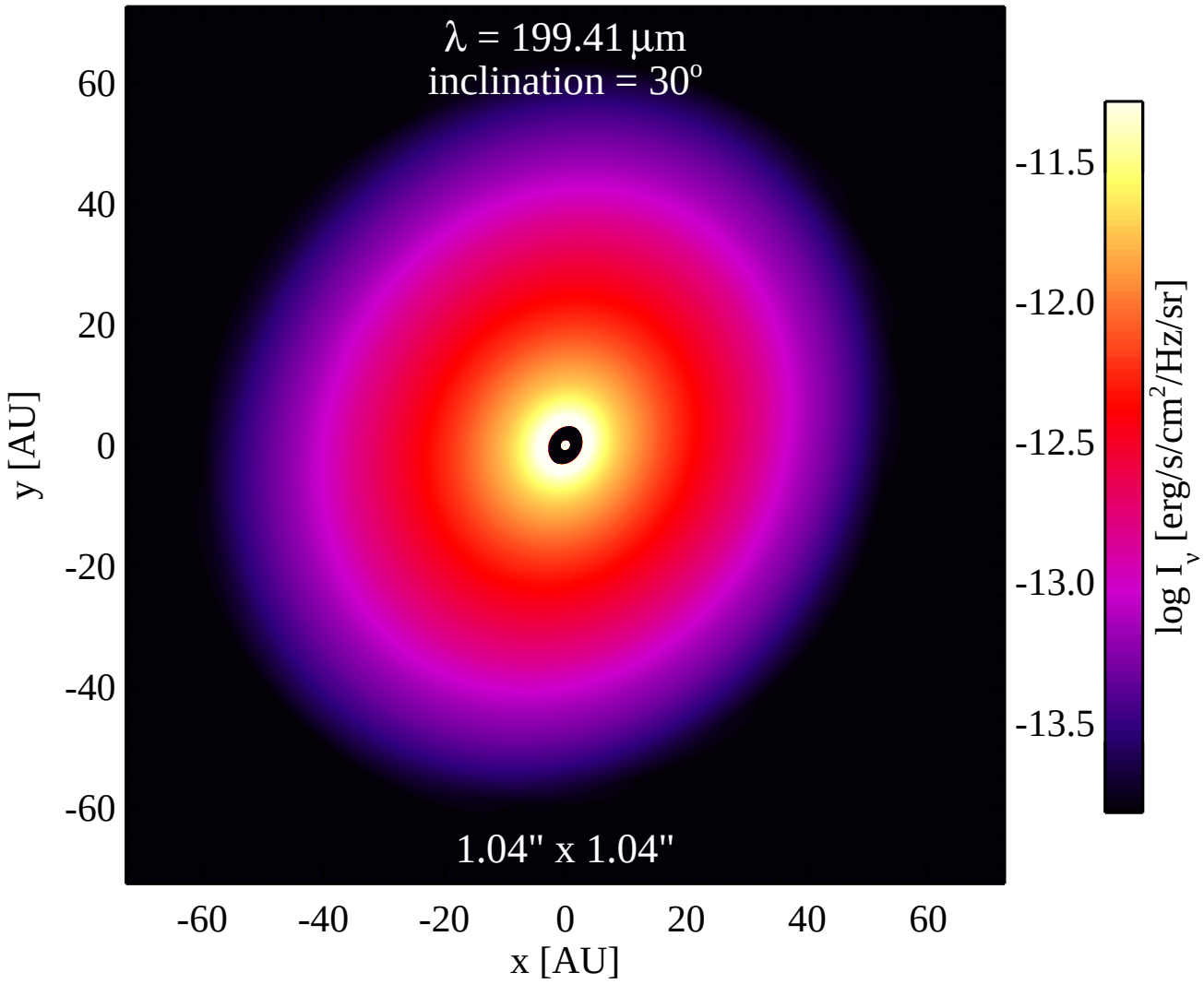

λ = 62.19 μm
inclination = 30°
0.80" x 0.80"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

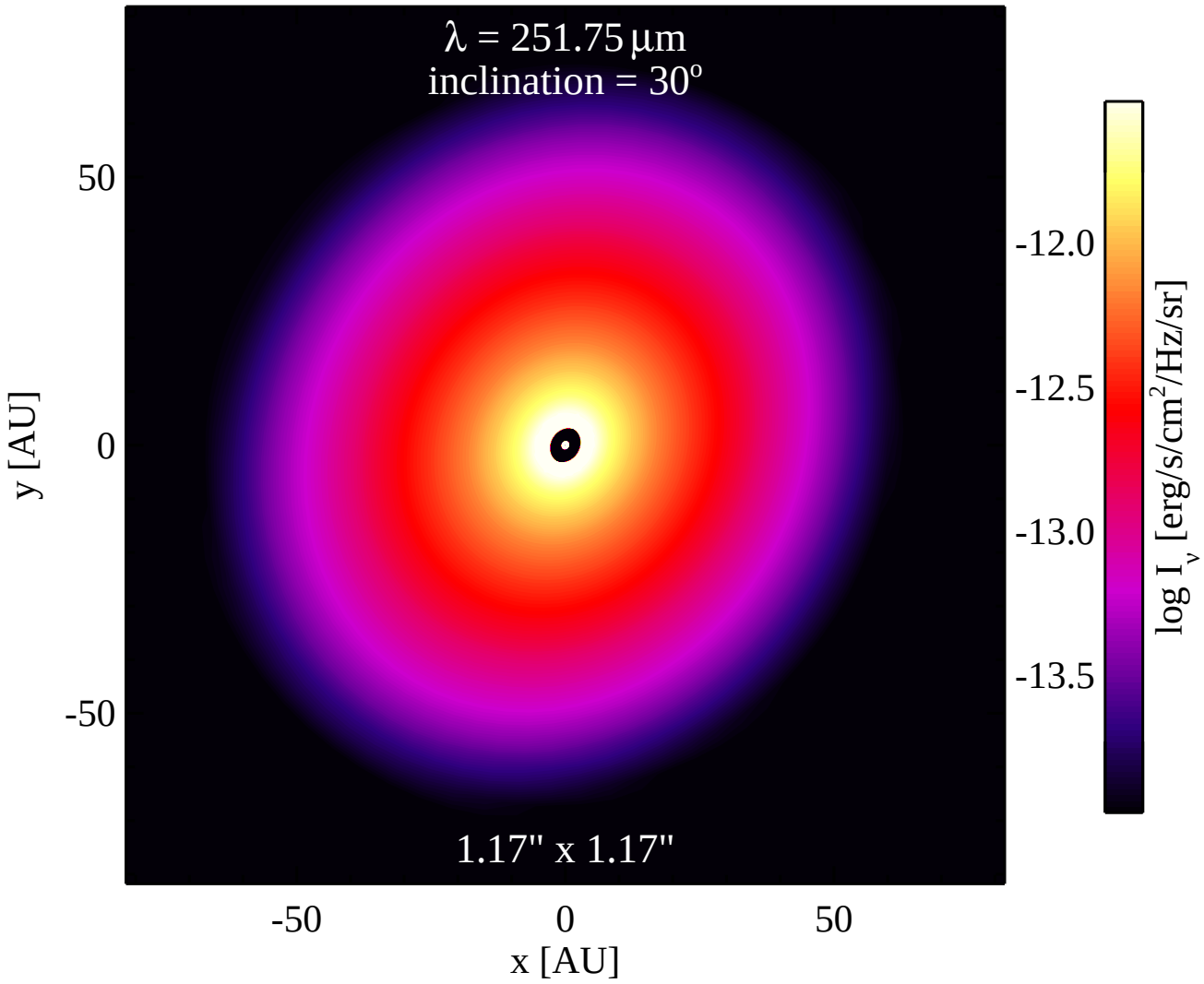

λ = 78.51 μm
inclination = 30°
0.83" x 0.83"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

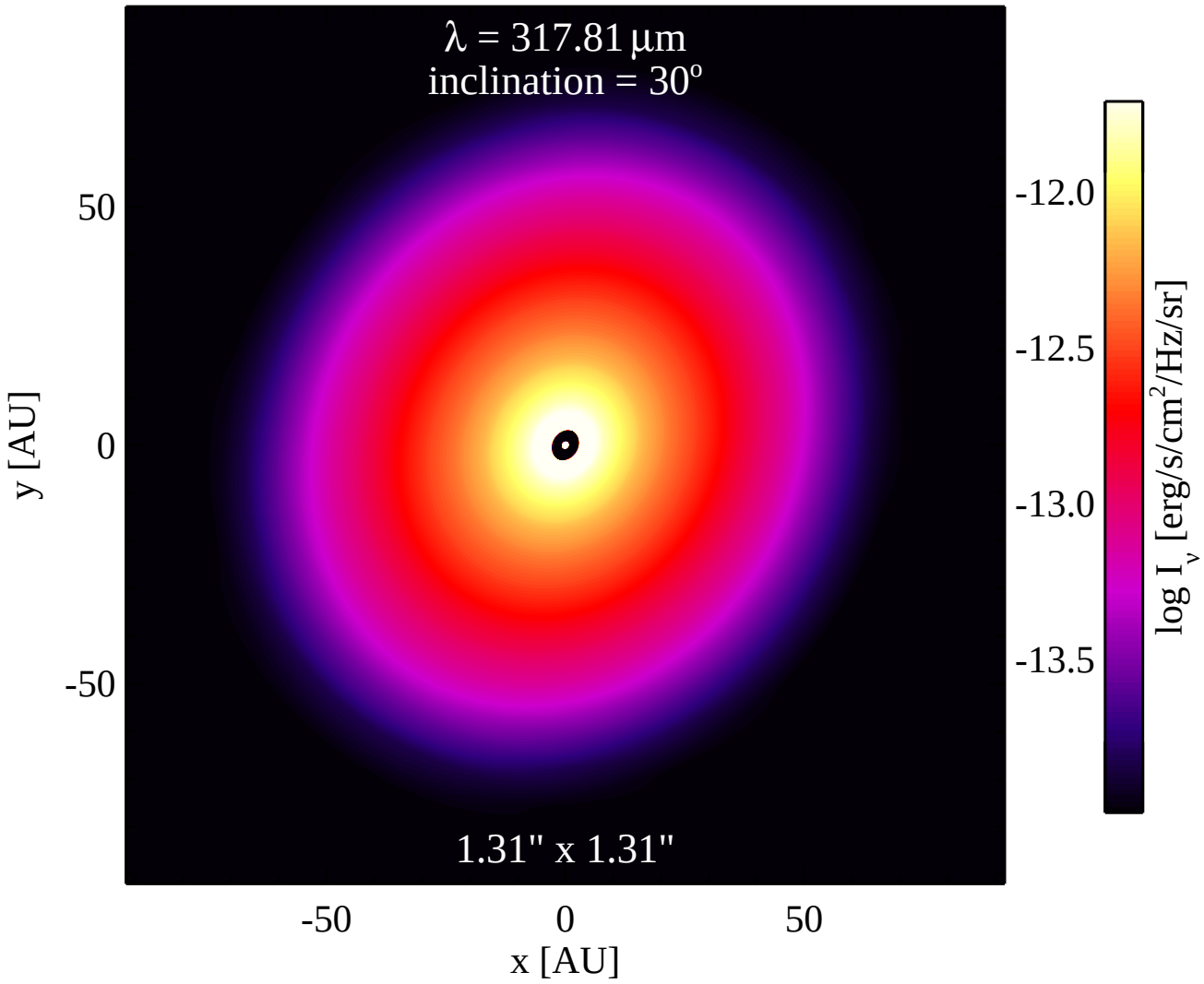

λ = 99.12 μm
inclination = 30°
0.86" x 0.86"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-11.0
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

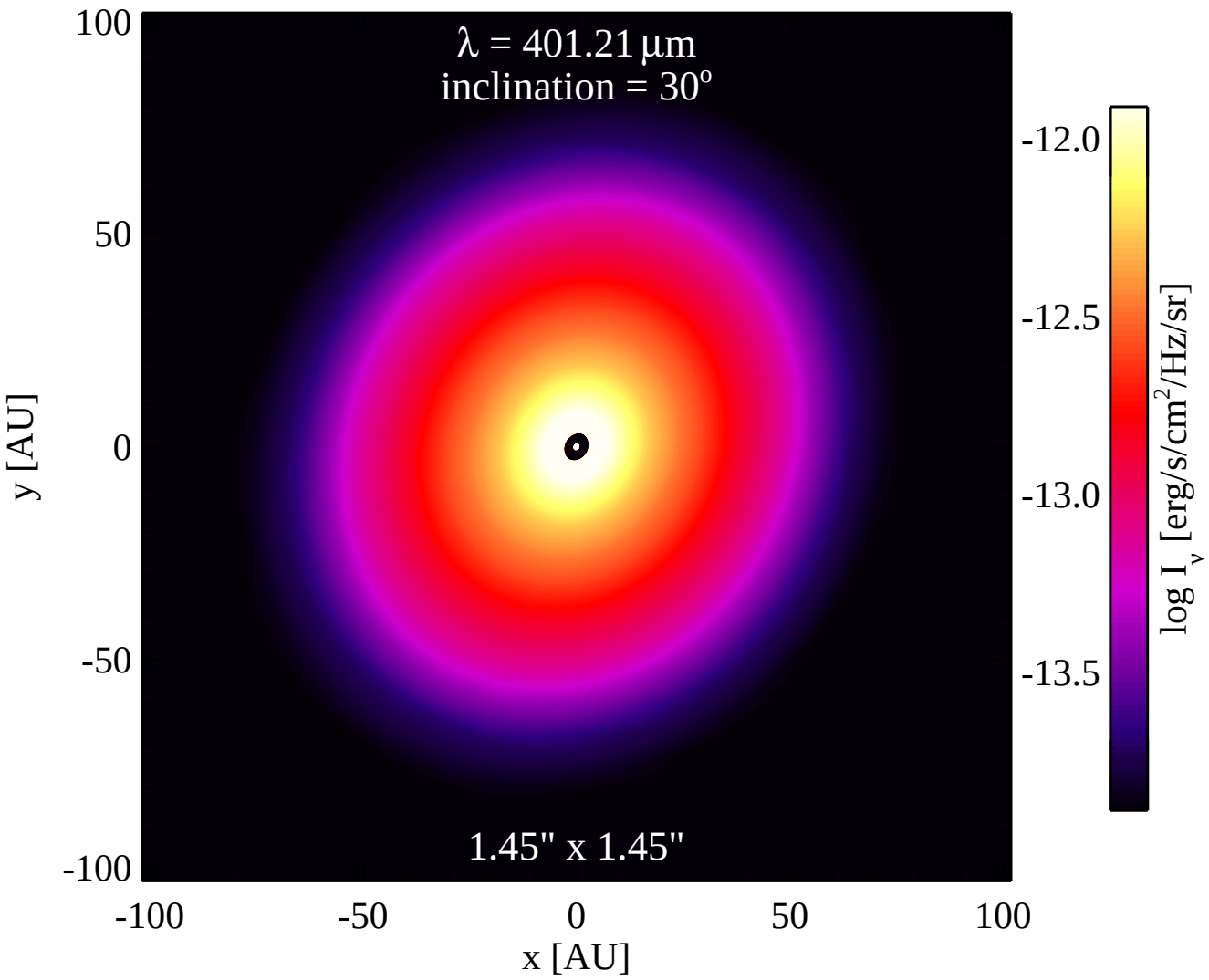

λ = 125.13 μm
inclination = 30°
0.90" x 0.90"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-11.0
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

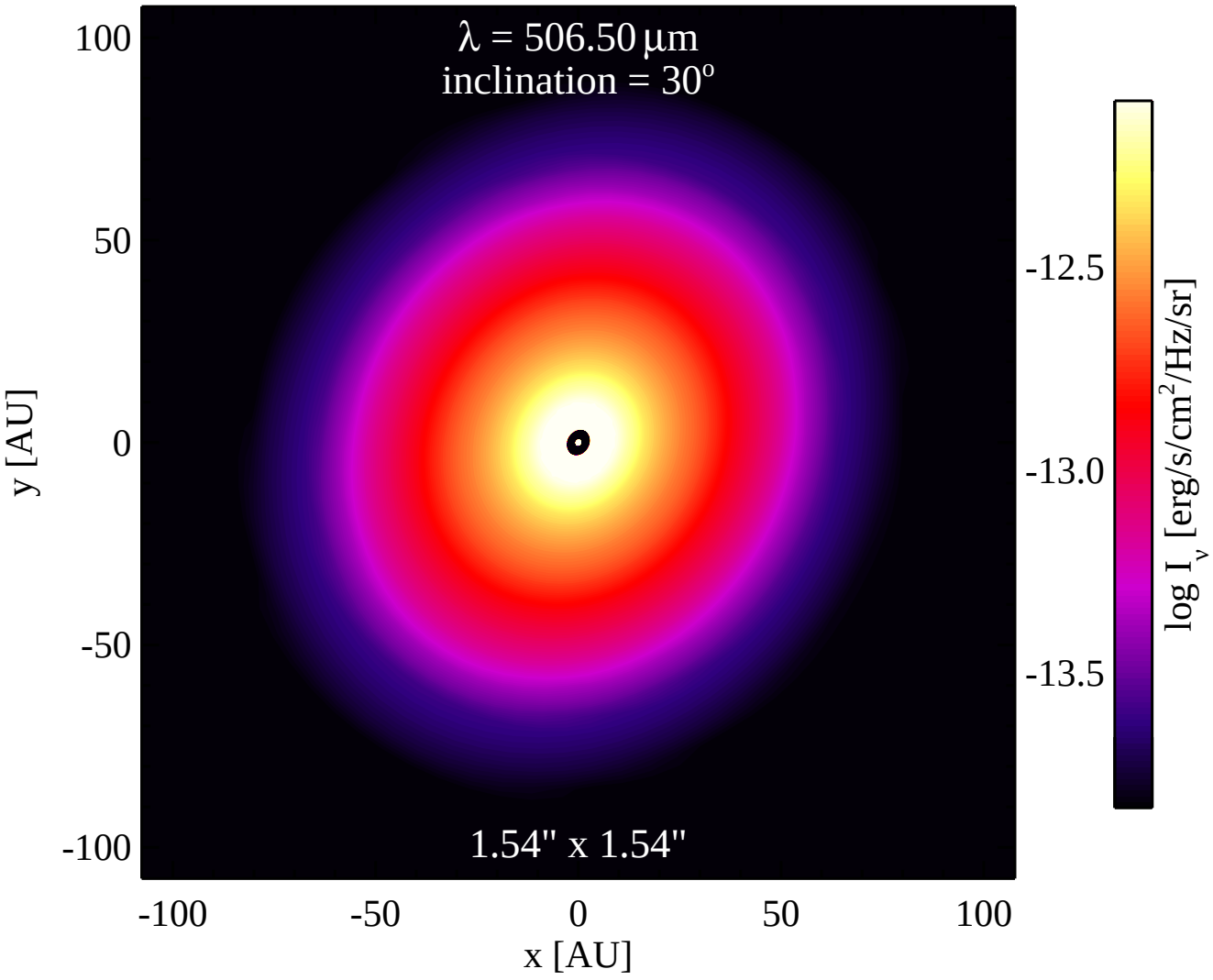

λ = 157.96 μm
inclination = 30°
0.96" x 0.96"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

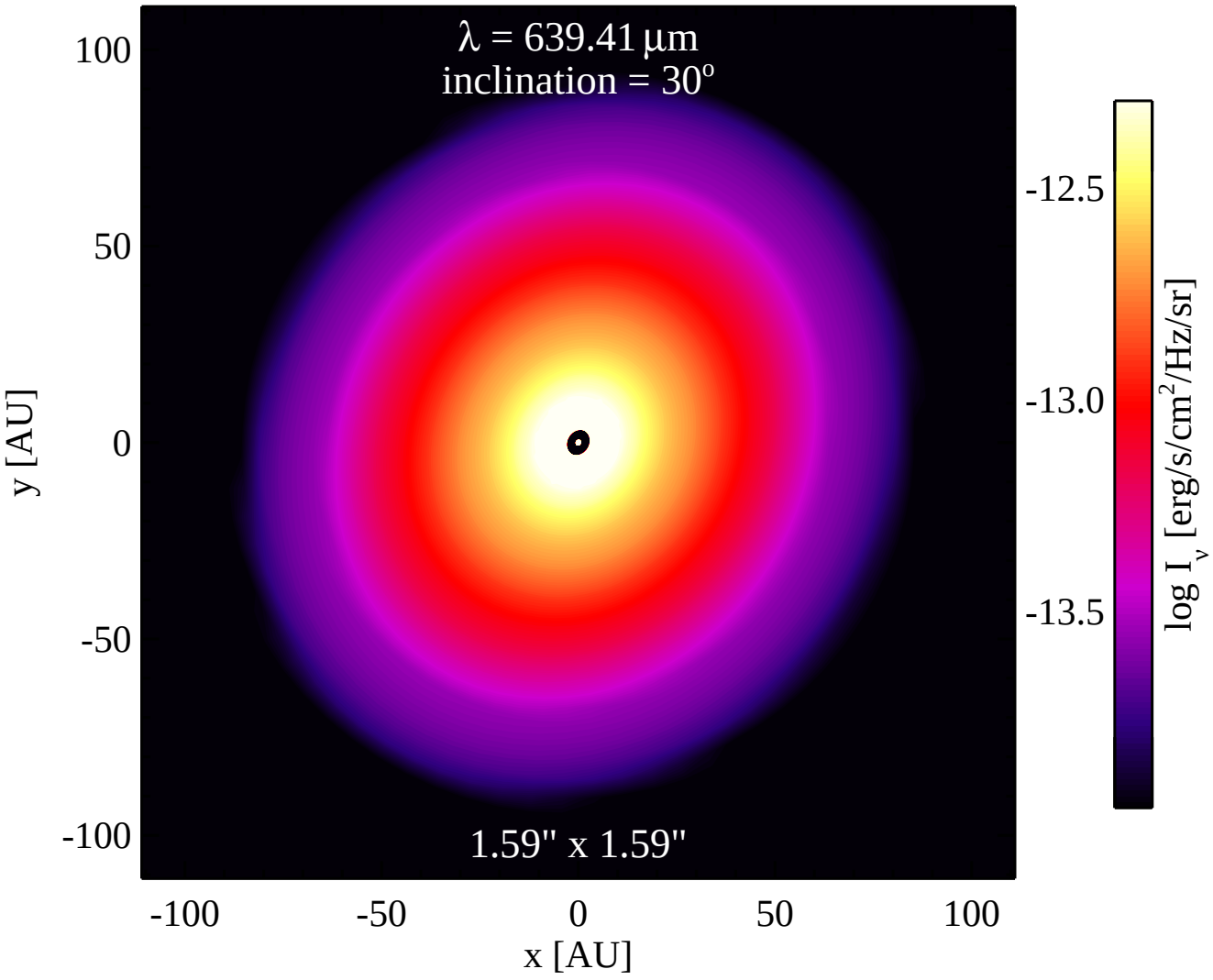

λ = 199.41 μm
inclination = 30°
1.04" x 1.04"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

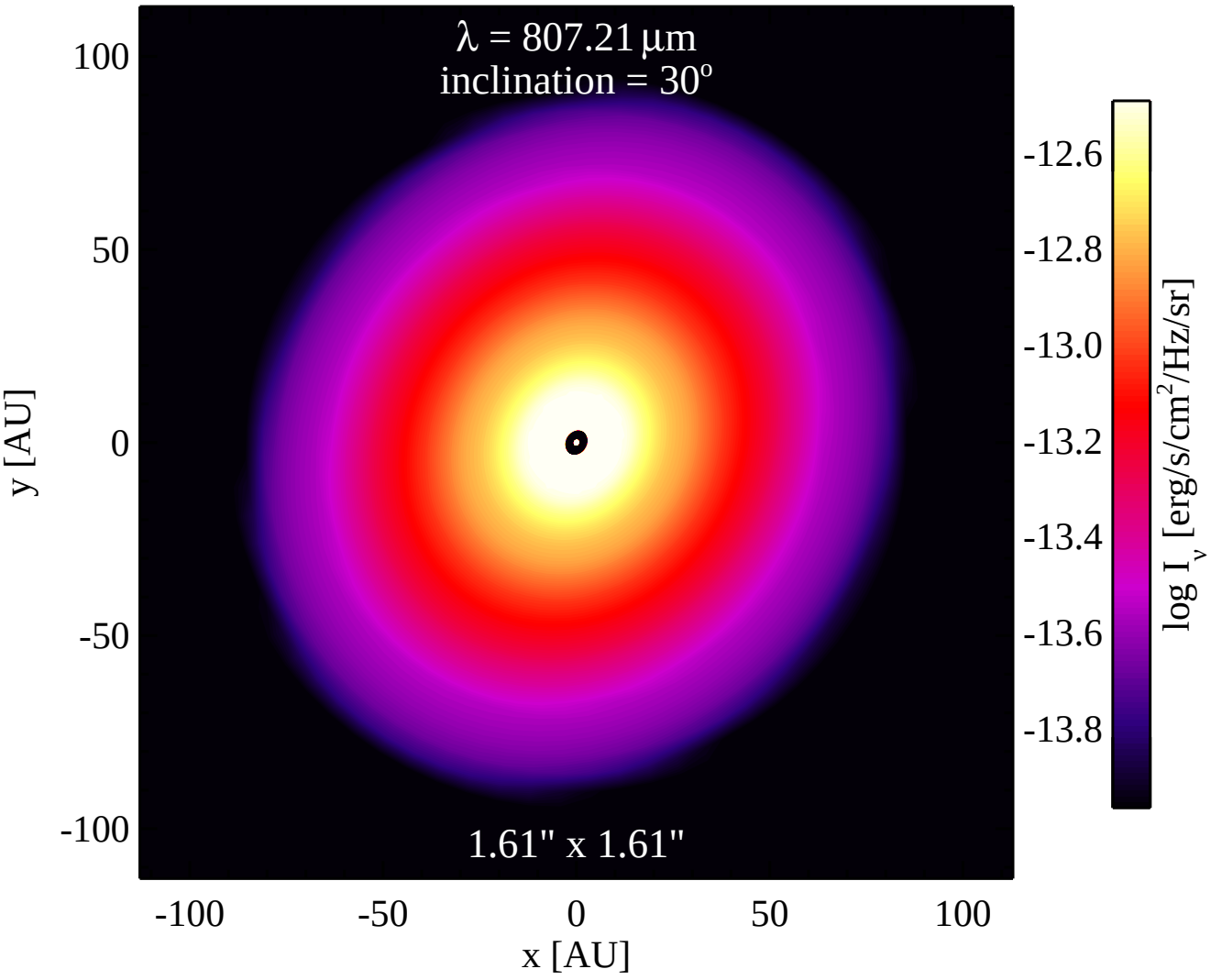

λ = 251.75 μm
inclination = 30°
1.17" x 1.17"
50
0
-50
y [AU]
-50
0
50
x [AU]
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

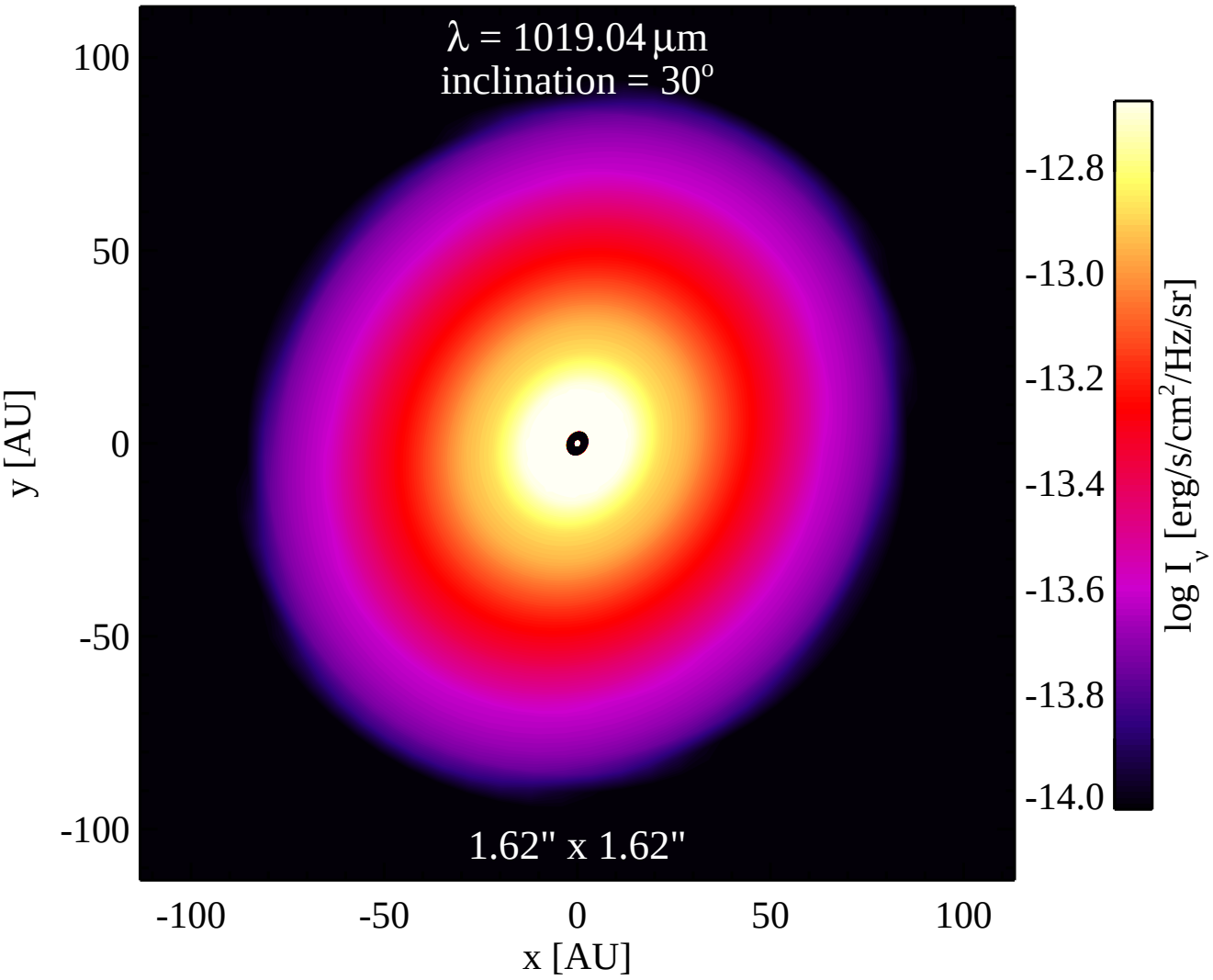

λ = 317.81 μm
inclination = 30°
1.31" x 1.31"
50
0
-50
y [AU]
-50
0
50
x [AU]
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

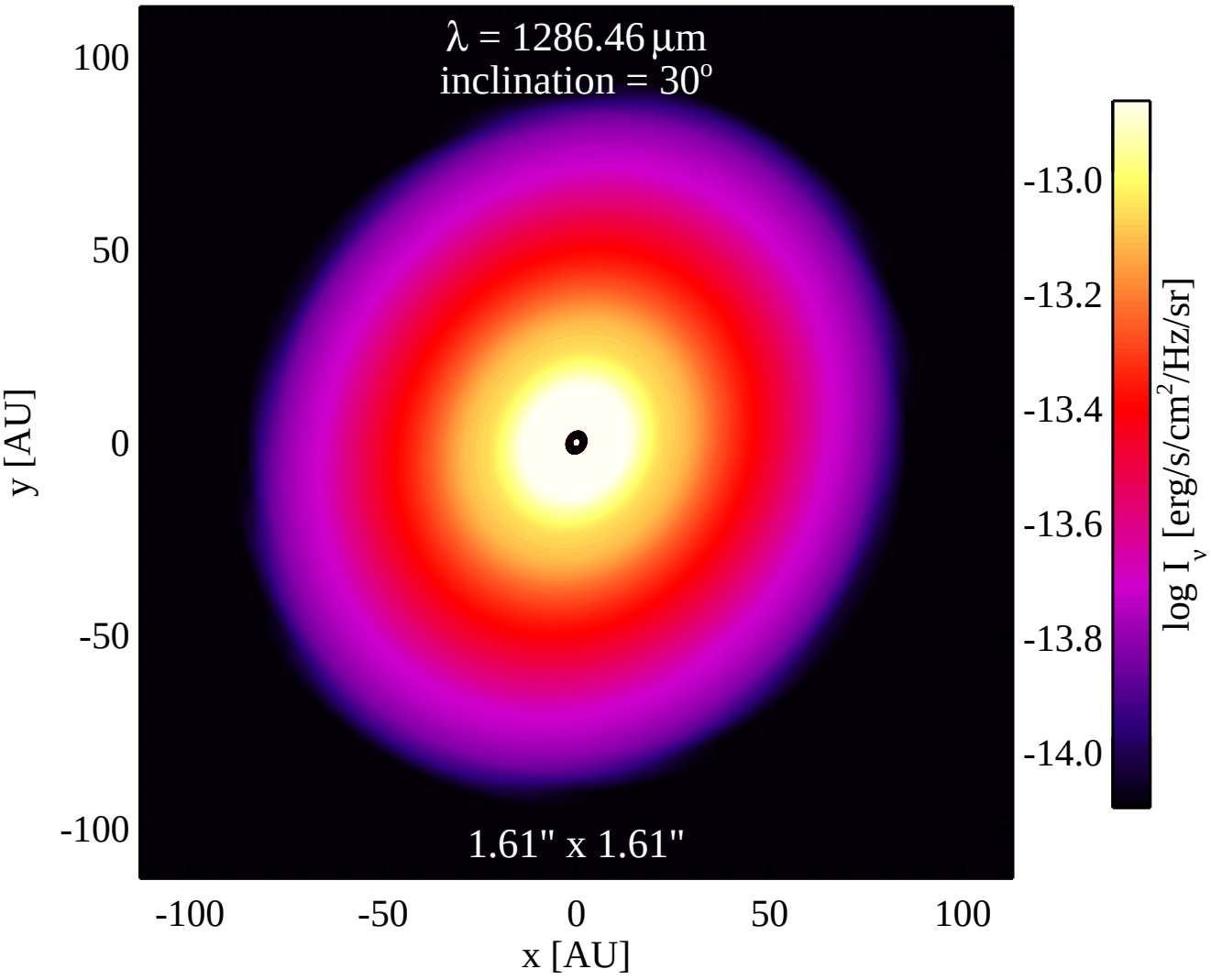

λ = 401.21 μm
inclination = 30°
1.45" x 1.45"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

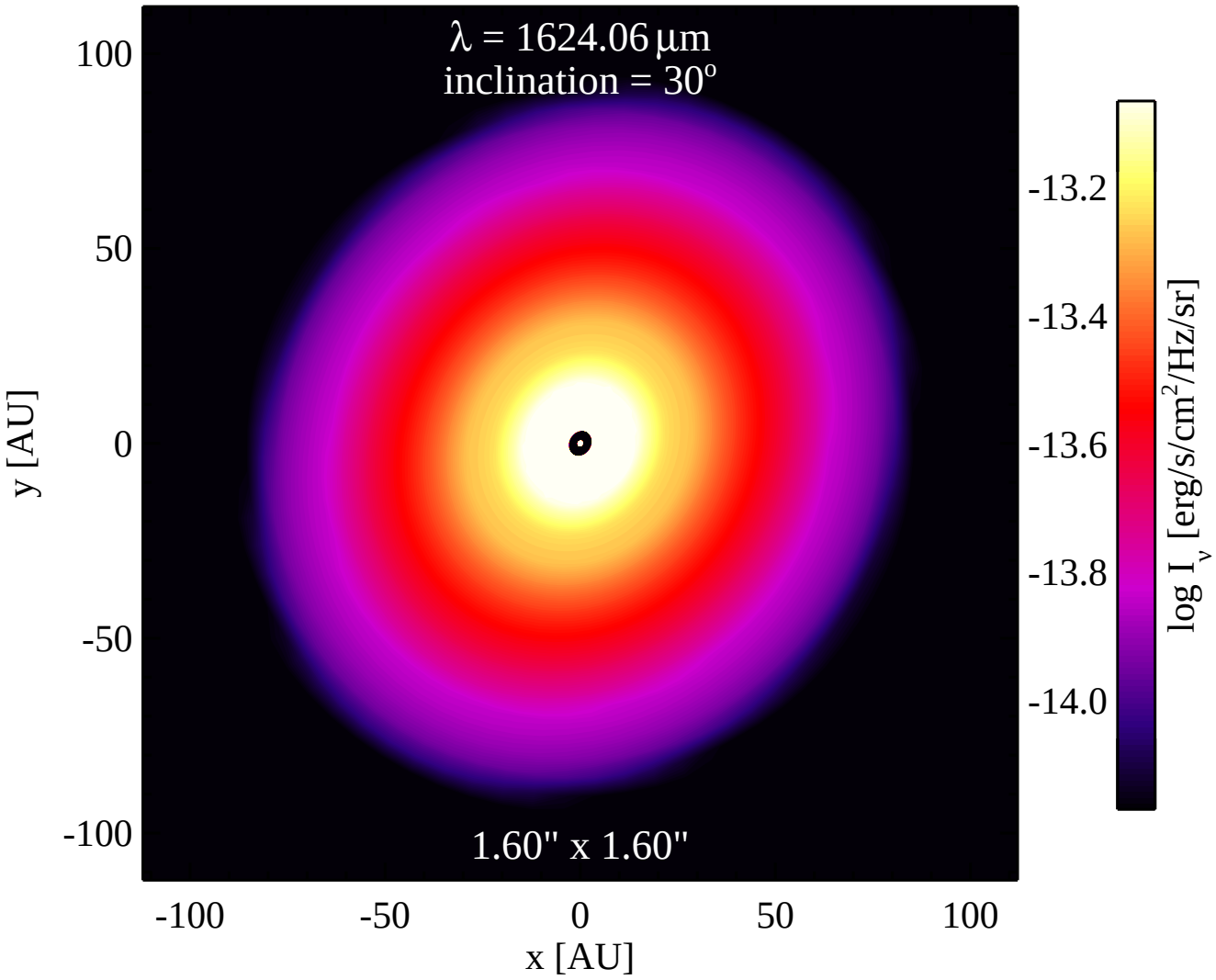

λ = 506.50 μm
inclination = 30°
1.54" x 1.54"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

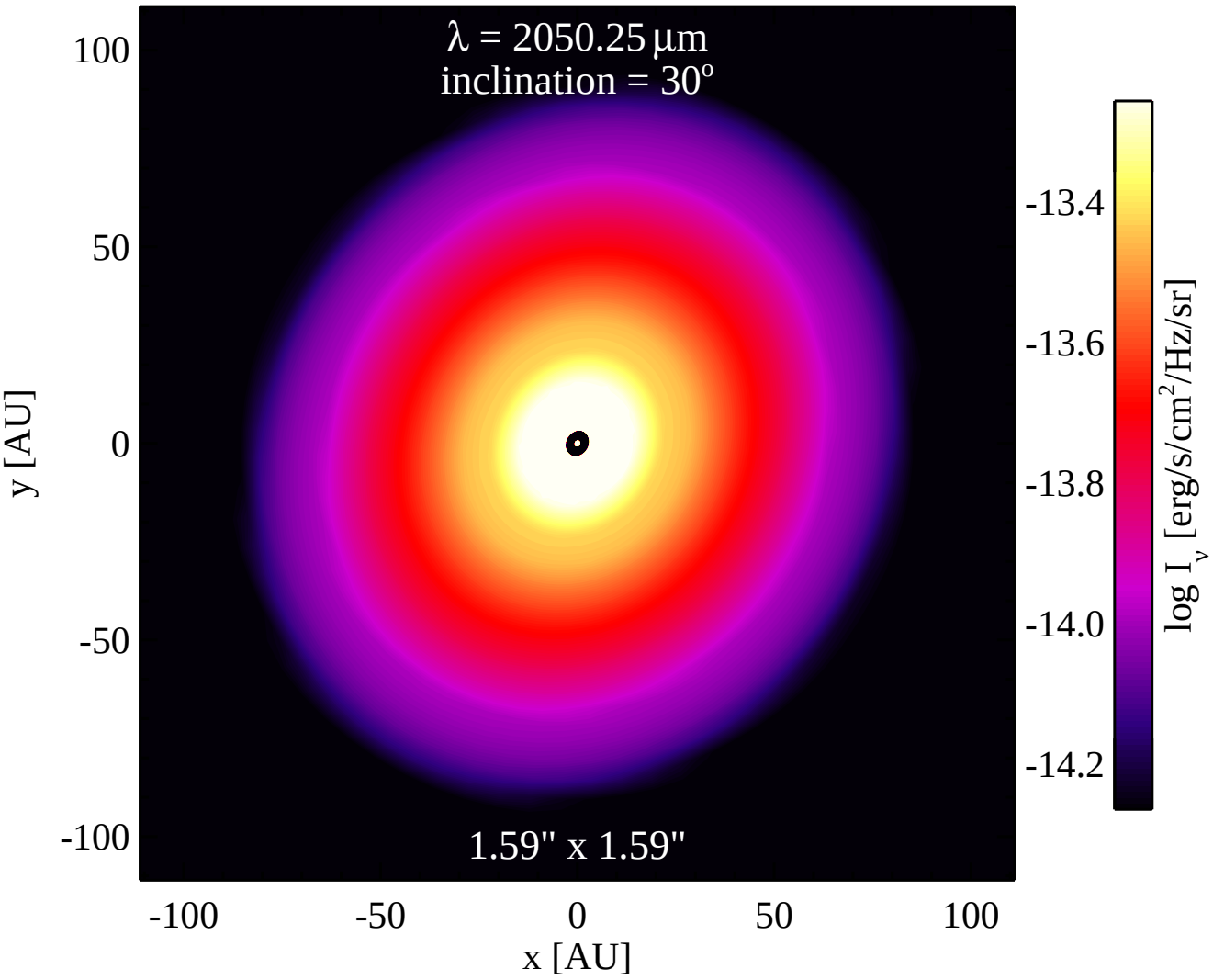

λ = 639.41 μm
inclination = 30°
1.59" x 1.59"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

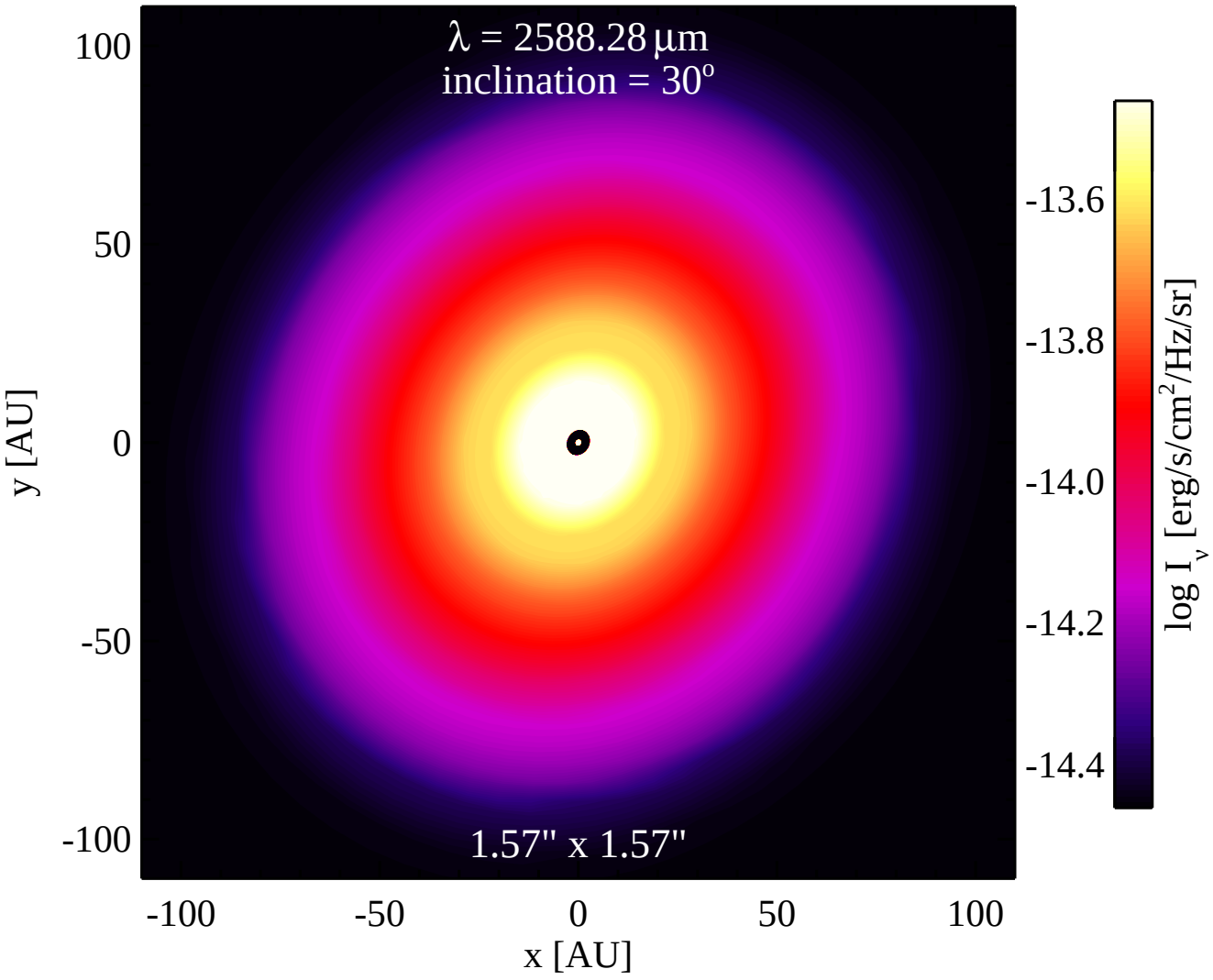

λ = 807.21 μm
inclination = 30°
1.61" x 1.61"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-12.6
-12.8
-13.0
-13.2
-13.4
-13.6
-13.8
log I_ν [erg/s/cm²/Hz/sr]

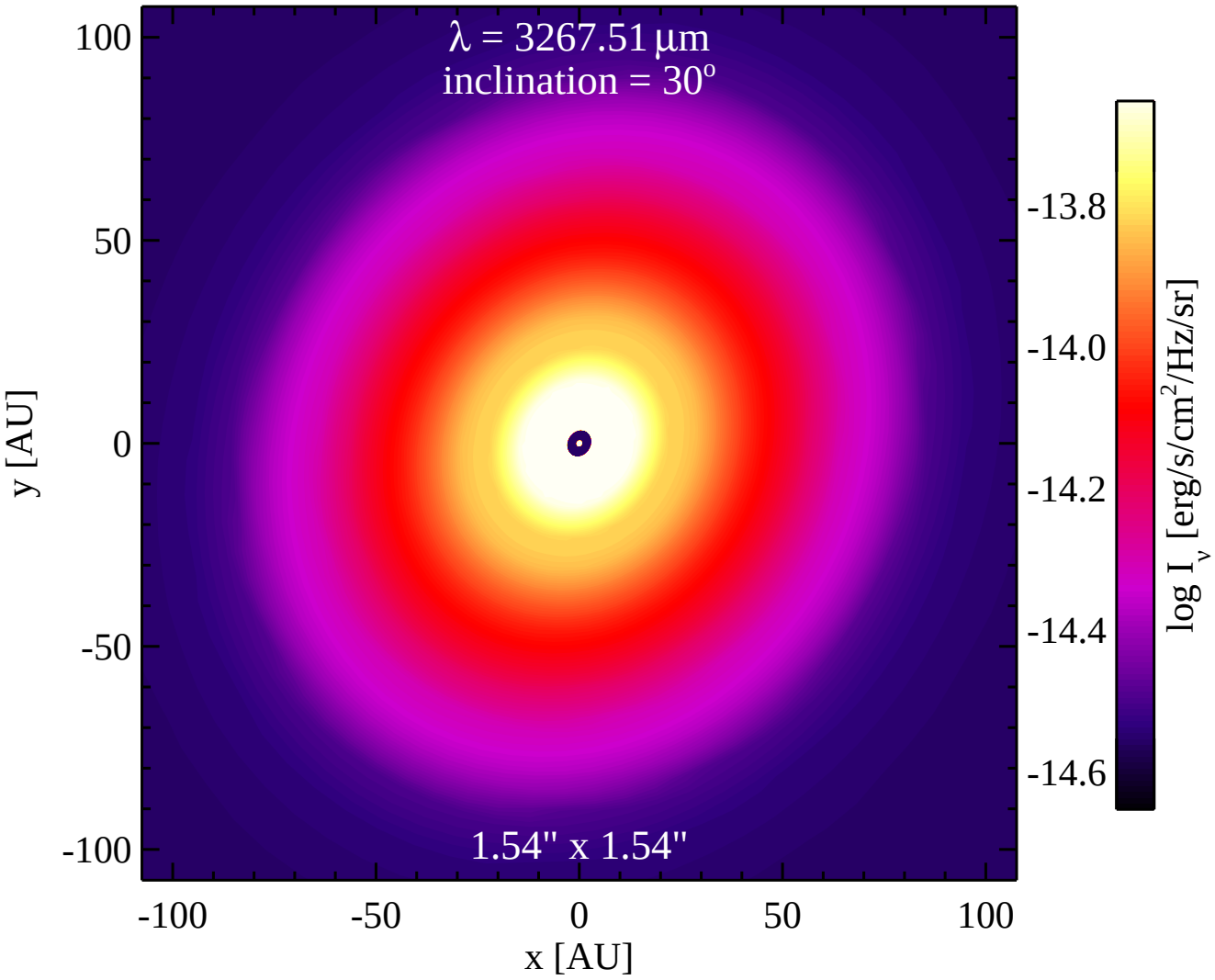

λ = 1019.04 μm
inclination = 30°
1.62" x 1.62"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-12.8
-13.0
-13.2
-13.4
-13.6
-13.8
-14.0
log I_ν [erg/s/cm²/Hz/sr]

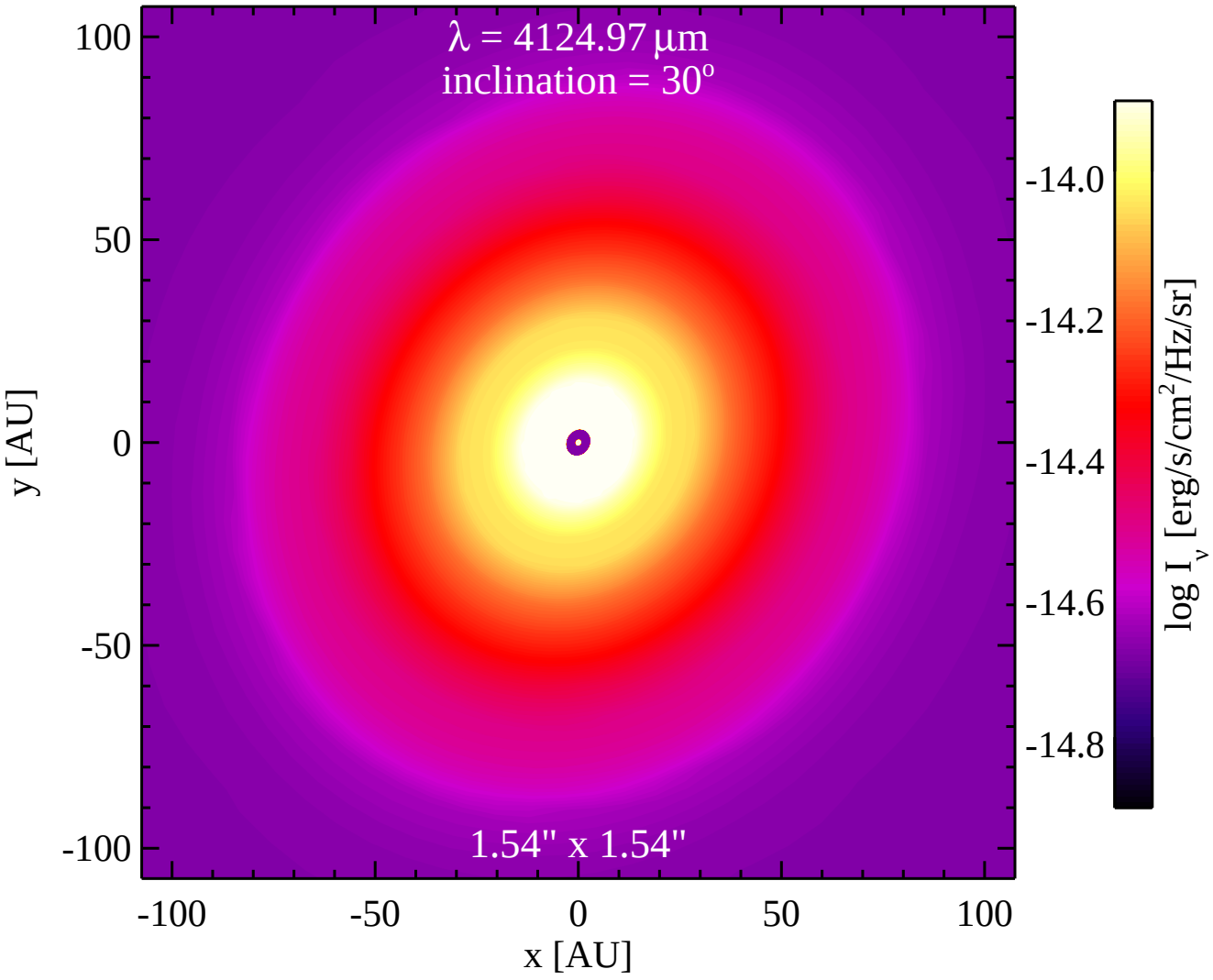

λ = 1286.46 μm
inclination = 30°
1.61" x 1.61"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-13.0
-13.2
-13.4
-13.6
-13.8
-14.0
log I_ν [erg/s/cm²/Hz/sr]

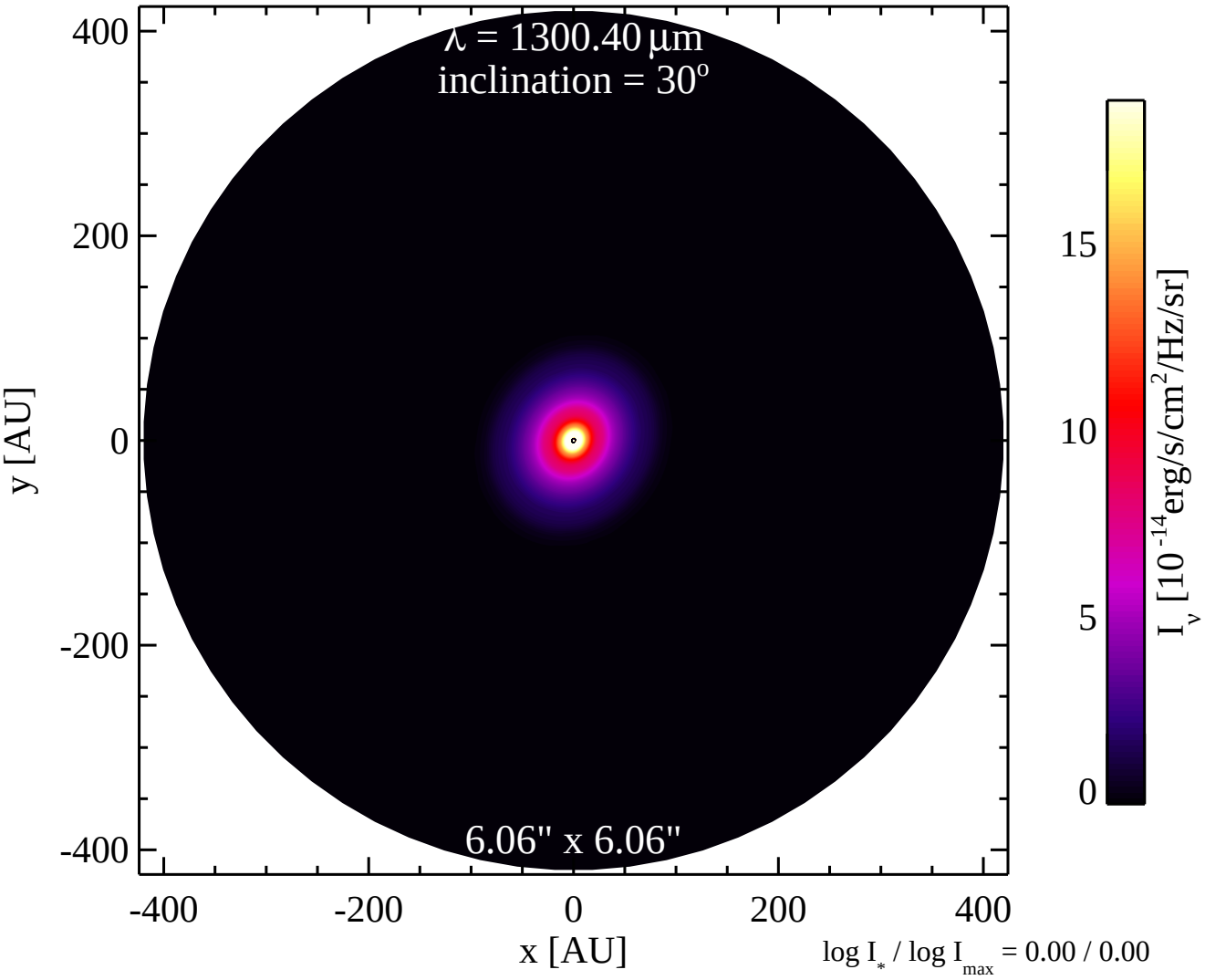

λ = 1624.06 μm
inclination = 30°
1.60" x 1.60"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-13.2
-13.4
-13.6
-13.8
-14.0
log I_ν [erg/s/cm²/Hz/sr]

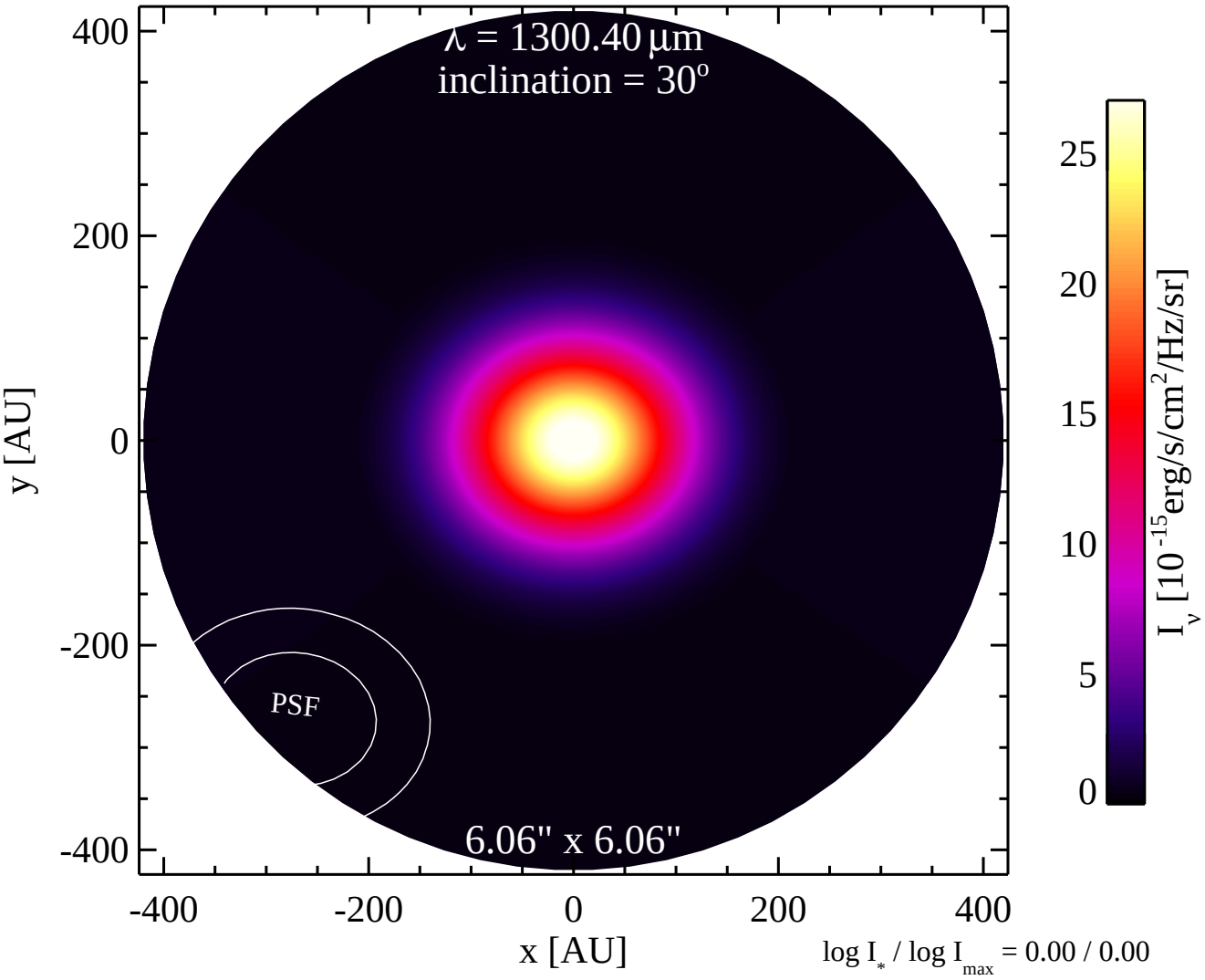

λ = 2050.25 μm
inclination = 30°
1.59" x 1.59"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-13.4
-13.6
-13.8
-14.0
-14.2
log I_ν [erg/s/cm²/Hz/sr]

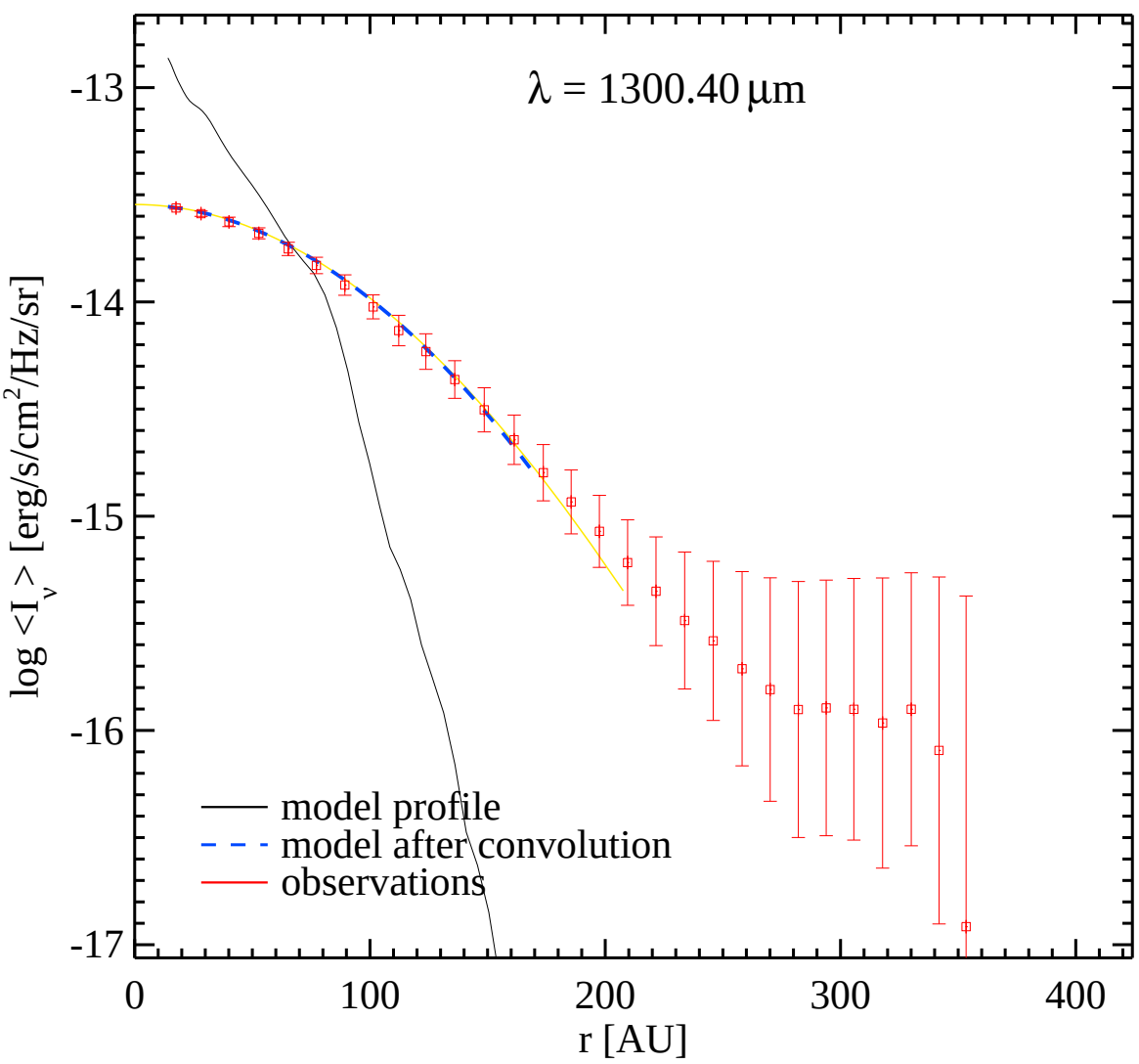

λ = 2588.28 μm
inclination = 30°
1.57" x 1.57"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-13.6
-13.8
-14.0
-14.2
-14.4
log I_ν [erg/s/cm²/Hz/sr]

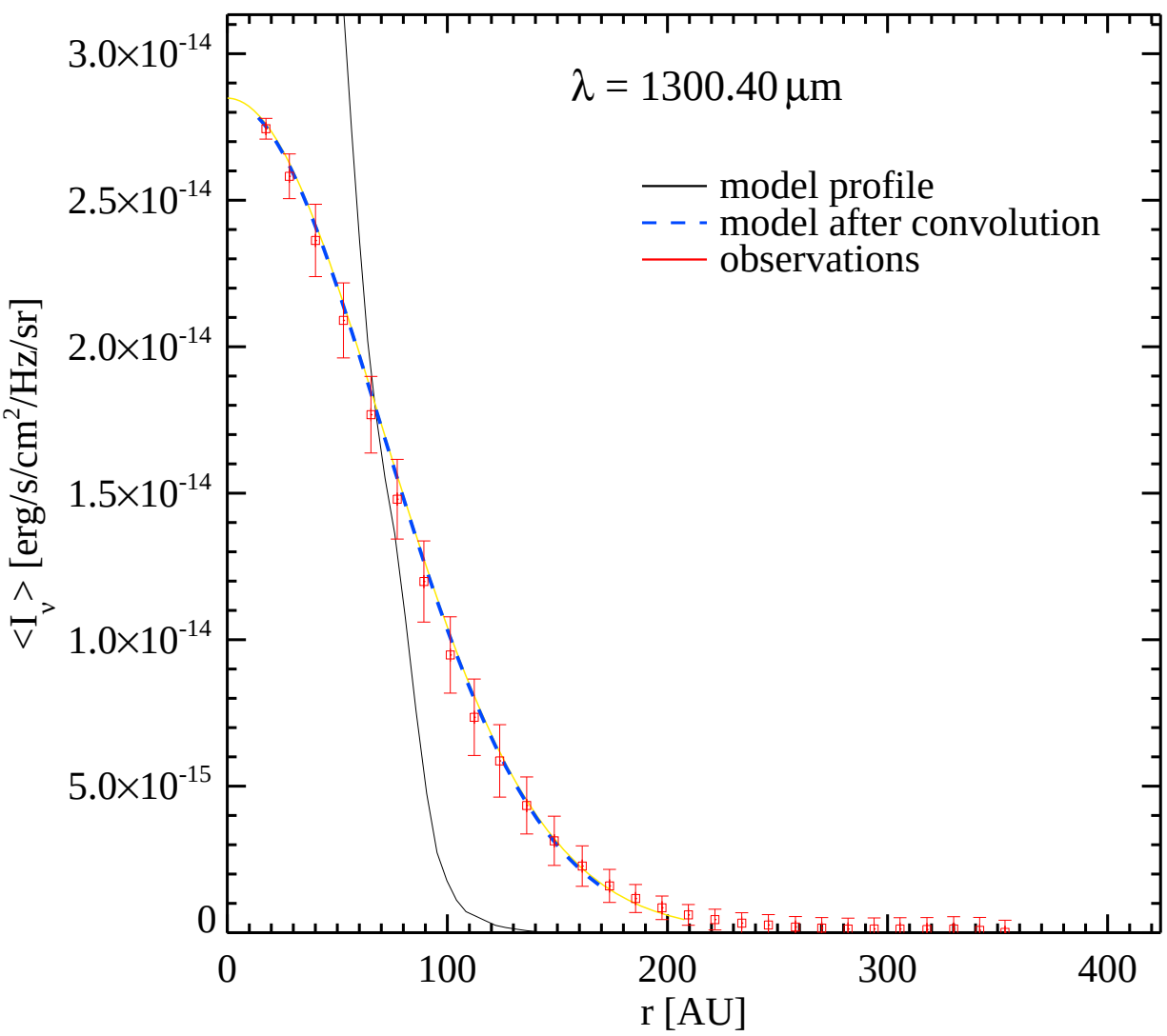

λ = 3267.51 μm
inclination = 30°
1.54" x 1.54"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-13.8
-14.0
-14.2
-14.4
-14.6
log I_ν [erg/s/cm²/Hz/sr]


λ = 4124.97 μm
inclination = 30°
1.54" x 1.54"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-14.0
-14.2
-14.4
-14.6
-14.8
log I_ν [erg/s/cm²/Hz/sr]


λ = 1300.40 μm
inclination = 30°
6.06" x 6.06"
400
200
0
-200
-400
y [AU]
-400
-200
0
200
400
x [AU]
15
10
5
0
I_ν [10^-14 erg/s/cm^2/Hz/sr]
log I_* / log I_max = 0.00 / 0.00


λ = 1300.40 μm
inclination = 30°
PSF
6.06" x 6.06"
400
200
0
-200
-400
y [AU]
-400
-200
0
200
400
x [AU]
25
20
15
10
5
0
I_ν [10^-15 erg/s/cm^2/Hz/sr]
log I_* / log I_max = 0.00 / 0.00


λ = 1300.40 μm
-13
-14
-15
-16
-17
0
100
200
300
400
r [AU]
log <I_ν> [erg/s/cm²/Hz/sr]
model profile
model after convolution
observations


λ = 1300.40 μm
model profile
model after convolution
observations
3.0×10-14
2.5×10-14
2.0×10-14
1.5×10-14
1.0×10-14
5.0×10-15
0
<Iν> [erg/s/cm2/Hz/sr]
0
100
200
300
400
r [AU]