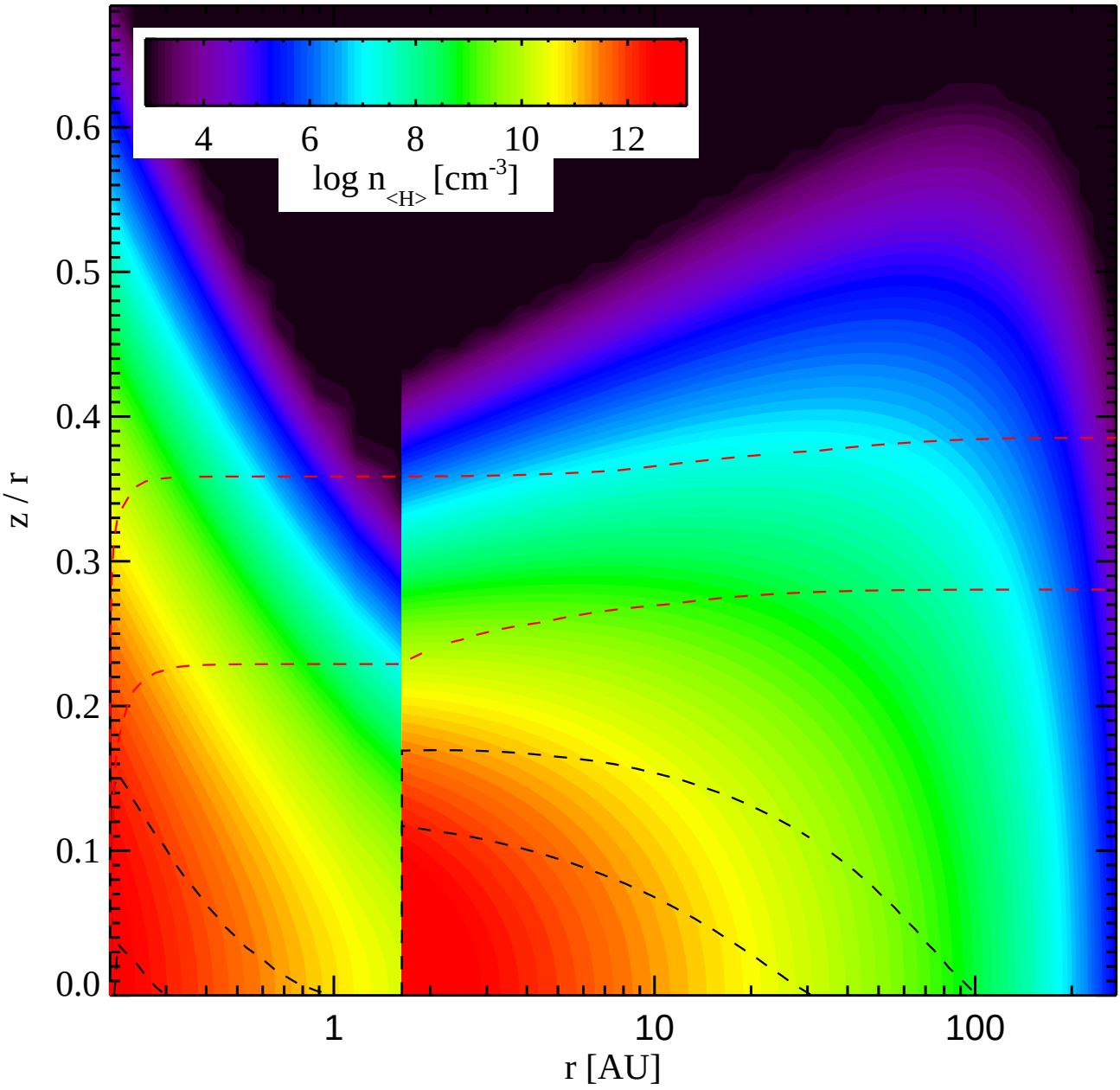
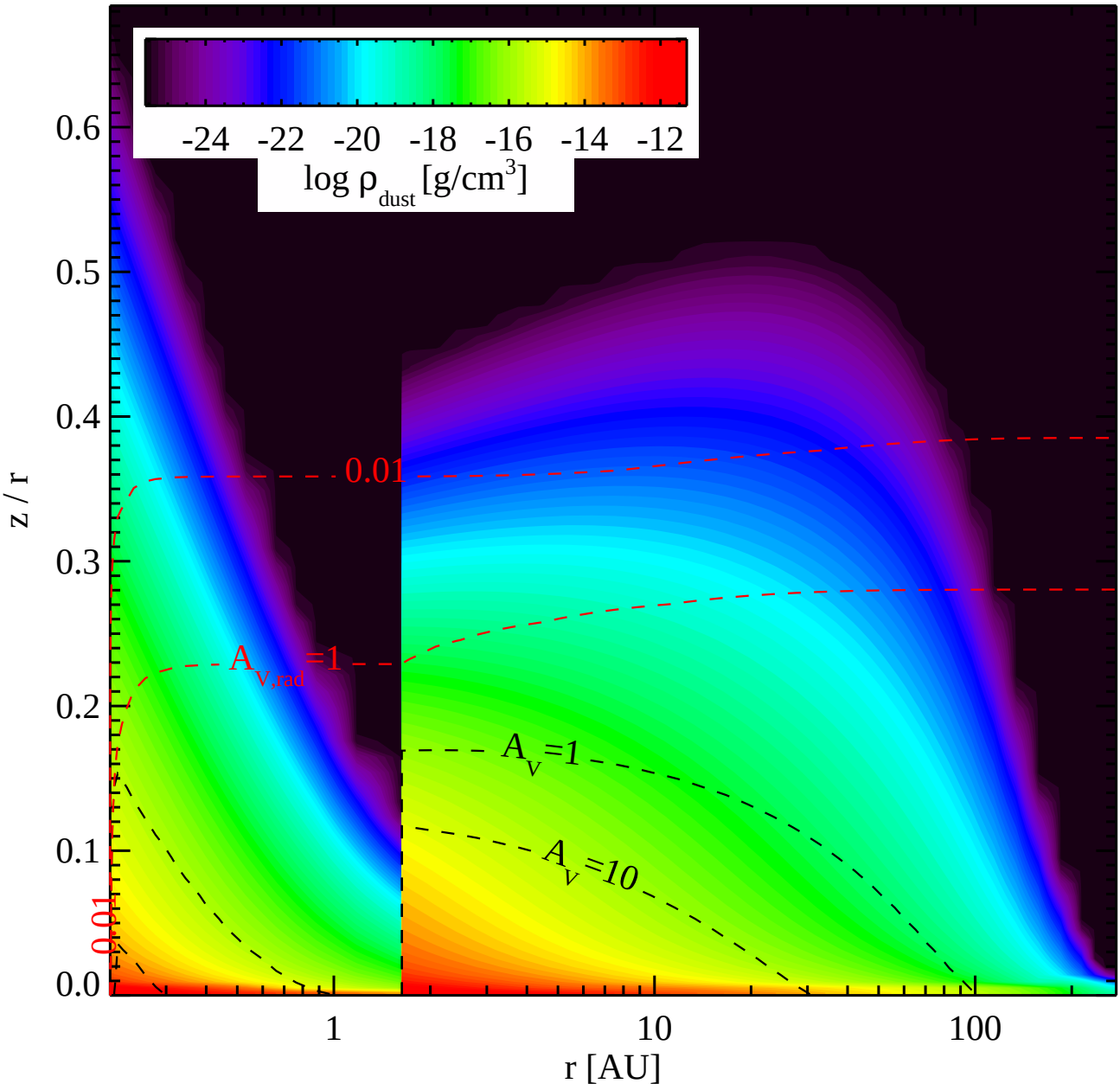
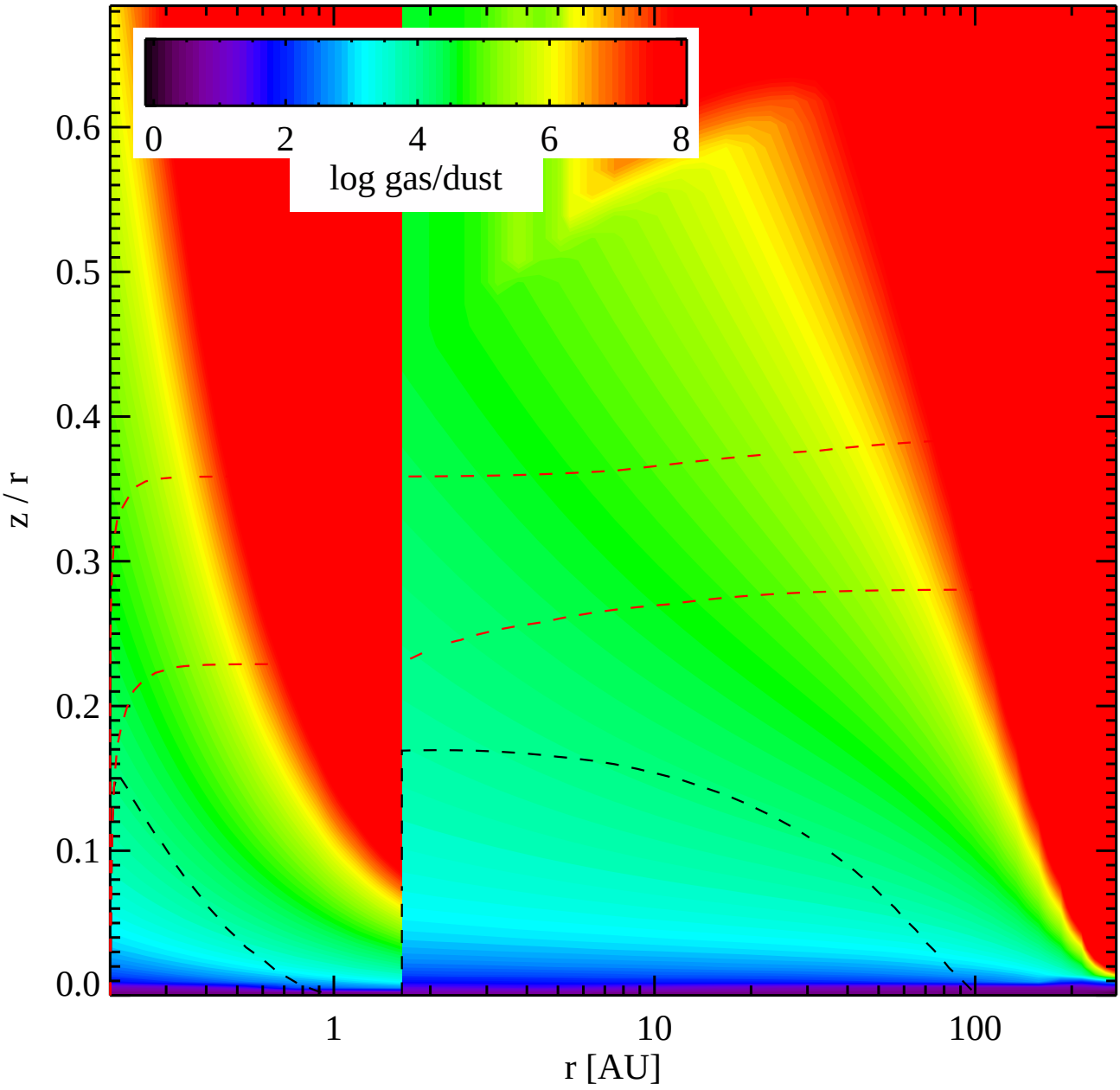
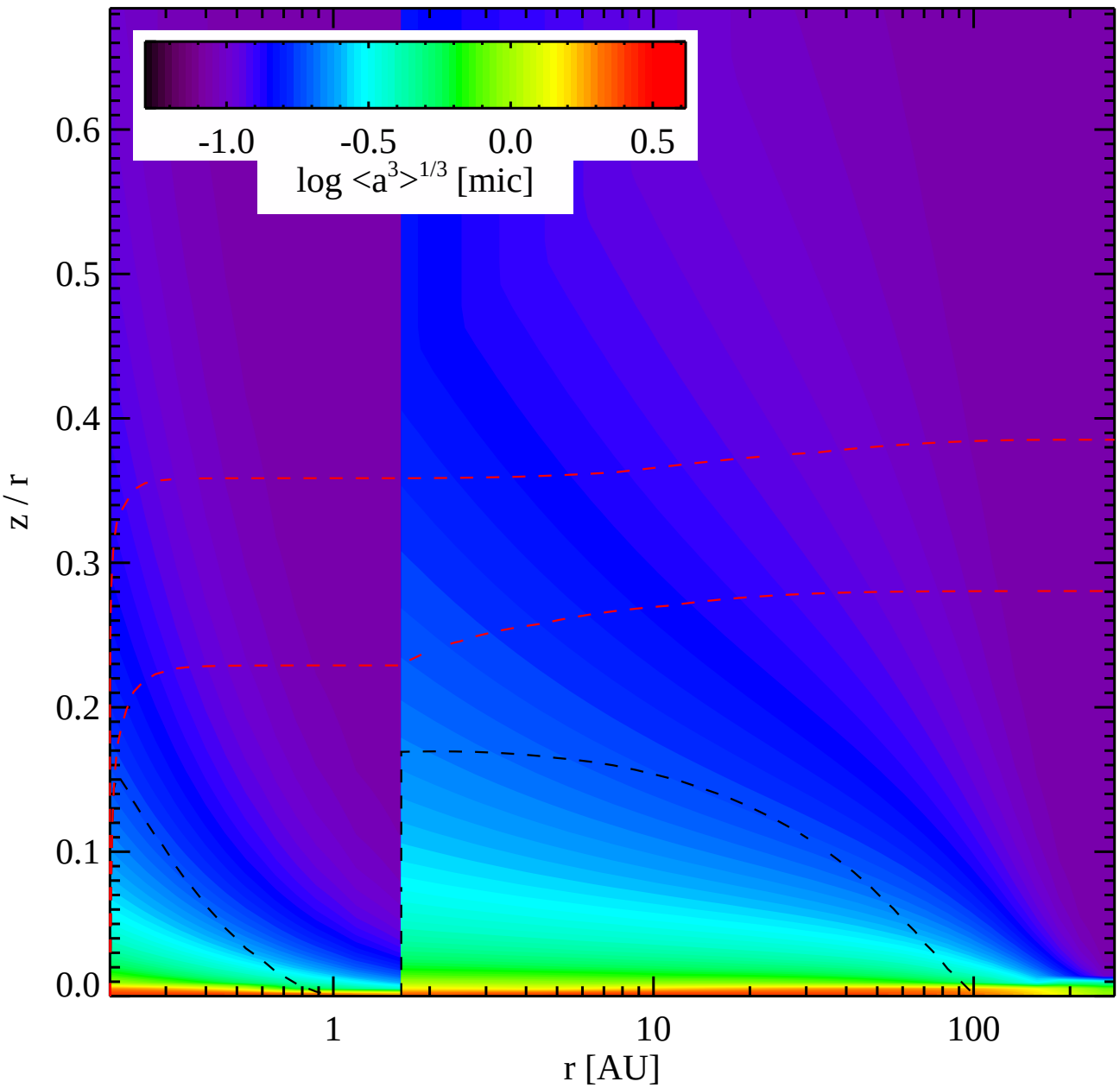
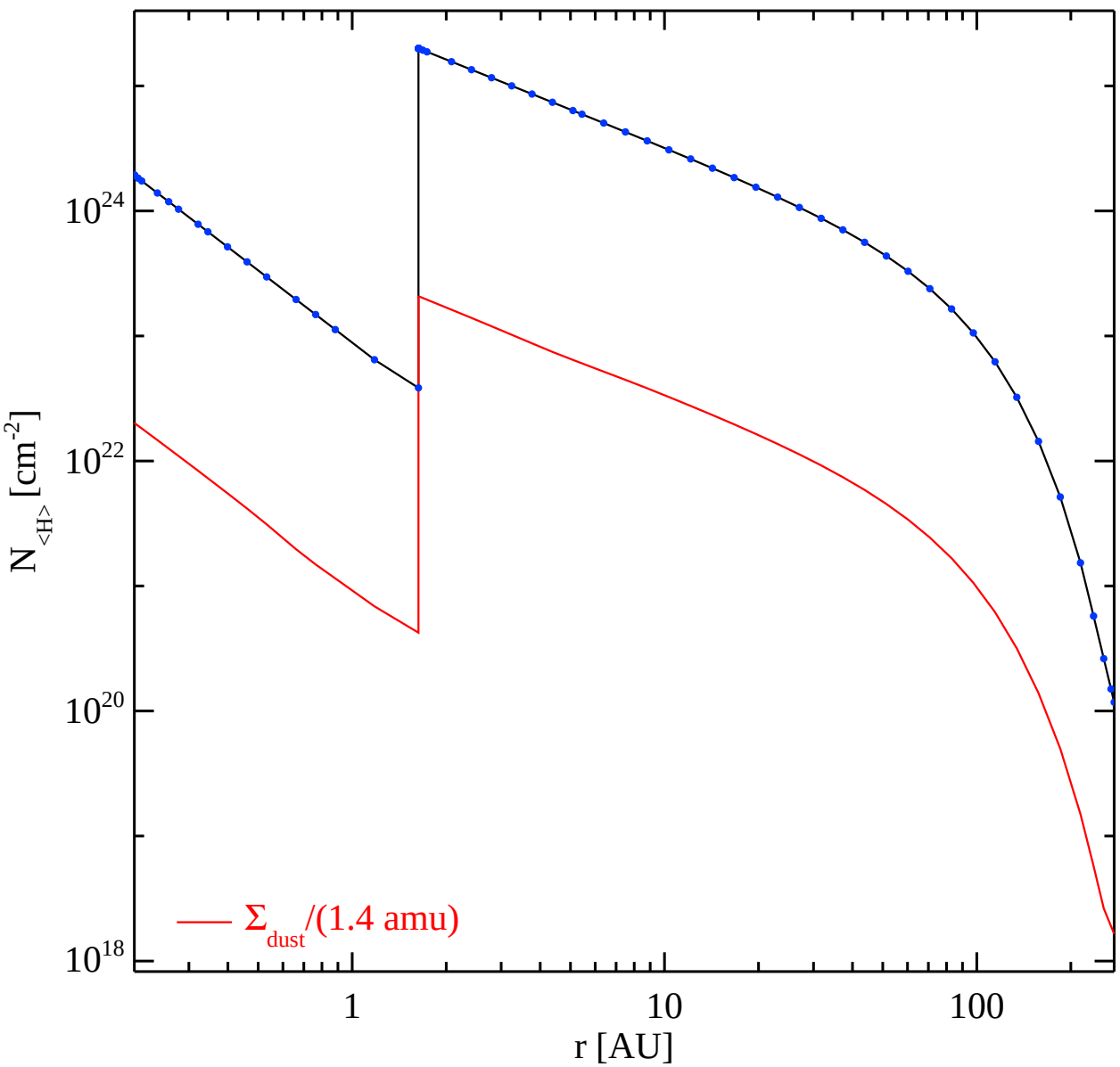
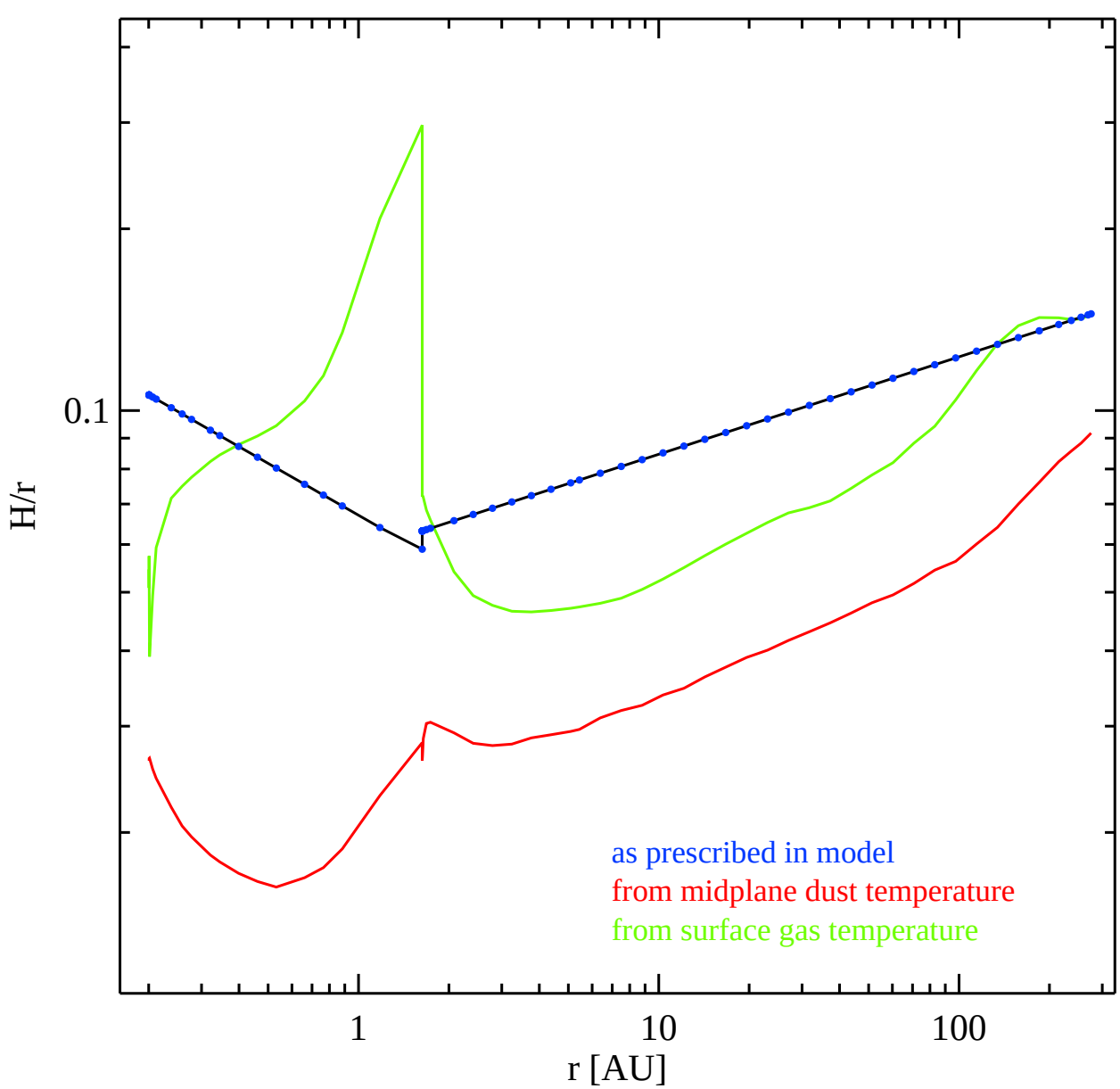

4
6
8
10
12
log n<H> [cm-3]
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
1
10
100
r [AU]

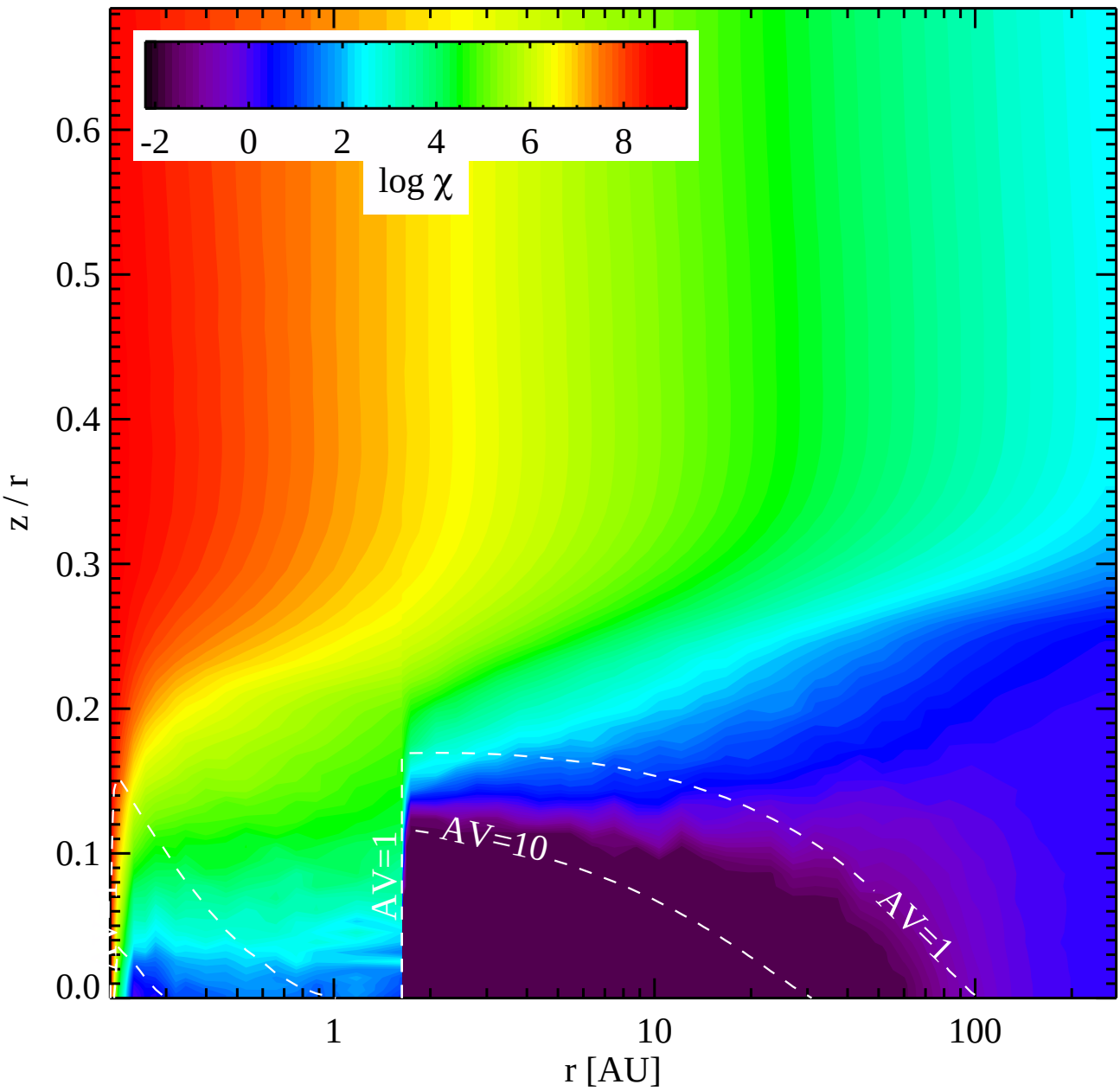

-24 -22 -20 -18 -16 -14 -12
log ρ dust [g/cm3]
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
0.01
A V,rad =1
A V =1
A V =10
0.01
1
10
100
r [AU]

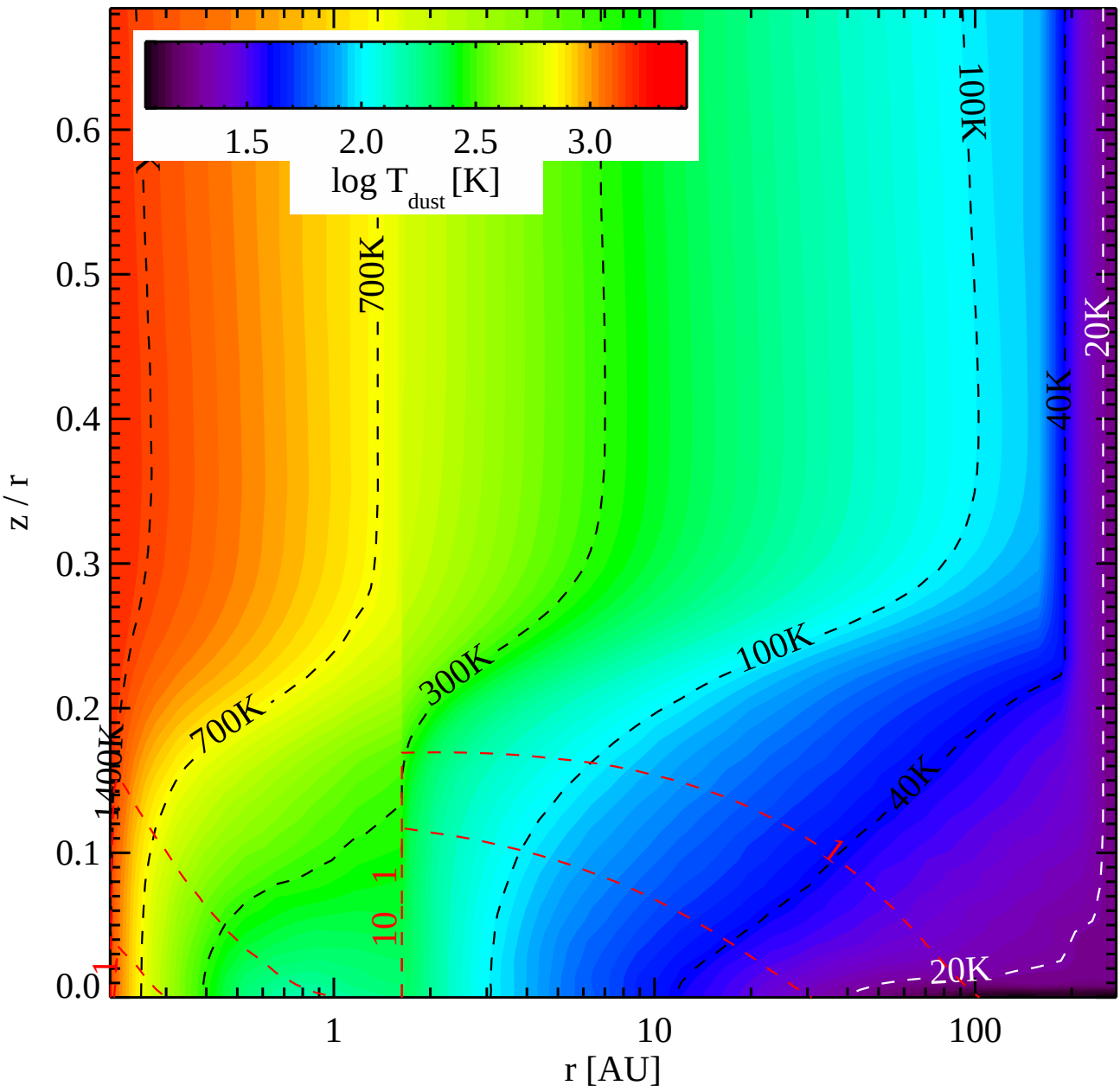

0
2
4
6
8
log gas/dust
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
1
10
100
r [AU]

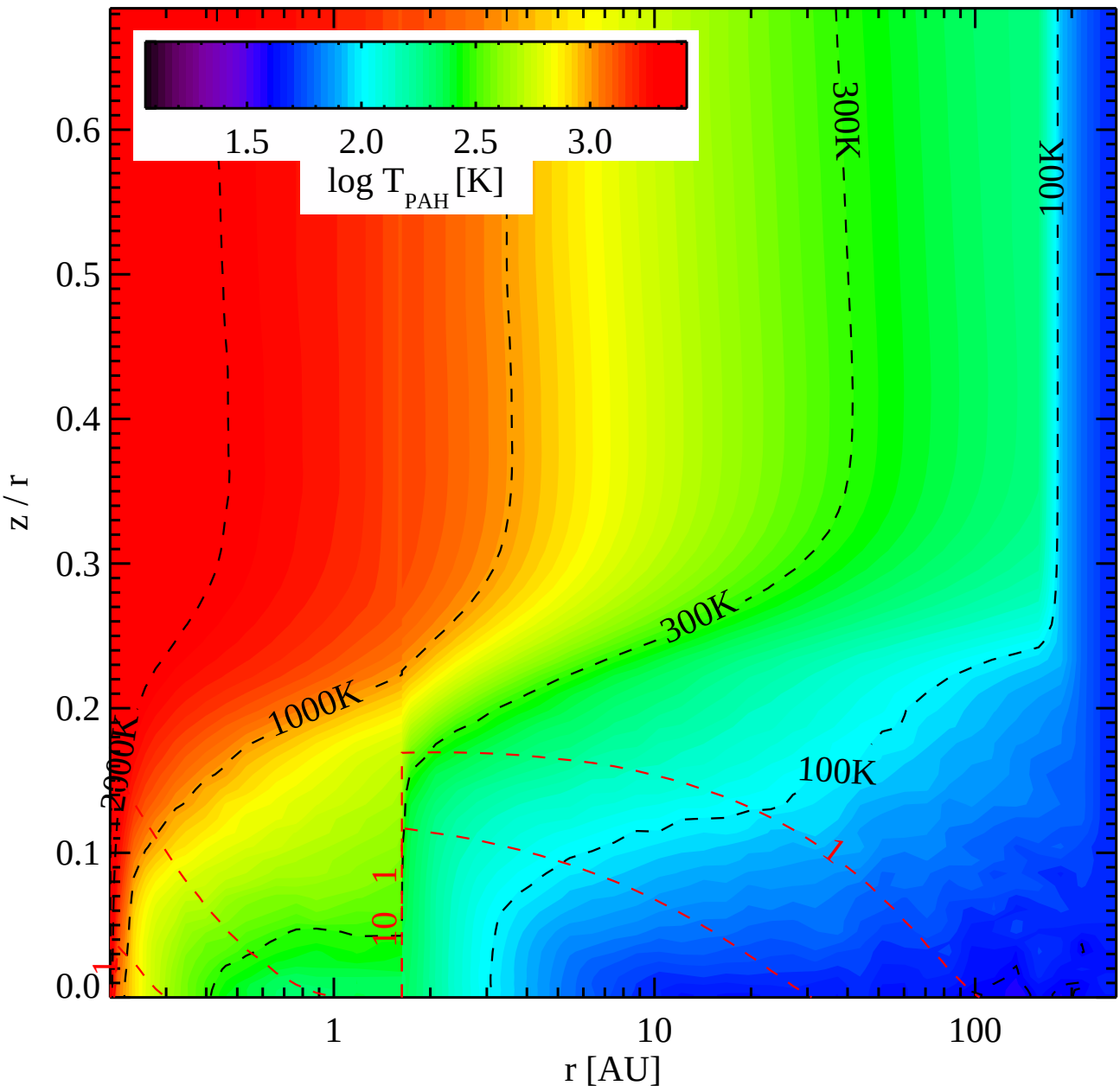

-1.0
-0.5
0.0
0.5
log <a^3>^1/3 [mic]
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
1
10
100
r [AU]

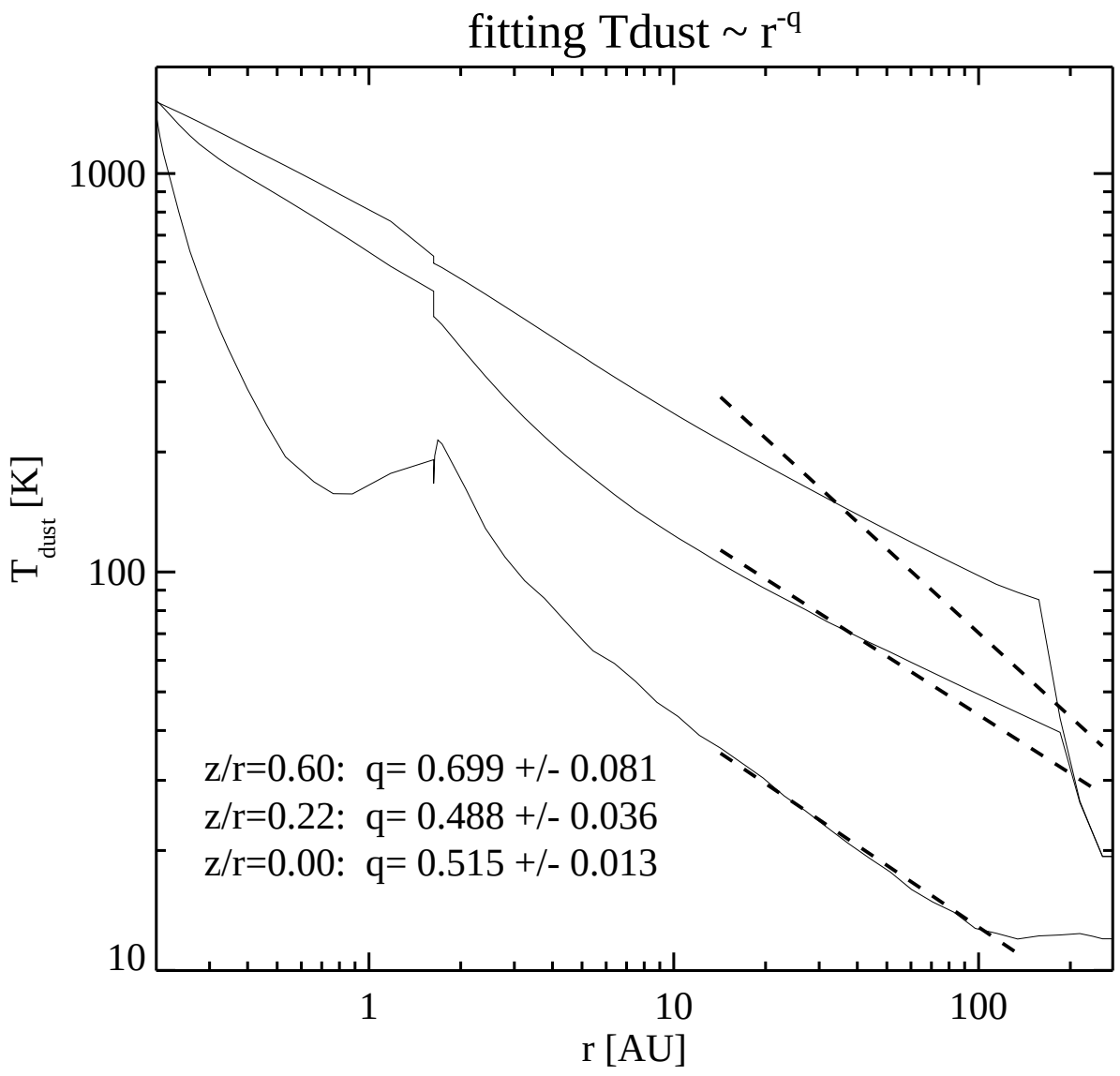

10^{24}
10^{22}
10^{20}
10^{18}
$N_{<H>}$ [cm^{-2}]
1
10
100
r [AU]
Σ_{dust}/(1.4 amu)

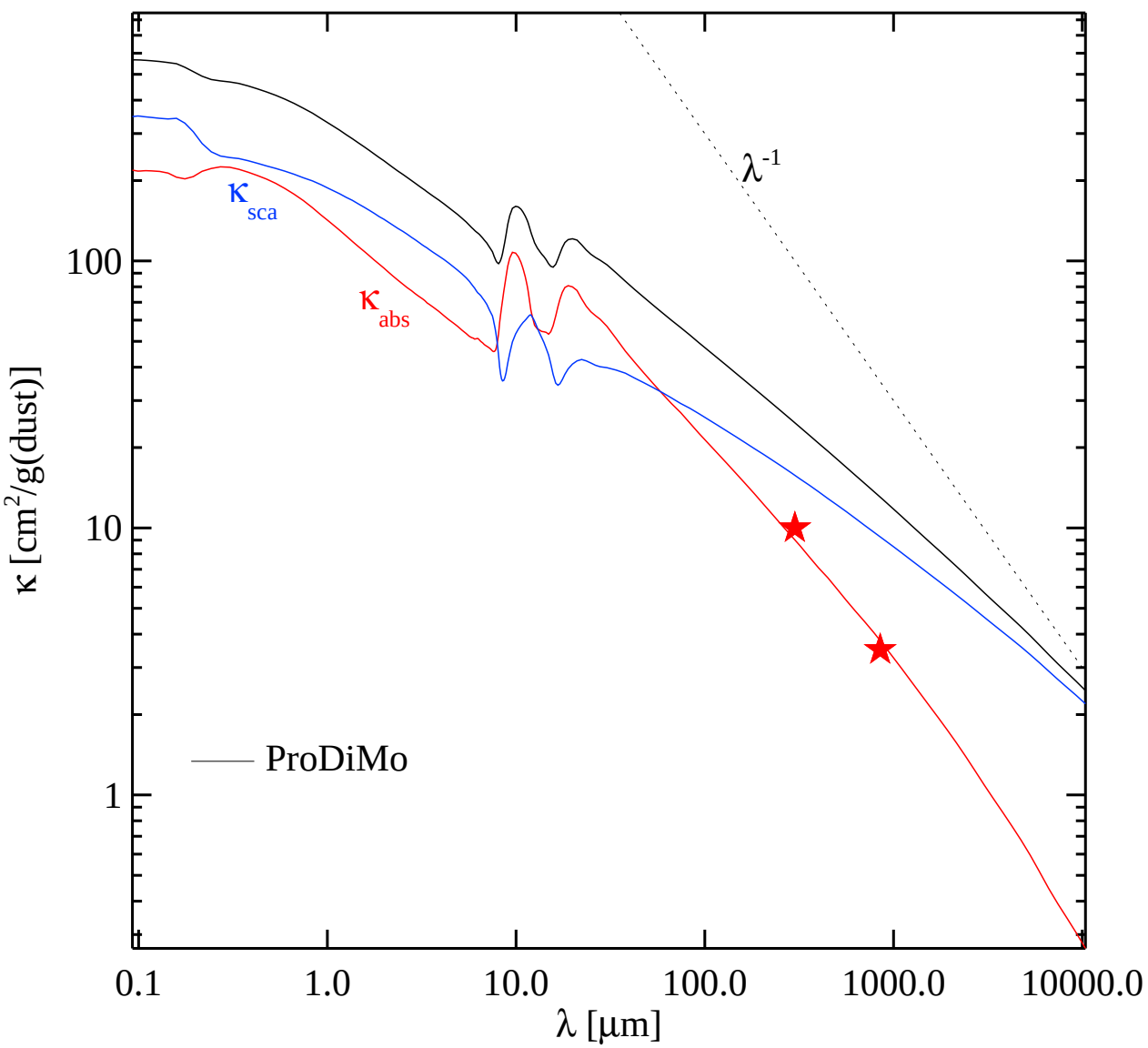

0.1
H/r
1
10
100
r [AU]
as prescribed in model
from midplane dust temperature
from surface gas temperature

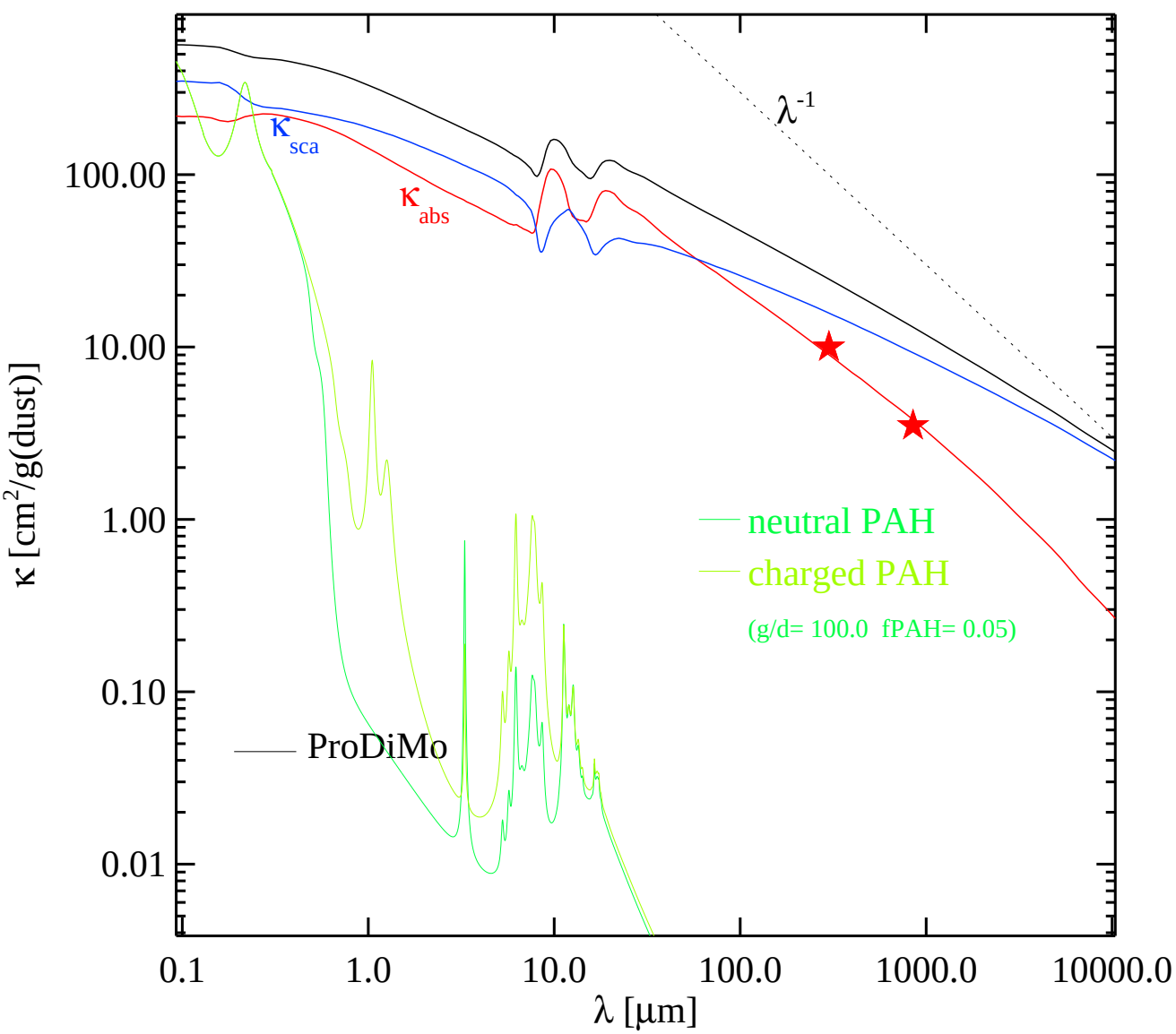

-2
0
2
4
6
8
log χ
0.6
0.5
0.4
0.3
0.2
0.1
0.0
z / r
1
10
100
r [AU]
AV=1
AV=10
AV=1

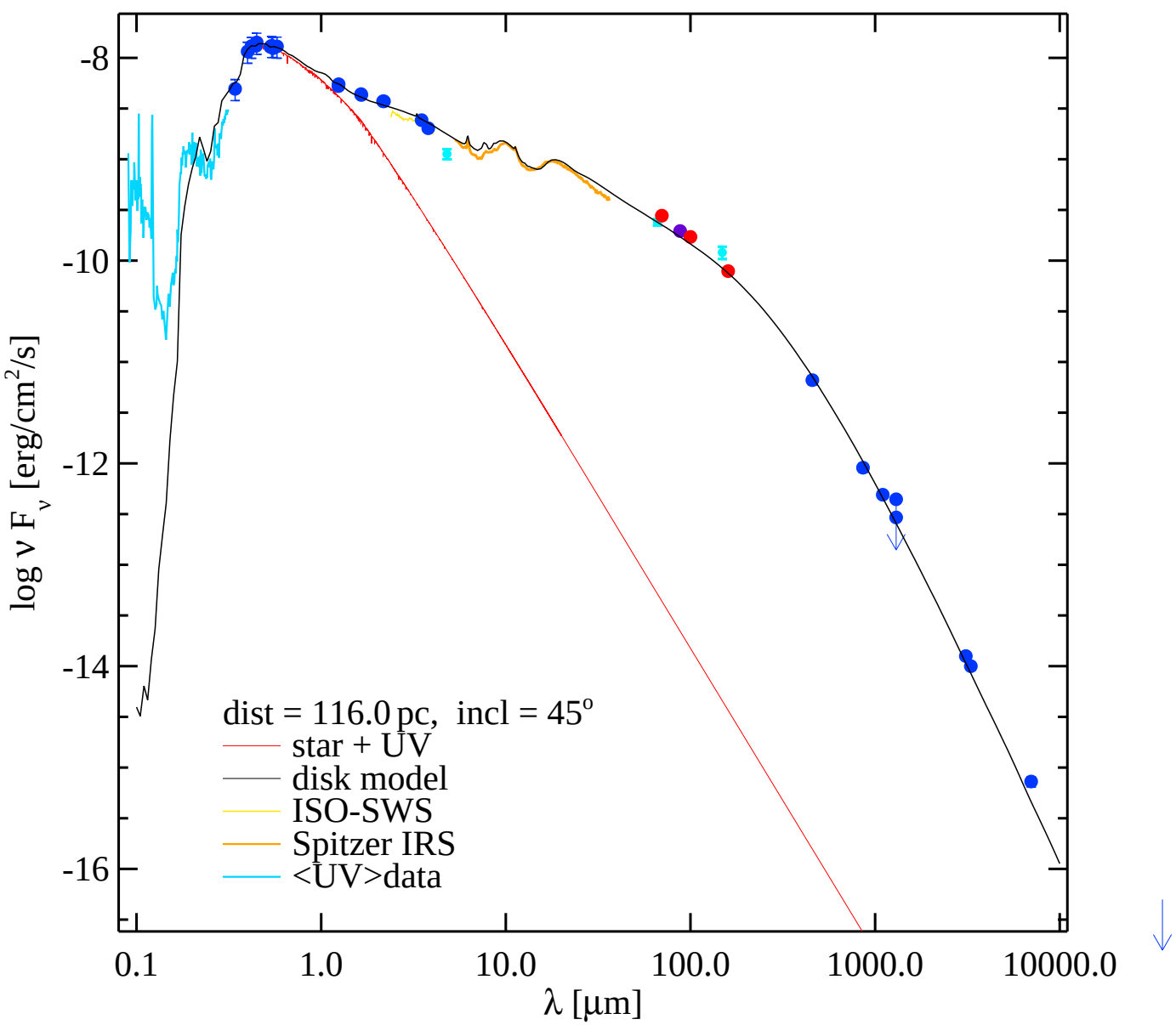

1.5
2.0
2.5
3.0
log T dust [K]
0.0
0.1
0.2
0.3
0.4
0.5
0.6
z / r
1
10
100
r [AU]
1400K
700K
300K
100K
40K
20K
700K
100K
40K
20K
10
1
1

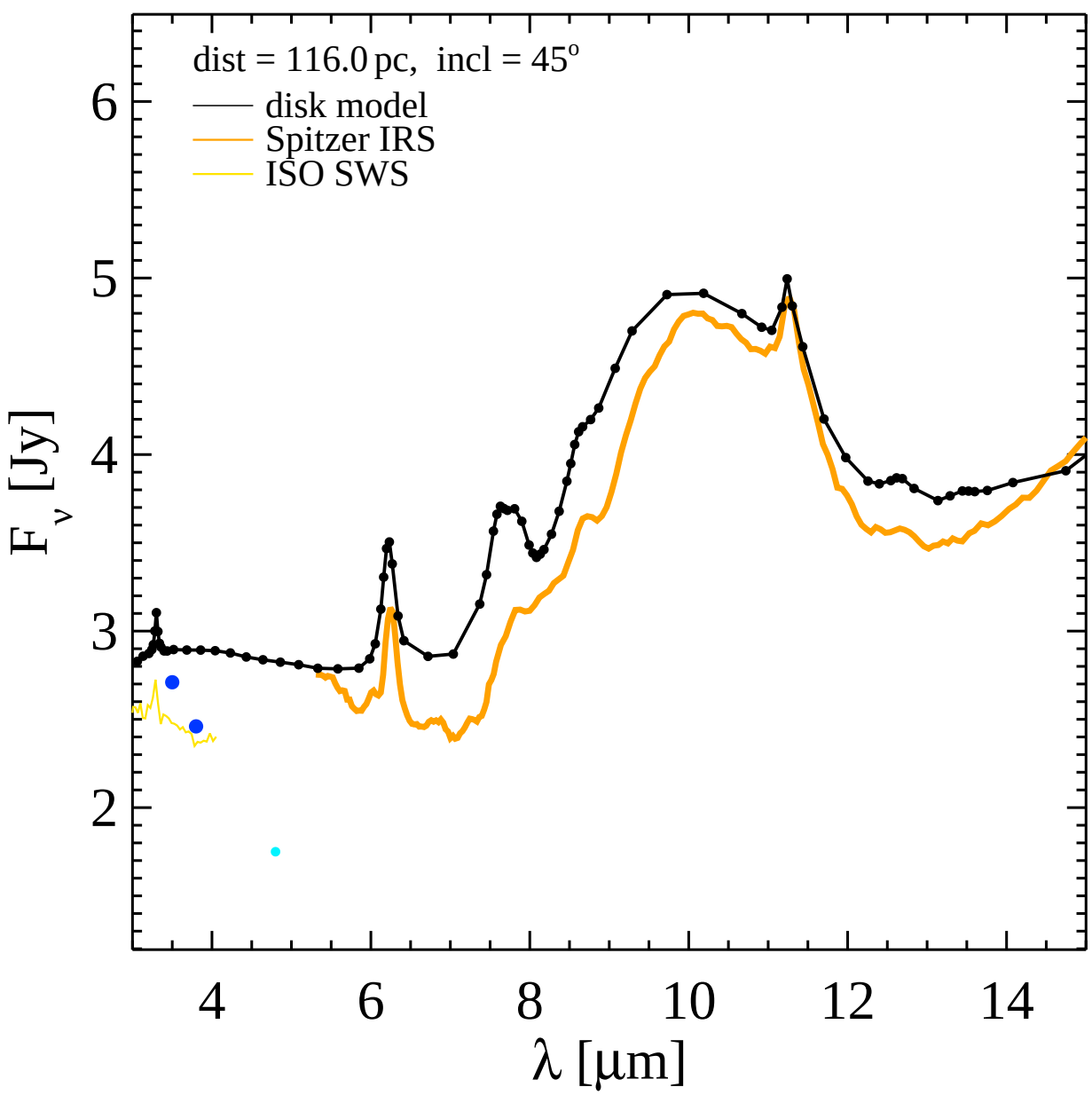

1.5
2.0
2.5
3.0
log T_PAH [K]
300K
100K
1000K
300K
100K
2000K
1
10
1
0.0
0.1
0.2
0.3
0.4
0.5
0.6
z / r
1
10
100
r [AU]

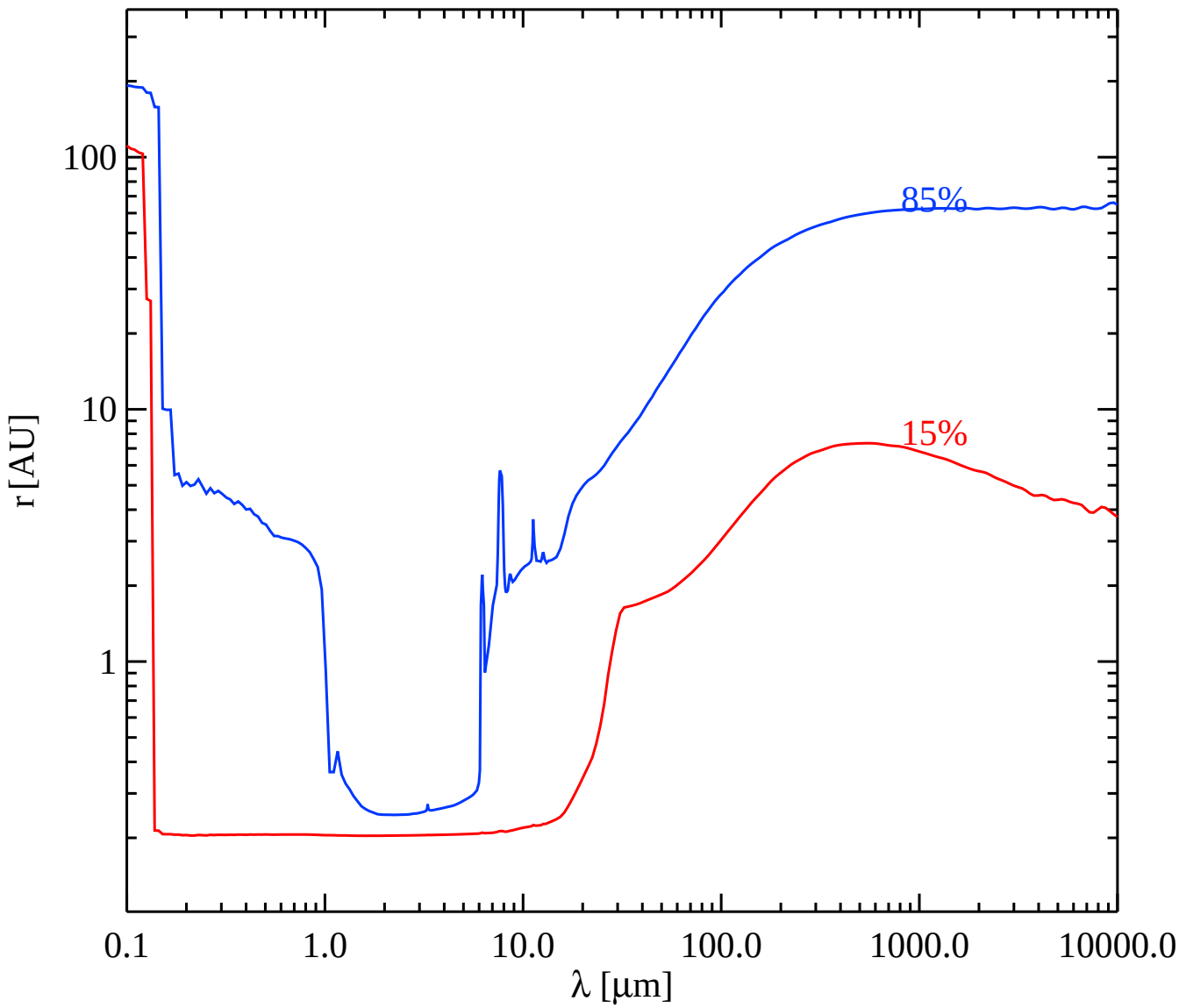

fitting Tdust ~ r^-q
1000
100
10
T dust [K]
1
10
100
r [AU]
z/r=0.60: q= 0.699 +/- 0.081
z/r=0.22: q= 0.488 +/- 0.036
z/r=0.00: q= 0.515 +/- 0.013

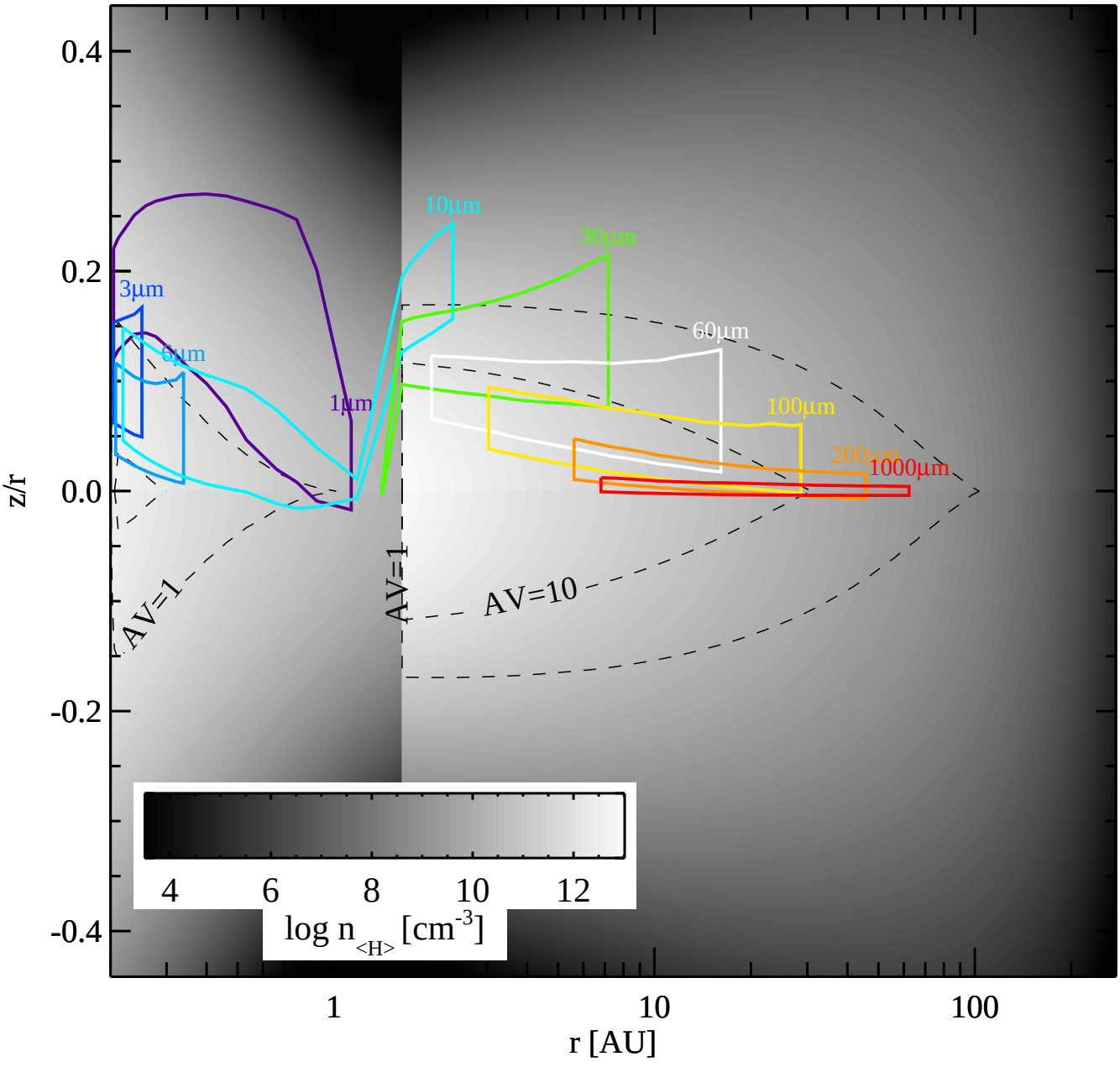

κ [cm²/g(dust)]
100
10
1
0.1
1.0
10.0
100.0
1000.0
10000.0
λ [μm]
λ^-1
κ sca
κ abs
ProDiMo

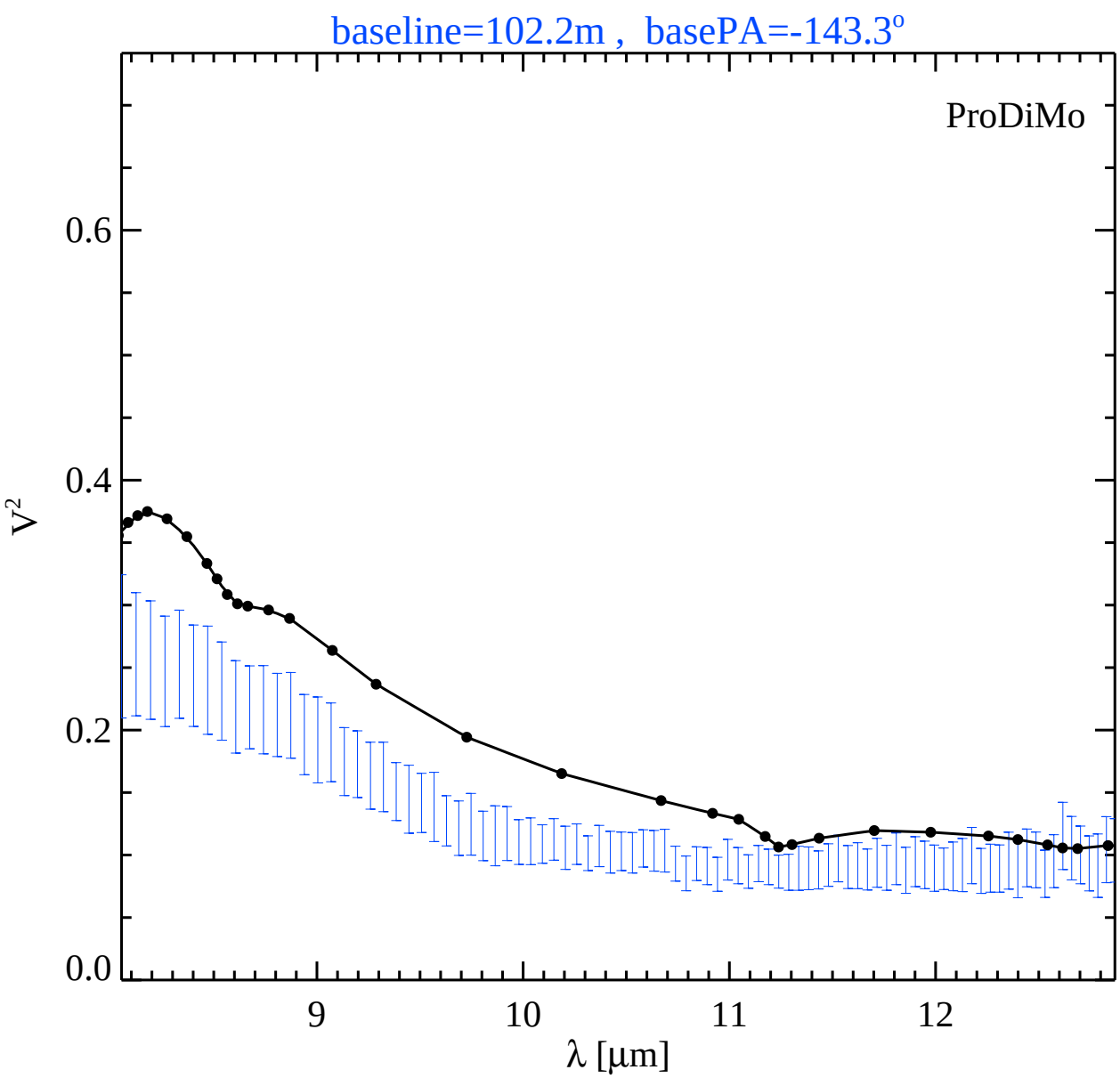

κ [cm²/g(dust)]
100.00
10.00
1.00
0.10
0.01
0.1
1.0
10.0
100.0
1000.0
10000.0
λ [μm]
λ-1
κsca
κabs
neutral PAH
charged PAH
(g/d= 100.0 fPAH= 0.05)
ProDiMo

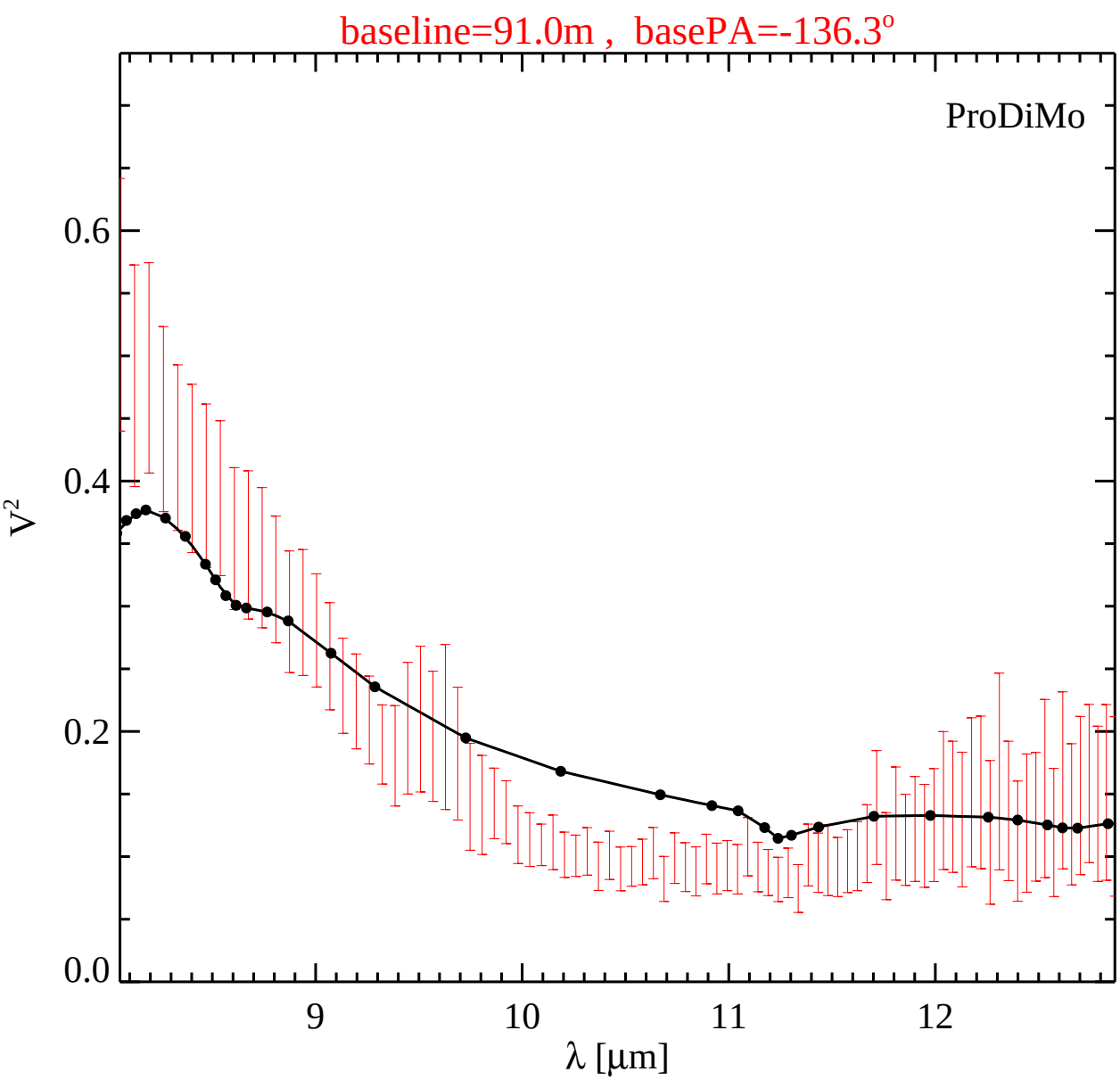

-8
-10
-12
-14
-16
log ν F_ν [erg/cm²/s]
0.1
1.0
10.0
100.0
1000.0
10000.0
λ [μm]
dist = 116.0 pc, incl = 45°
star + UV
disk model
ISO-SWS
Spitzer IRS
<UV>data

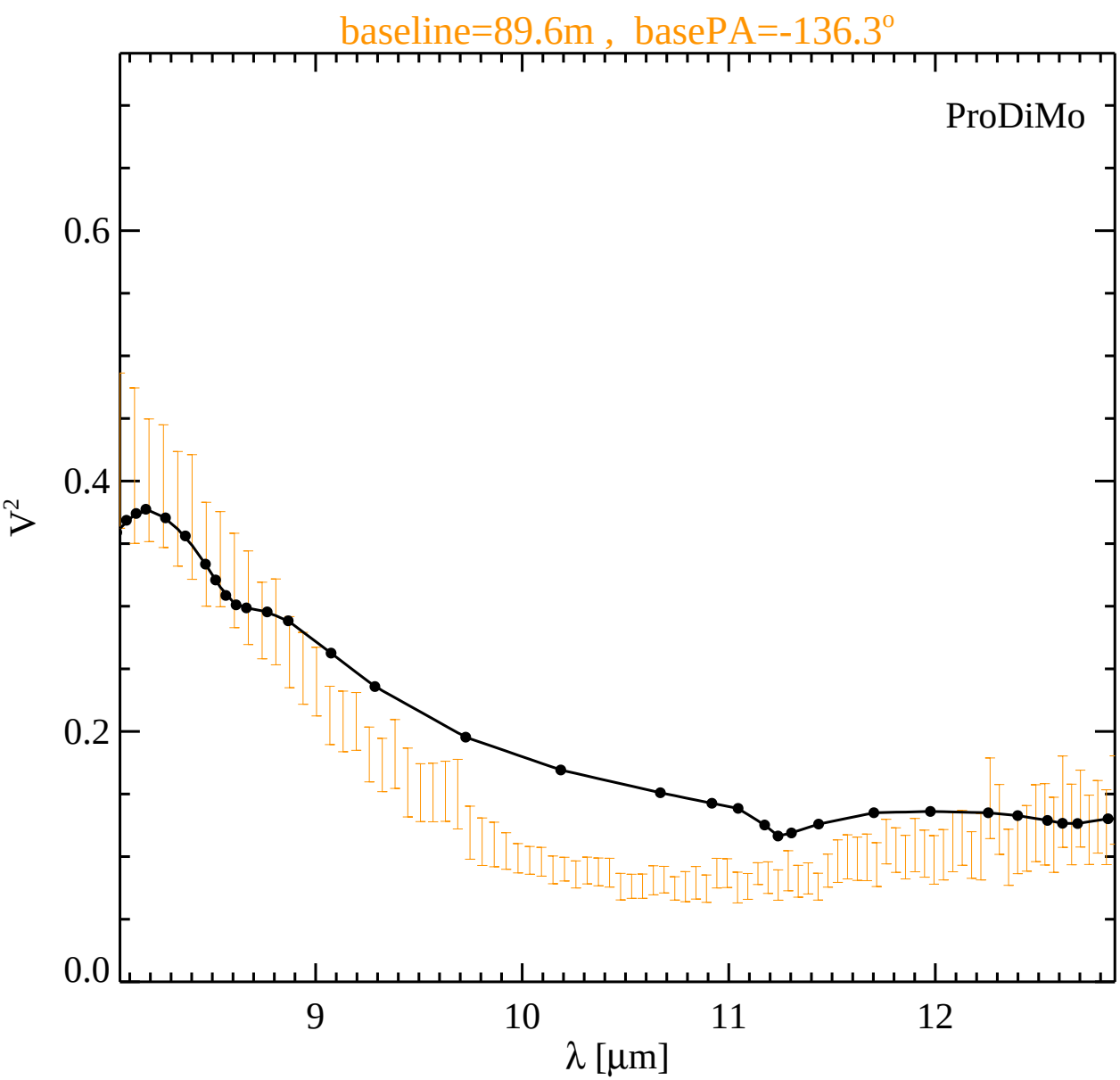

dist = 116.0 pc, incl = 45°
disk model
Spitzer IRS
ISO SWS
F_ν [Jy]
λ [μm]
2
3
4
5
6
4
6
8
10
12
14

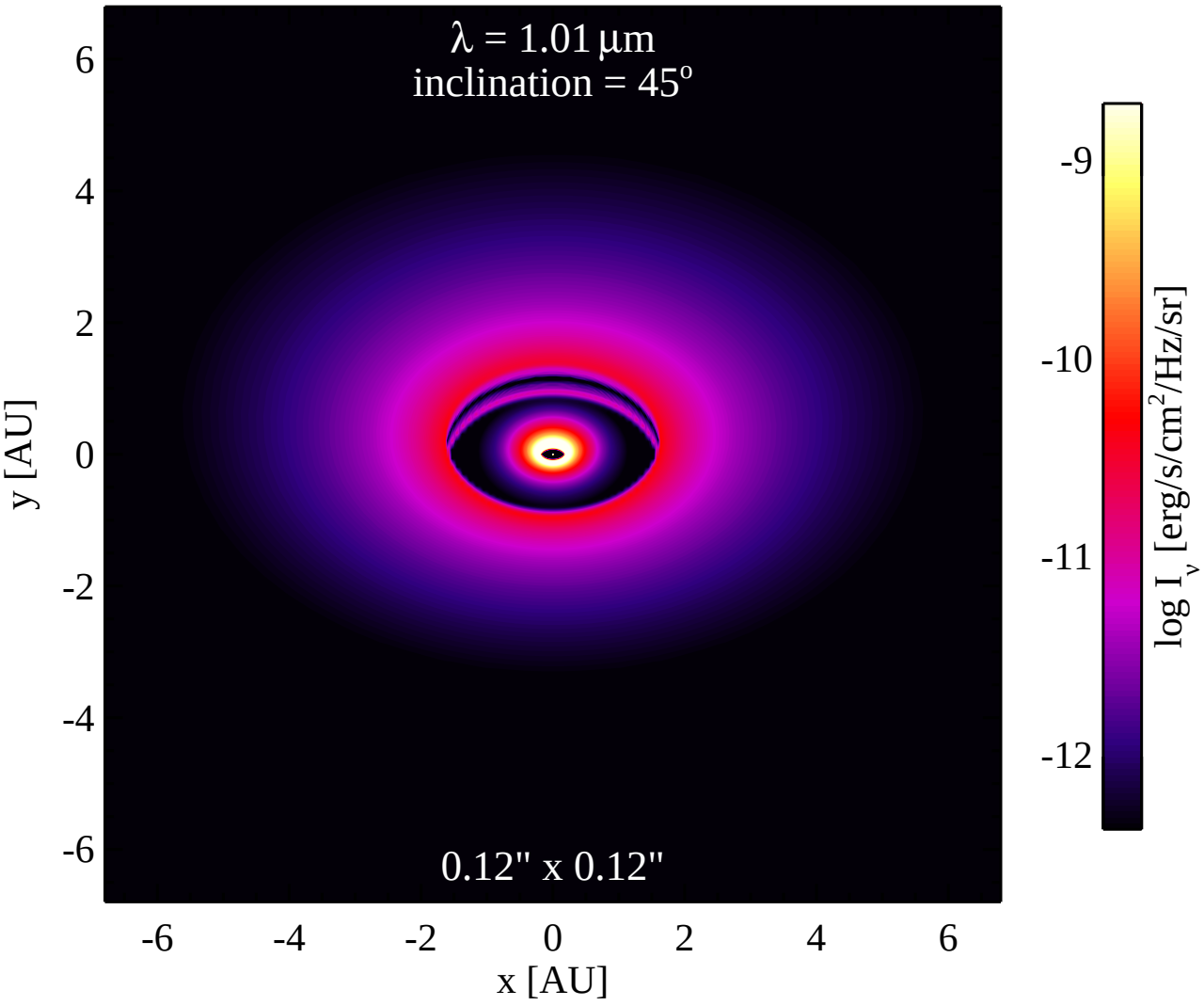

100
10
1
r [AU]
0.1
1.0
10.0
100.0
1000.0
10000.0
λ [μm]
85%
15%

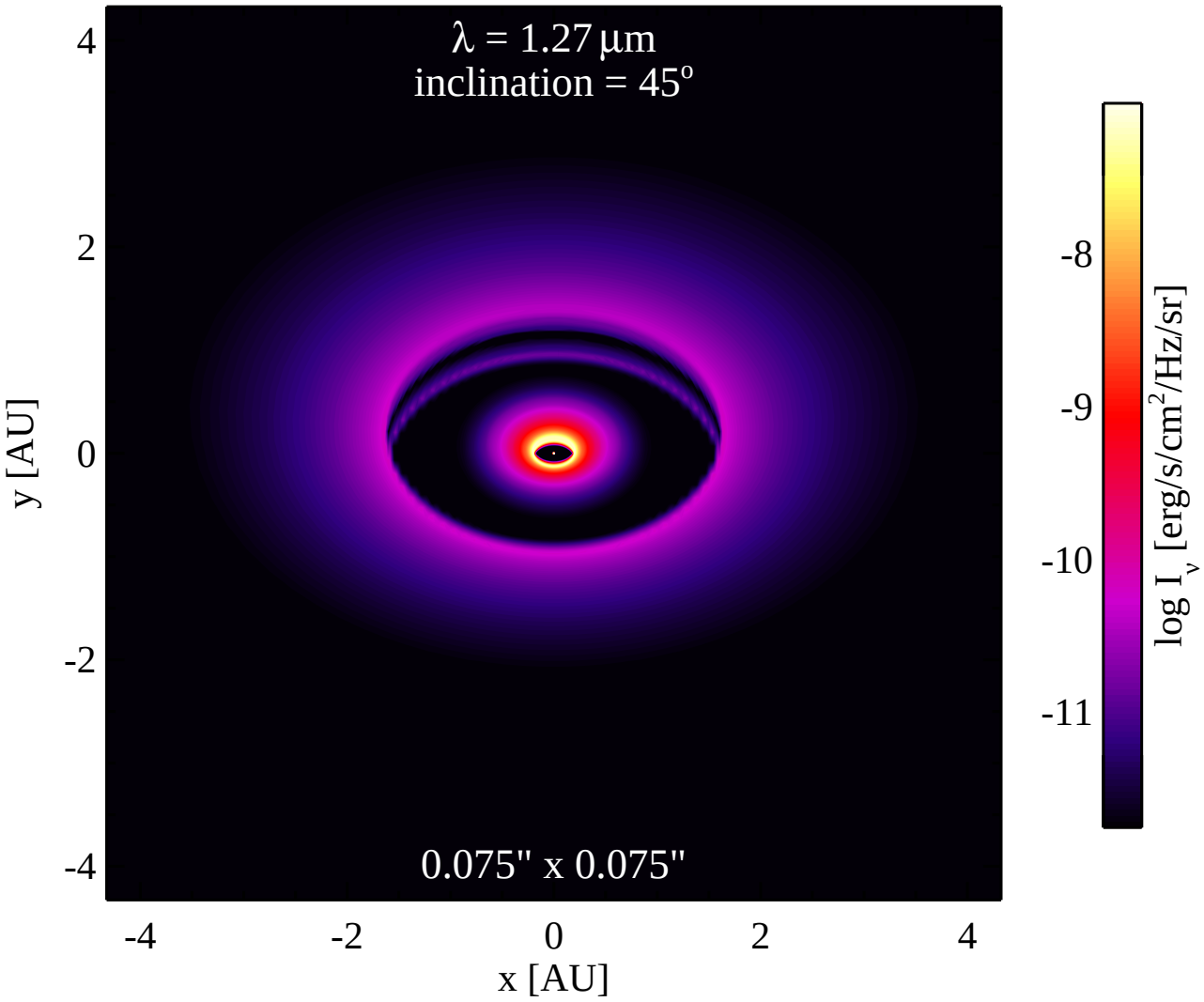

0.4
0.2
0.0
-0.2
-0.4
z/r
1
10
100
r [AU]
3µm
6µm
1µm
10µm
30µm
60µm
100µm
200µm
1000µm
AV=1
AV=1
AV=10
4
6
8
10
12
log n <H> [cm-3]

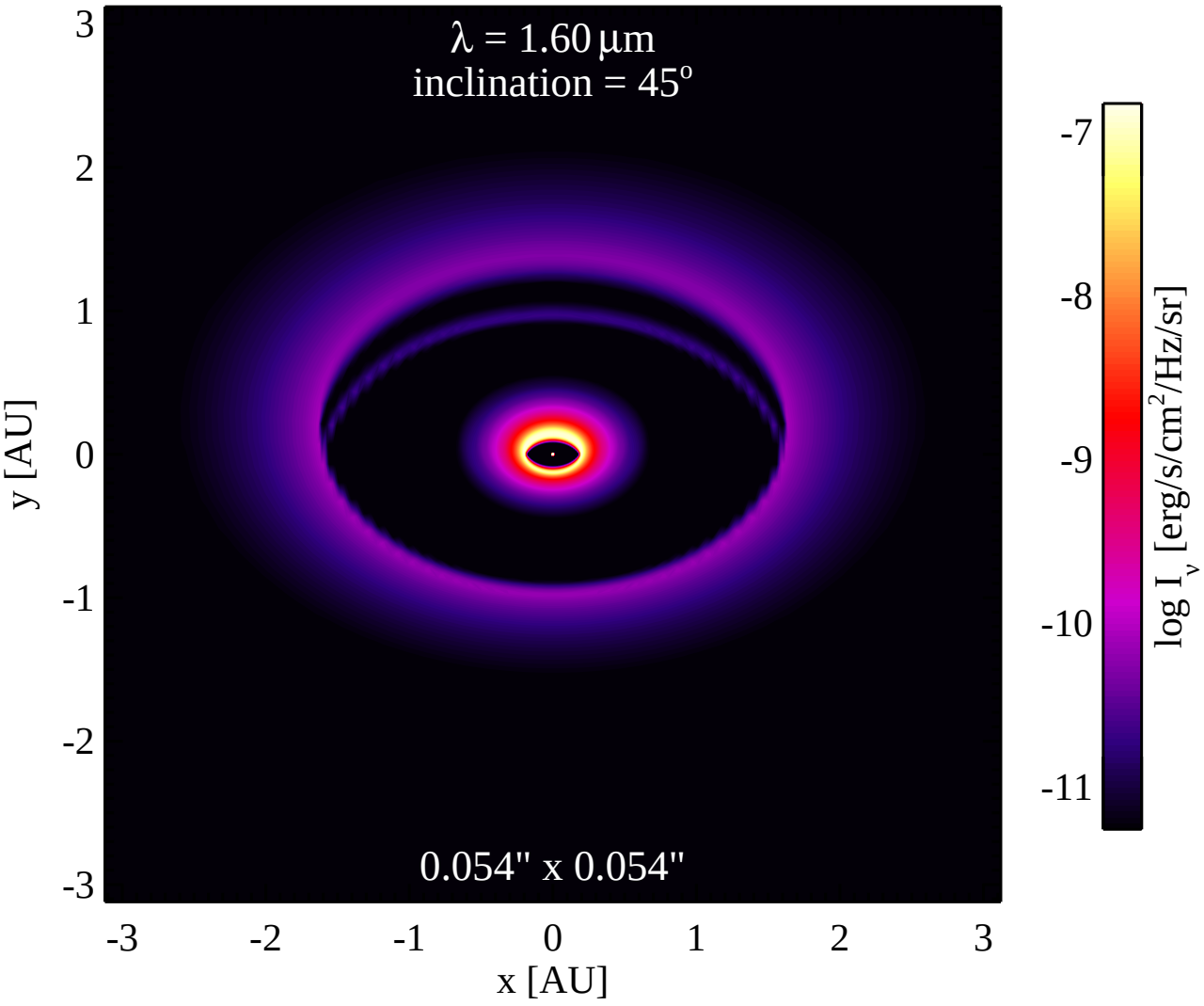

baseline=102.2m , basePA=-143.3°
ProDiMo
0.6
0.4
0.2
0.0
V²
9
10
11
12
λ [μm]

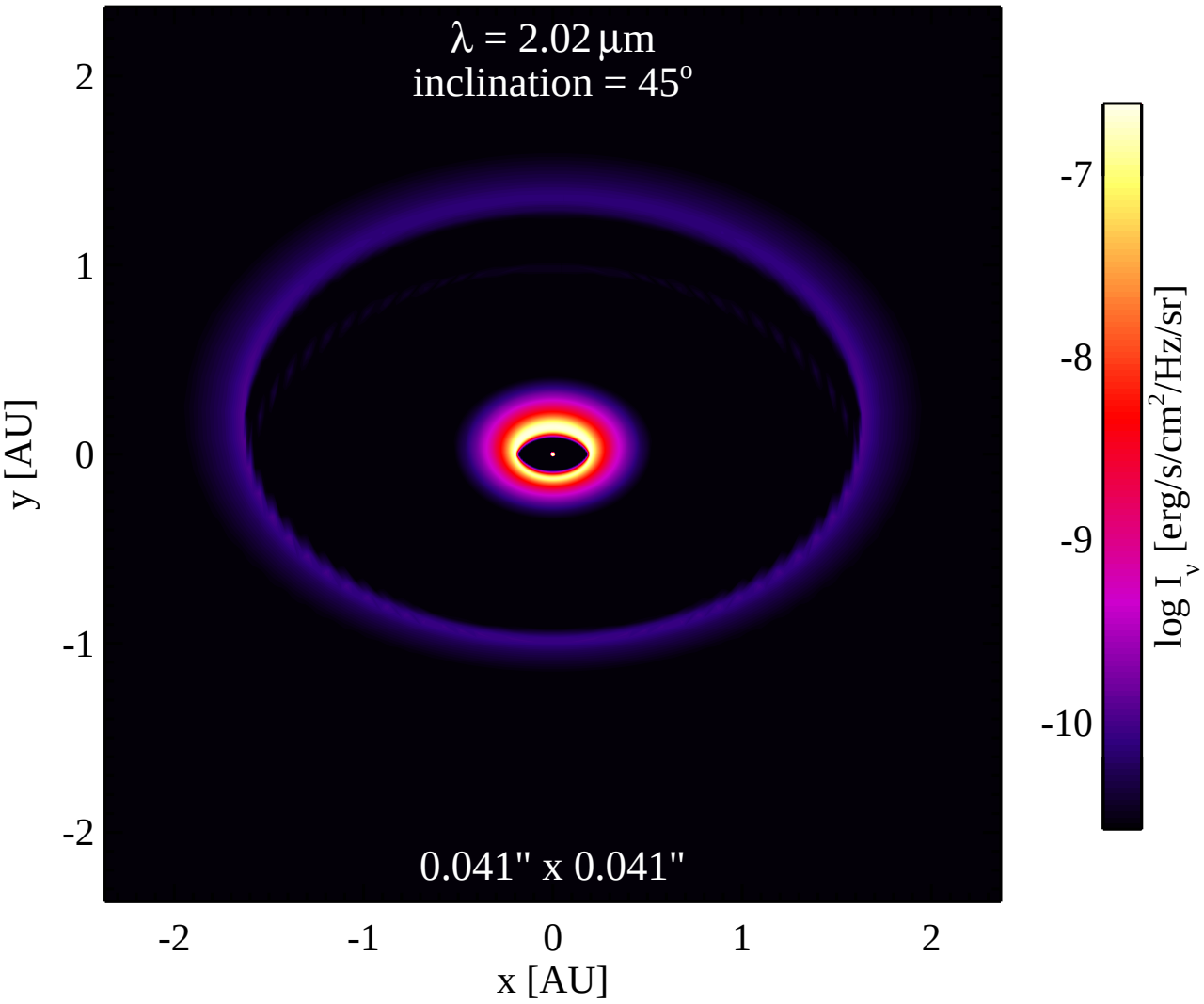

baseline=91.0m , basePA=-136.3º
ProDiMo
0.6
0.4
0.2
0.0
V²
9
10
11
12
λ [μm]

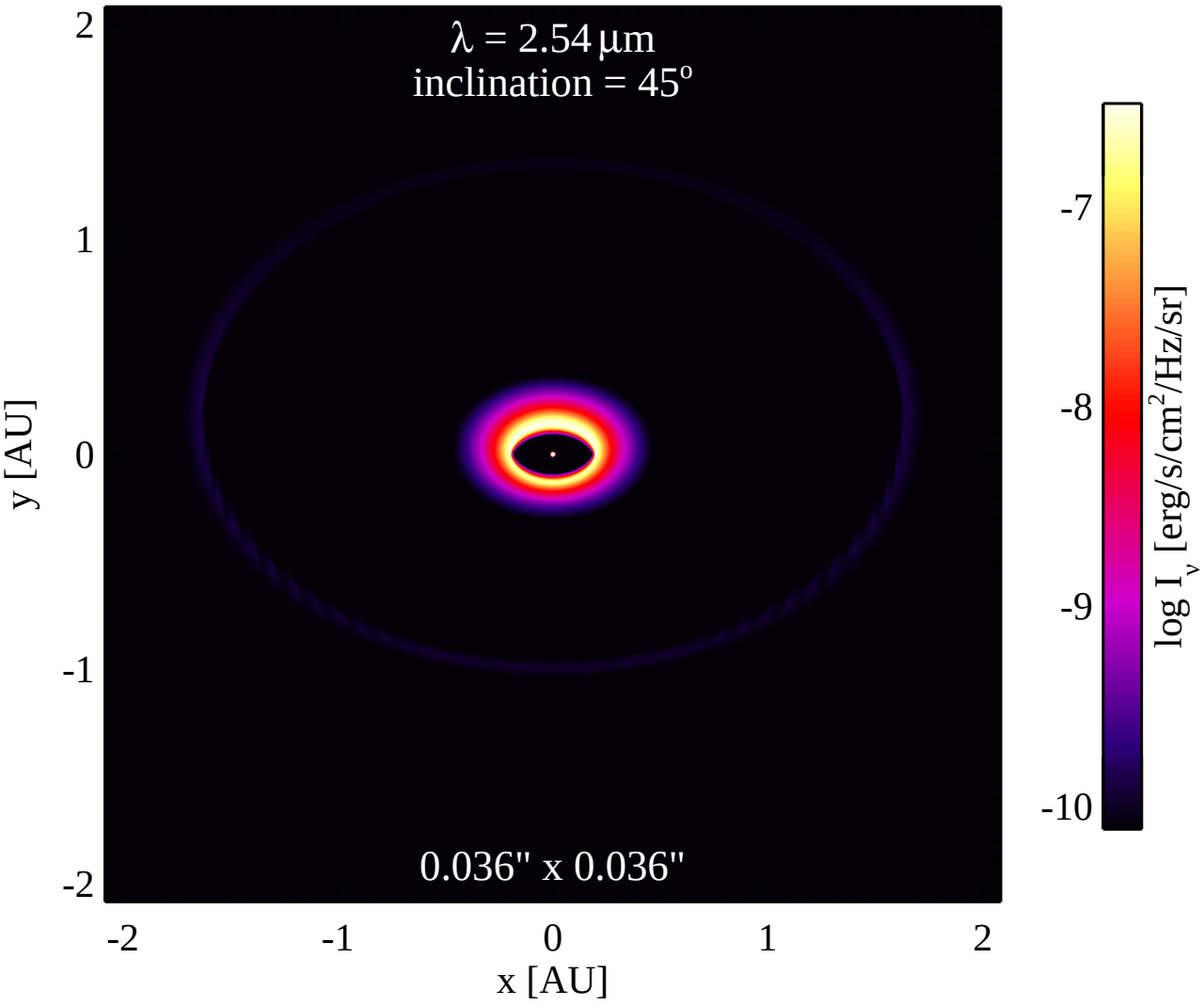

baseline=89.6m , basePA=-136.3°
ProDiMo
0.6
0.4
0.2
0.0
V²
9
10
11
12
λ [μm]

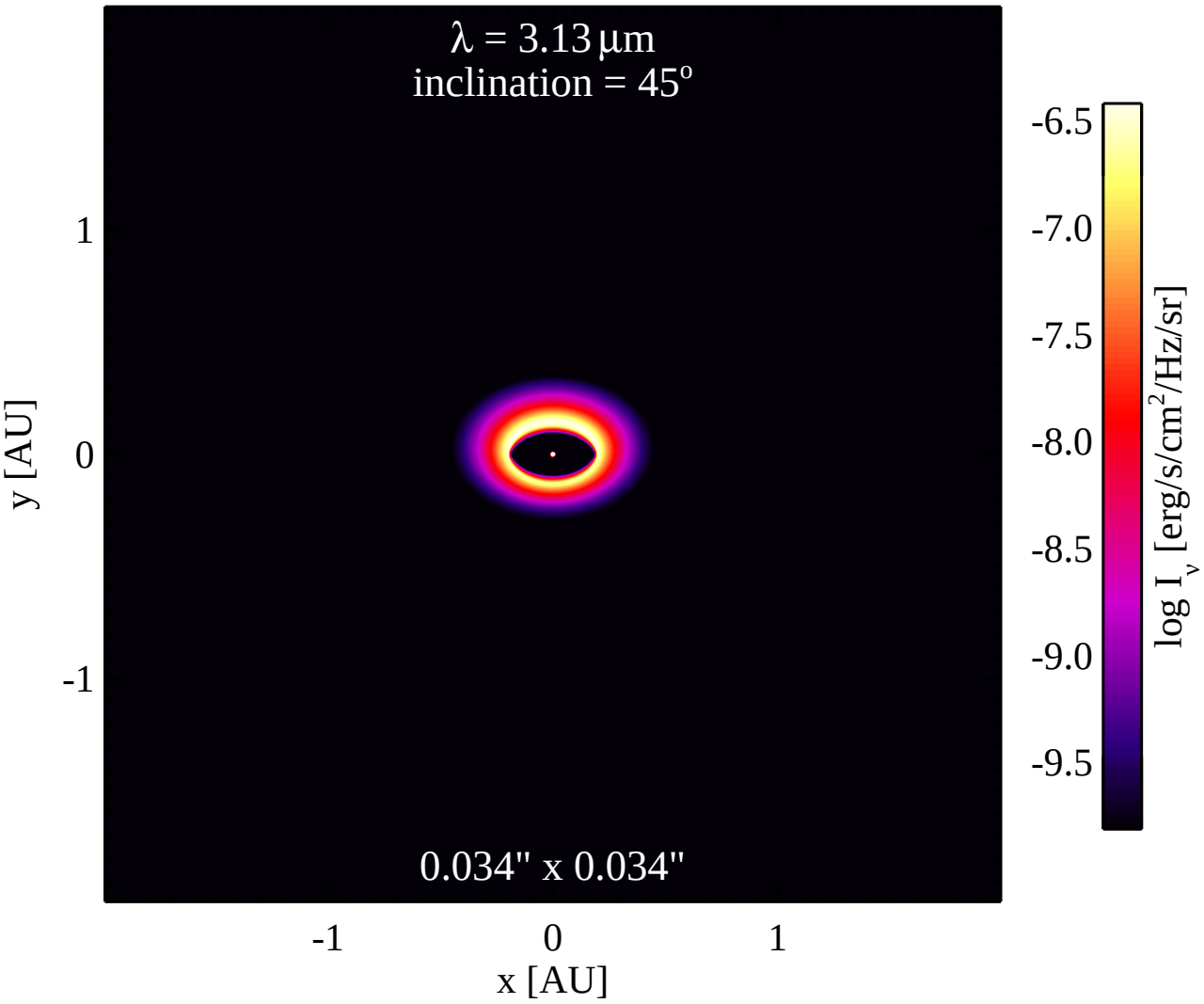

λ = 1.01 μm
inclination = 45°
0.12" x 0.12"
y [AU]
x [AU]
6
4
2
0
-2
-4
-6
-6
-4
-2
0
2
4
6
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

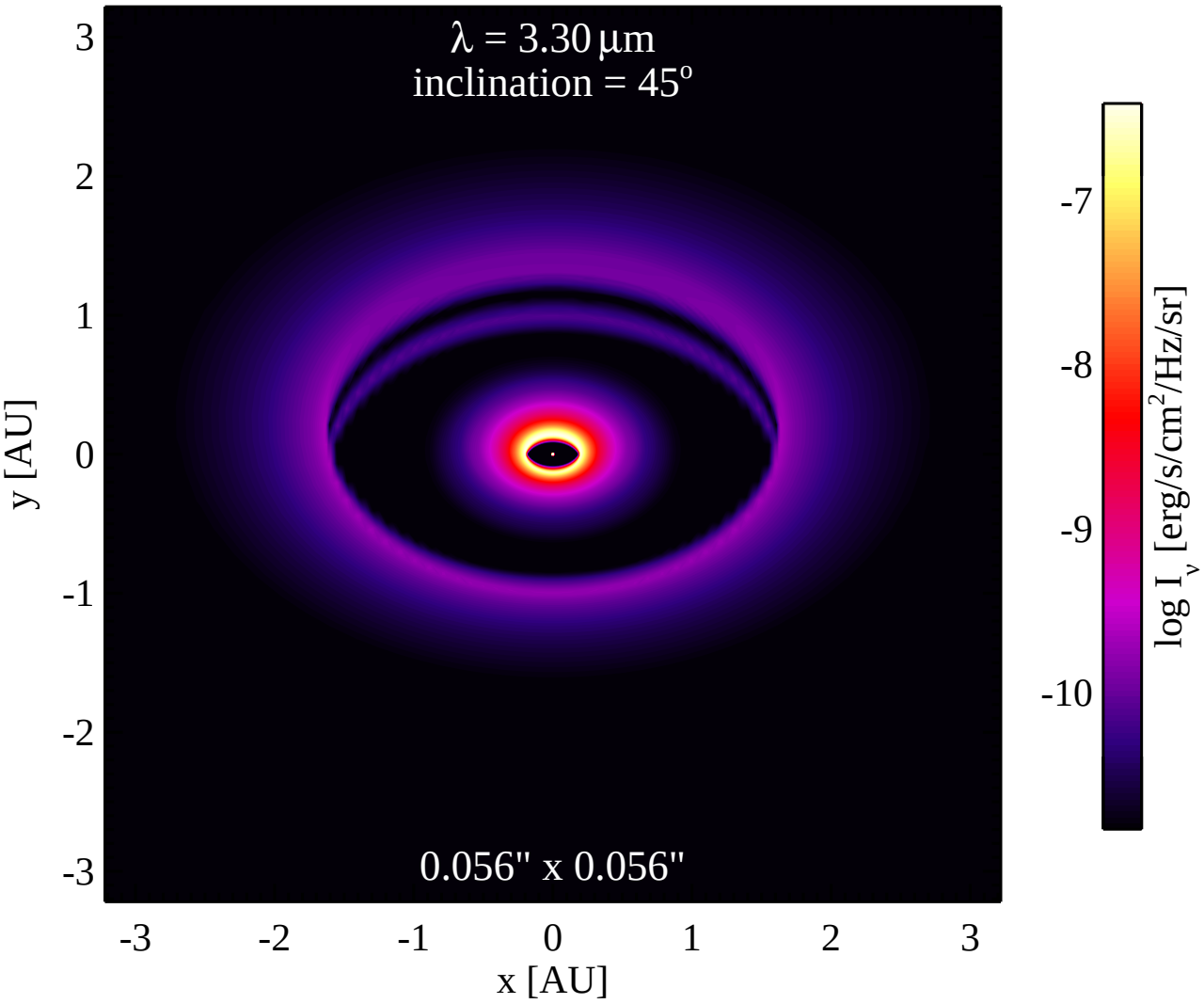

λ = 1.27 μm
inclination = 45°
0.075" x 0.075"
y [AU]
x [AU]
4
2
0
-2
-4
-4
-2
0
2
4
-8
-9
-10
-11
log I_ν [erg/s/cm²/Hz/sr]

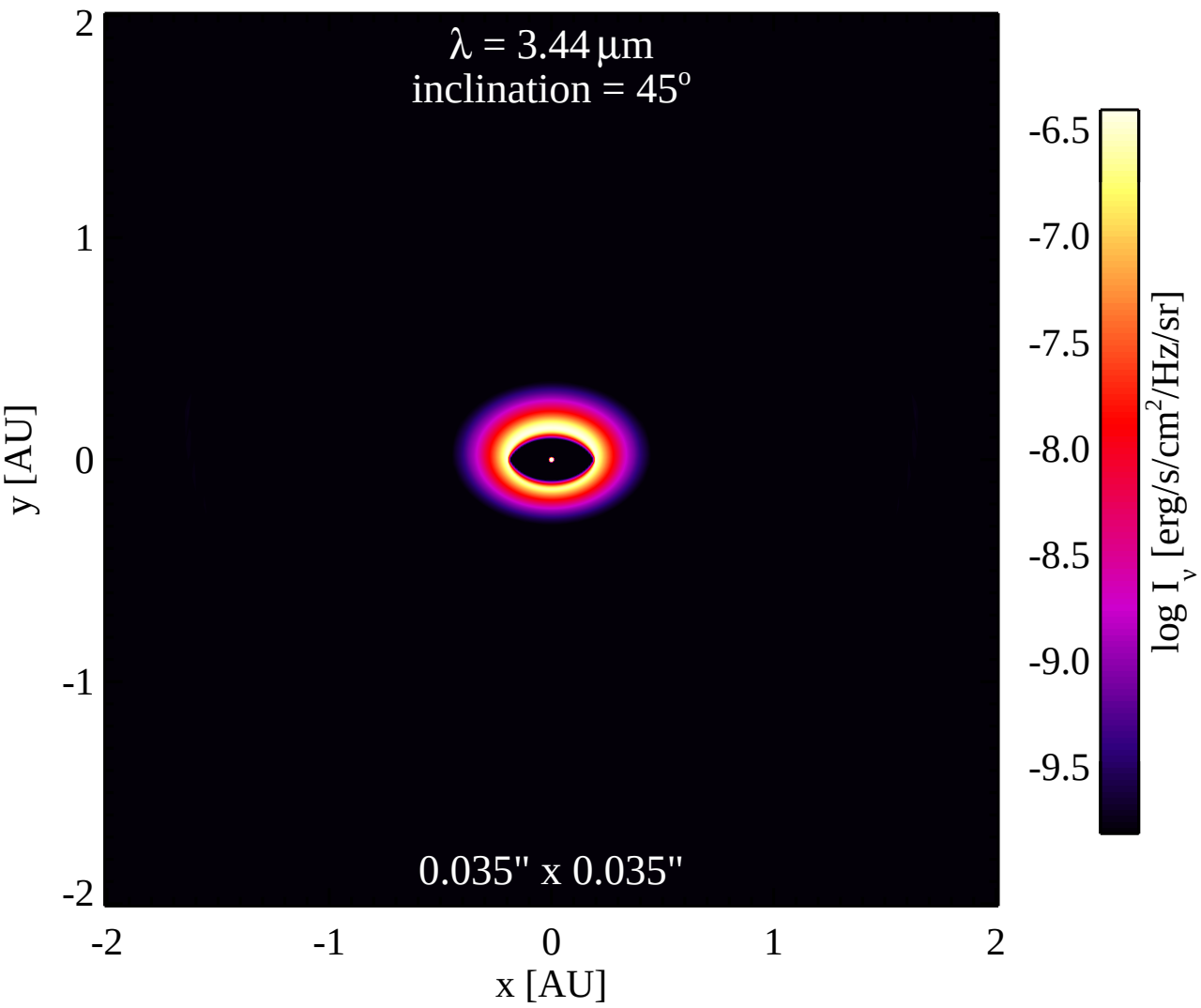

λ = 1.60 μm
inclination = 45°
0.054" x 0.054"
y [AU]
x [AU]
3
2
1
0
-1
-2
-3
-3
-2
-1
0
1
2
3
-7
-8
-9
-10
-11
log I_ν [erg/s/cm²/Hz/sr]

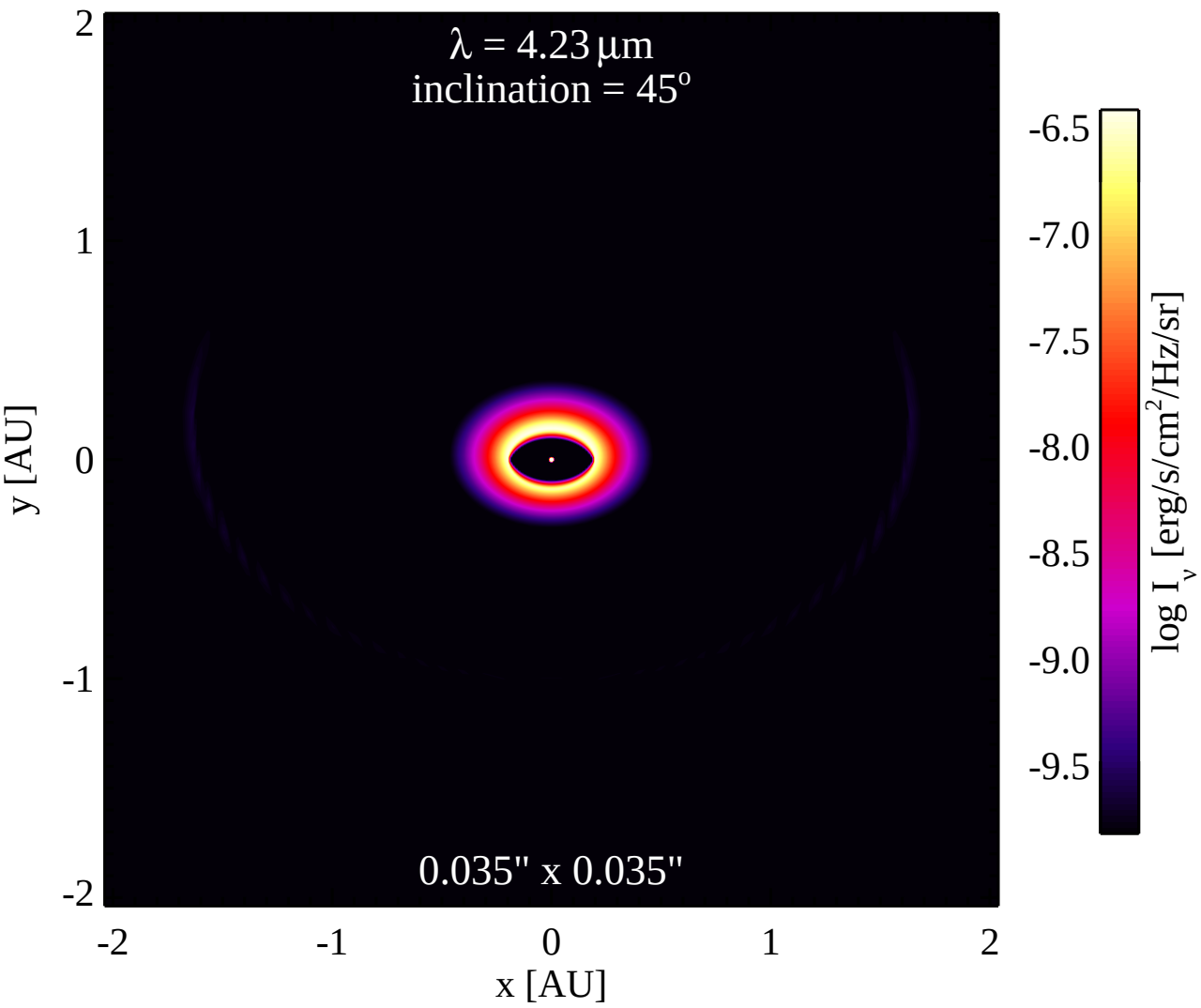

λ = 2.02 μm
inclination = 45°
0.041" x 0.041"
y [AU]
x [AU]
2
1
0
-1
-2
-2
-1
0
1
2
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

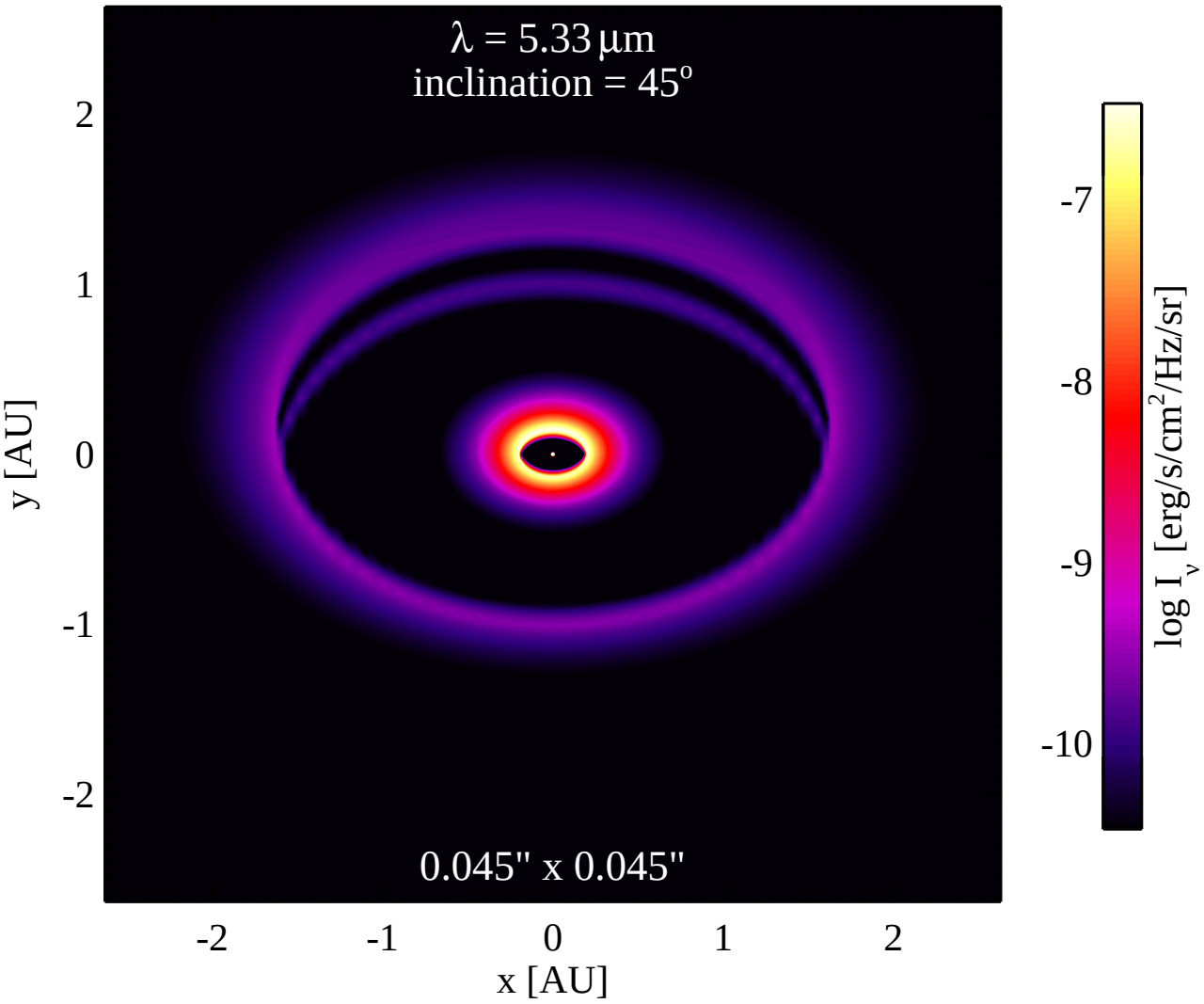

λ = 2.54 μm
inclination = 45°
0.036" x 0.036"
y [AU]
x [AU]
2
1
0
-1
-2
-2
-1
0
1
2
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

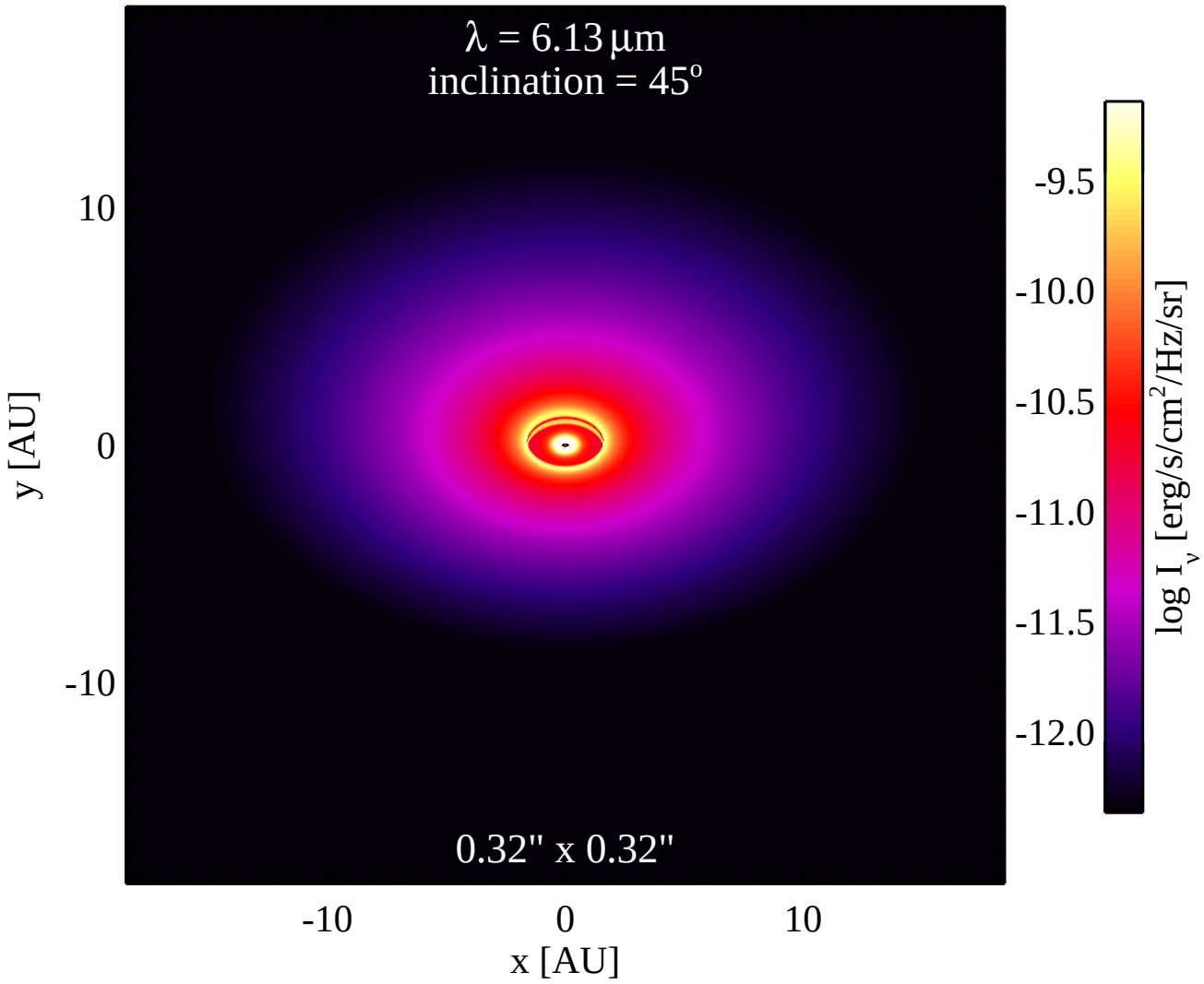

λ = 3.13 μm
inclination = 45°
0.034" x 0.034"
y [AU]
1
0
-1
x [AU]
-1
0
1
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

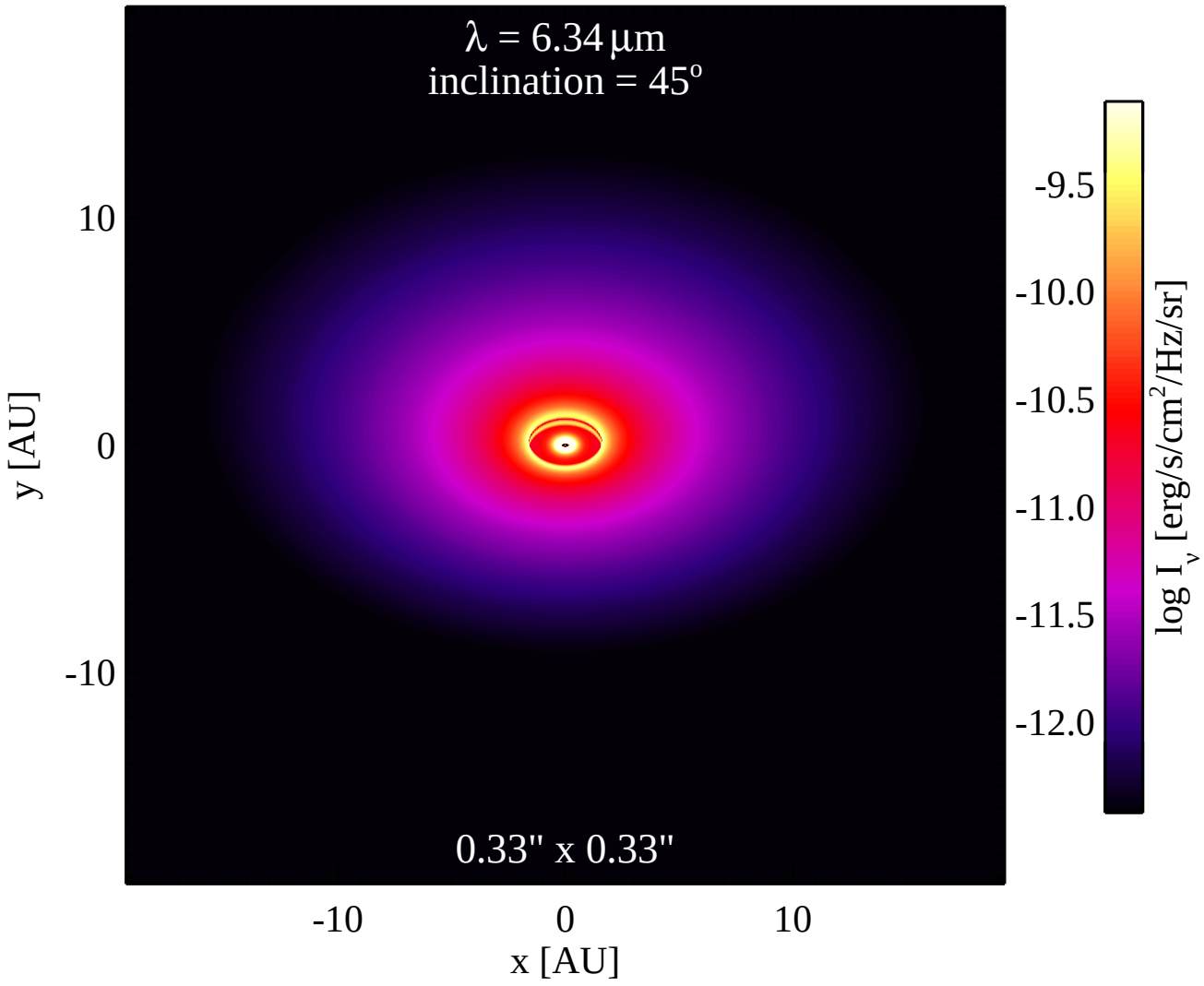

λ = 3.30 μm
inclination = 45°
0.056" x 0.056"
y [AU]
x [AU]
3
2
1
0
-1
-2
-3
-3
-2
-1
0
1
2
3
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

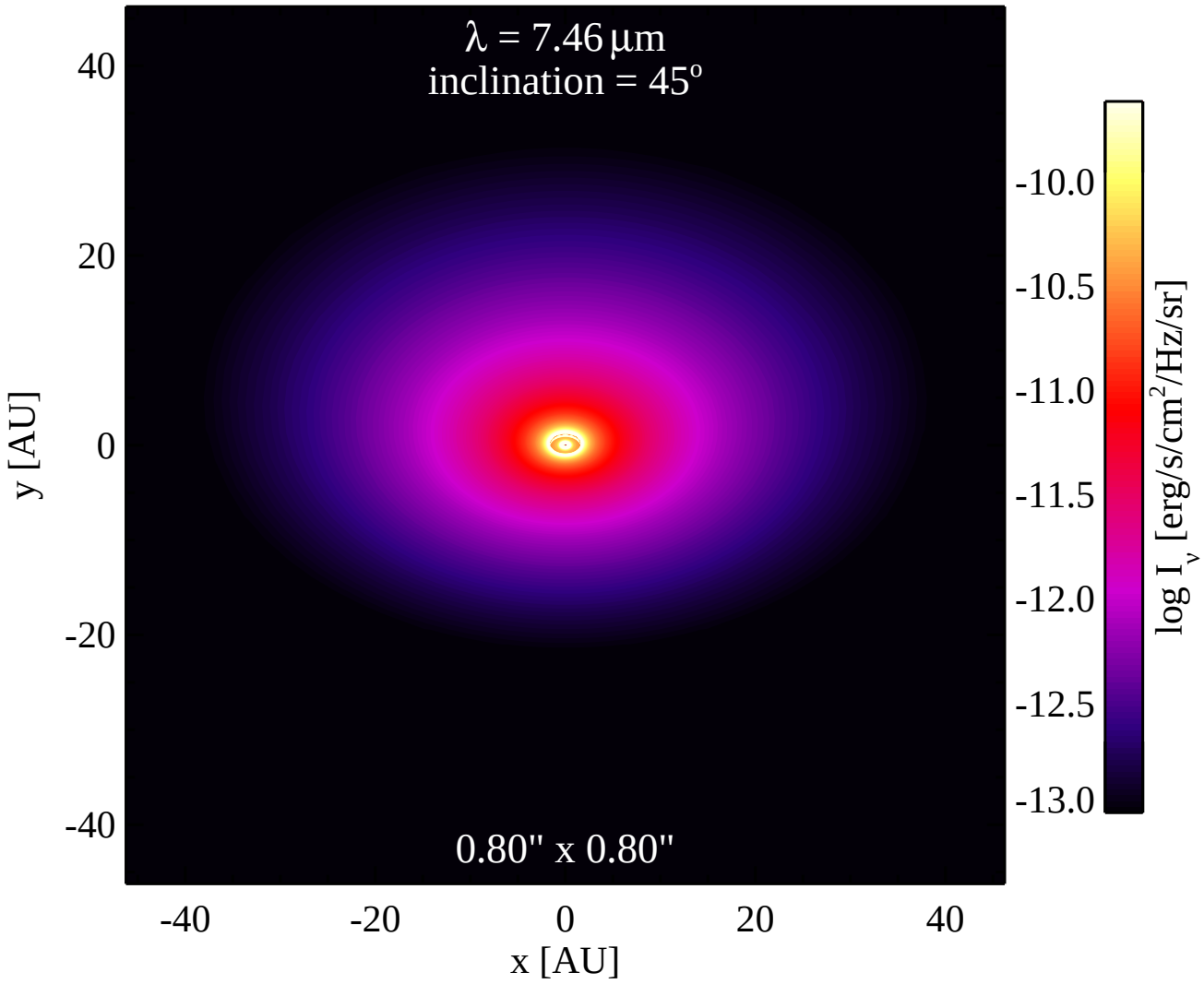

λ = 3.44 μm
inclination = 45°
0.035" x 0.035"
2
1
0
-1
-2
y [AU]
-2
-1
0
1
2
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

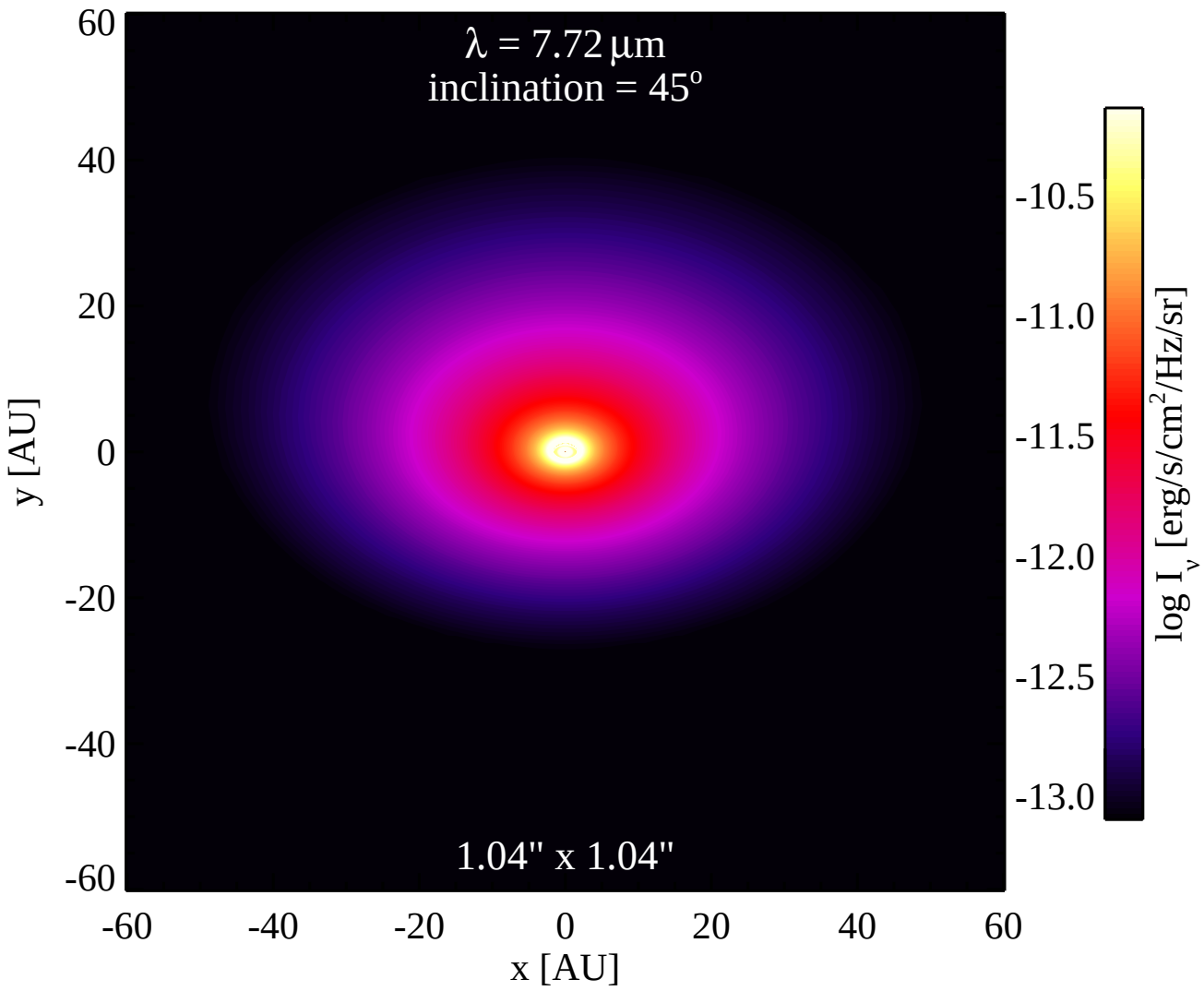

λ = 4.23 μm
inclination = 45°
0.035" x 0.035"
2
1
0
-1
-2
y [AU]
-2
-1
0
1
2
x [AU]
-6.5
-7.0
-7.5
-8.0
-8.5
-9.0
-9.5
log I_ν [erg/s/cm²/Hz/sr]

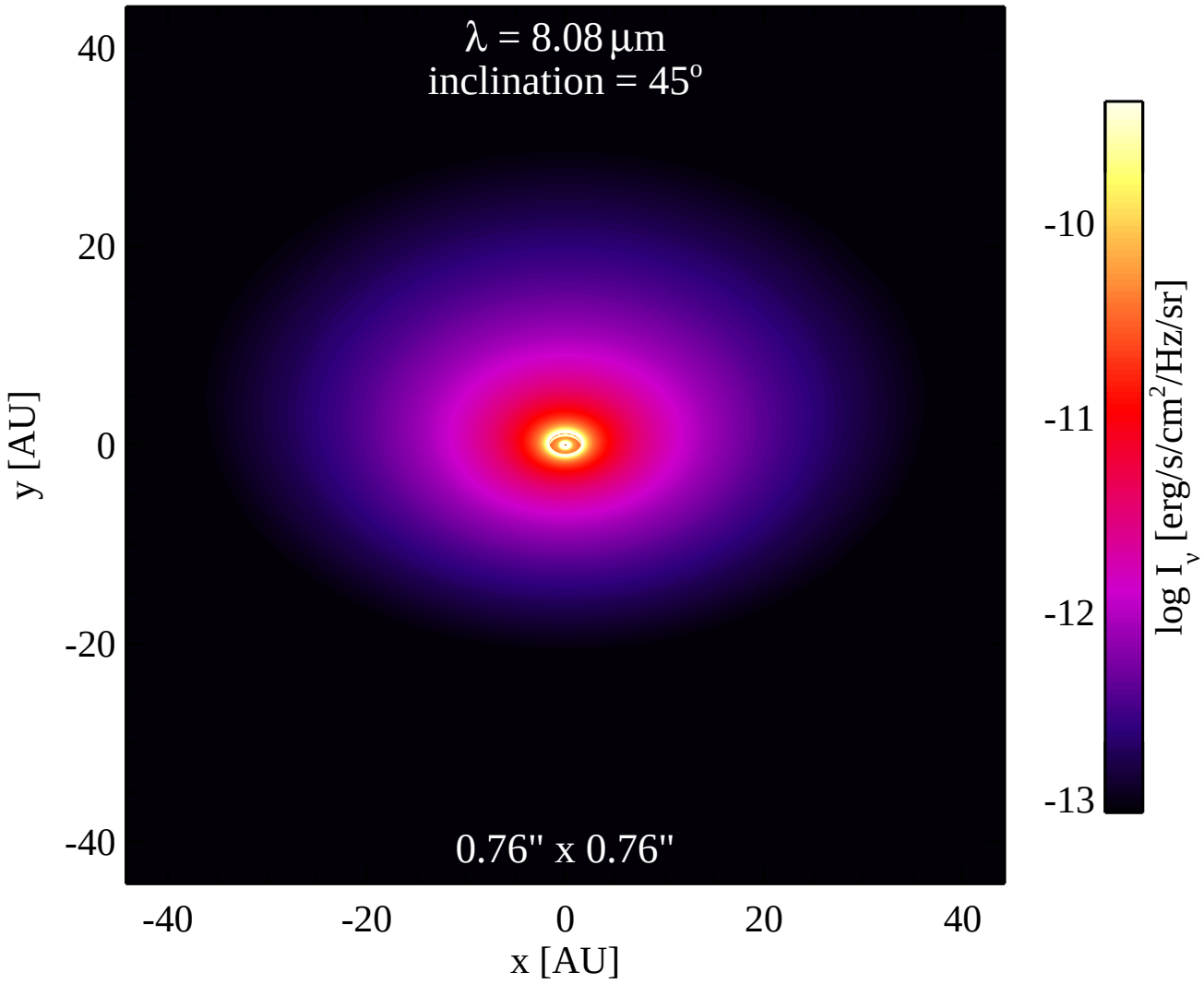

λ = 5.33 μm
inclination = 45°
0.045" x 0.045"
y [AU]
x [AU]
2
1
0
-1
-2
-2
-1
0
1
2
-7
-8
-9
-10
log I_ν [erg/s/cm²/Hz/sr]

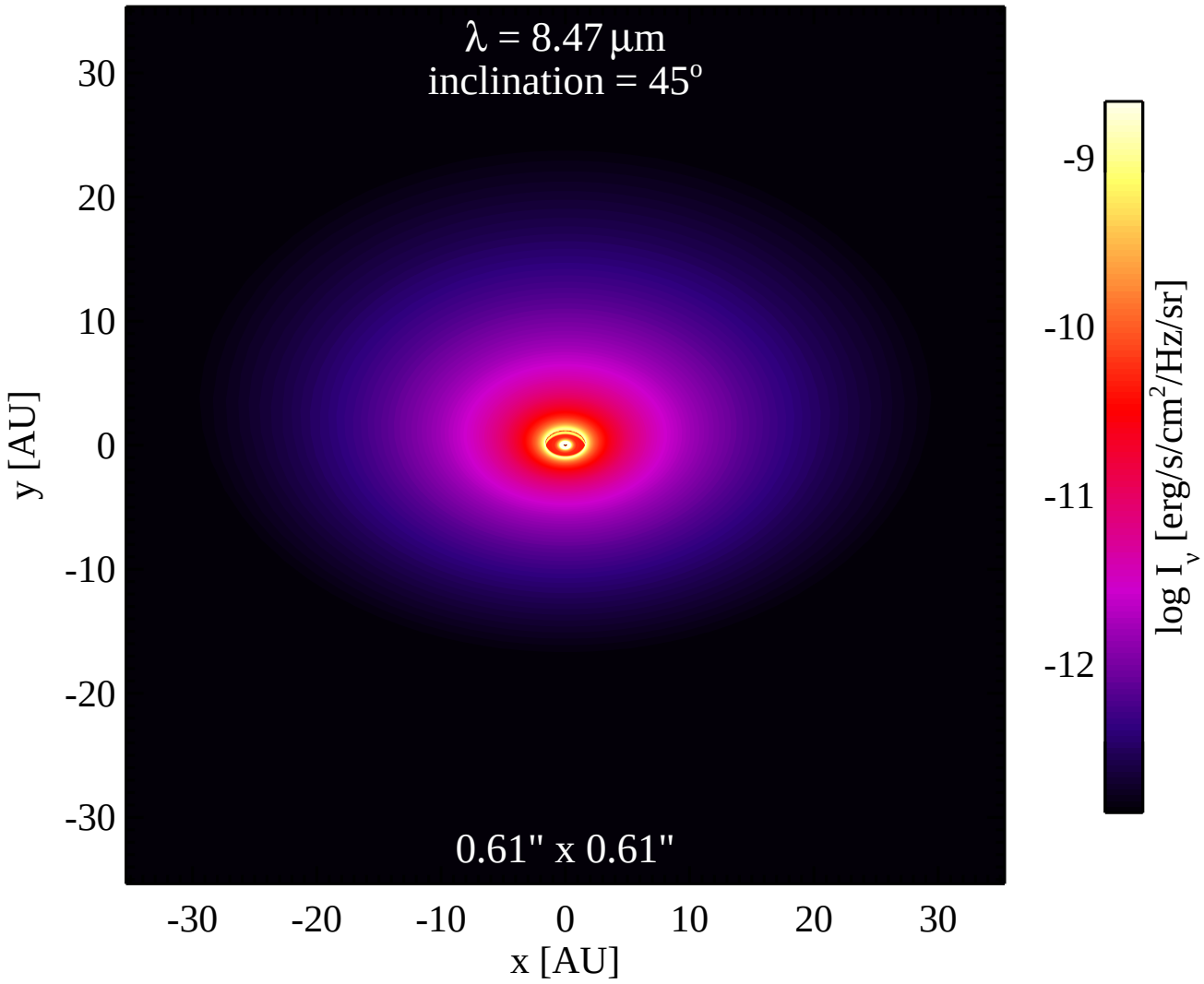

λ = 6.13 μm
inclination = 45°
0.32" x 0.32"
10
0
-10
y [AU]
-10
0
10
x [AU]
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
log I_ν [erg/s/cm²/Hz/sr]

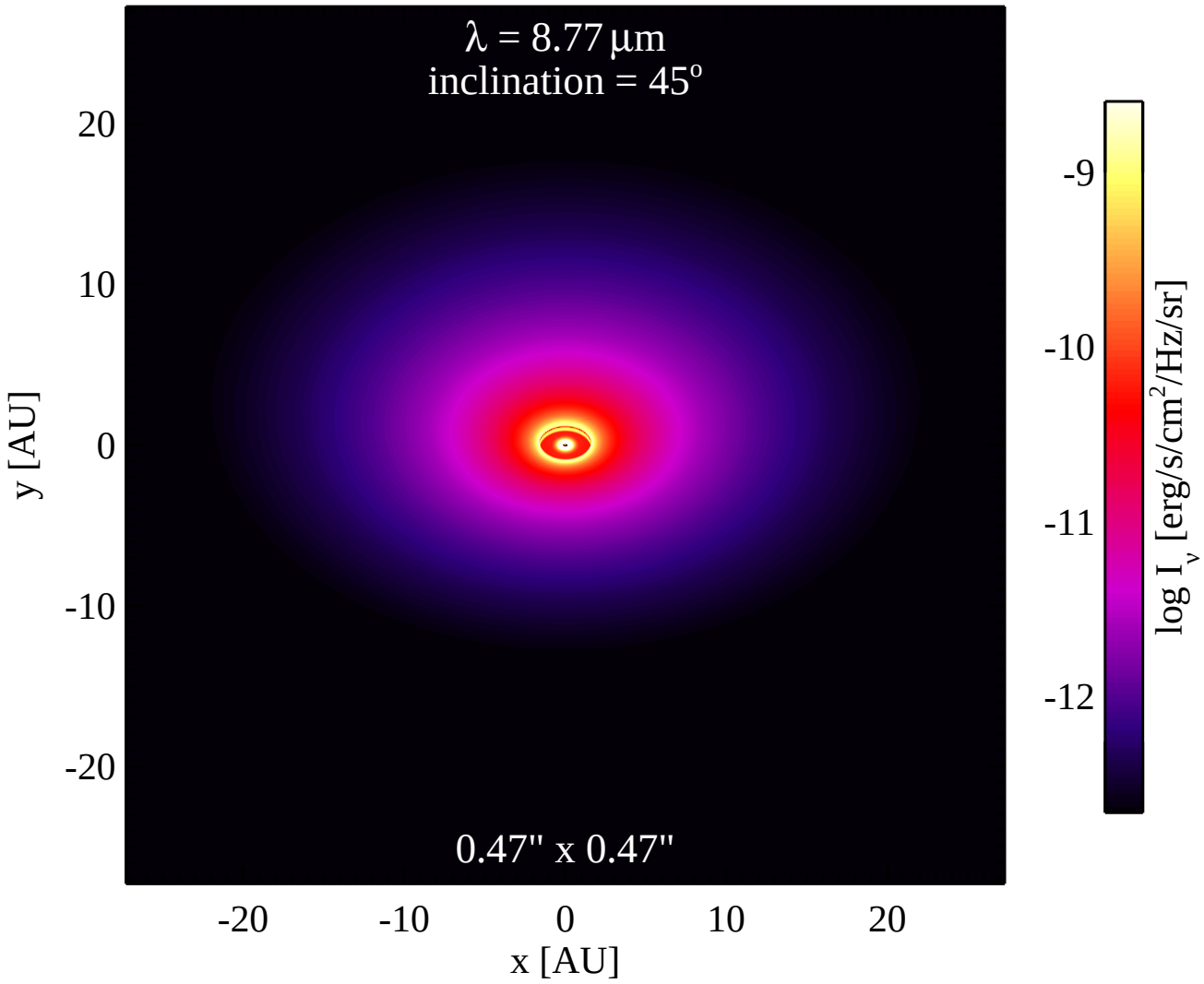

λ = 6.34 μm
inclination = 45°
0.33" x 0.33"
10
0
-10
y [AU]
-10
0
10
x [AU]
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
log I_ν [erg/s/cm²/Hz/sr]

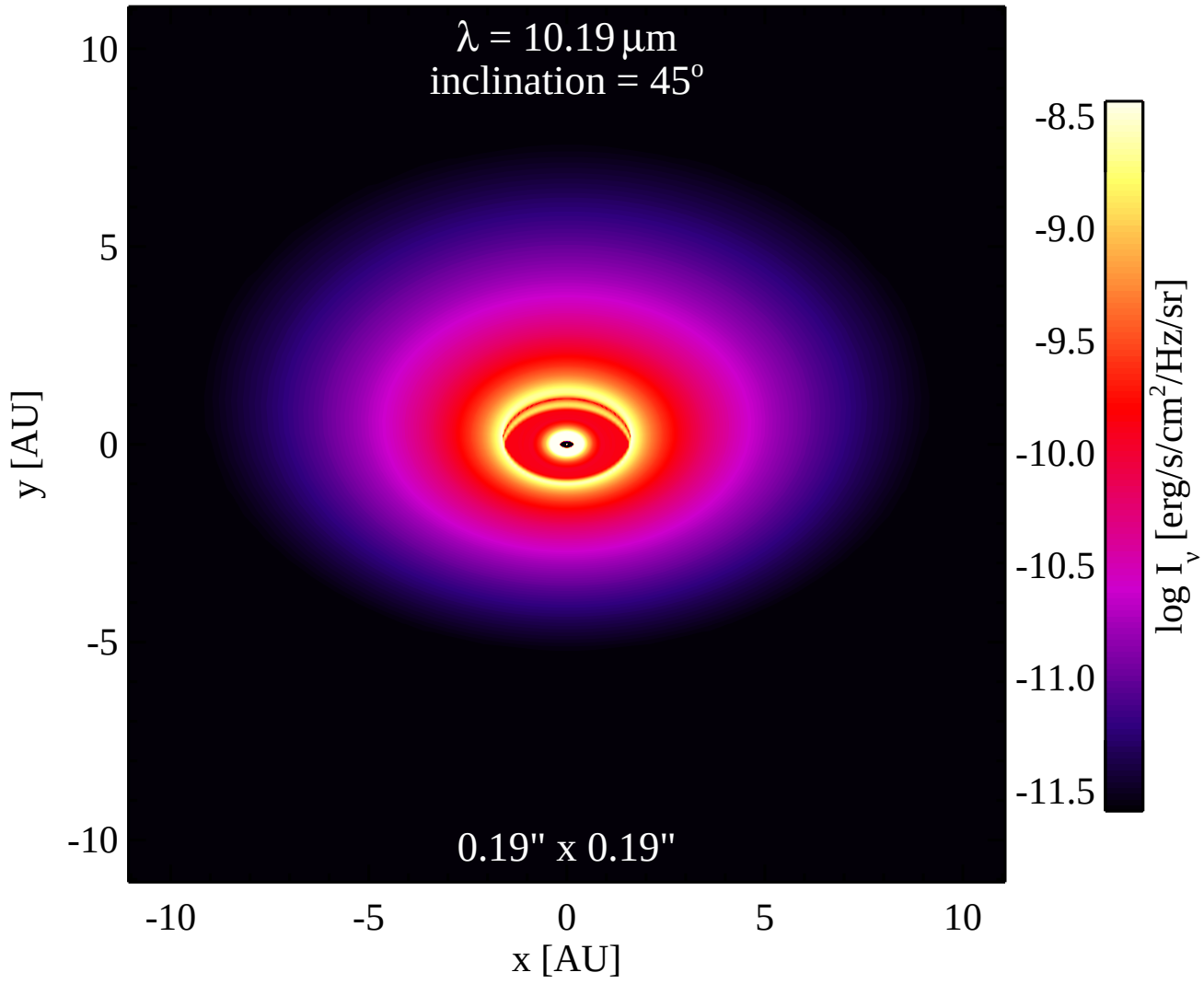

λ = 7.46 μm
inclination = 45°
0.80" x 0.80"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

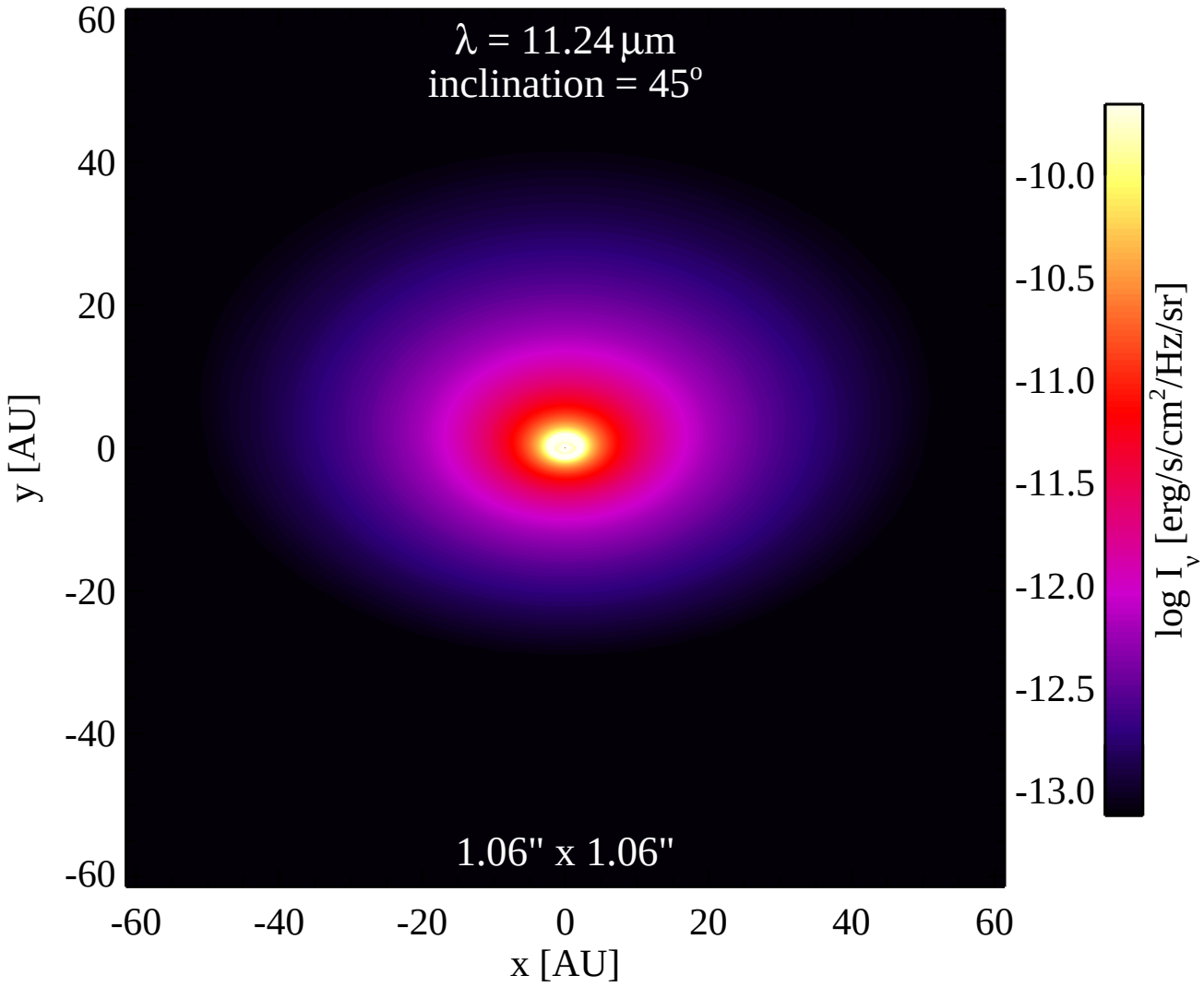

λ = 7.72 μm
inclination = 45°
1.04" x 1.04"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

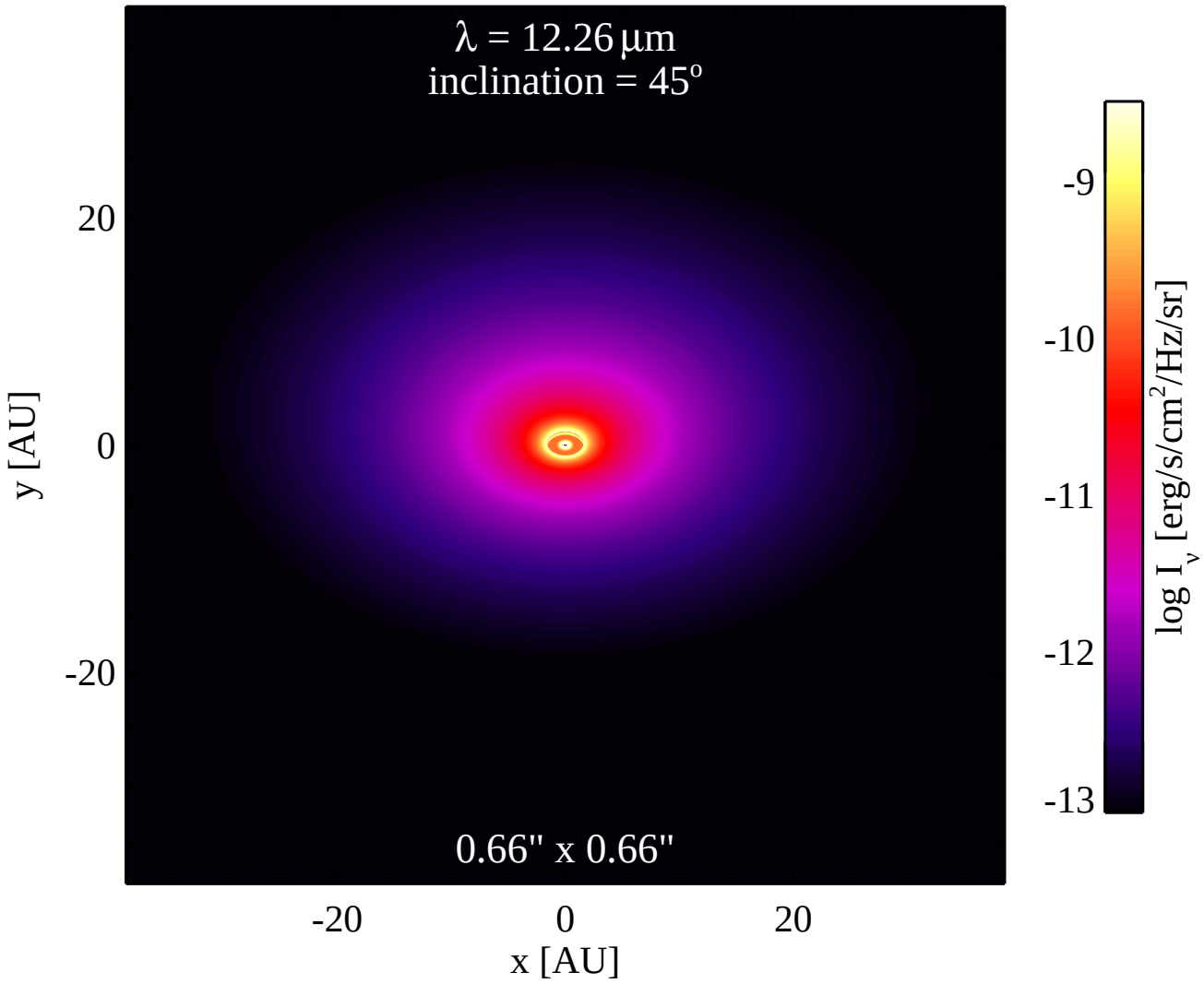

λ = 8.08 μm
inclination = 45°
0.76" x 0.76"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-10
-11
-12
-13
log I_ν [erg/s/cm²/Hz/sr]

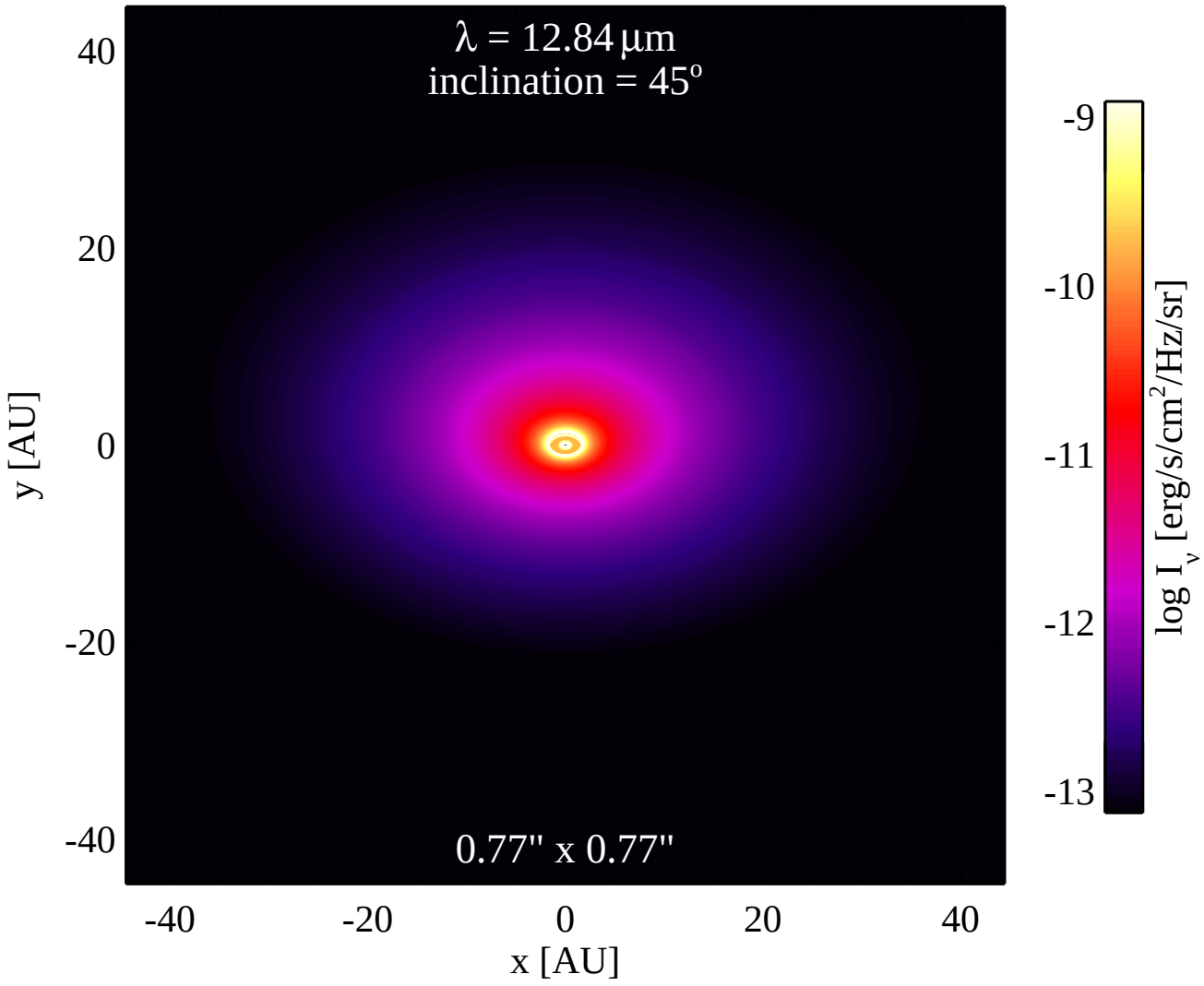

λ = 8.47 μm
inclination = 45°
0.61" x 0.61"
30
20
10
0
-10
-20
-30
y [AU]
-30
-20
-10
0
10
20
30
x [AU]
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

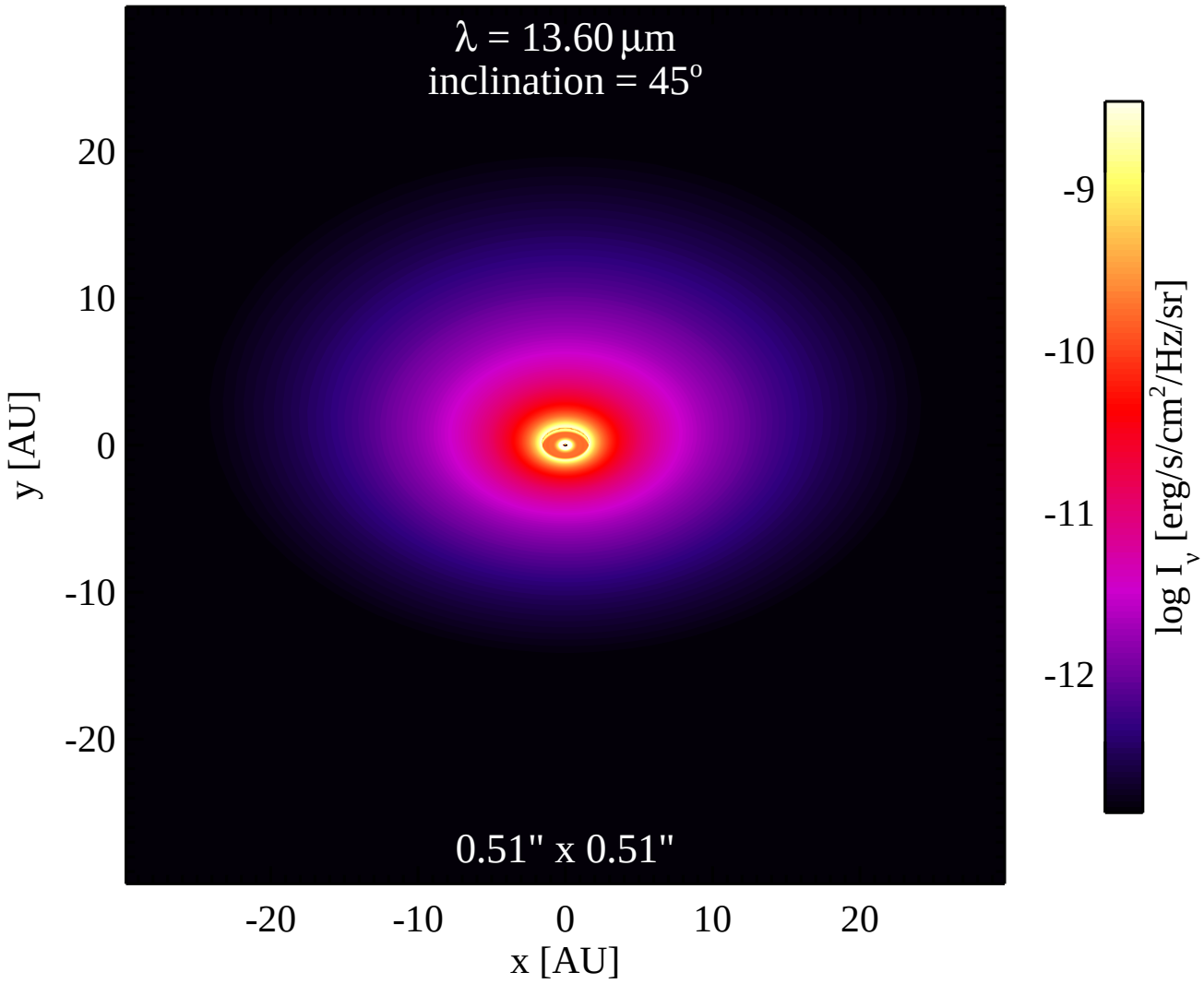

λ = 8.77 μm
inclination = 45°
0.47" x 0.47"
20
10
0
-10
-20
y [AU]
-20
-10
0
10
20
x [AU]
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

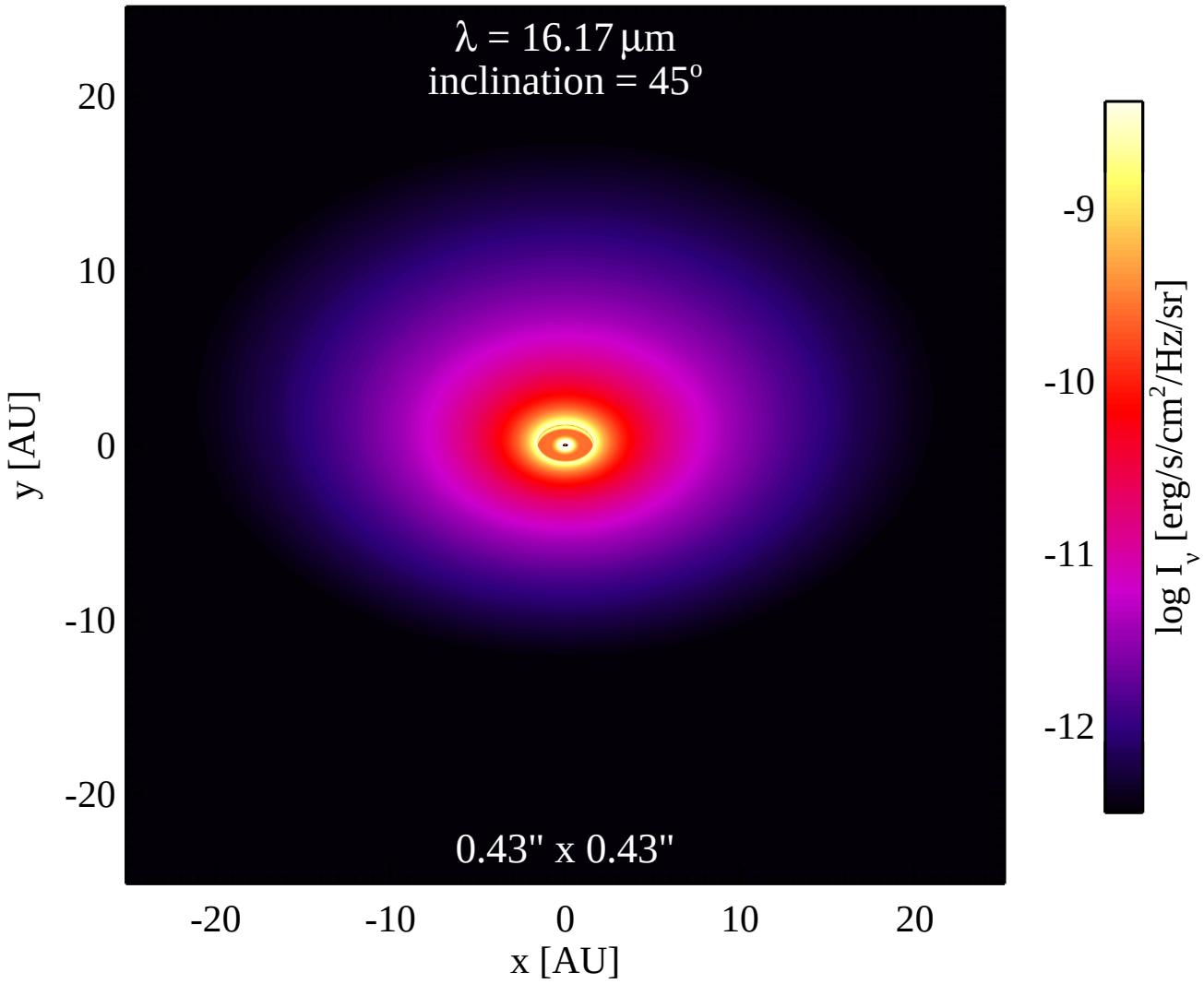

λ = 10.19 μm
inclination = 45°
0.19" x 0.19"
10
5
0
-5
-10
y [AU]
-10
-5
0
5
10
x [AU]
-8.5
-9.0
-9.5
-10.0
-10.5
-11.0
-11.5
log I_ν [erg/s/cm²/Hz/sr]

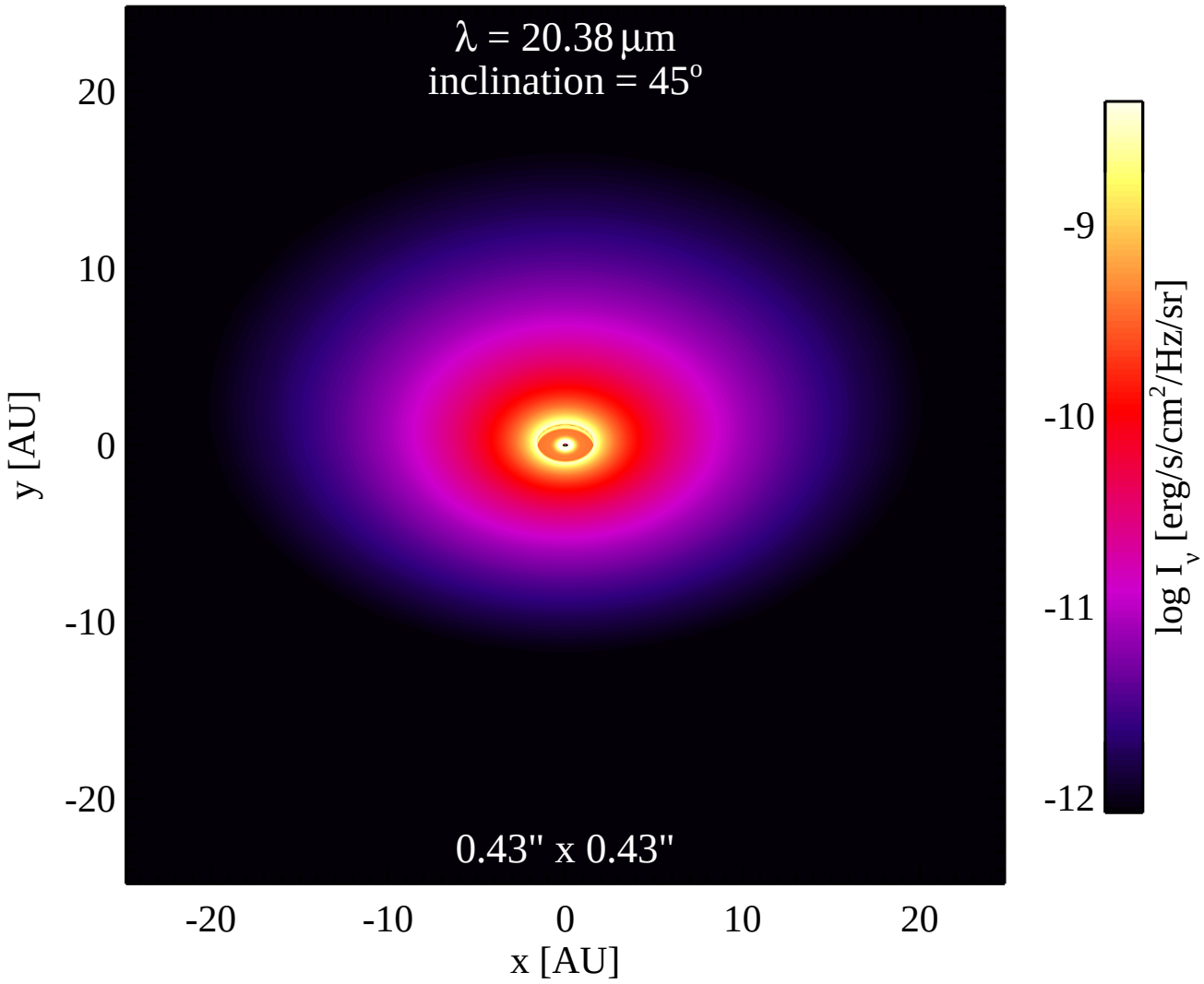

λ = 11.24 μm
inclination = 45°
1.06" x 1.06"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

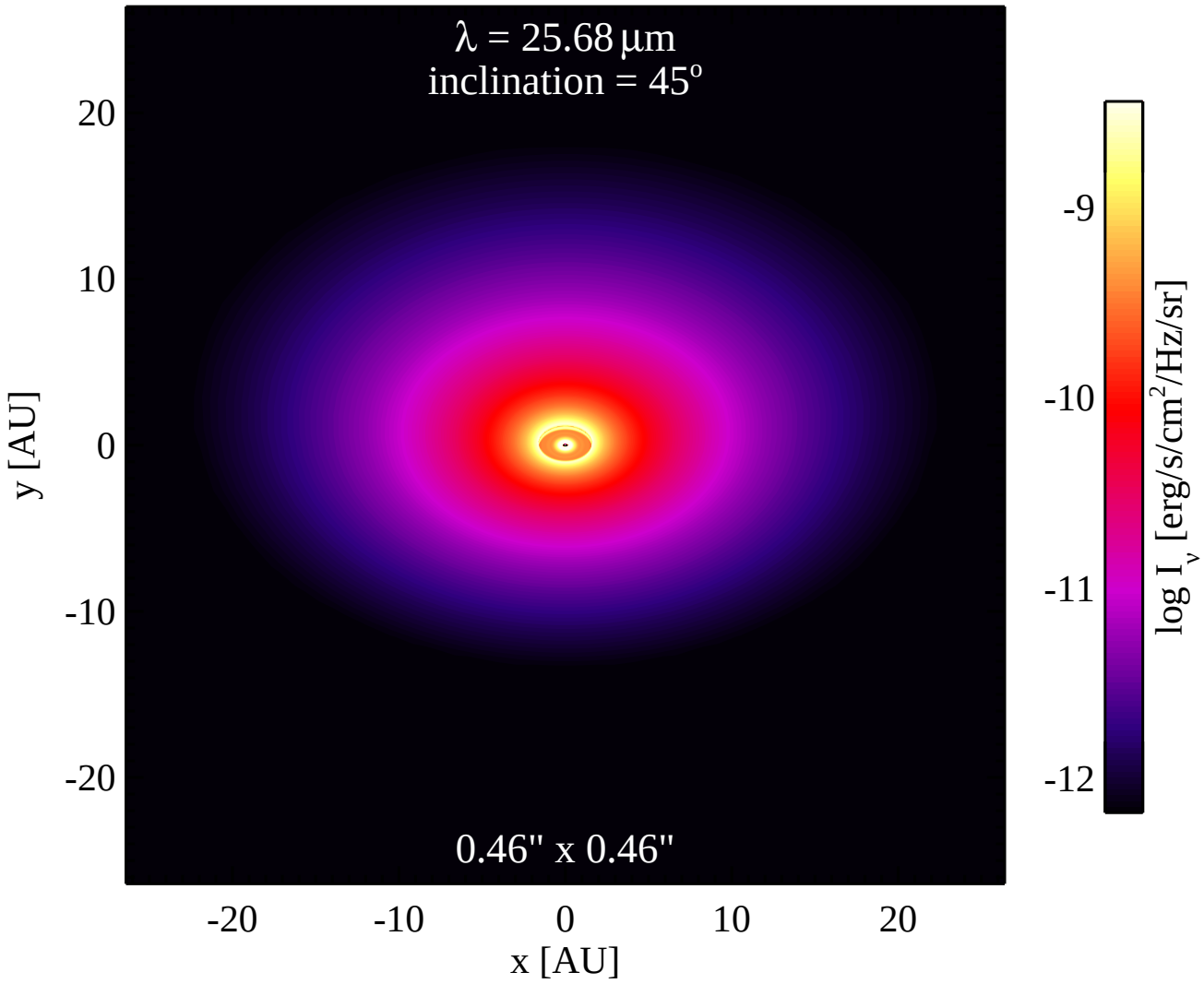

λ = 12.26 μm
inclination = 45°
0.66" x 0.66"
20
0
-20
y [AU]
-20
0
20
x [AU]
-9
-10
-11
-12
-13
log I_ν [erg/s/cm²/Hz/sr]

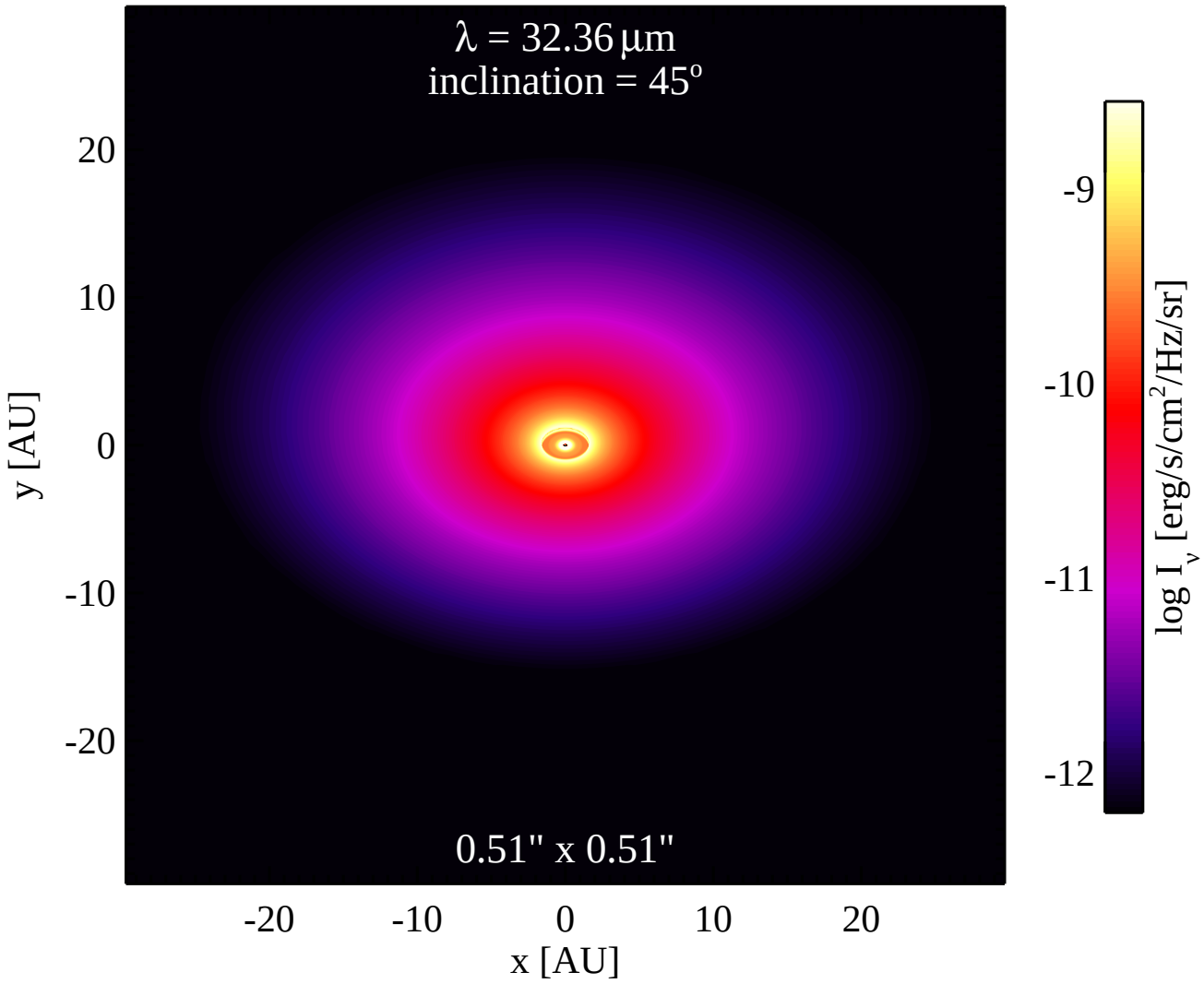

λ = 12.84 μm
inclination = 45°
0.77" x 0.77"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-9
-10
-11
-12
-13
log I_ν [erg/s/cm²/Hz/sr]

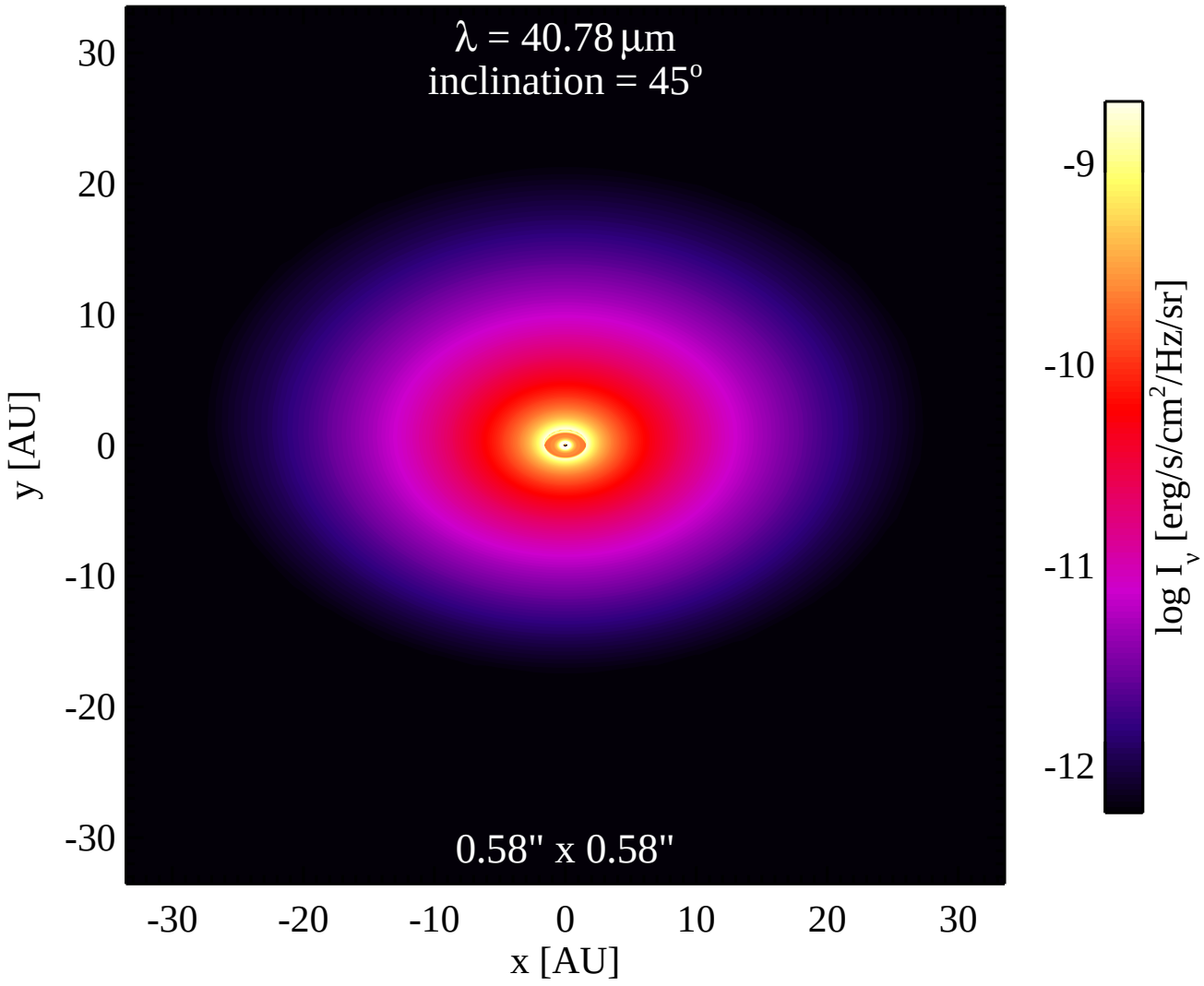

λ = 13.60 μm
inclination = 45°
0.51" x 0.51"
20
10
0
-10
-20
y [AU]
-20
-10
0
10
20
x [AU]
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

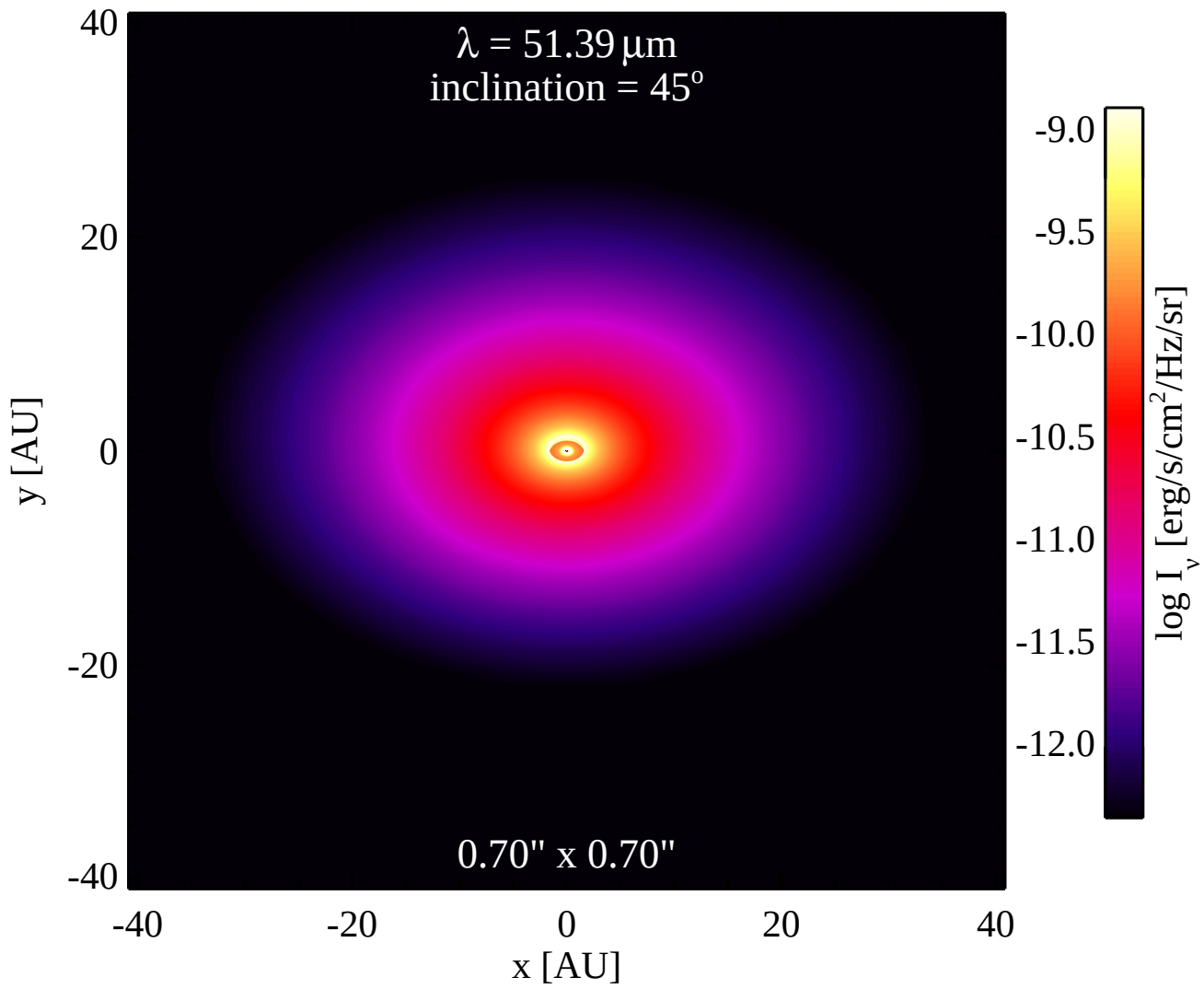

λ = 16.17 μm
inclination = 45°
0.43" x 0.43"
20
10
0
-10
-20
y [AU]
-20
-10
0
10
20
x [AU]
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

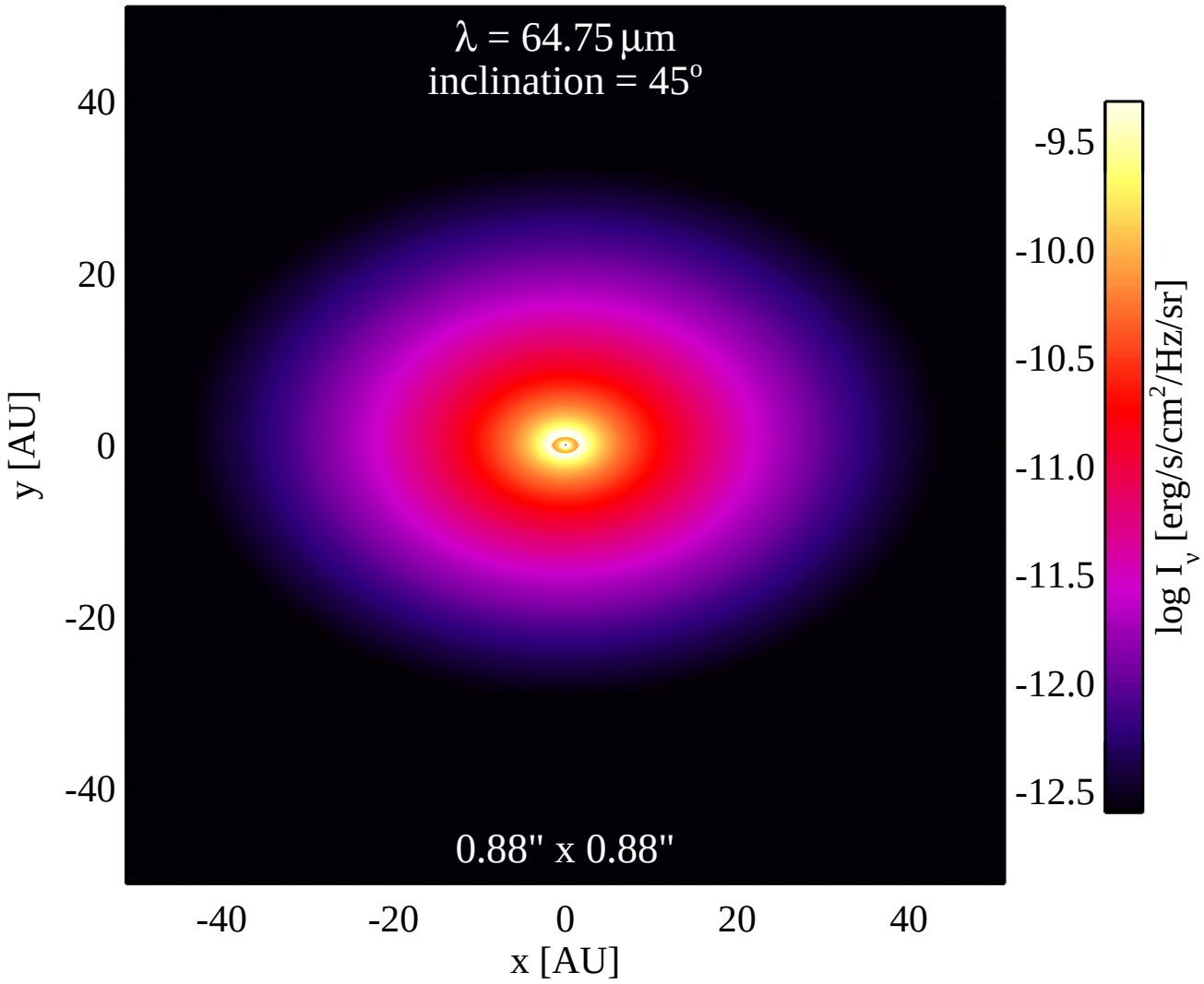

λ = 20.38 μm
inclination = 45°
0.43" x 0.43"
20
10
0
-10
-20
y [AU]
-20
-10
0
10
20
x [AU]
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

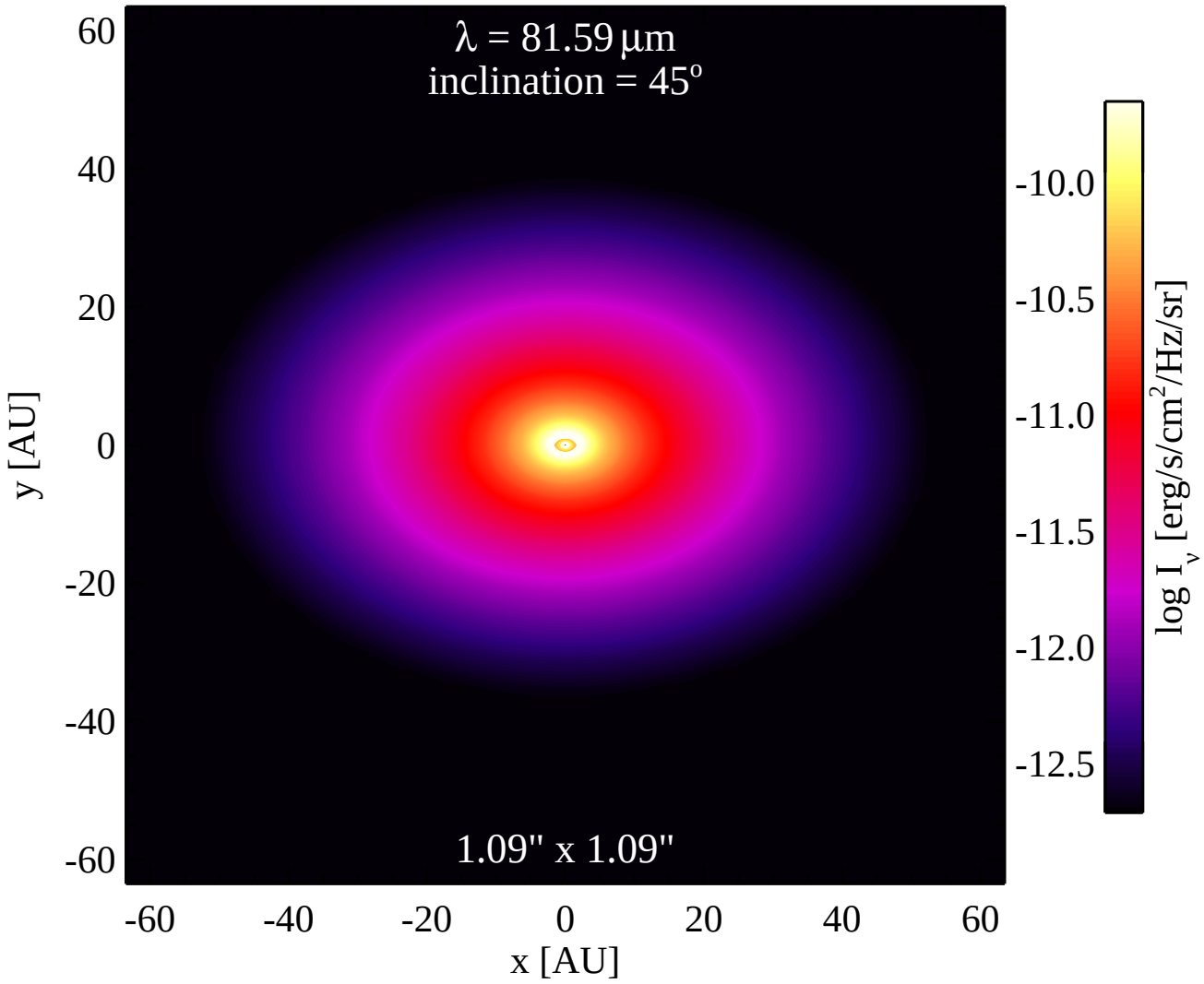

λ = 25.68 μm
inclination = 45°
0.46" x 0.46"
20
10
0
-10
-20
y [AU]
-20
-10
0
10
20
x [AU]
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

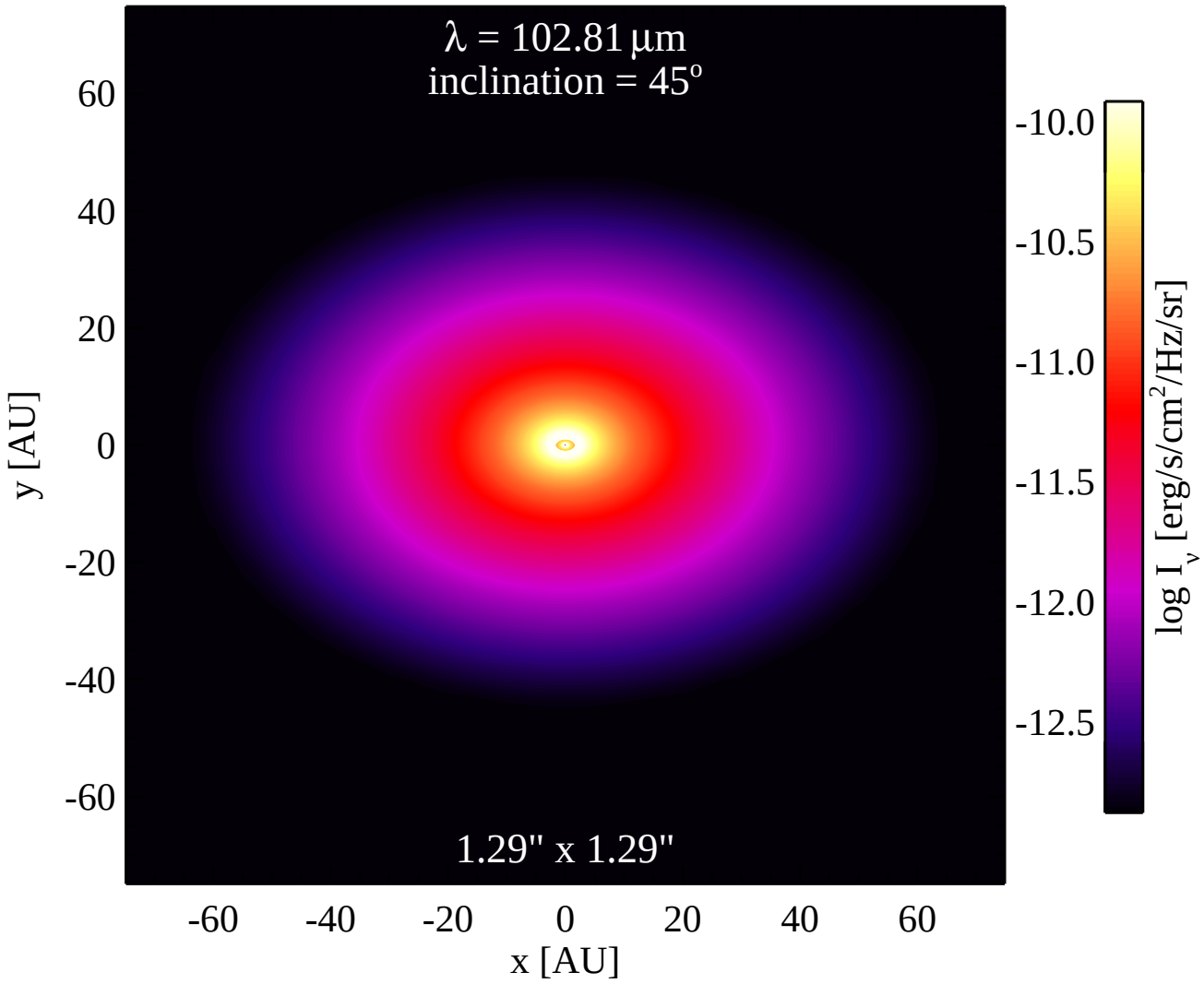

λ = 32.36 μm
inclination = 45°
0.51" x 0.51"
20
10
0
-10
-20
y [AU]
-20
-10
0
10
20
x [AU]
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

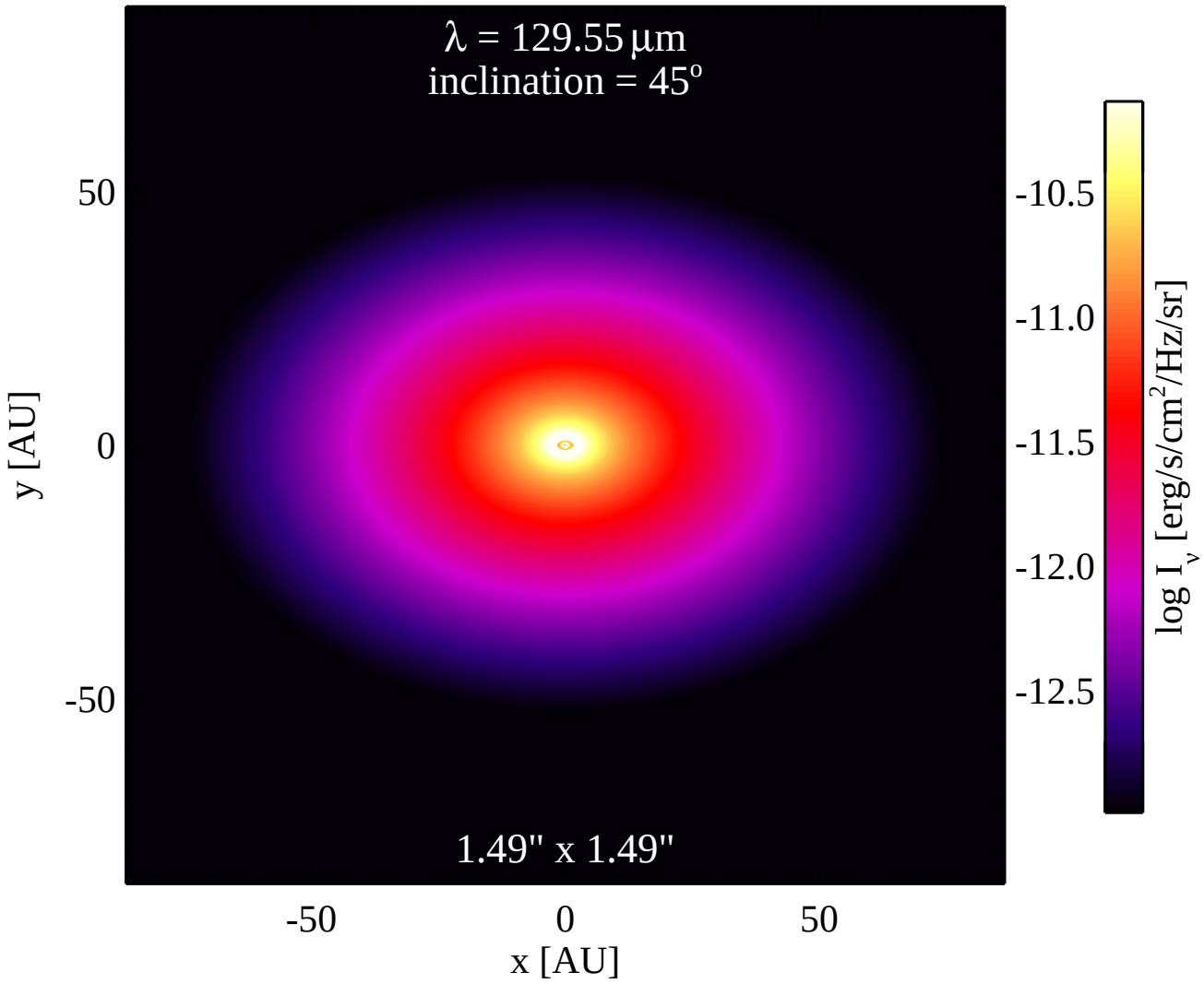

λ = 40.78 μm
inclination = 45°
0.58" x 0.58"
30
20
10
0
-10
-20
-30
y [AU]
-30
-20
-10
0
10
20
30
x [AU]
-9
-10
-11
-12
log I_ν [erg/s/cm²/Hz/sr]

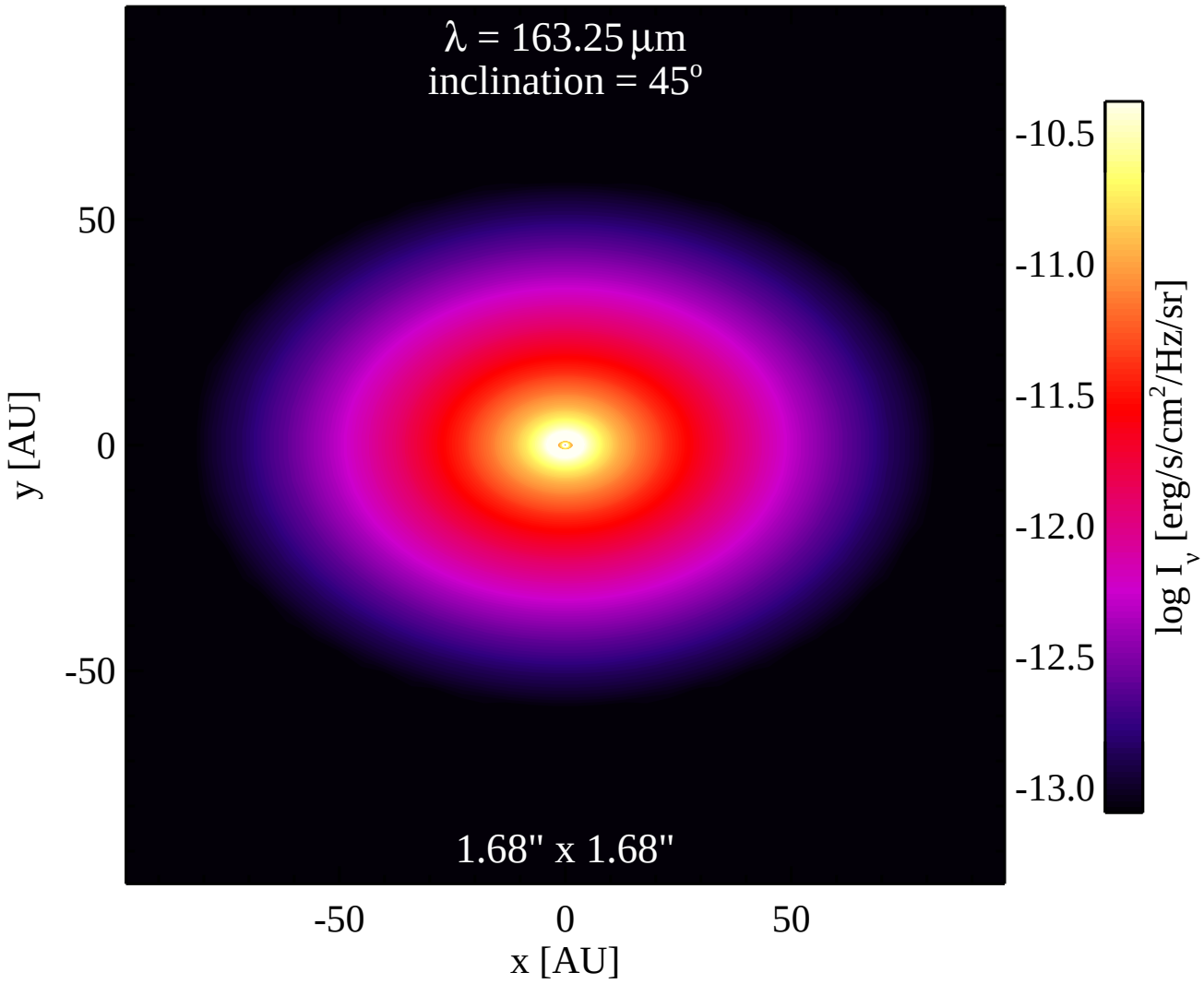

λ = 51.39 μm
inclination = 45°
0.70" x 0.70"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-9.0
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
log I_ν [erg/s/cm²/Hz/sr]

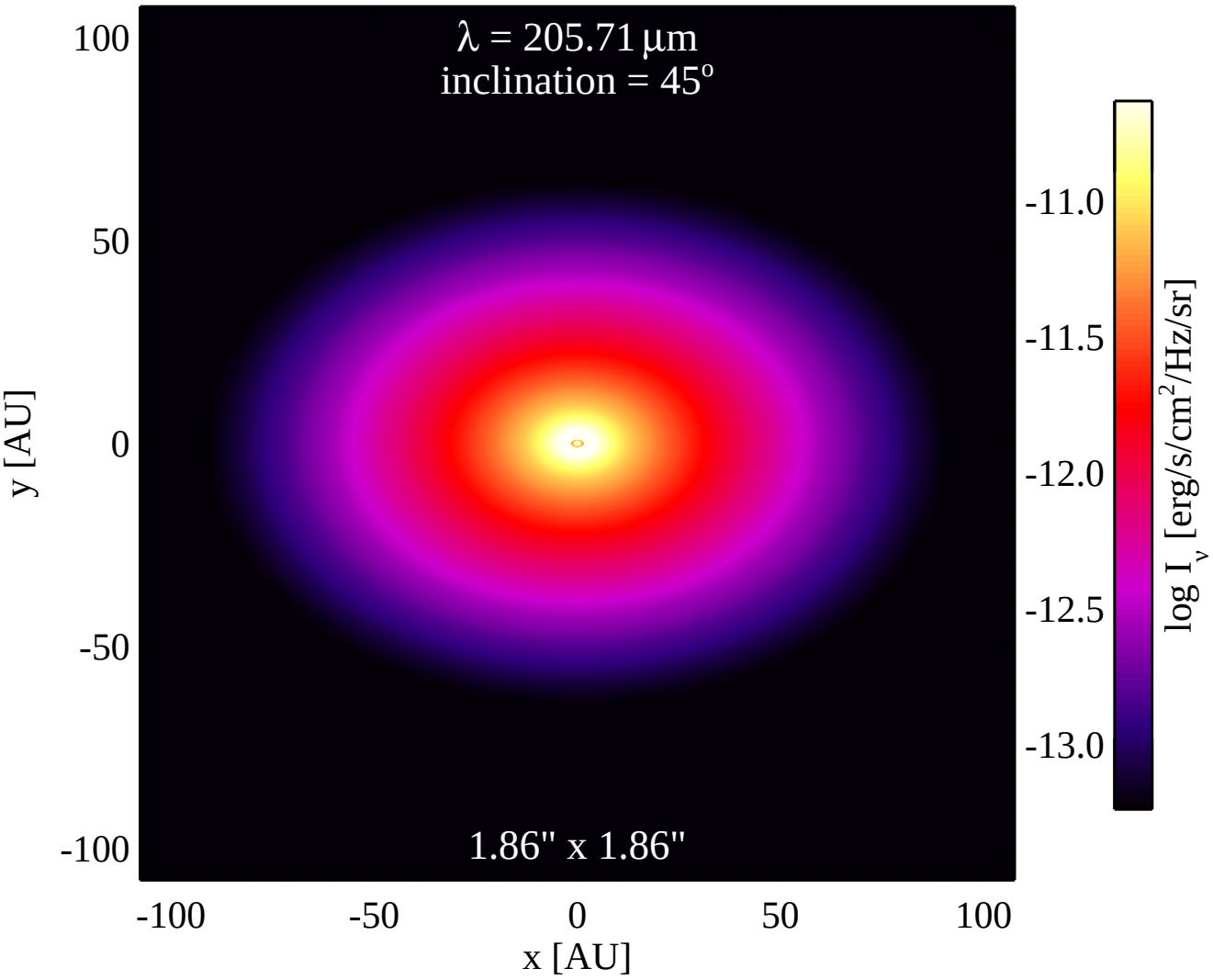

λ = 64.75 μm
inclination = 45°
0.88" x 0.88"
40
20
0
-20
-40
y [AU]
-40
-20
0
20
40
x [AU]
-9.5
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

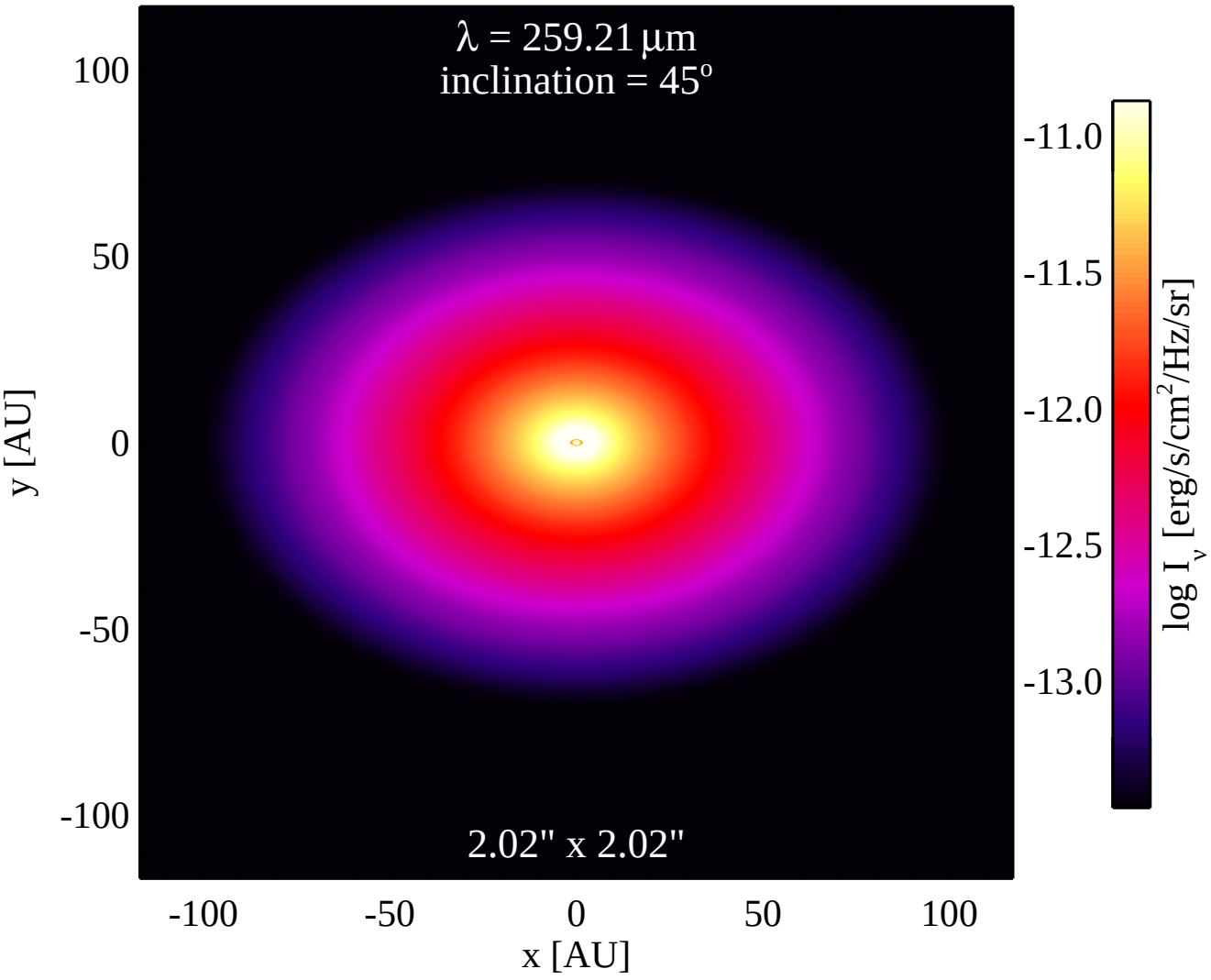

λ = 81.59 μm
inclination = 45°
1.09" x 1.09"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

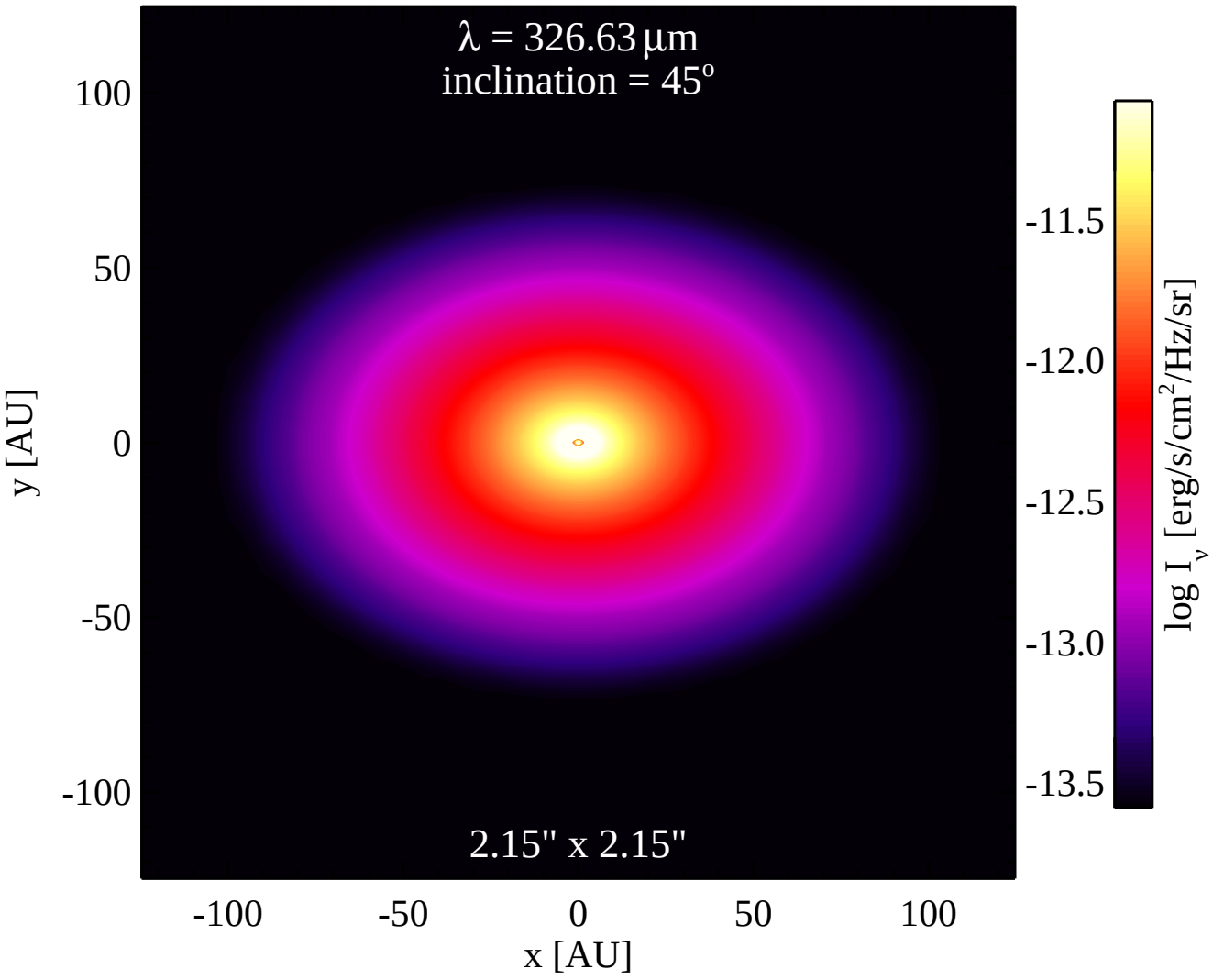

λ = 102.81 μm
inclination = 45°
1.29" x 1.29"
60
40
20
0
-20
-40
-60
y [AU]
-60
-40
-20
0
20
40
60
x [AU]
-10.0
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

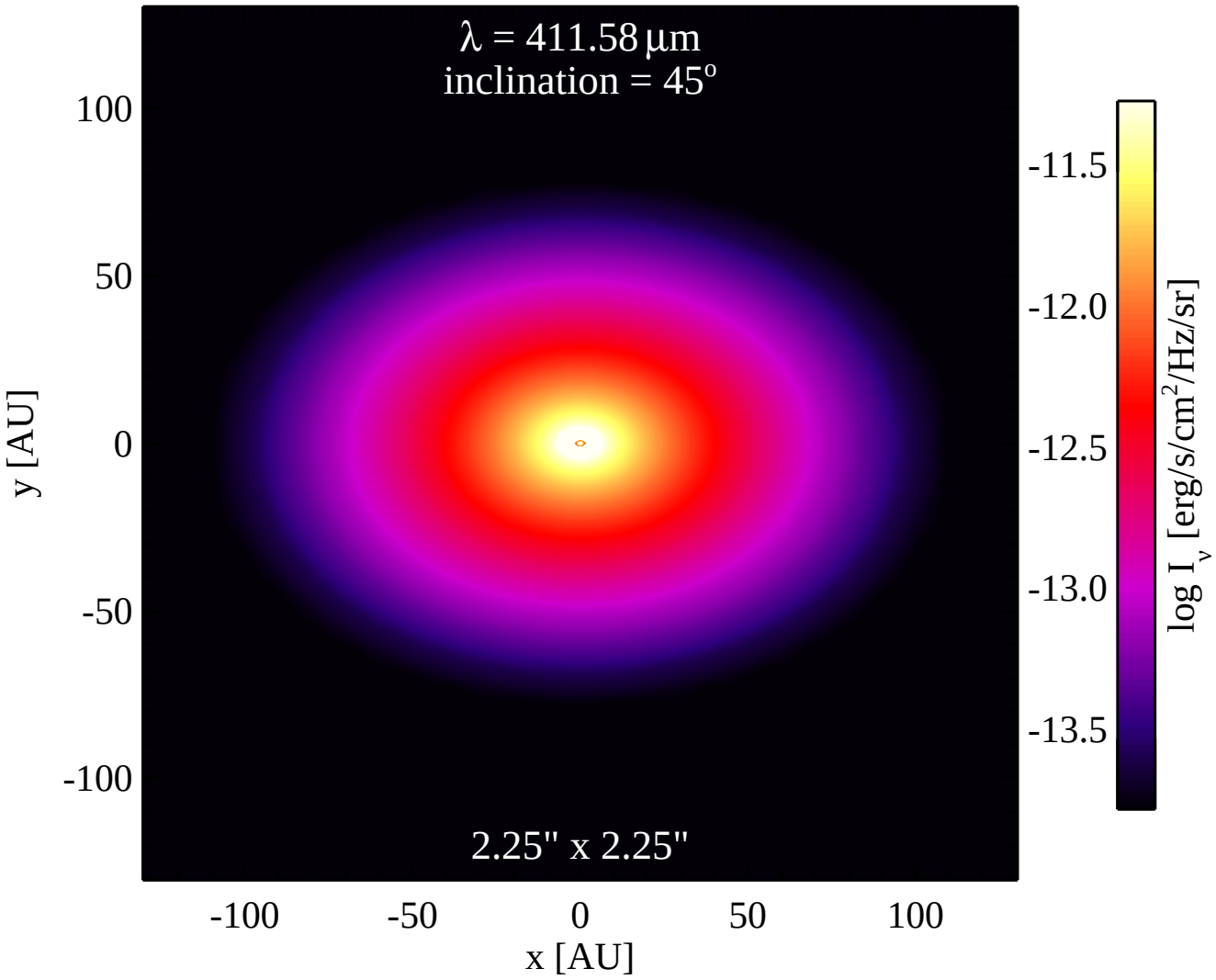

λ = 129.55 μm
inclination = 45°
1.49" x 1.49"
50
0
-50
y [AU]
-50
0
50
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
log I_ν [erg/s/cm²/Hz/sr]

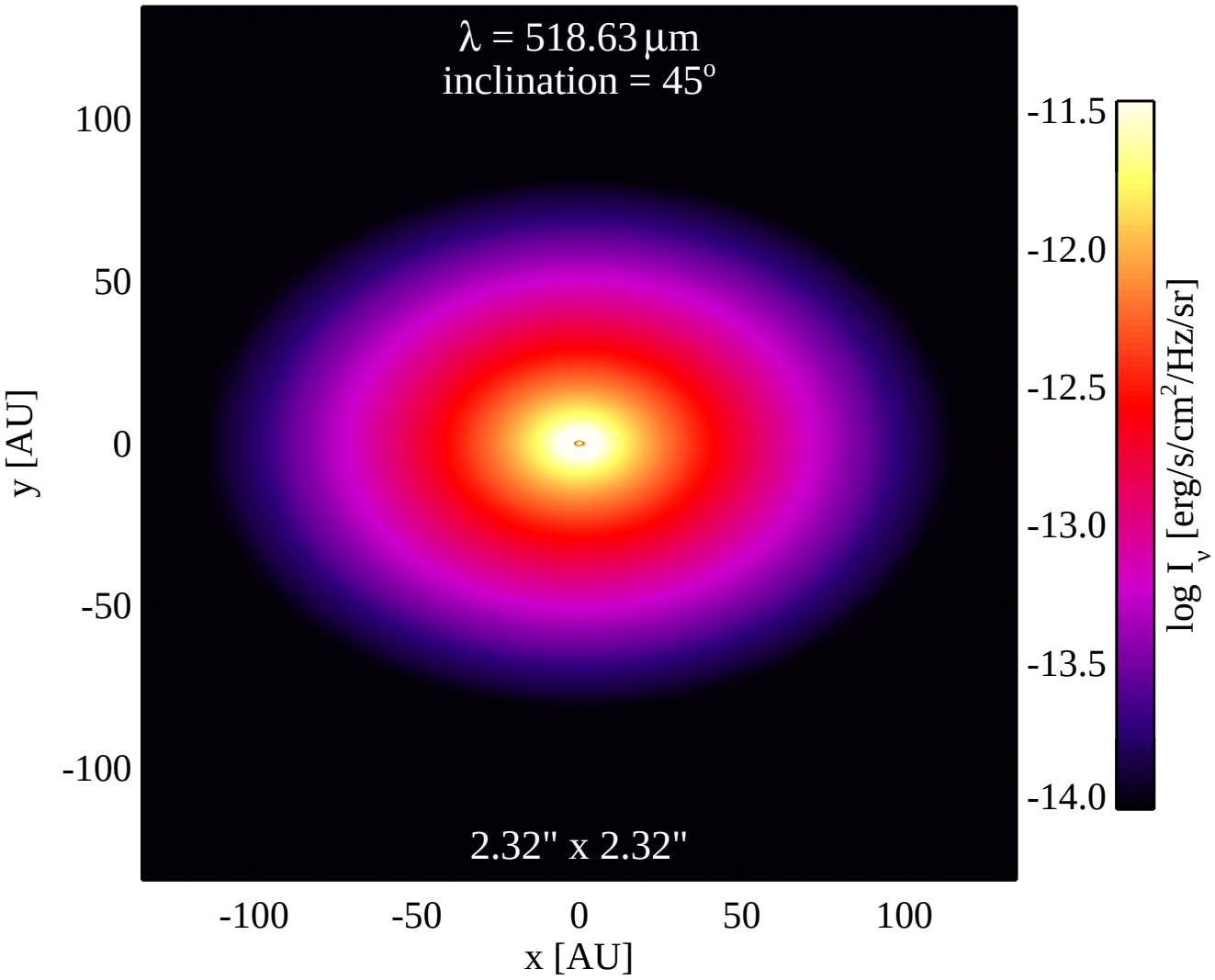

λ = 163.25 μm
inclination = 45°
1.68" x 1.68"
50
0
-50
y [AU]
-50
0
50
x [AU]
-10.5
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

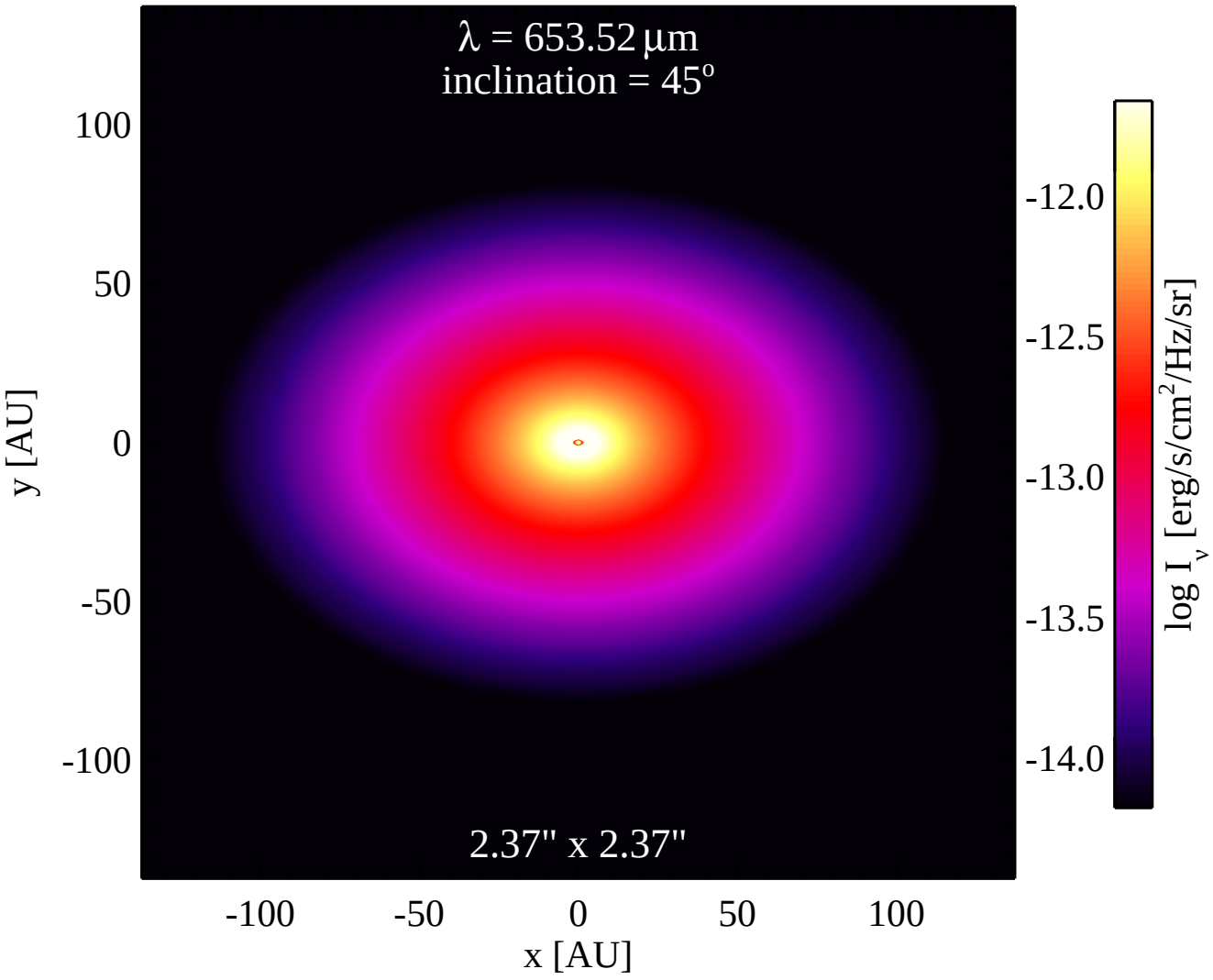

λ = 205.71 μm
inclination = 45°
1.86" x 1.86"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

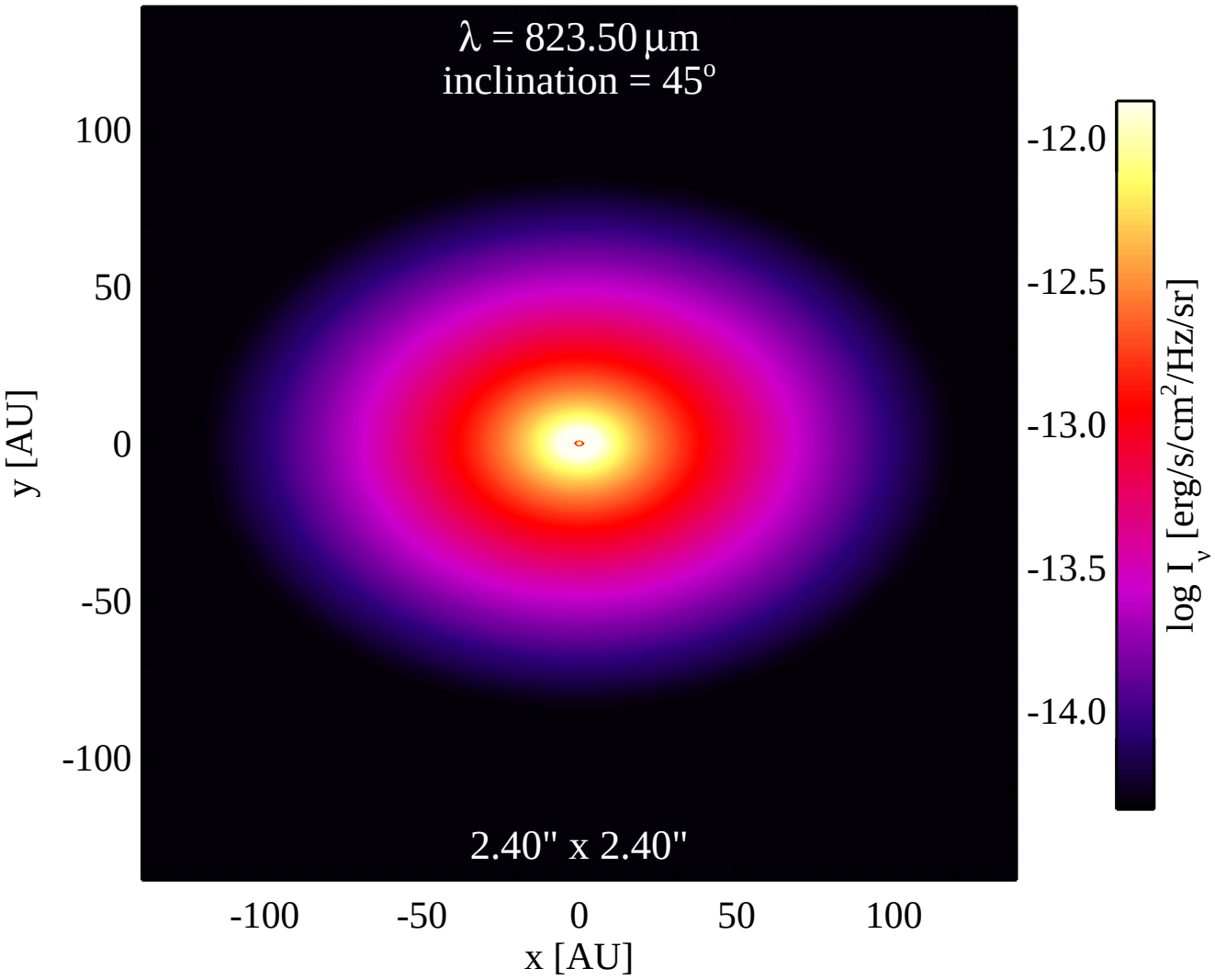

λ = 259.21 μm
inclination = 45°
2.02" x 2.02"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-11.0
-11.5
-12.0
-12.5
-13.0
log I_ν [erg/s/cm²/Hz/sr]

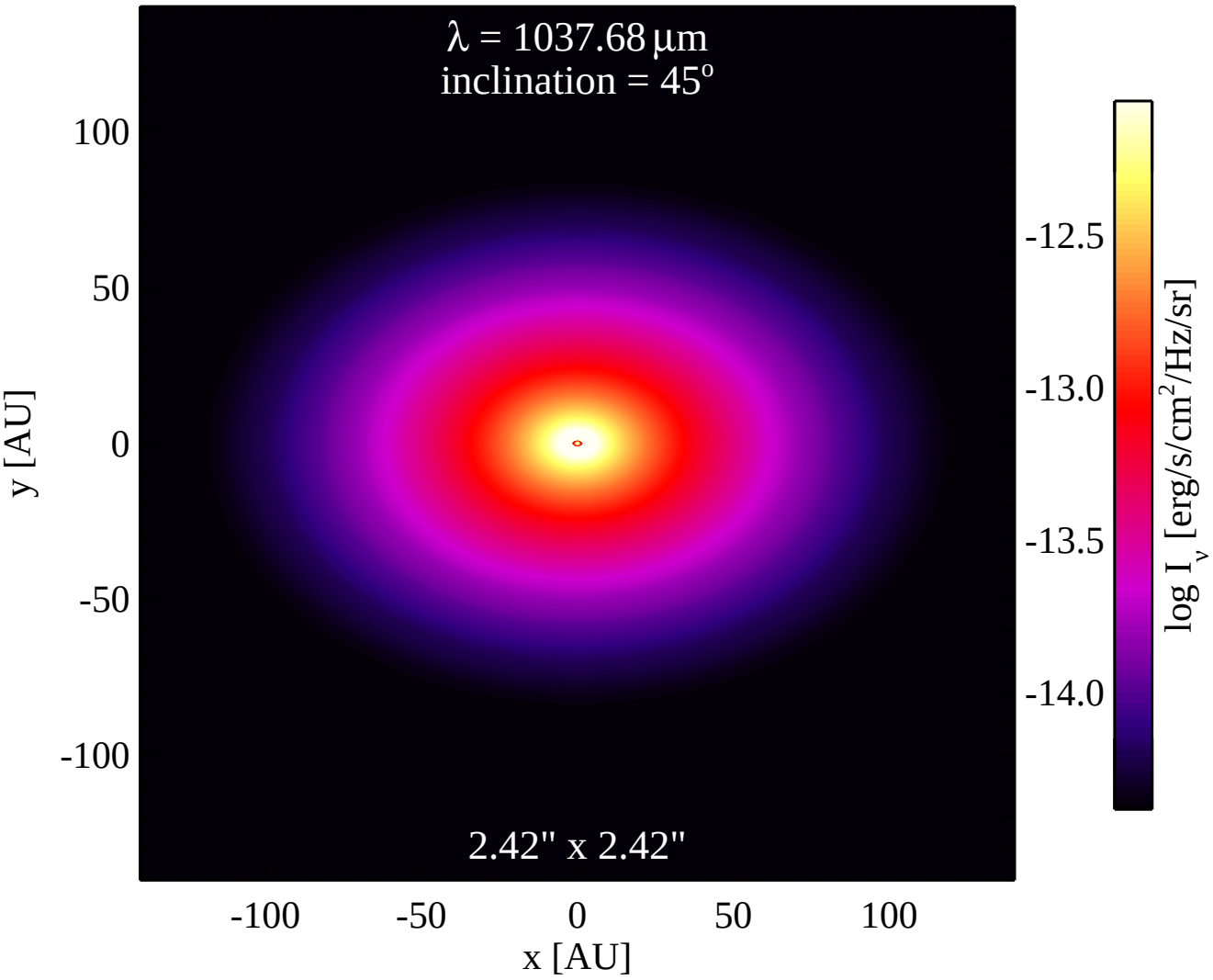

λ = 326.63 μm
inclination = 45°
2.15" x 2.15"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

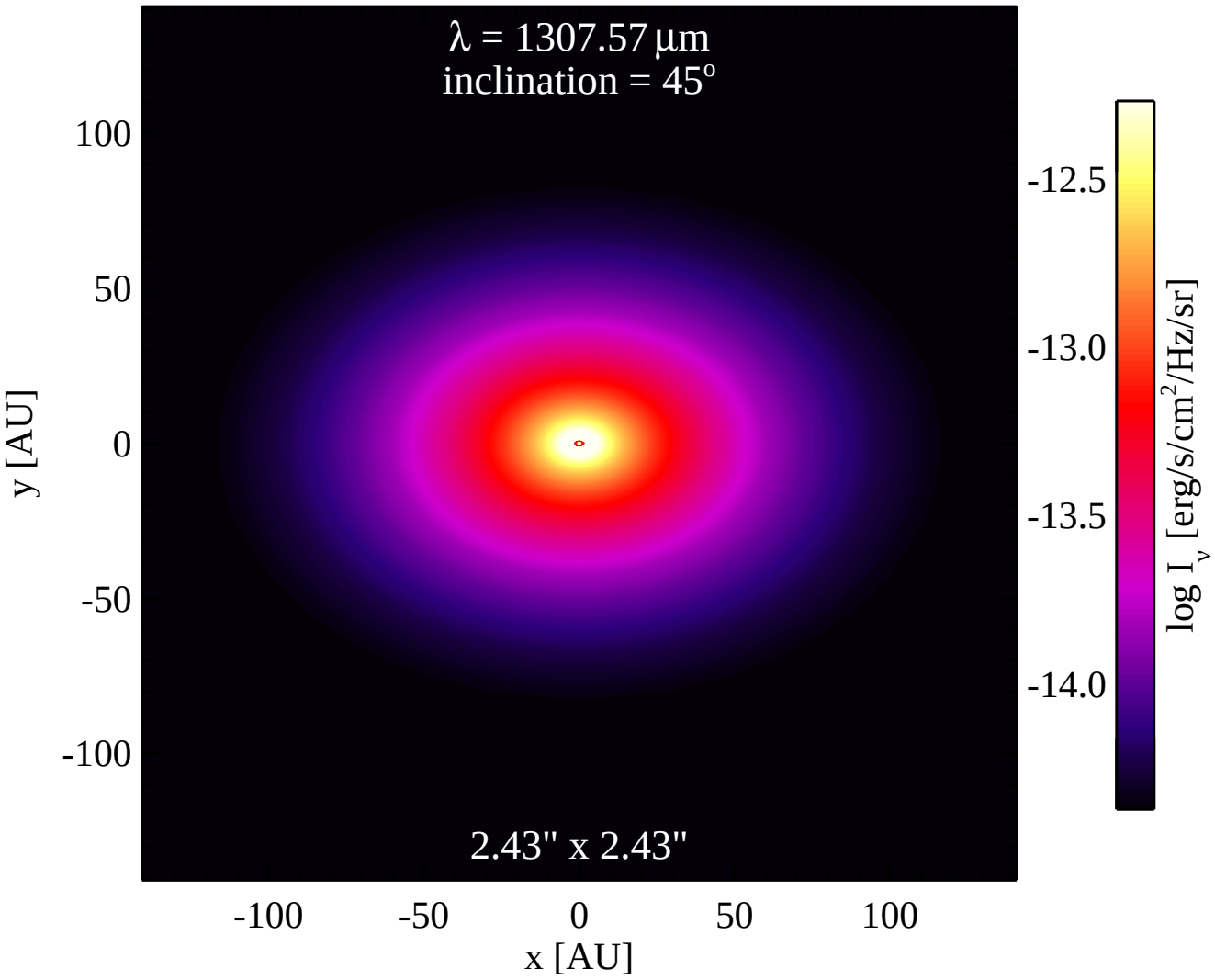

λ = 411.58 μm
inclination = 45°
2.25" x 2.25"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-11.5
-12.0
-12.5
-13.0
-13.5
log I_ν [erg/s/cm²/Hz/sr]

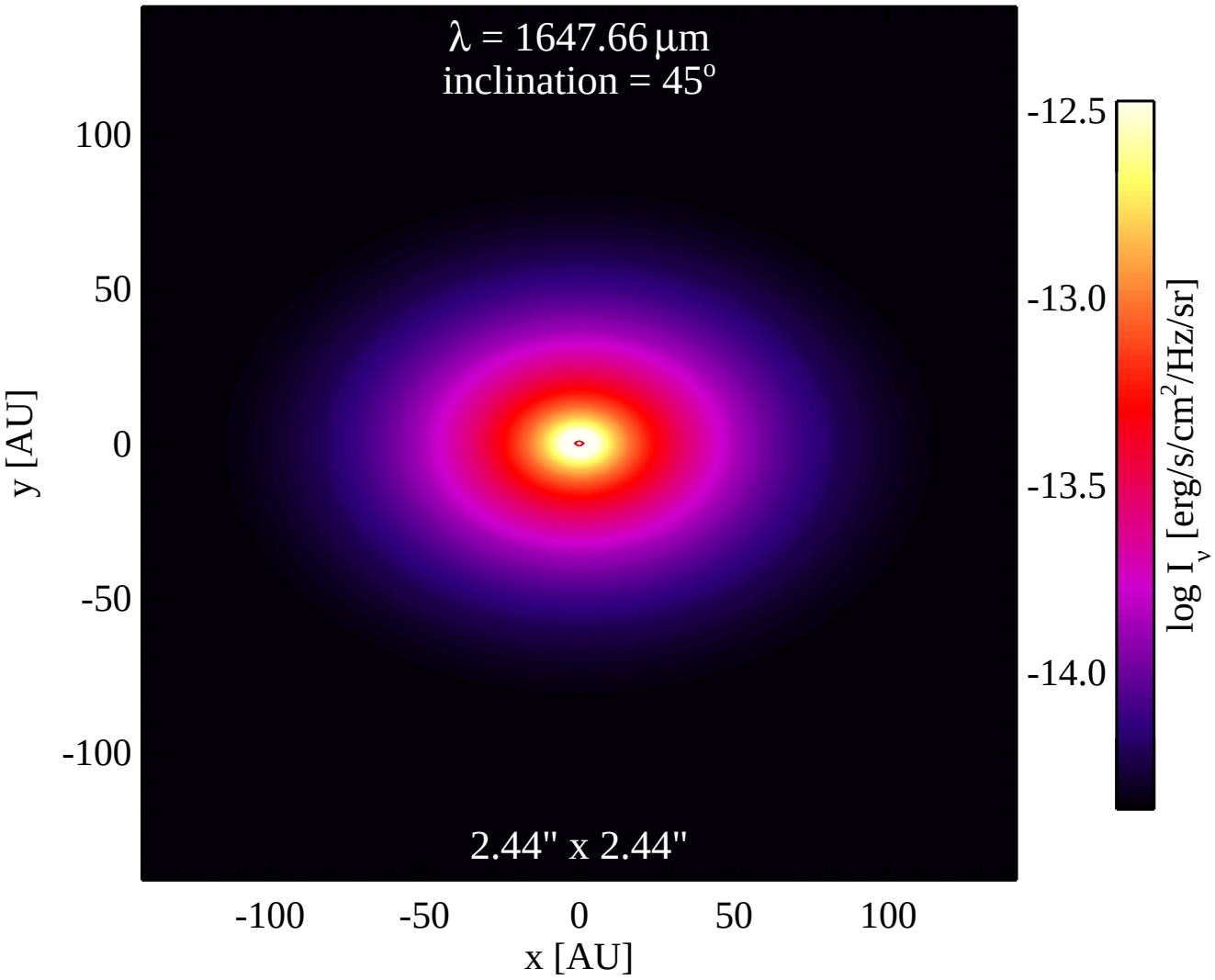

λ = 518.63 μm
inclination = 45°
2.32" x 2.32"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-11.5
-12.0
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]

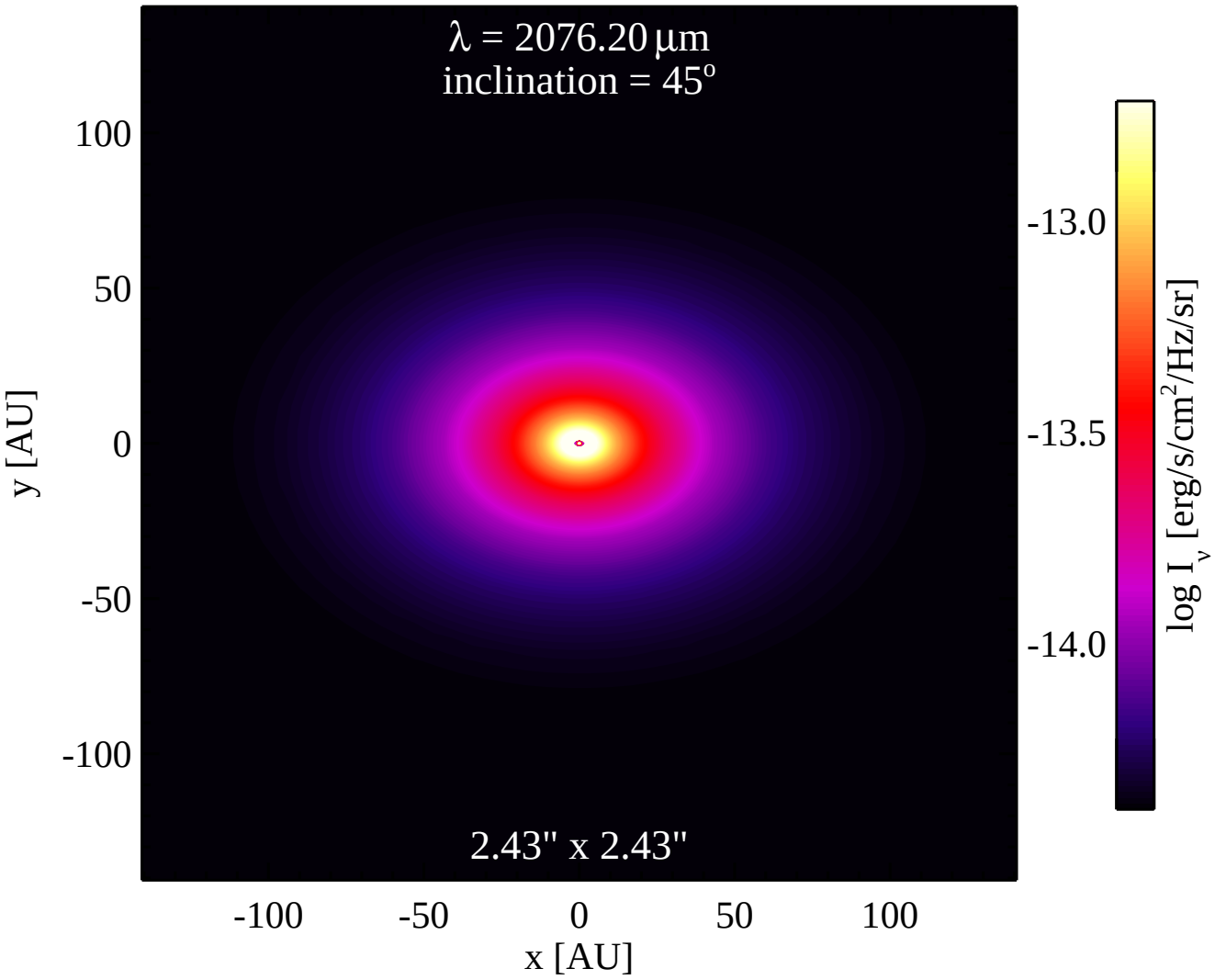

λ = 653.52 μm
inclination = 45°
2.37" x 2.37"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-12.0
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]

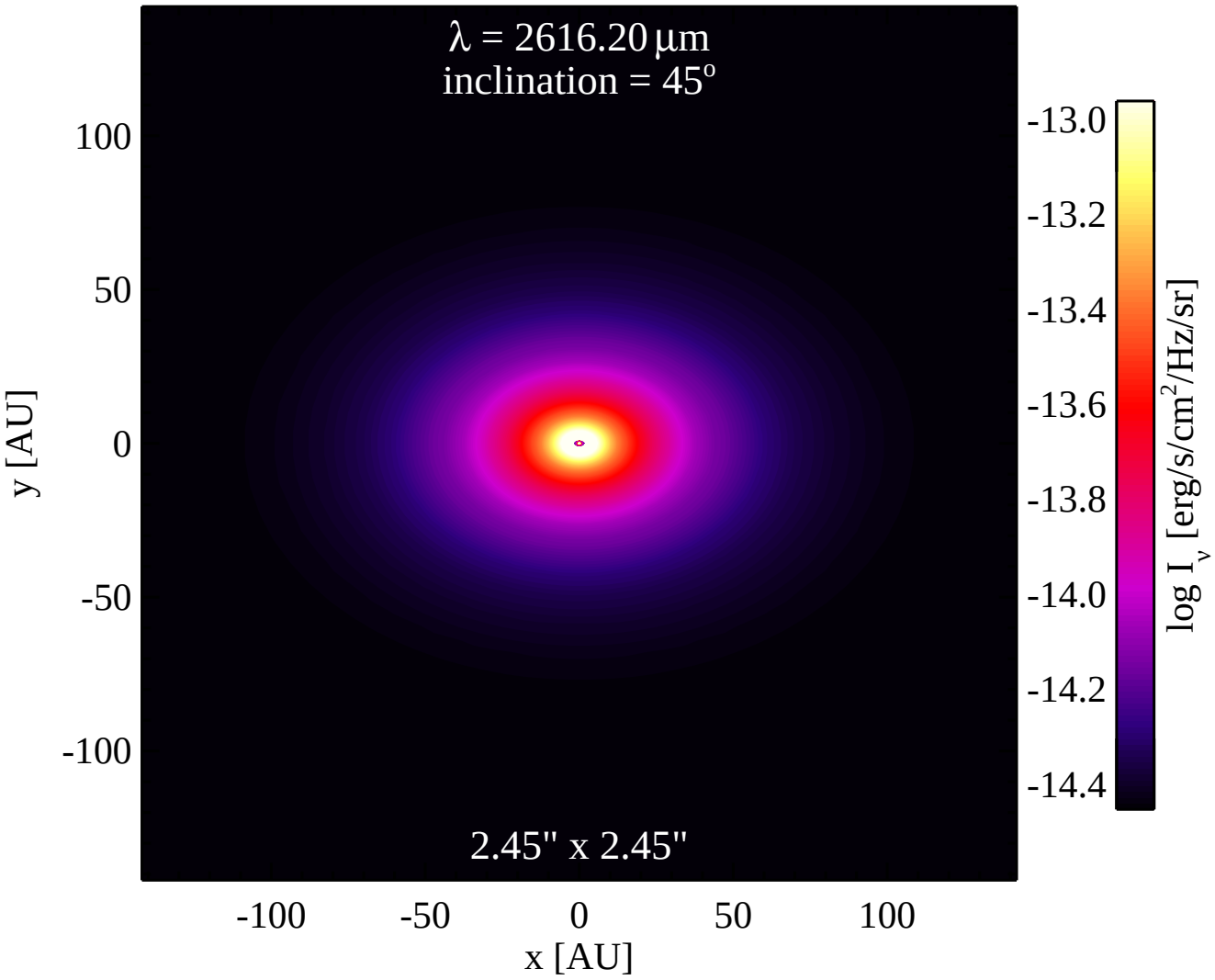

λ = 823.50 μm
inclination = 45°
2.40" x 2.40"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-12.0
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]

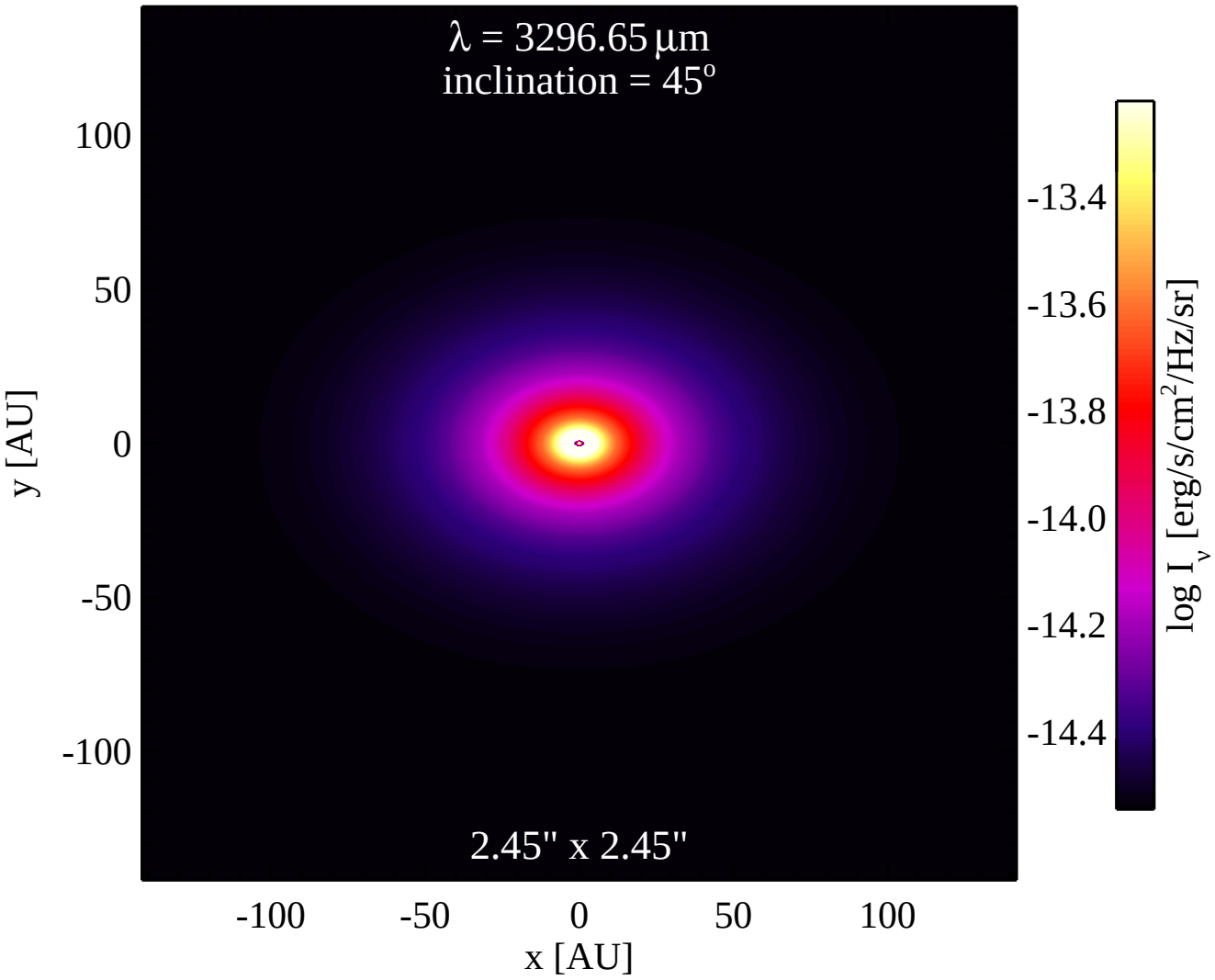

λ = 1037.68 μm
inclination = 45°
2.42" x 2.42"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]

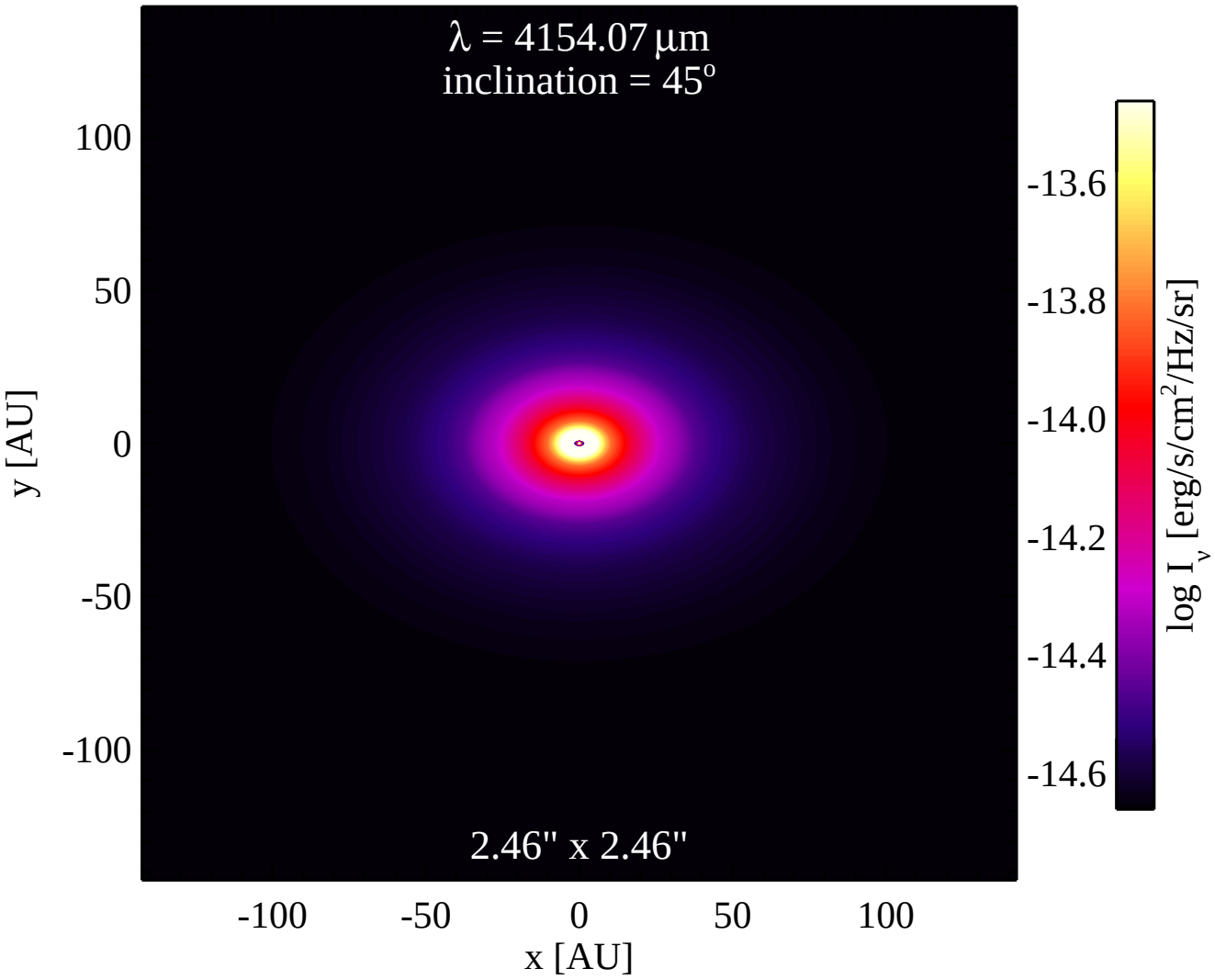

λ = 1307.57 μm
inclination = 45°
2.43" x 2.43"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]


λ = 1647.66 μm
inclination = 45°
2.44" x 2.44"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-12.5
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]


λ = 2076.20 μm
inclination = 45°
2.43" x 2.43"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-13.0
-13.5
-14.0
log I_ν [erg/s/cm²/Hz/sr]


λ = 2616.20 μm
inclination = 45°
2.45" x 2.45"
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
-14.2
-14.4
log I_ν [erg/s/cm²/Hz/sr]


λ = 3296.65 μm
inclination = 45°
2.45" x 2.45"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-13.4
-13.6
-13.8
-14.0
-14.2
-14.4
log I_ν [erg/s/cm²/Hz/sr]


λ = 4154.07 μm
inclination = 45°
2.46" x 2.46"
100
50
0
-50
-100
y [AU]
-100
-50
0
50
100
x [AU]
-13.6
-13.8
-14.0
-14.2
-14.4
-14.6
log I_ν [erg/s/cm²/Hz/sr]