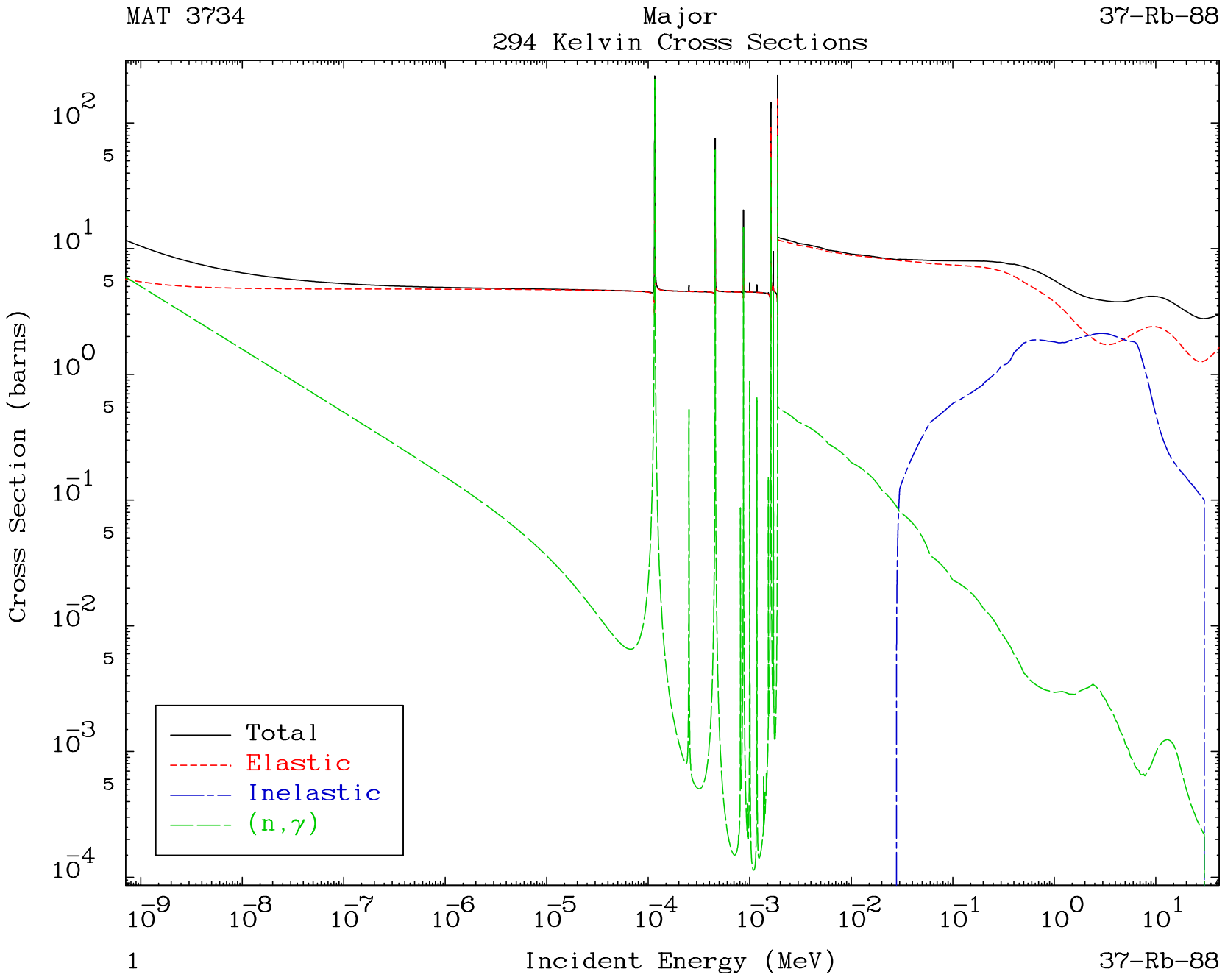
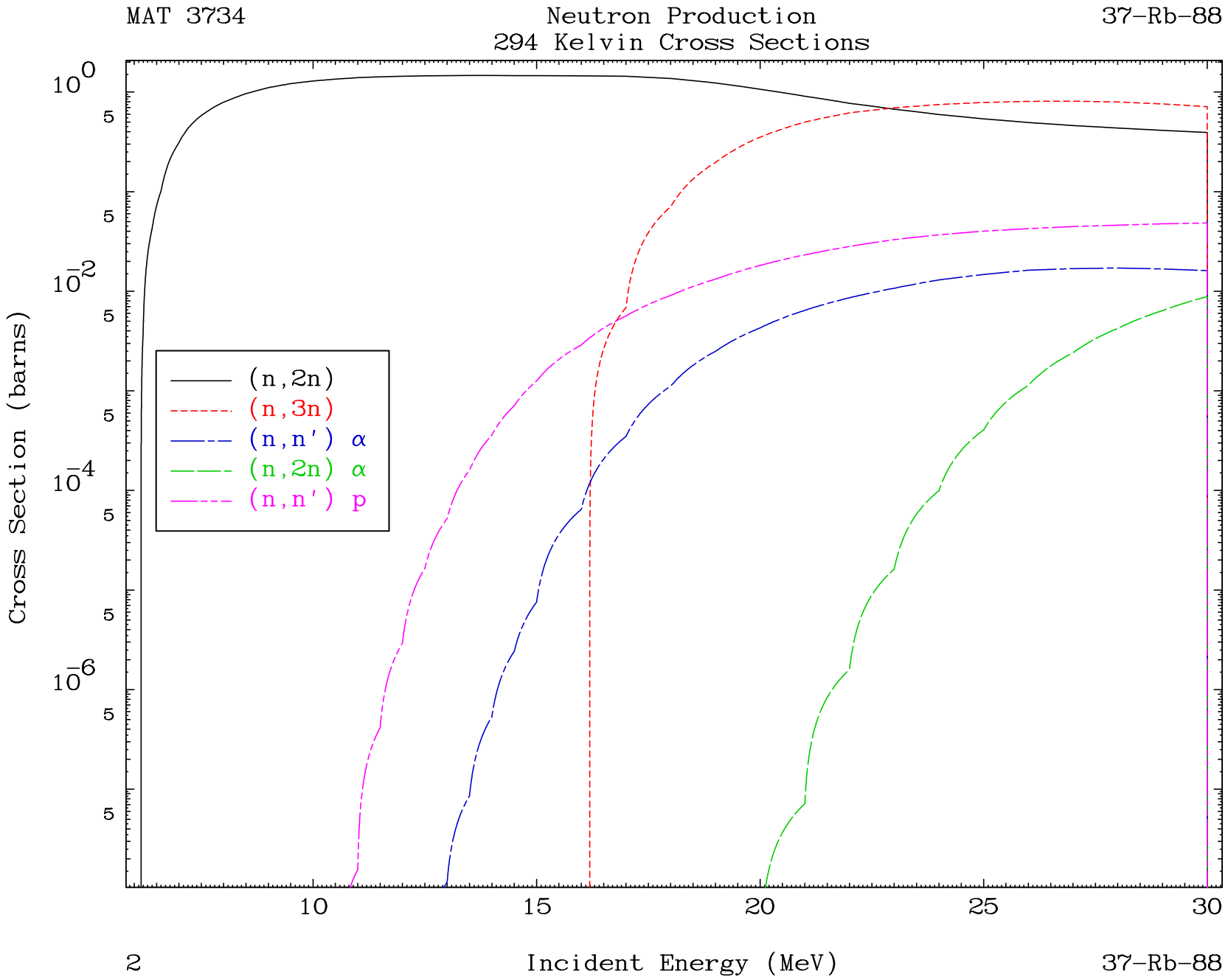
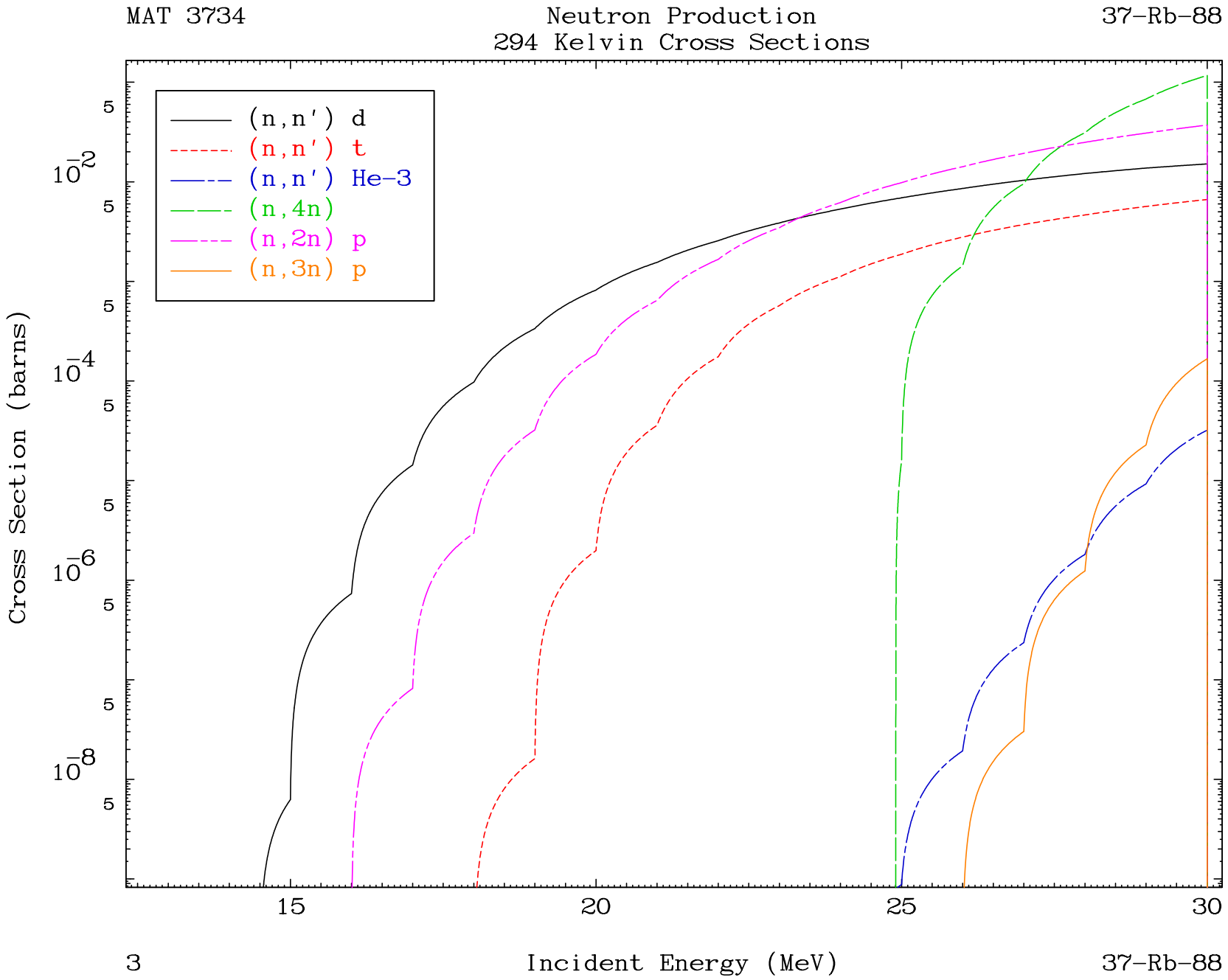
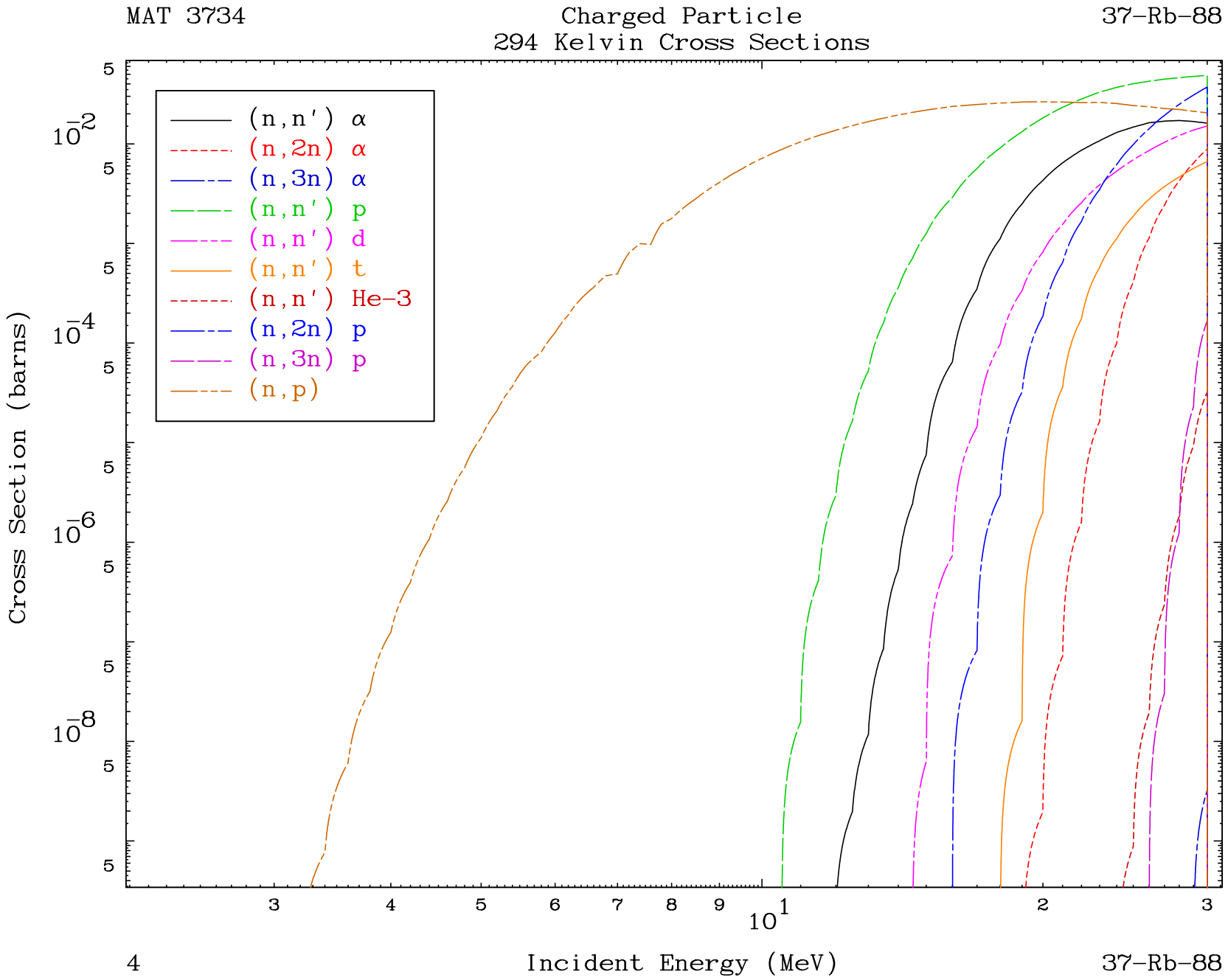
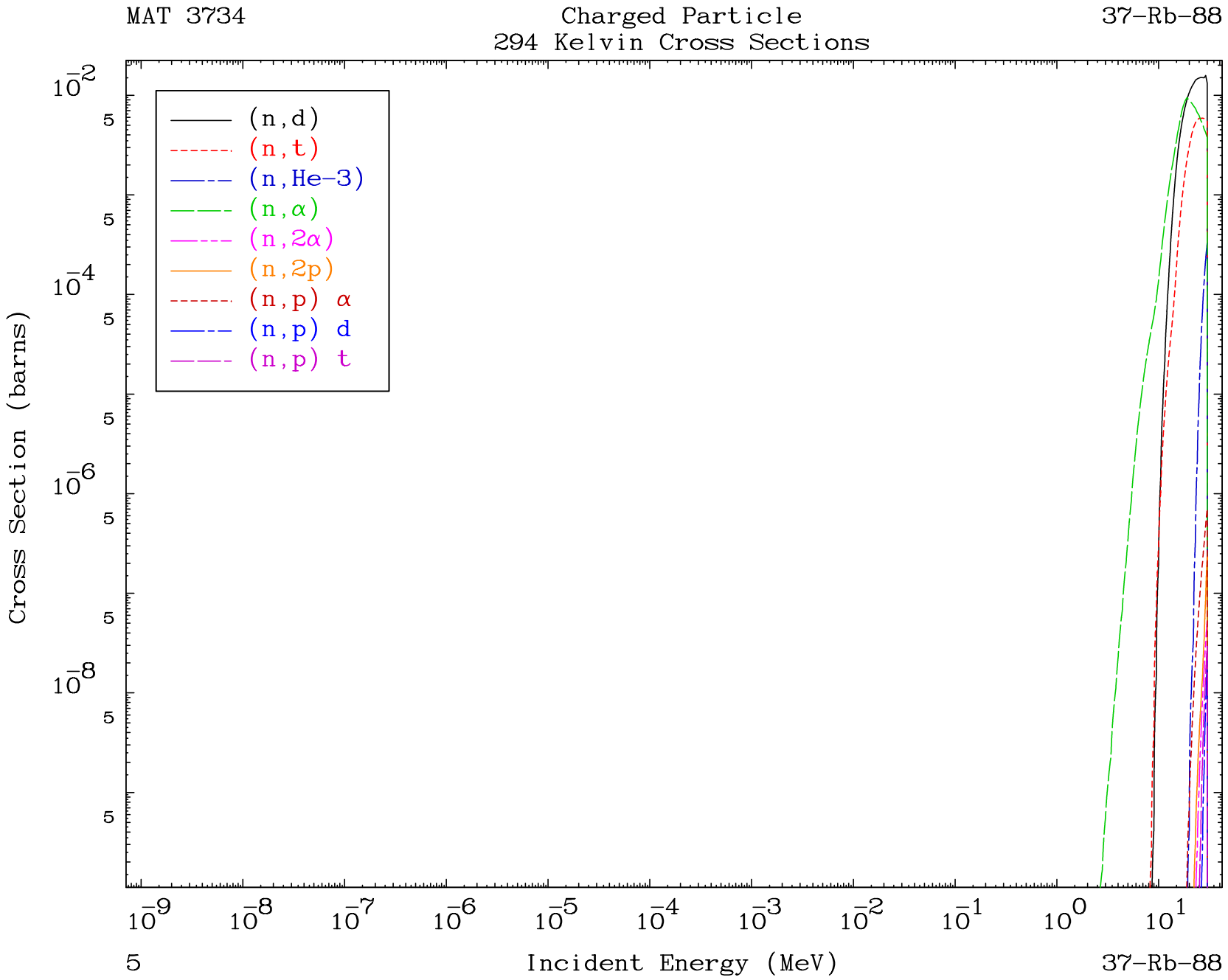
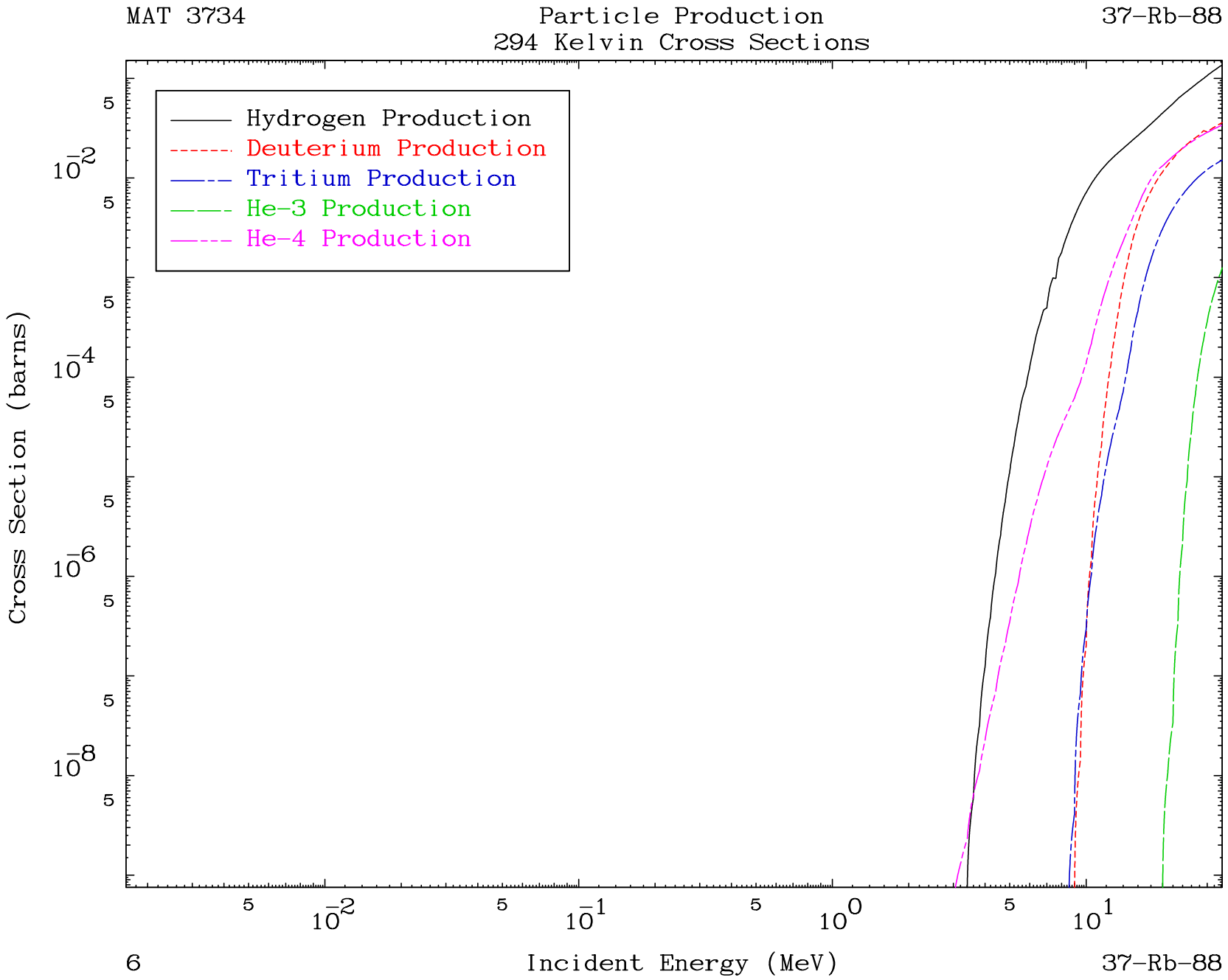

MAT 3734
Major
37-Rb-88
294 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Inelastic
(n,γ)
37-Rb-88

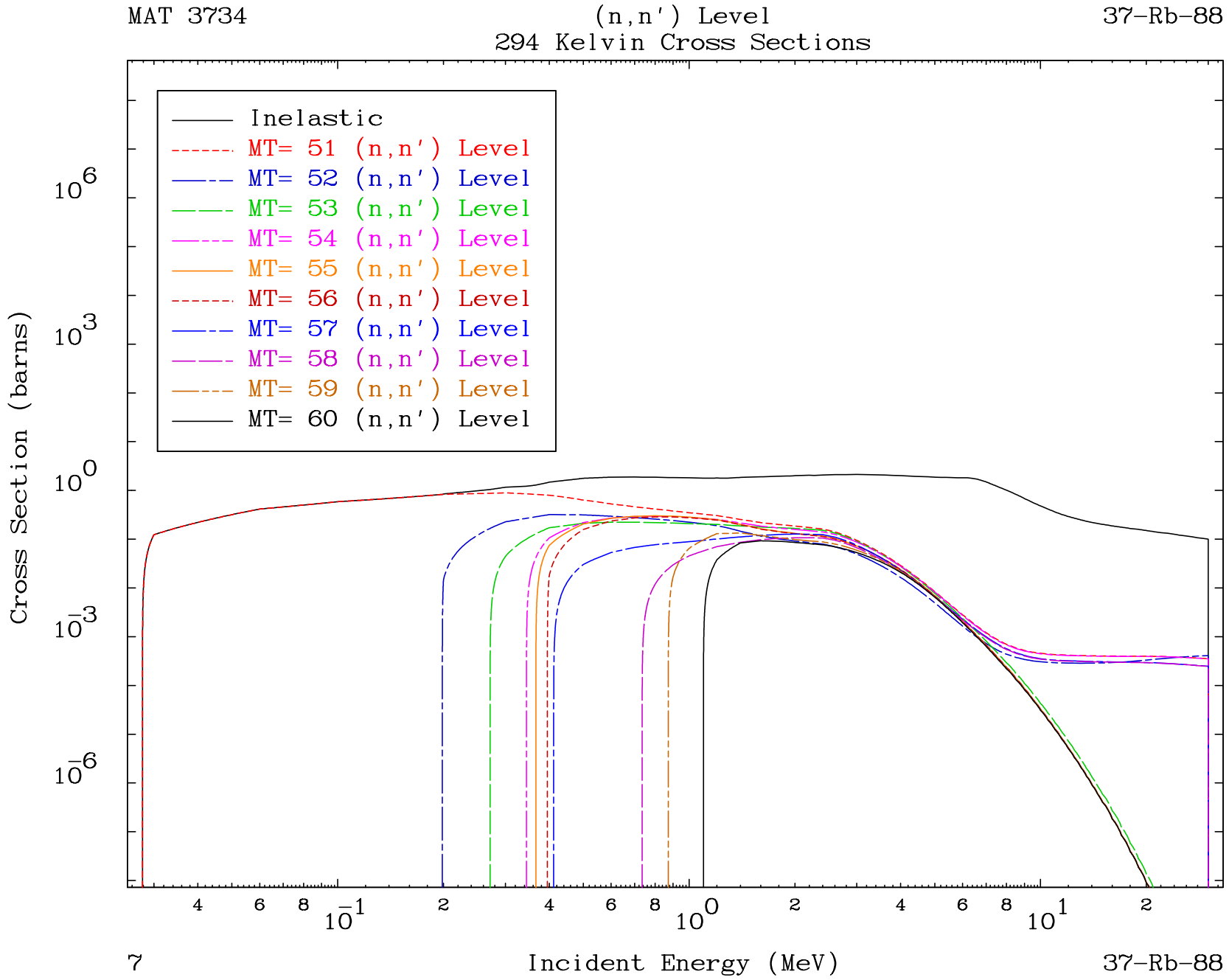

MAT 3734
Neutron Production
294 Kelvin Cross Sections
37-Rb-88
Cross Section (barns)
10^0
10^-2
10^-4
10^-6
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,n') p
10
15
20
25
30
2
Incident Energy (MeV)
37-Rb-88

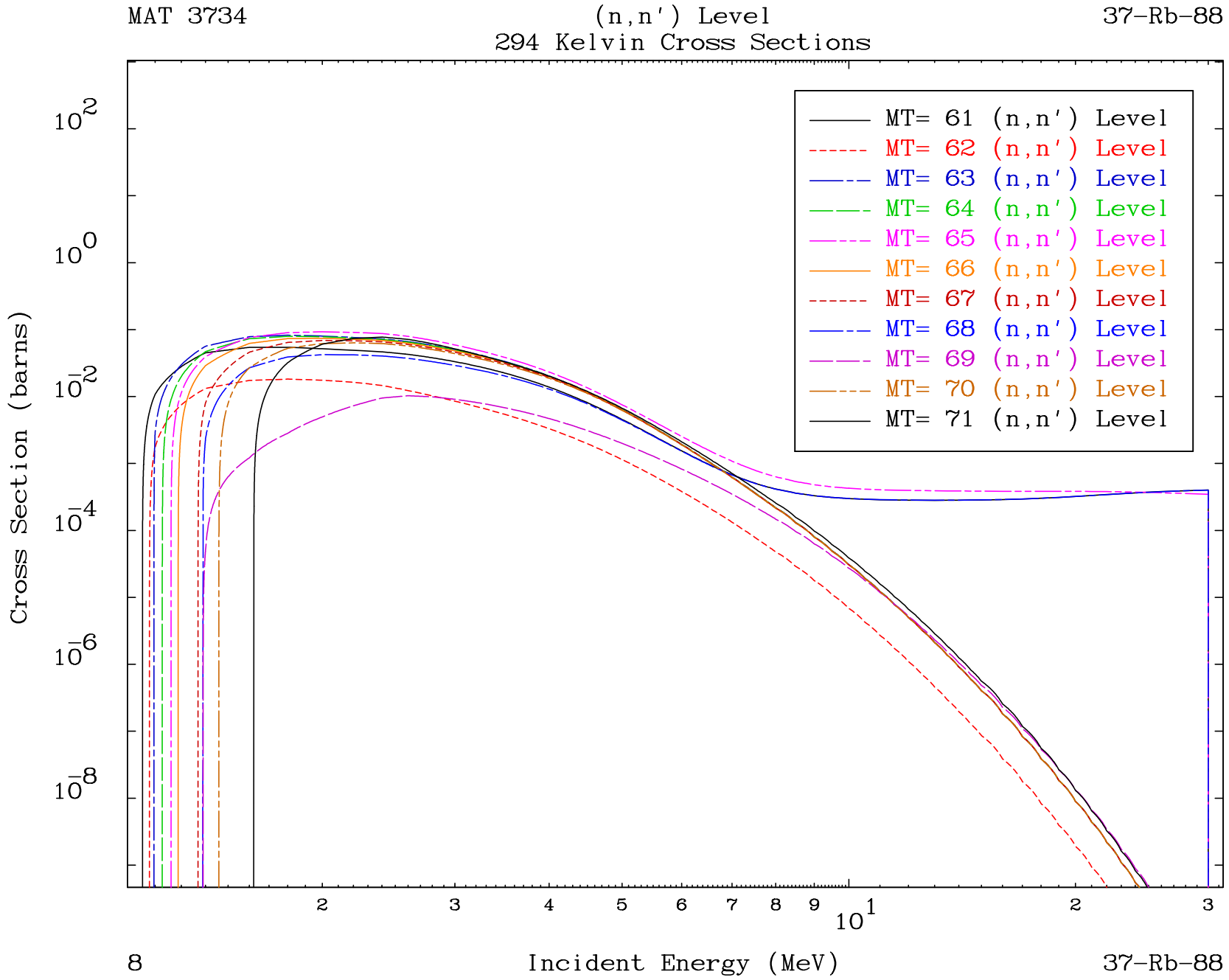

MAT 3734
Neutron Production
294 Kelvin Cross Sections
37-Rb-88
(n,n') d
(n,n') t
(n,n') He-3
(n,4n)
(n,2n) p
(n,3n) p
Cross Section (barns)
10-2
10-4
10-6
10-8
5
15
20
25
30
3
Incident Energy (MeV)
37-Rb-88

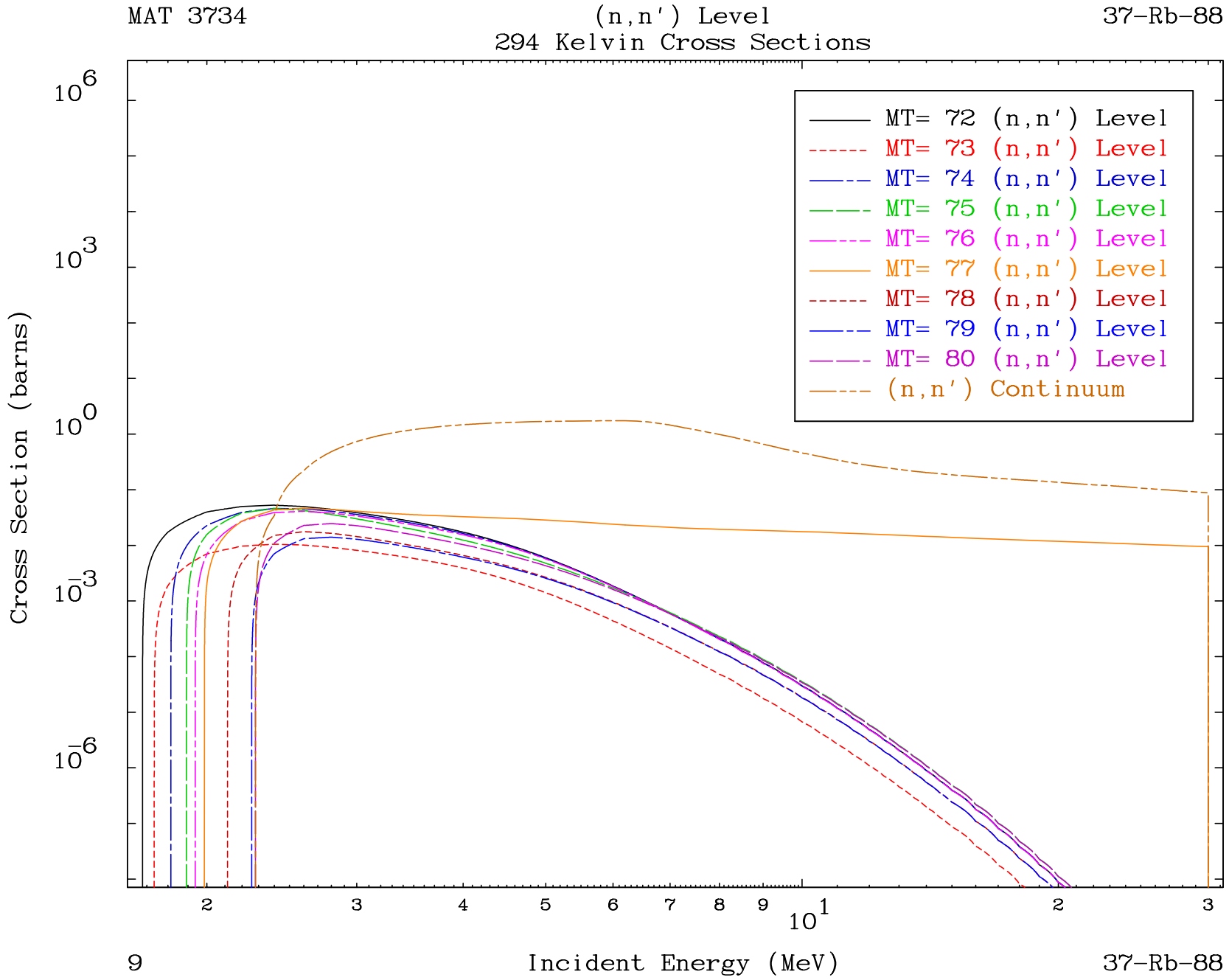

MAT 3734
Charged Particle
294 Kelvin Cross Sections
37-Rb-88
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') d
(n,n') t
(n,n') He-3
(n,2n) p
(n,3n) p
(n,p)
Cross Section (barns)
Incident Energy (MeV)
4
37-Rb-88

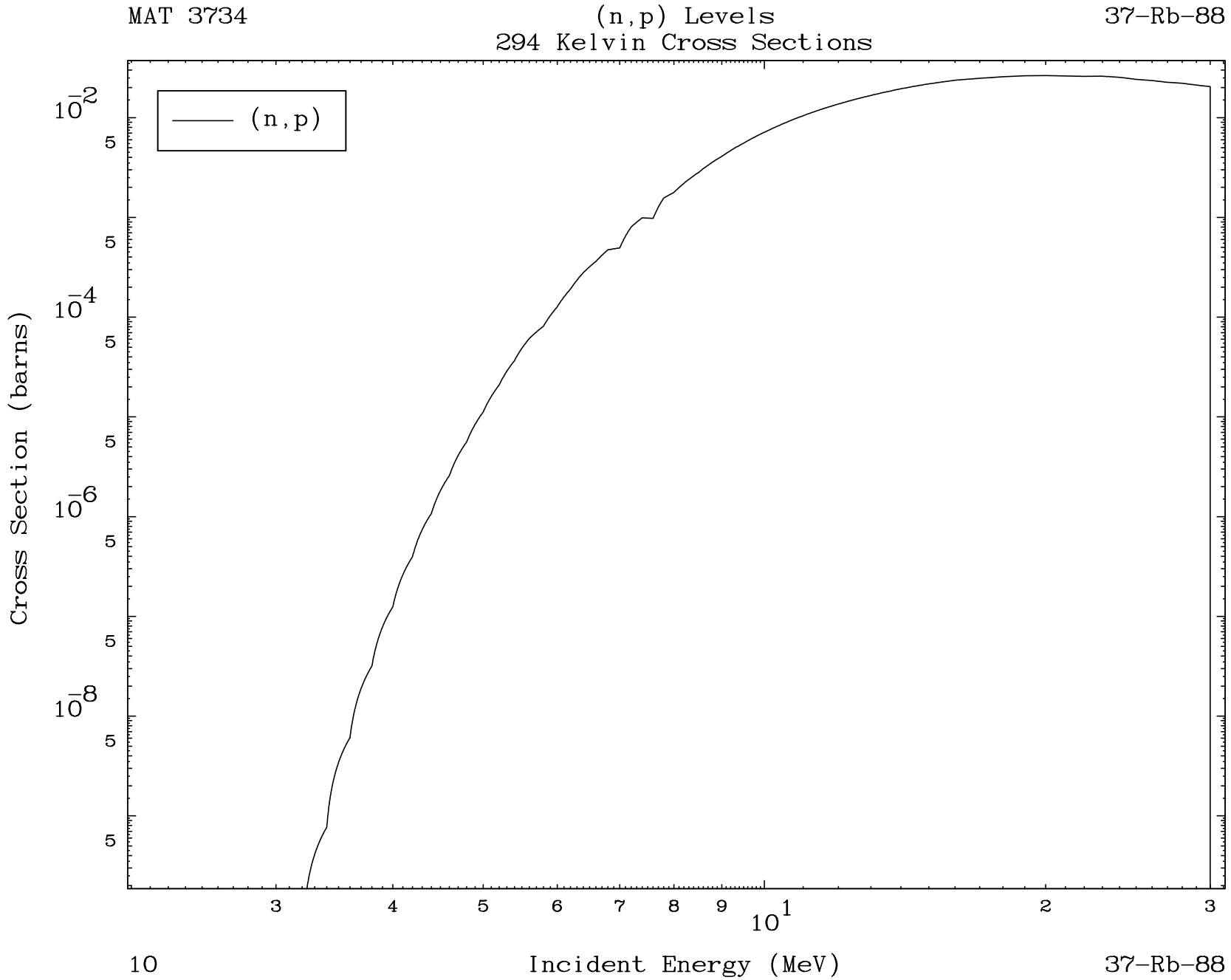

MAT 3734
Charged Particle
37-Rb-88
294 Kelvin Cross Sections
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2α)
(n,2p)
(n,p) α
(n,p) d
(n,p) t
Cross Section (barns)
Incident Energy (MeV)
37-Rb-88

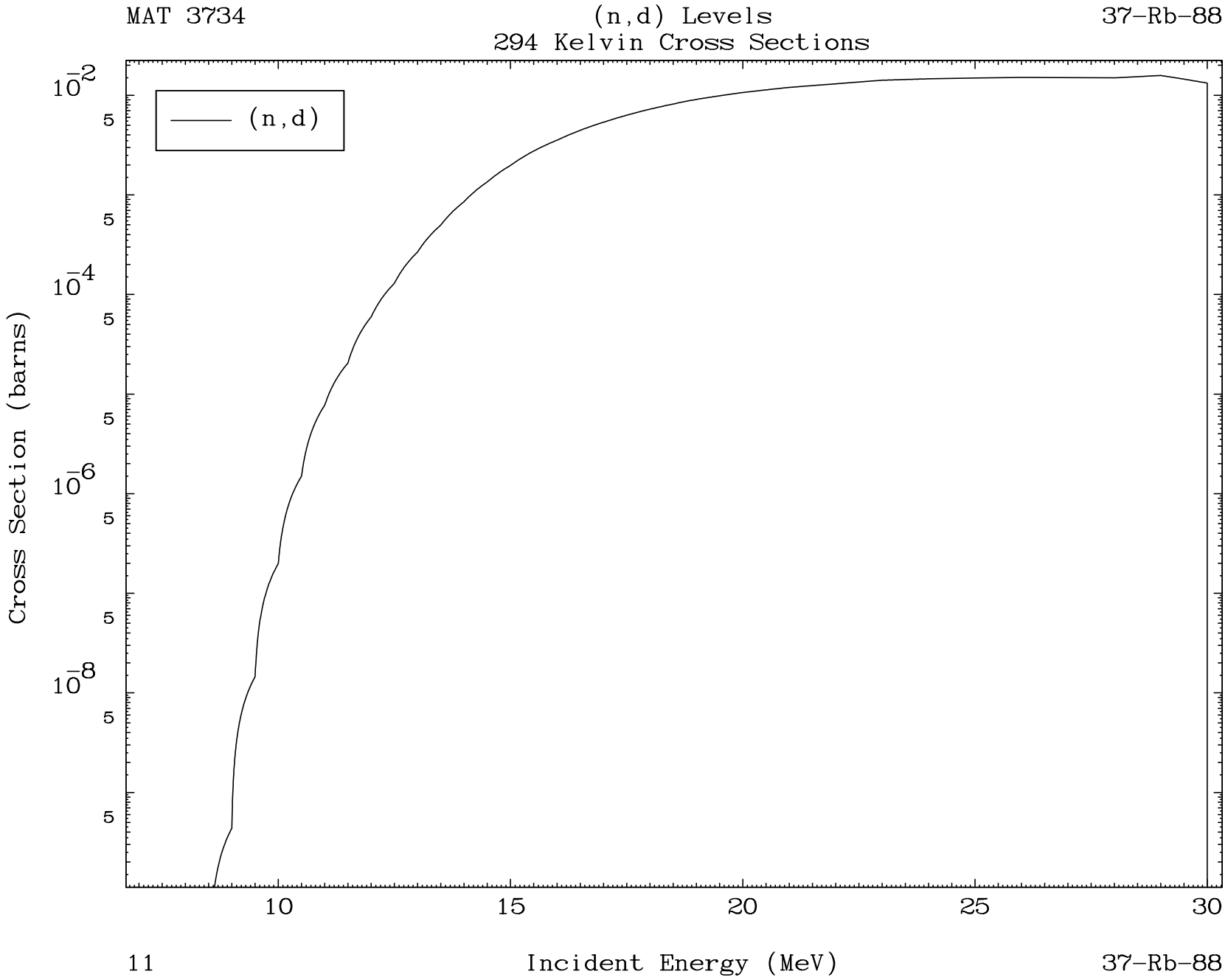

MAT 3734
Particle Production
294 Kelvin Cross Sections
37-Rb-88
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
Cross Section (barns)
Incident Energy (MeV)
37-Rb-88
6

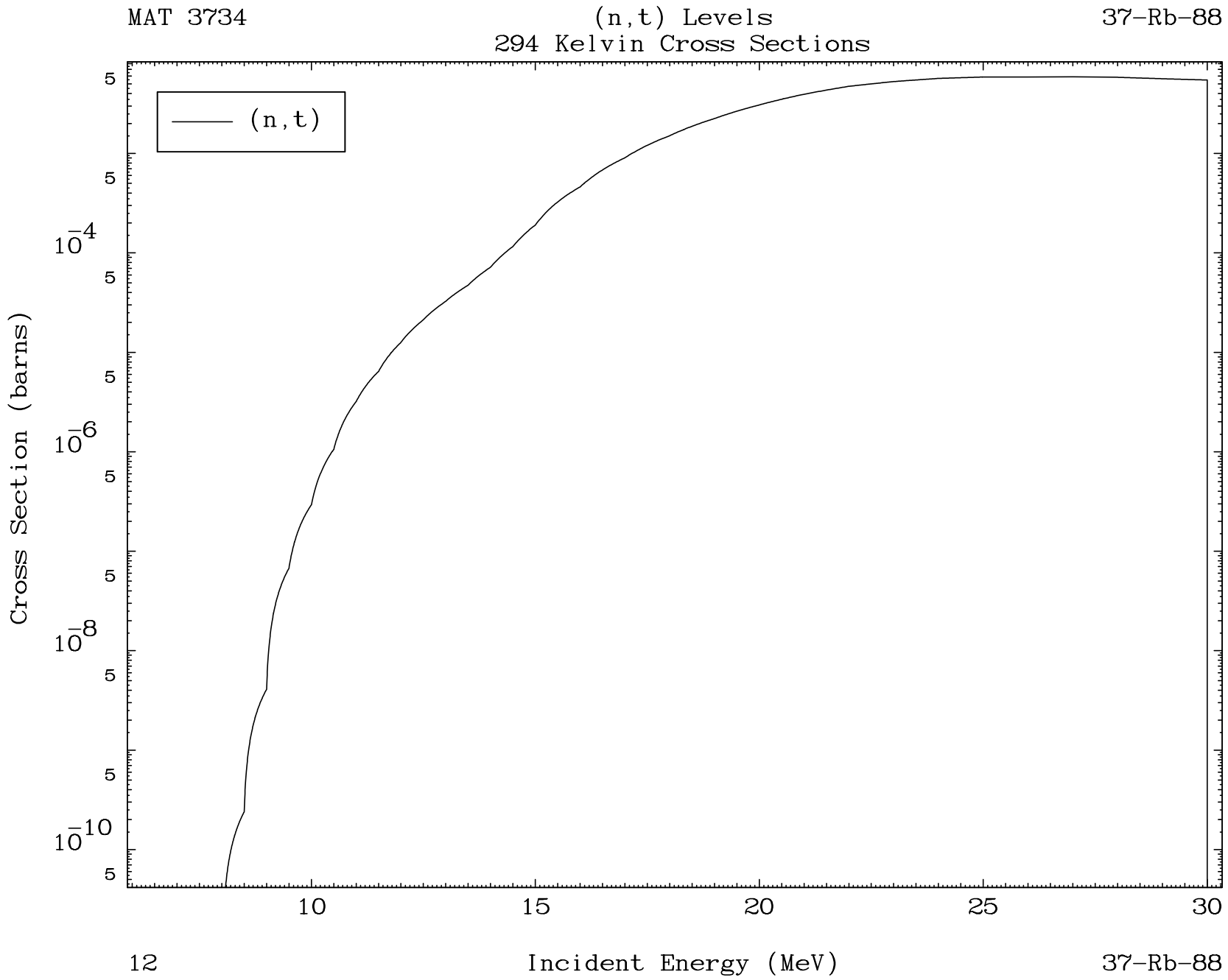

MAT 3734
(n,n') Level
37-Rb-88
294 Kelvin Cross Sections
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
MT= 56 (n,n') Level
MT= 57 (n,n') Level
MT= 58 (n,n') Level
MT= 59 (n,n') Level
MT= 60 (n,n') Level
Cross Section (barns)
10^6
10^3
10^0
10^-3
10^-6
4 6 8 10^-1 2 4 6 8 10^0 2 4 6 8 10^1 2
Incident Energy (MeV)
7
37-Rb-88

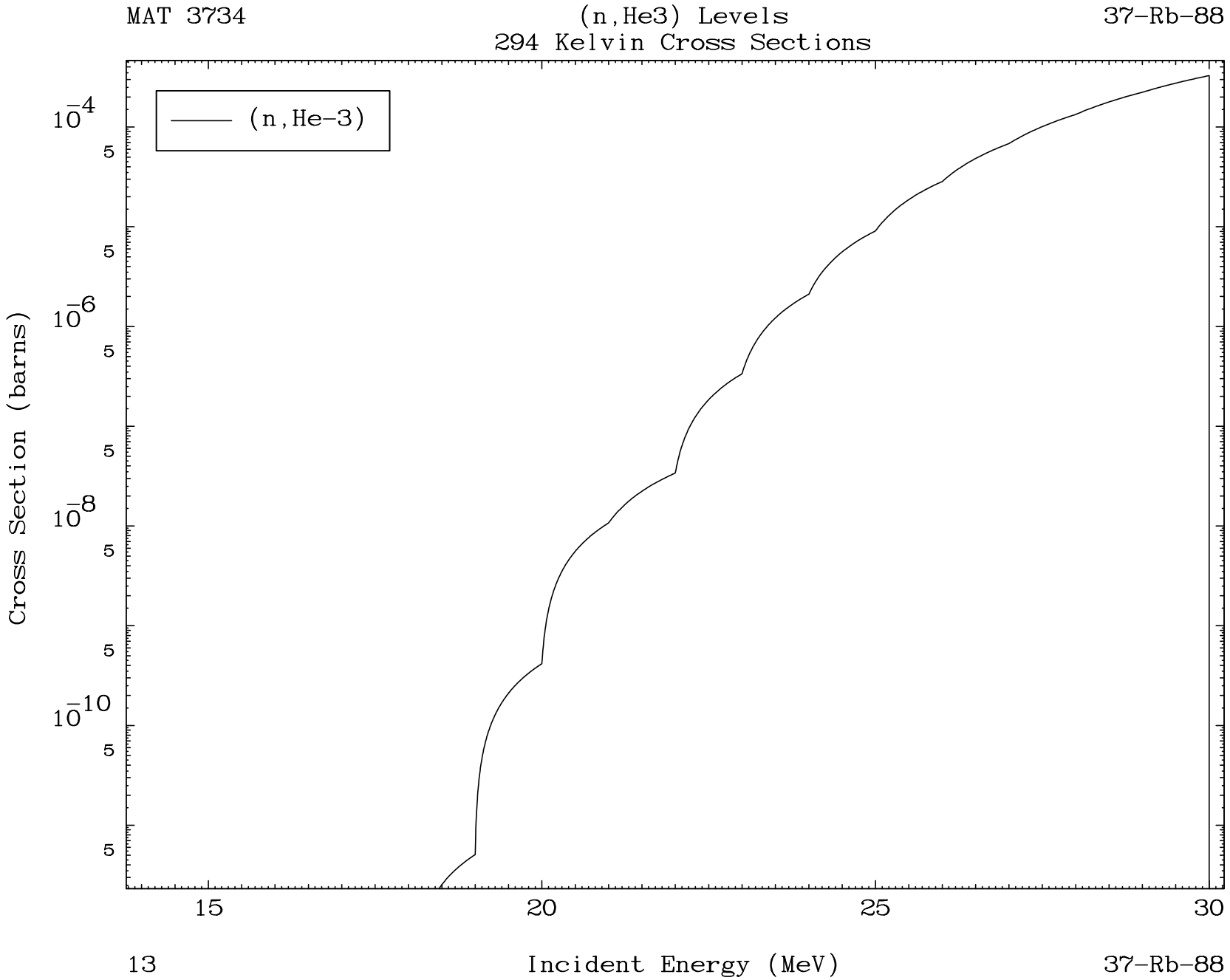

MAT 3734
(n,n') Level
37-Rb-88
294 Kelvin Cross Sections
MT= 61 (n,n') Level
MT= 62 (n,n') Level
MT= 63 (n,n') Level
MT= 64 (n,n') Level
MT= 65 (n,n') Level
MT= 66 (n,n') Level
MT= 67 (n,n') Level
MT= 68 (n,n') Level
MT= 69 (n,n') Level
MT= 70 (n,n') Level
MT= 71 (n,n') Level
Cross Section (barns)
Incident Energy (MeV)
8
37-Rb-88

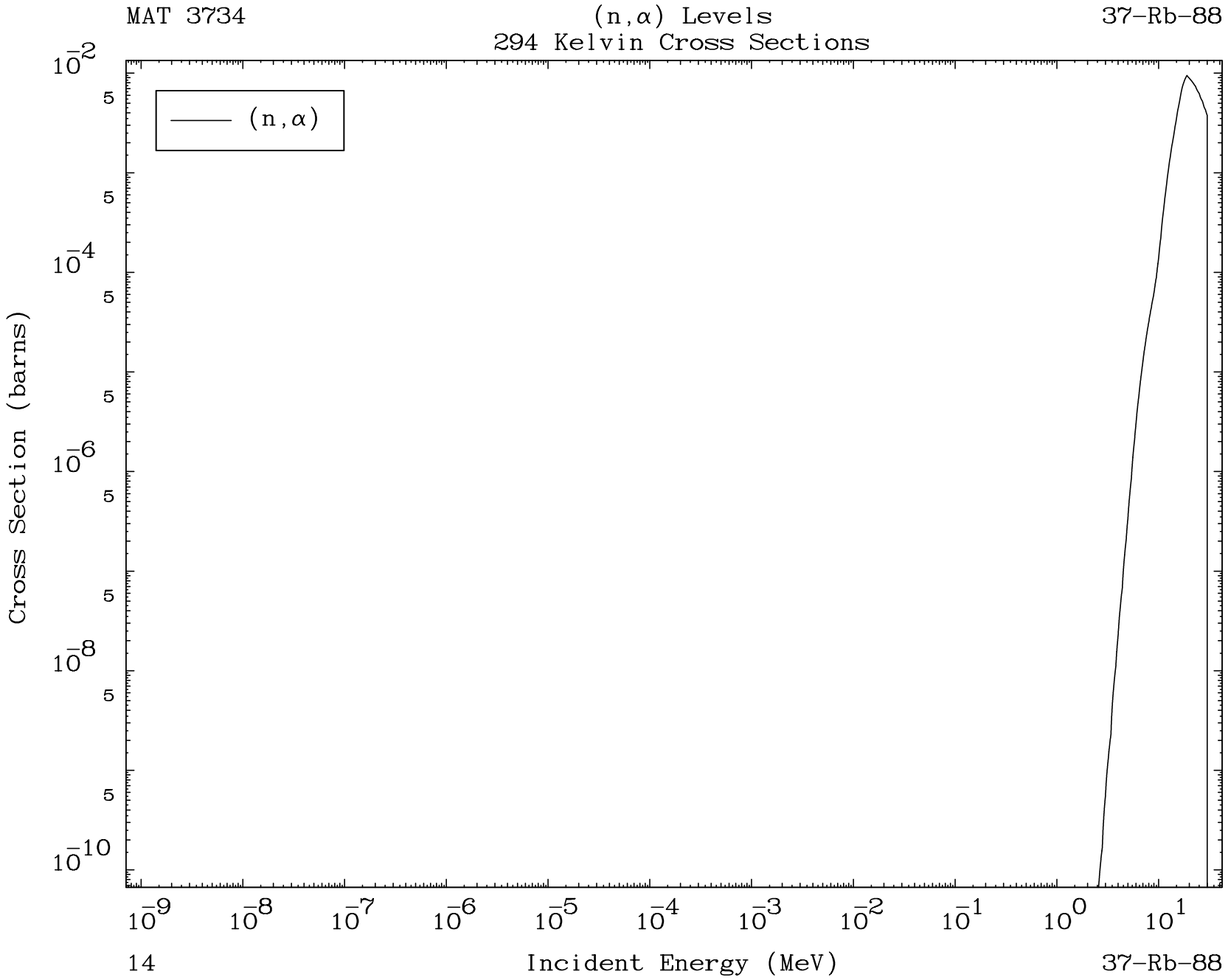

MAT 3734
(n,n') Level
37-Rb-88
294 Kelvin Cross Sections
MT= 72 (n,n') Level
MT= 73 (n,n') Level
MT= 74 (n,n') Level
MT= 75 (n,n') Level
MT= 76 (n,n') Level
MT= 77 (n,n') Level
MT= 78 (n,n') Level
MT= 79 (n,n') Level
MT= 80 (n,n') Level
(n,n') Continuum
Cross Section (barns)
Incident Energy (MeV)
9
37-Rb-88

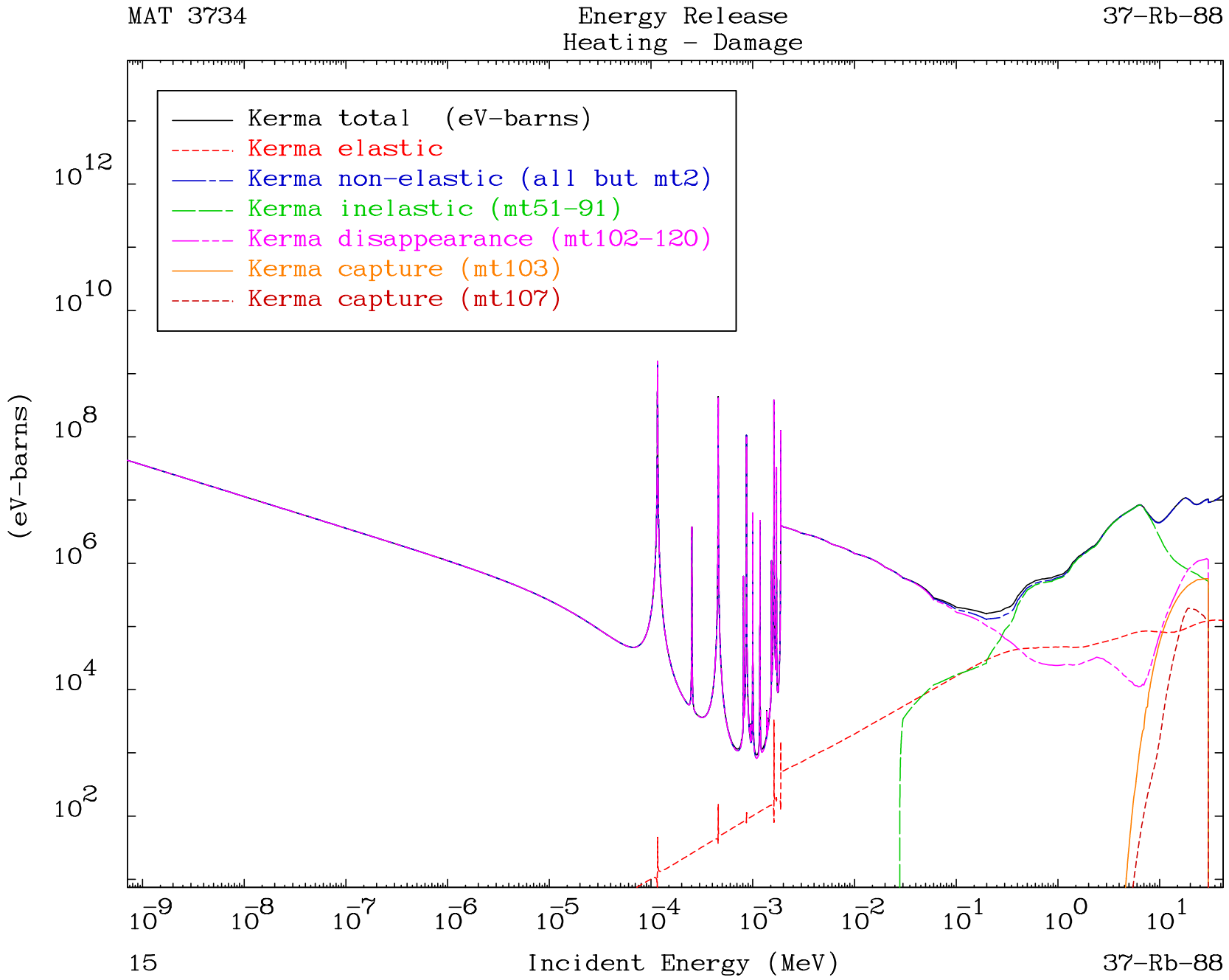

MAT 3734
(n,p) Levels
37-Rb-88
294 Kelvin Cross Sections
(n,p)
Cross Section (barns)
10^-2
10^-4
10^-6
10^-8
5
3
4
5
6
7
8
9
10^1
2
3
10
Incident Energy (MeV)
37-Rb-88

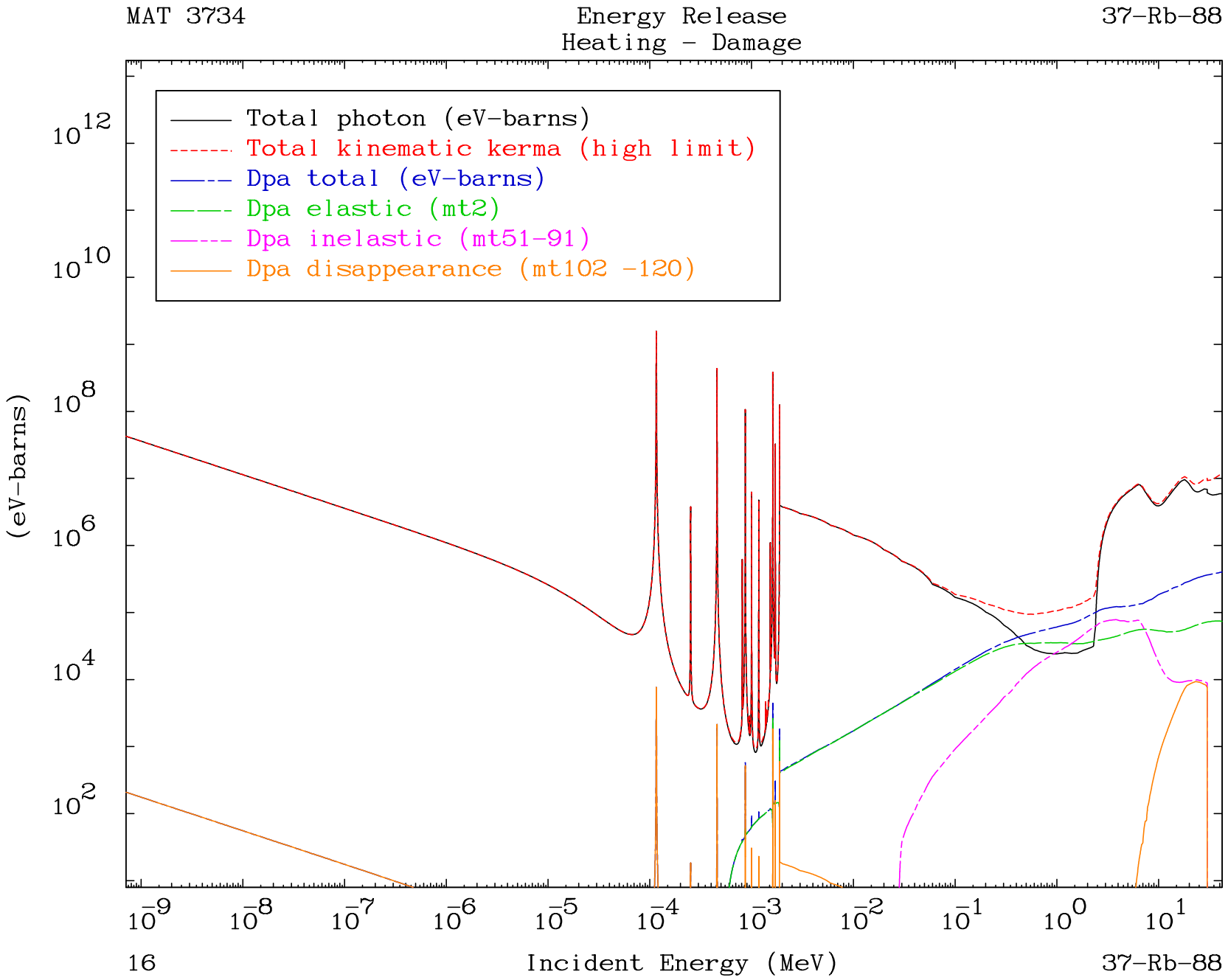

MAT 3734
(n,d) Levels
37-Rb-88
294 Kelvin Cross Sections
(n,d)
Cross Section (barns)
10^-2
5
10^-4
5
10^-6
5
10^-8
5
10
15
20
25
30
11
Incident Energy (MeV)
37-Rb-88

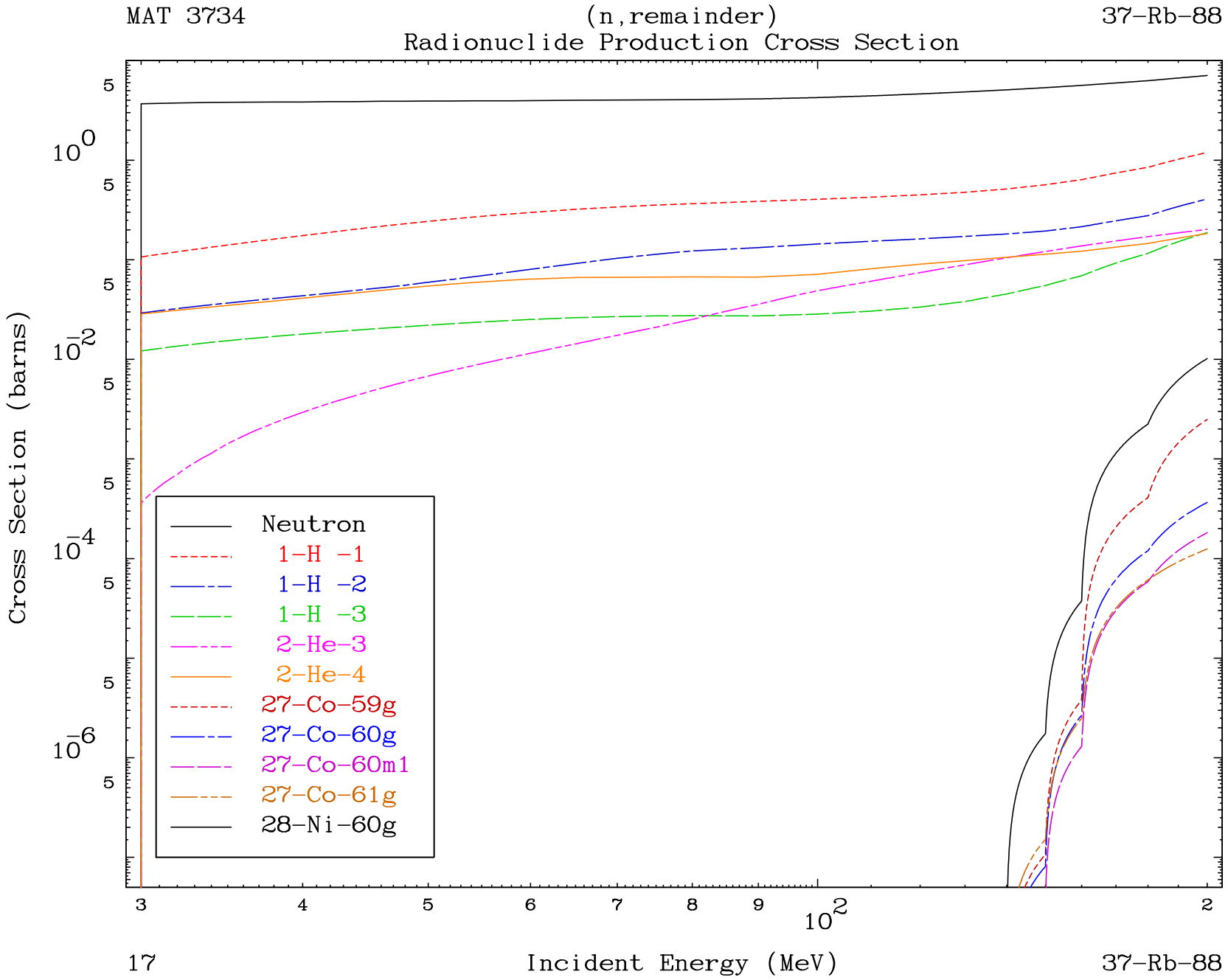

MAT 3734
(n,t) Levels
37-Rb-88
294 Kelvin Cross Sections
(n,t)
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
5
10
15
20
25
30
12
Incident Energy (MeV)
37-Rb-88

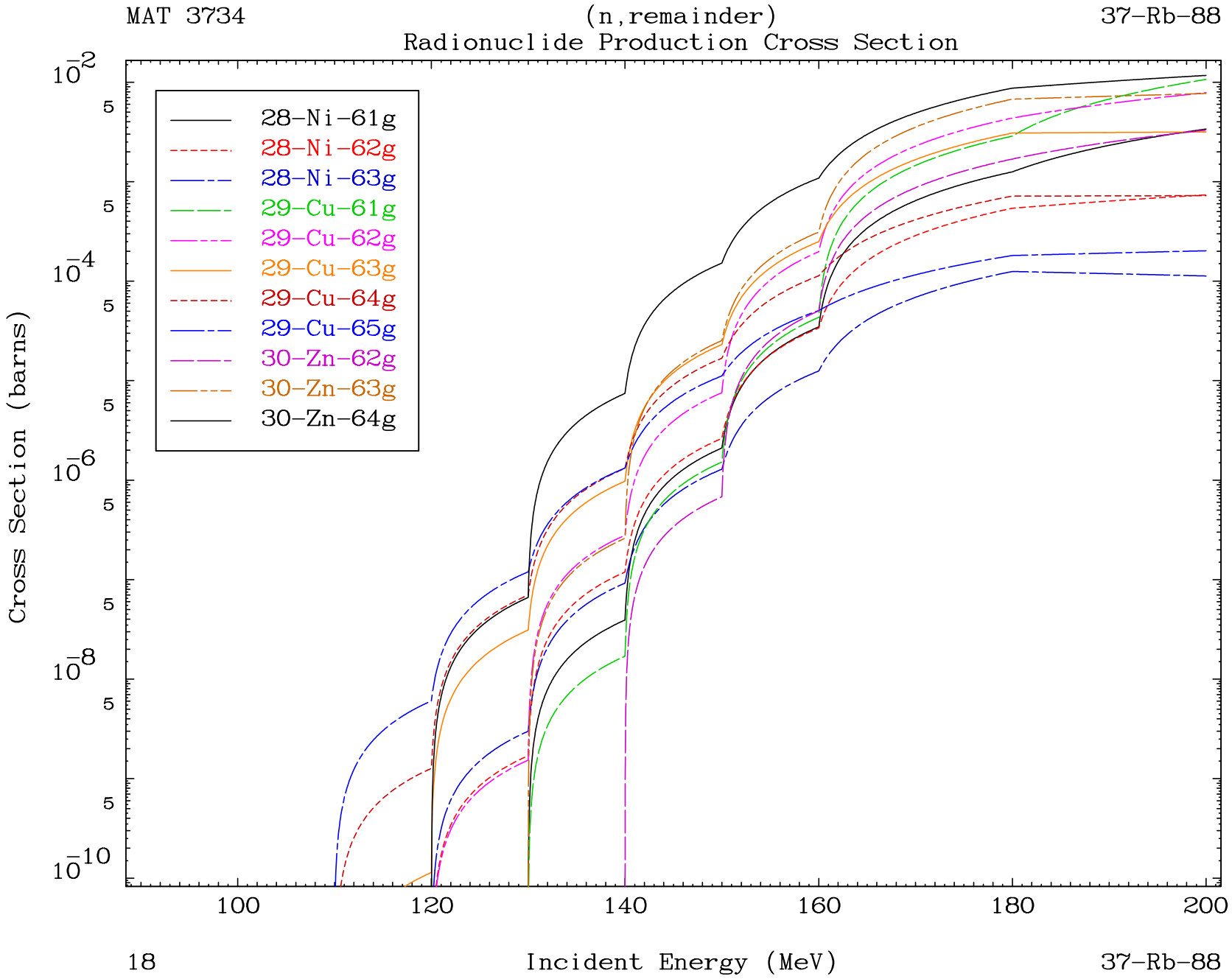

MAT 3734
(n,He3) Levels
37-Rb-88
294 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
10-4
10-6
10-8
10-10
5
15
20
25
30
13
Incident Energy (MeV)
37-Rb-88

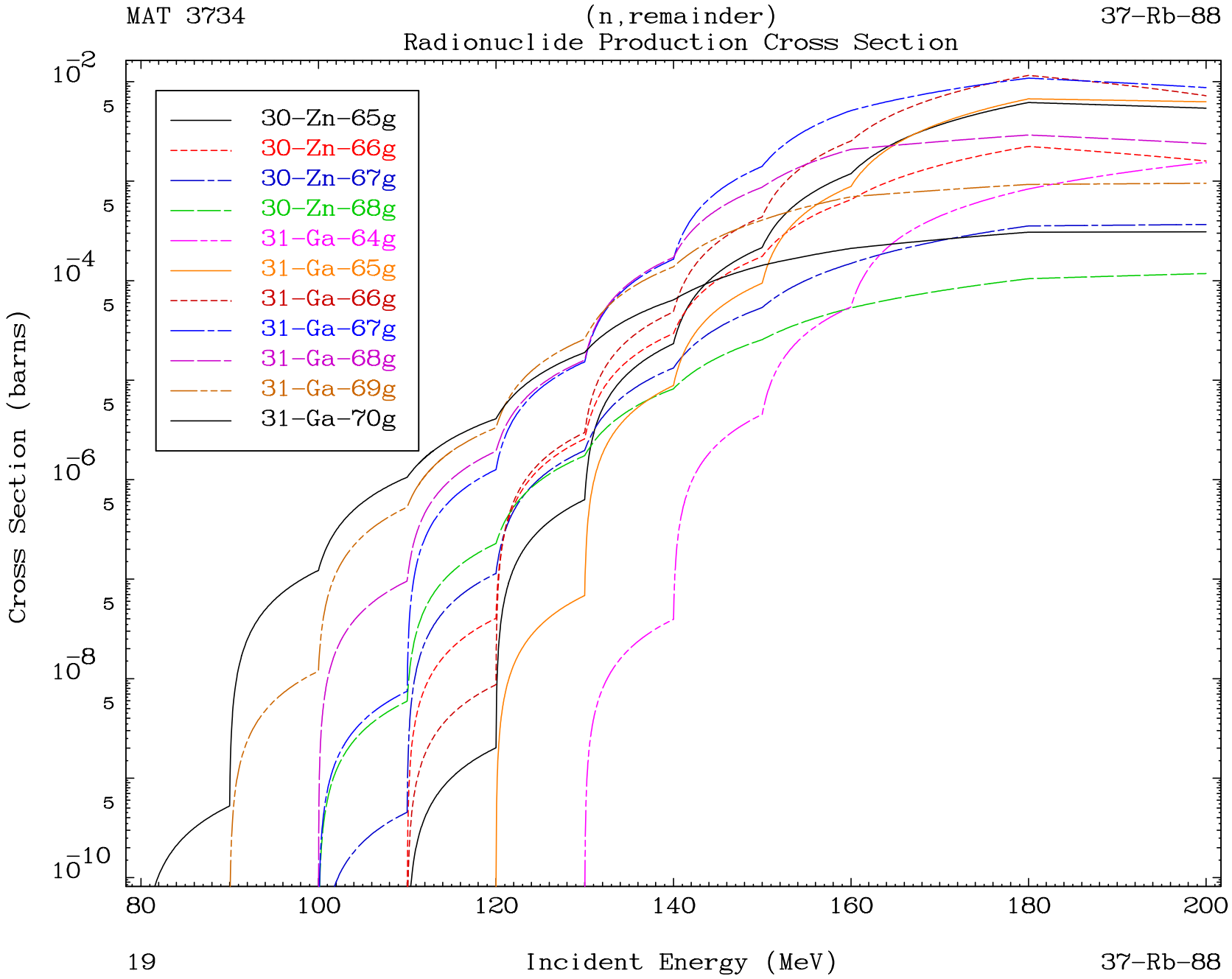

MAT 3734
(n,α) Levels
37-Rb-88
294 Kelvin Cross Sections
(n,α)
Cross Section (barns)
Incident Energy (MeV)
14
37-Rb-88

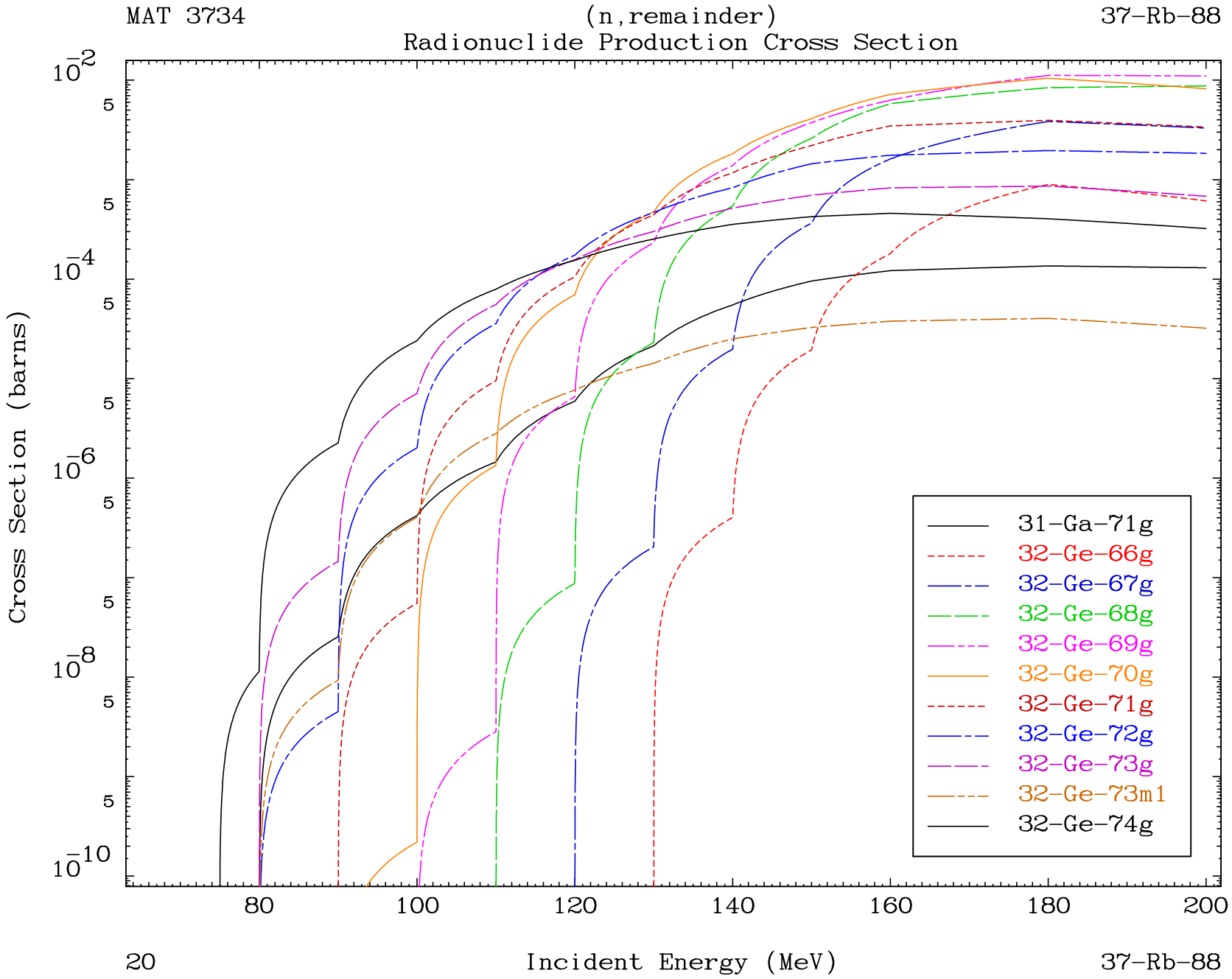

MAT 3734
Energy Release
Heating - Damage
37-Rb-88
Kerma total (eV-barns)
Kerma elastic
Kerma non-elastic (all but mt2)
Kerma inelastic (mt51-91)
Kerma disappearance (mt102-120)
Kerma capture (mt103)
Kerma capture (mt107)
(eV-barns)
10^12
10^10
10^8
10^6
10^4
10^2
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1
Incident Energy (MeV)
15
37-Rb-88

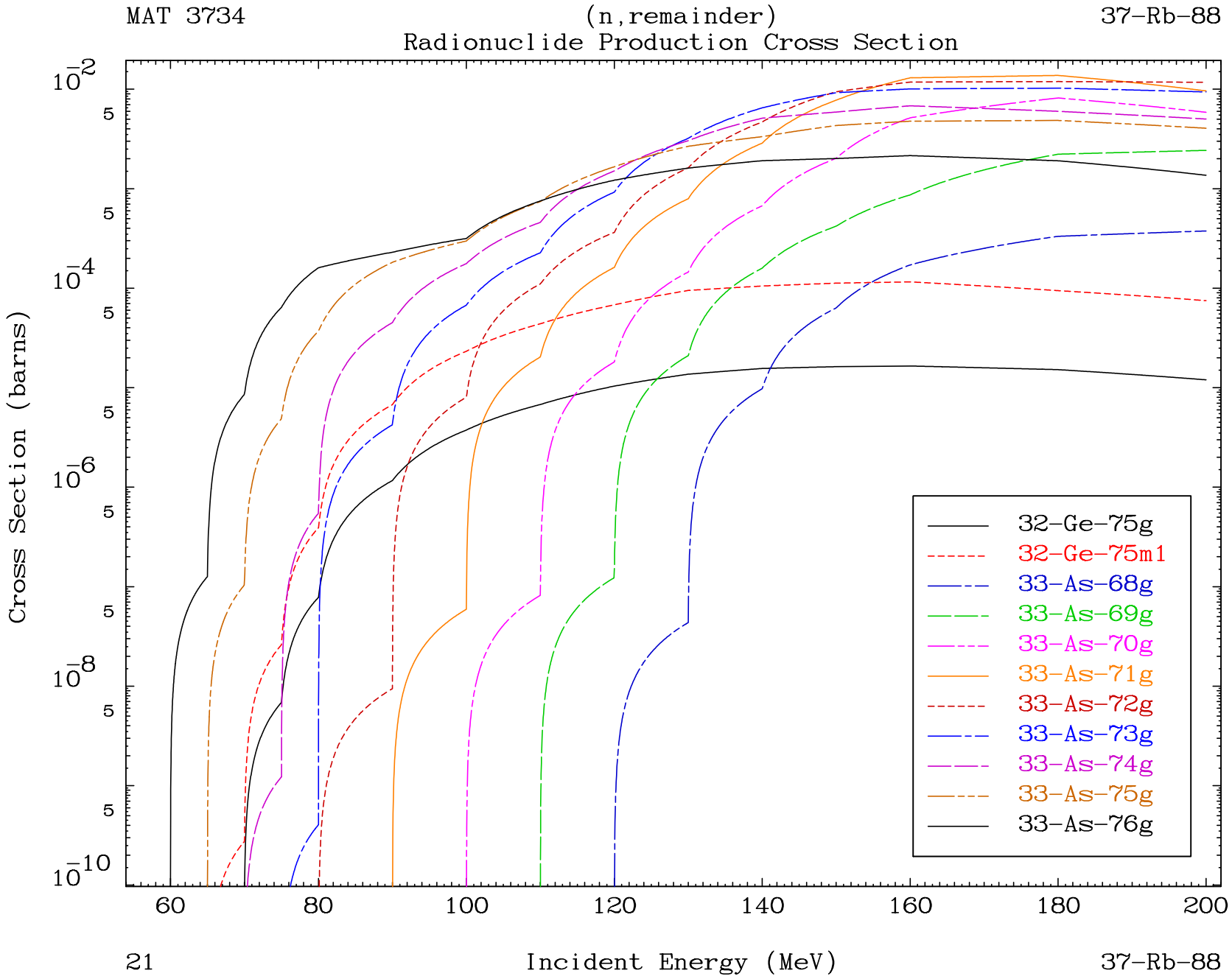

MAT 3734
Energy Release
Heating - Damage
37-Rb-88
Total photon (eV-barns)
Total kinematic kerma (high limit)
Dpa total (eV-barns)
Dpa elastic (mt2)
Dpa inelastic (mt51-91)
Dpa disappearance (mt102 -120)
(eV-barns)
10^12
10^10
10^8
10^6
10^4
10^2
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1
Incident Energy (MeV)
16
37-Rb-88

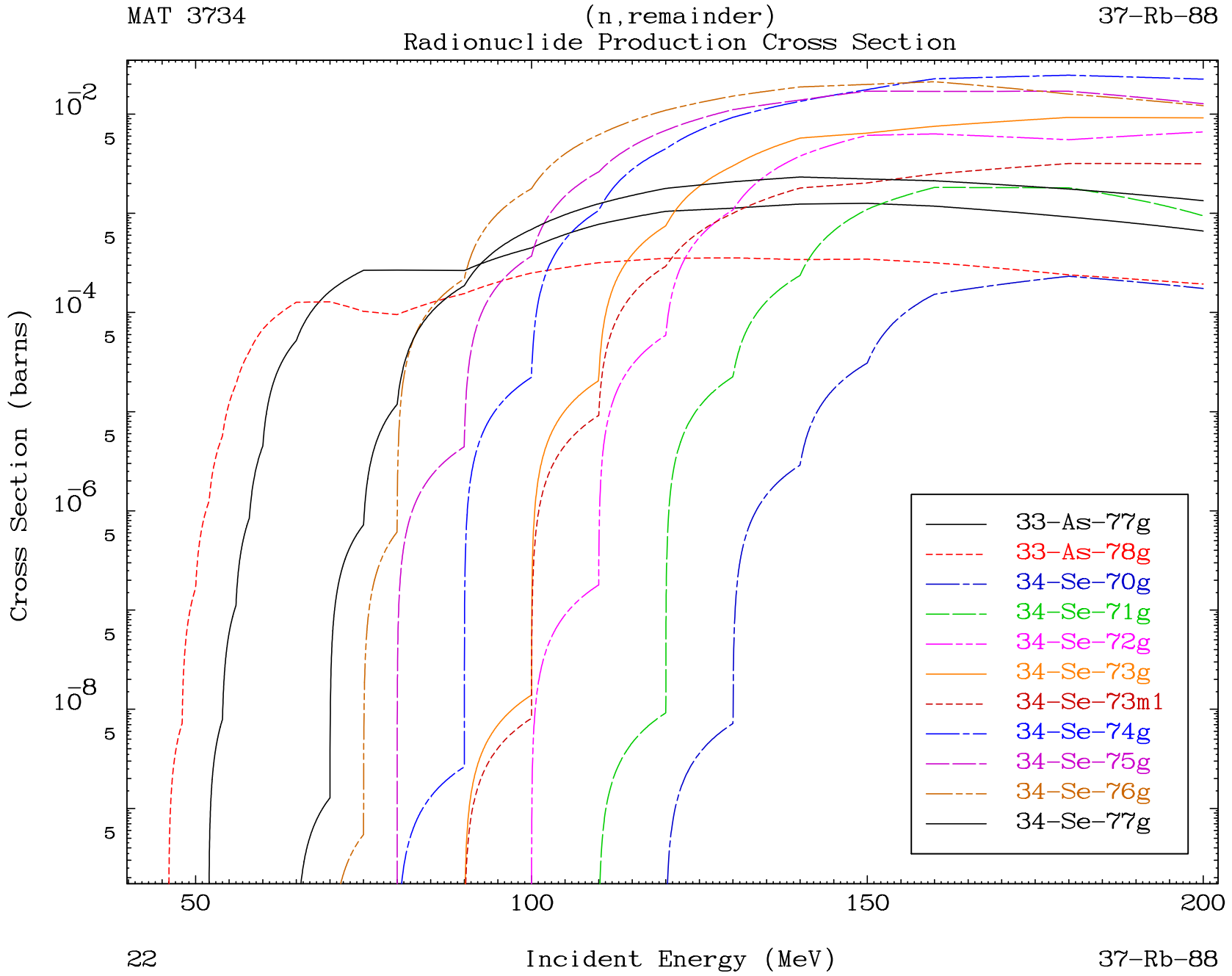

MAT 3734
(n,remainder)
37-Rb-88
Radionuclide Production Cross Section
Cross Section (barns)
10^0
10^-2
10^-4
10^-6
Neutron
1-H -1
1-H -2
1-H -3
2-He-3
2-He-4
27-Co-59g
27-Co-60g
27-Co-60m1
27-Co-61g
28-Ni-60g
3
4
5
6
7
8
9
10^2
2
17
Incident Energy (MeV)
37-Rb-88

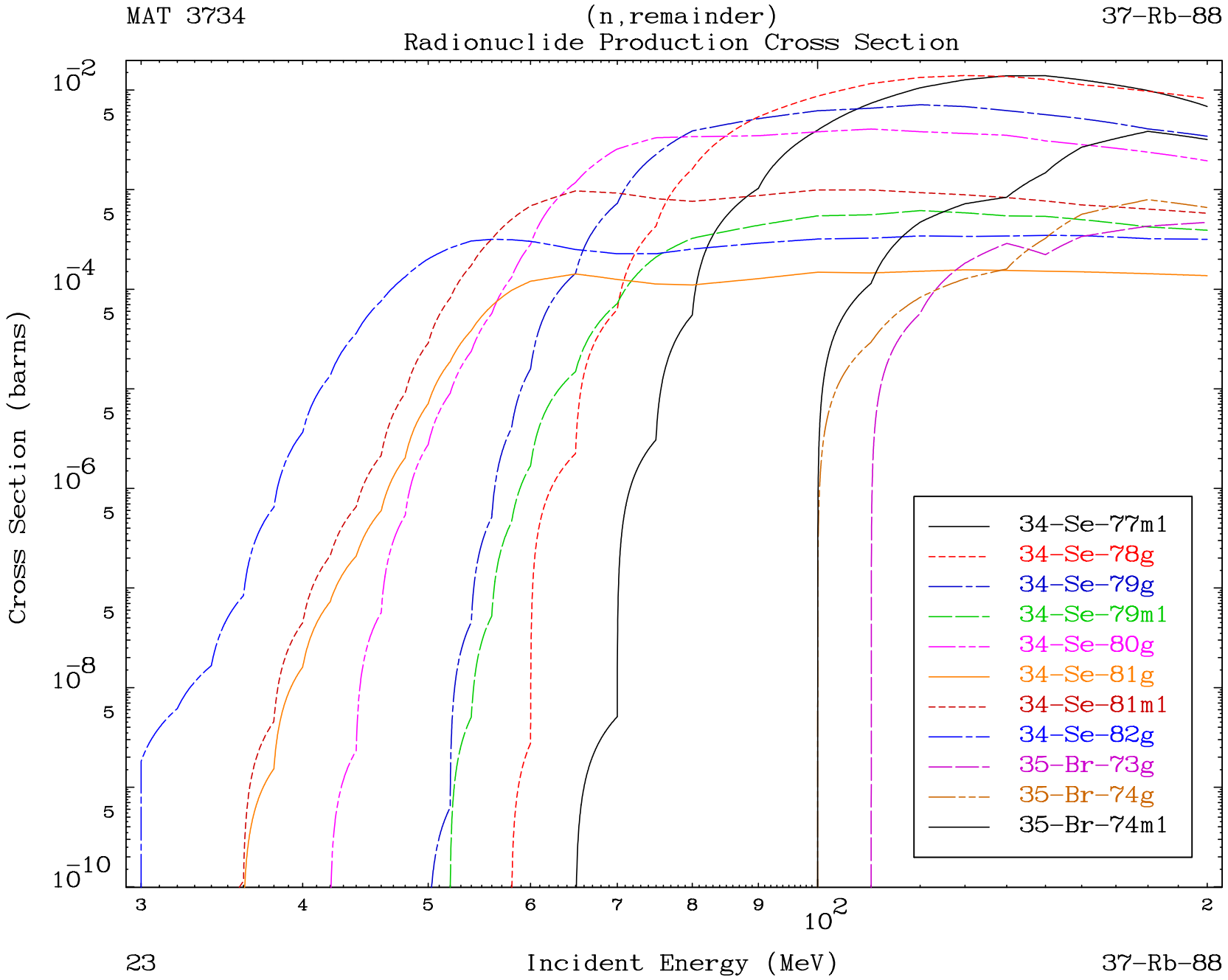

MAT 3734
(n,remainder)
37-Rb-88
Radionuclide Production Cross Section
28-Ni-61g
28-Ni-62g
28-Ni-63g
29-Cu-61g
29-Cu-62g
29-Cu-63g
29-Cu-64g
29-Cu-65g
30-Zn-62g
30-Zn-63g
30-Zn-64g
Cross Section (barns)
10^-2
10^-4
10^-6
10^-8
10^-10
100
120
140
160
180
200
18
Incident Energy (MeV)
37-Rb-88

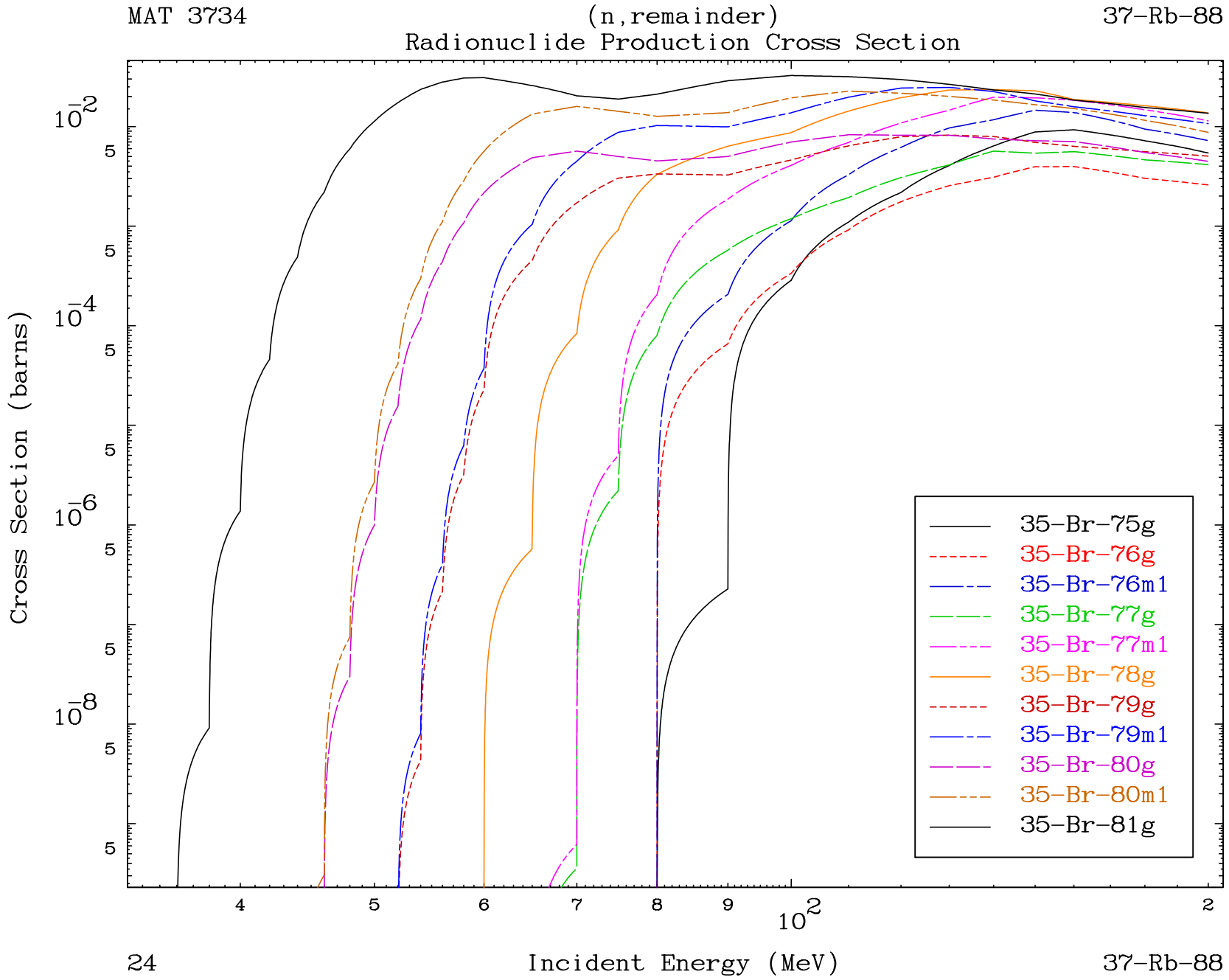

MAT 3734
(n,remainder)
37-Rb-88
Radionuclide Production Cross Section
30-Zn-65g
30-Zn-66g
30-Zn-67g
30-Zn-68g
31-Ga-64g
31-Ga-65g
31-Ga-66g
31-Ga-67g
31-Ga-68g
31-Ga-69g
31-Ga-70g
Cross Section (barns)
10^-2
10^-4
10^-6
10^-8
10^-10
80
100
120
140
160
180
200
19
Incident Energy (MeV)
37-Rb-88


MAT 3734
(n,remainder)
37-Rb-88
Radionuclide Production Cross Section
Cross Section (barns)
10-2
5
10-4
5
10-6
5
10-8
5
10-10
5
80
100
120
140
160
180
200
20
Incident Energy (MeV)
37-Rb-88
31-Ga-71g
32-Ge-66g
32-Ge-67g
32-Ge-68g
32-Ge-69g
32-Ge-70g
32-Ge-71g
32-Ge-72g
32-Ge-73g
32-Ge-73m1
32-Ge-74g

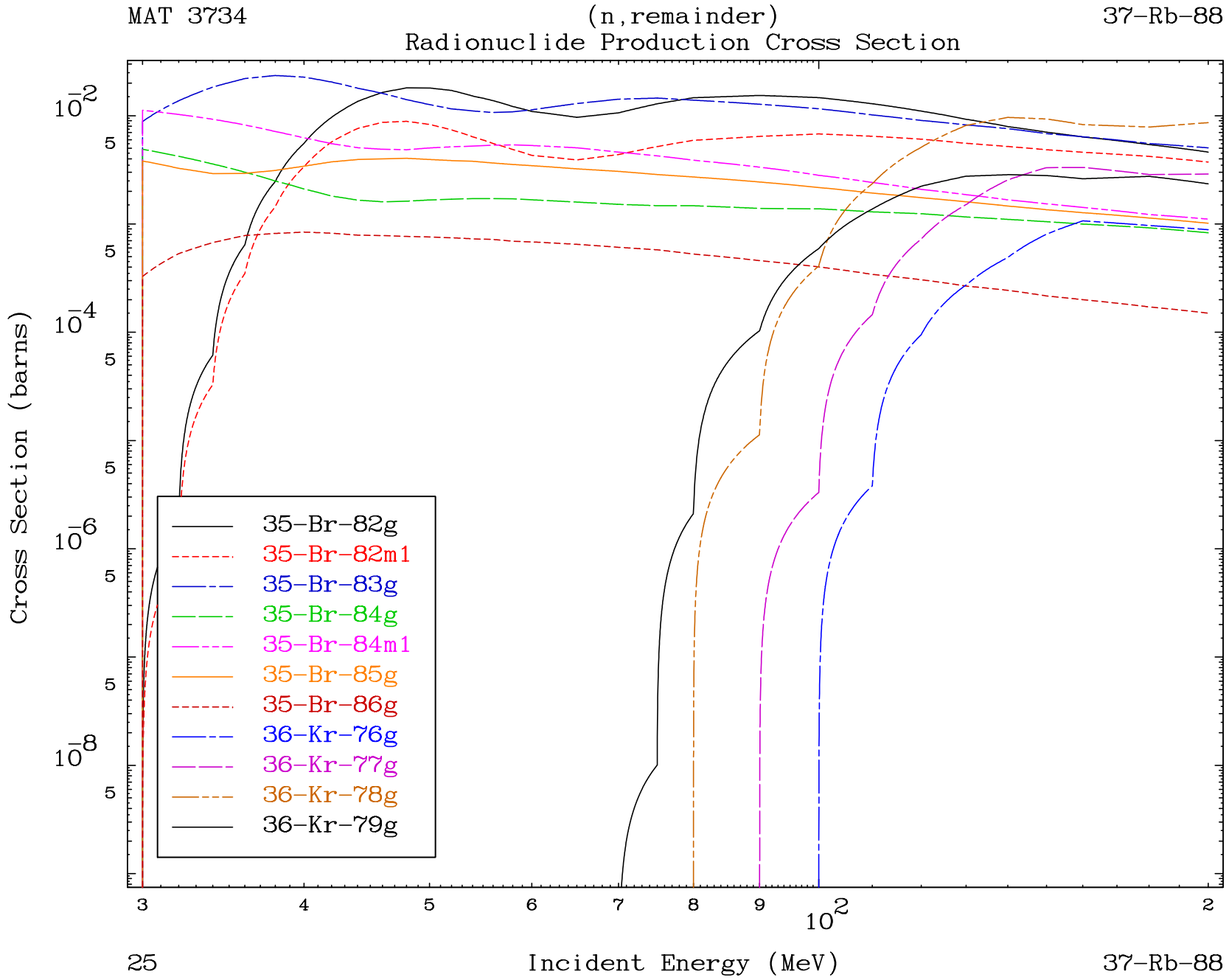

MAT 3734
(n,remainder)
37-Rb-88
Radionuclide Production Cross Section
Cross Section (barns)
10-2
5
10-4
5
10-6
5
10-8
5
10-10
5
60
80
100
120
140
160
180
200
Incident Energy (MeV)
21
37-Rb-88
32-Ge-75g
32-Ge-75m1
33-As-68g
33-As-69g
33-As-70g
33-As-71g
33-As-72g
33-As-73g
33-As-74g
33-As-75g
33-As-76g

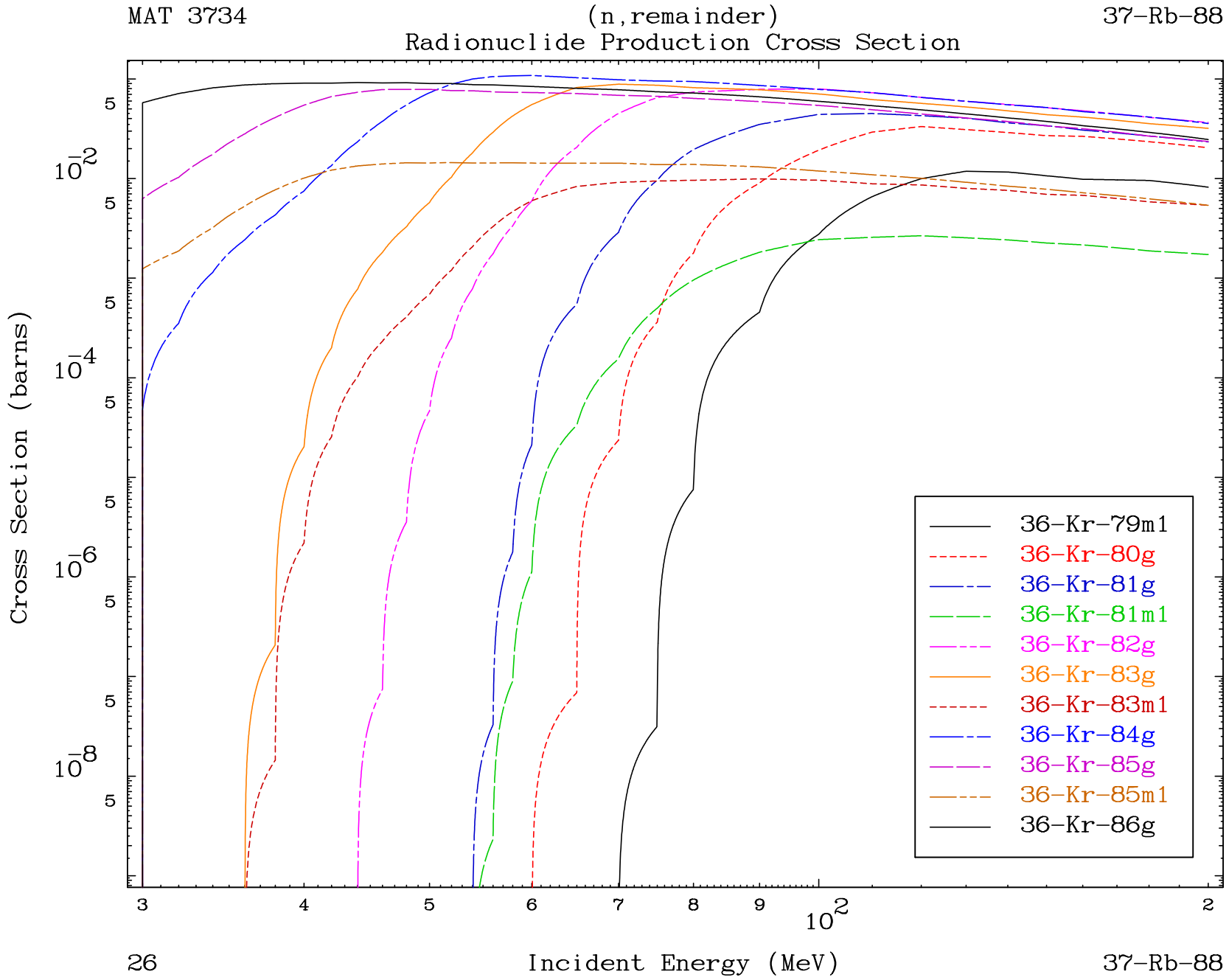

MAT 3734
(n,remainder)
37-Rb-88
Radionuclide Production Cross Section
Cross Section (barns)
10-2
10-4
10-6
10-8
50
100
150
200
Incident Energy (MeV)
22
37-Rb-88
33-As-77g
33-As-78g
34-Se-70g
34-Se-71g
34-Se-72g
34-Se-73g
34-Se-73m1
34-Se-74g
34-Se-75g
34-Se-76g
34-Se-77g

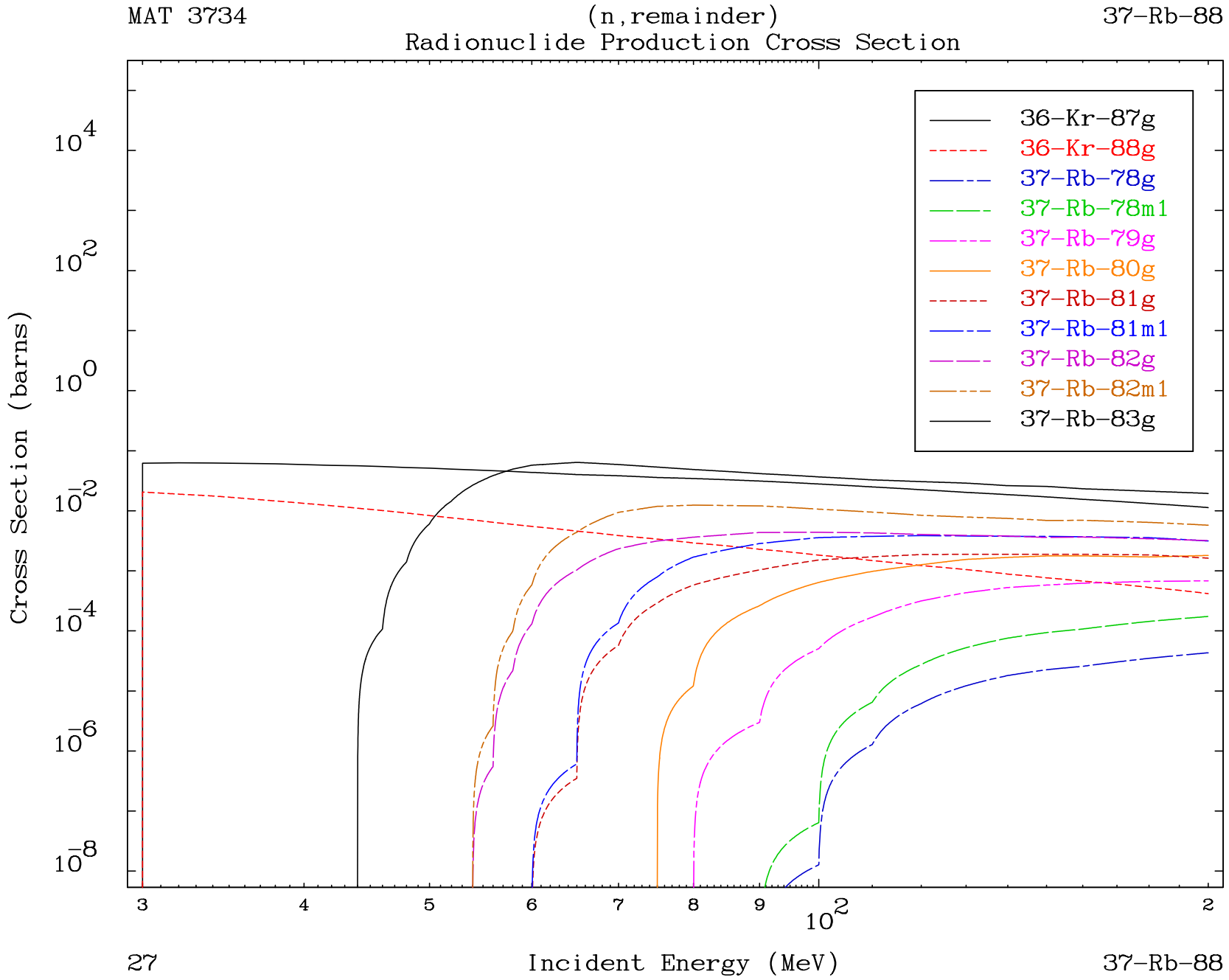

MAT 3734
(n,remainder)
37-Rb-88
Radionuclide Production Cross Section
Cross Section (barns)
10-2
10-4
10-6
10-8
10-10
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
23
37-Rb-88
34-Se-77m1
34-Se-78g
34-Se-79g
34-Se-79m1
34-Se-80g
34-Se-81g
34-Se-81m1
34-Se-82g
35-Br-73g
35-Br-74g
35-Br-74m1

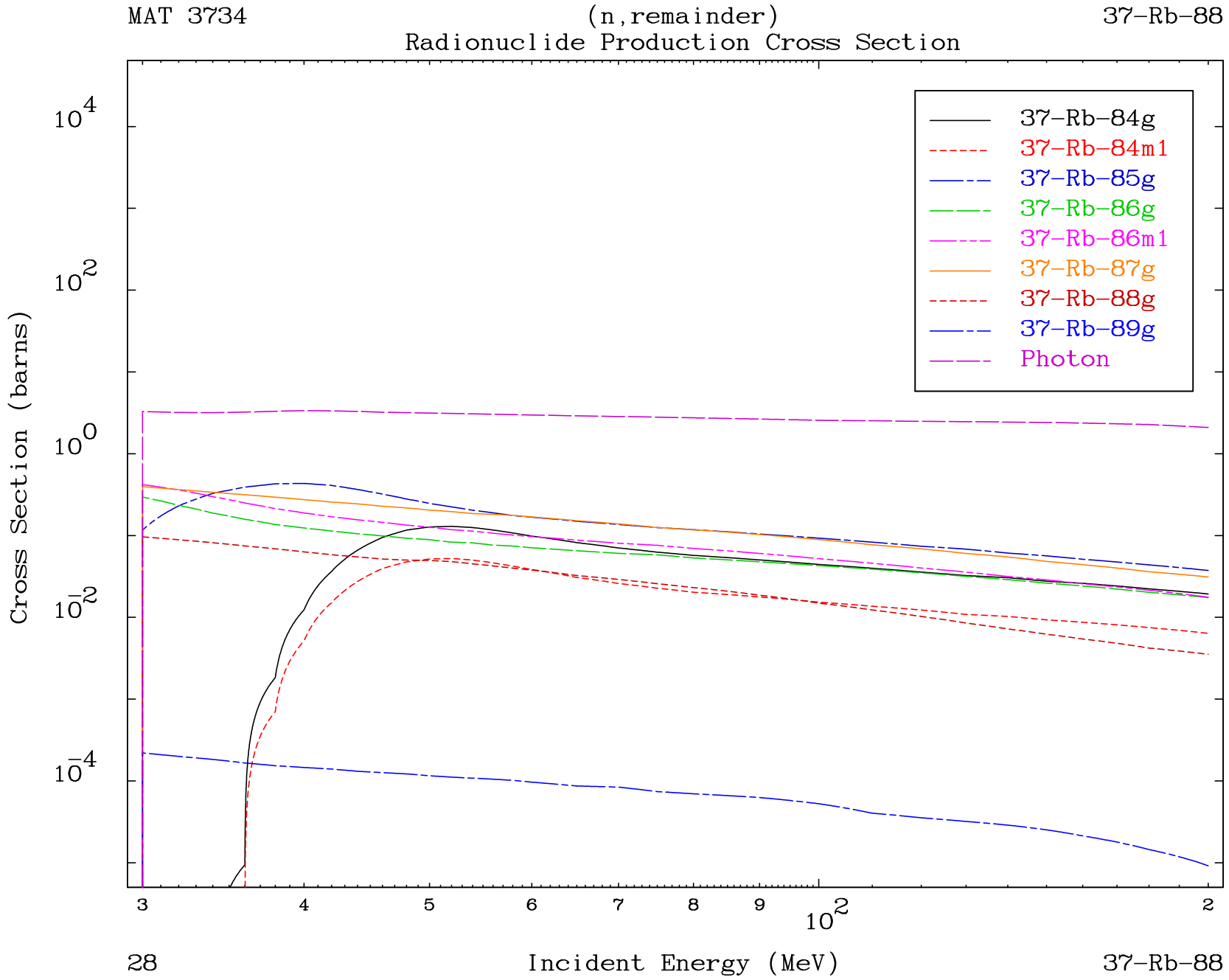

MAT 3734
(n,remainder)
37-Rb-88
Radionuclide Production Cross Section
Cross Section (barns)
10-2
10-4
10-6
10-8
5
4
6
7
8
9
10 2
2
Incident Energy (MeV)
35-Br-75g
35-Br-76g
35-Br-76m1
35-Br-77g
35-Br-77m1
35-Br-78g
35-Br-79g
35-Br-79m1
35-Br-80g
35-Br-80m1
35-Br-81g

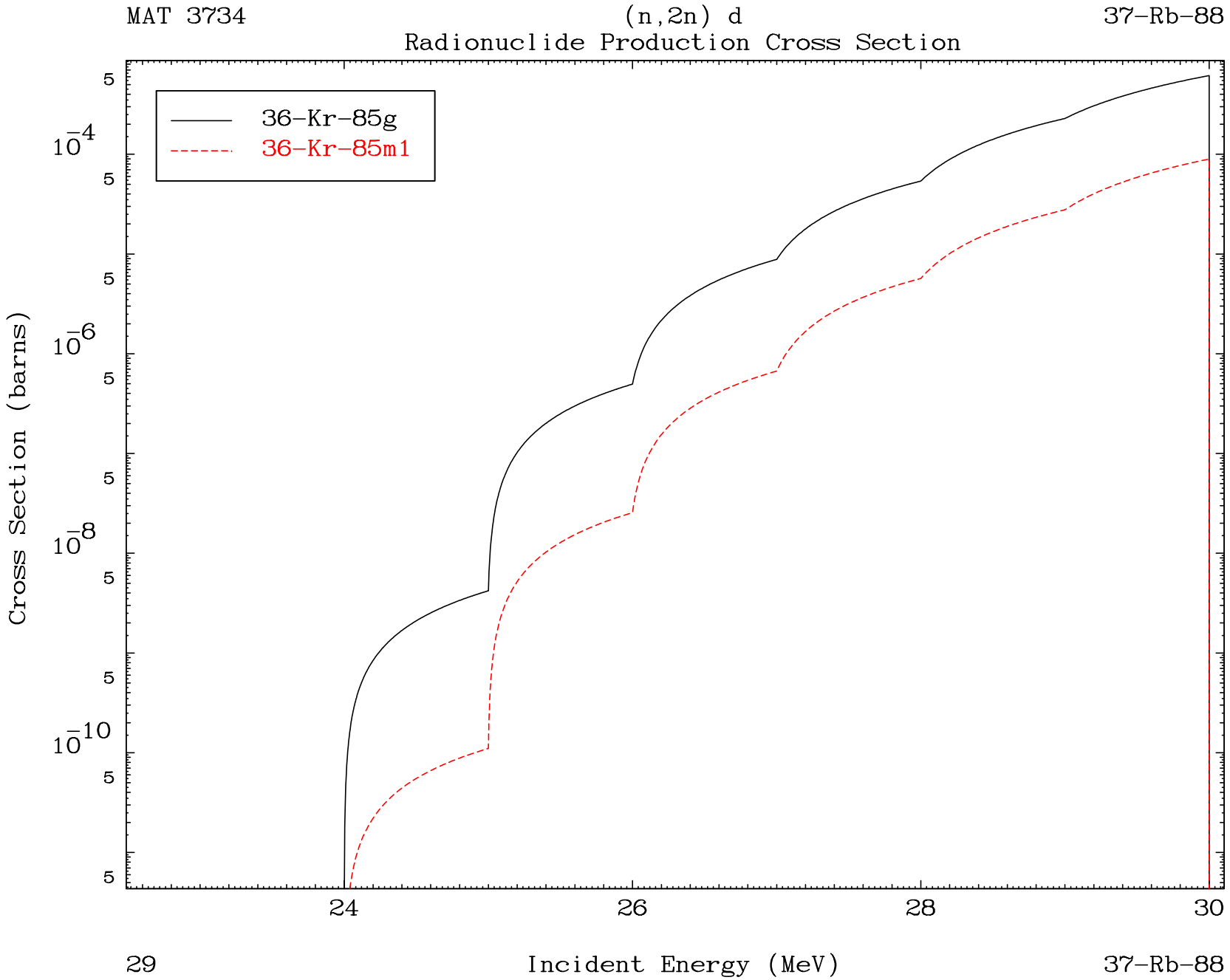
37-Rb-88

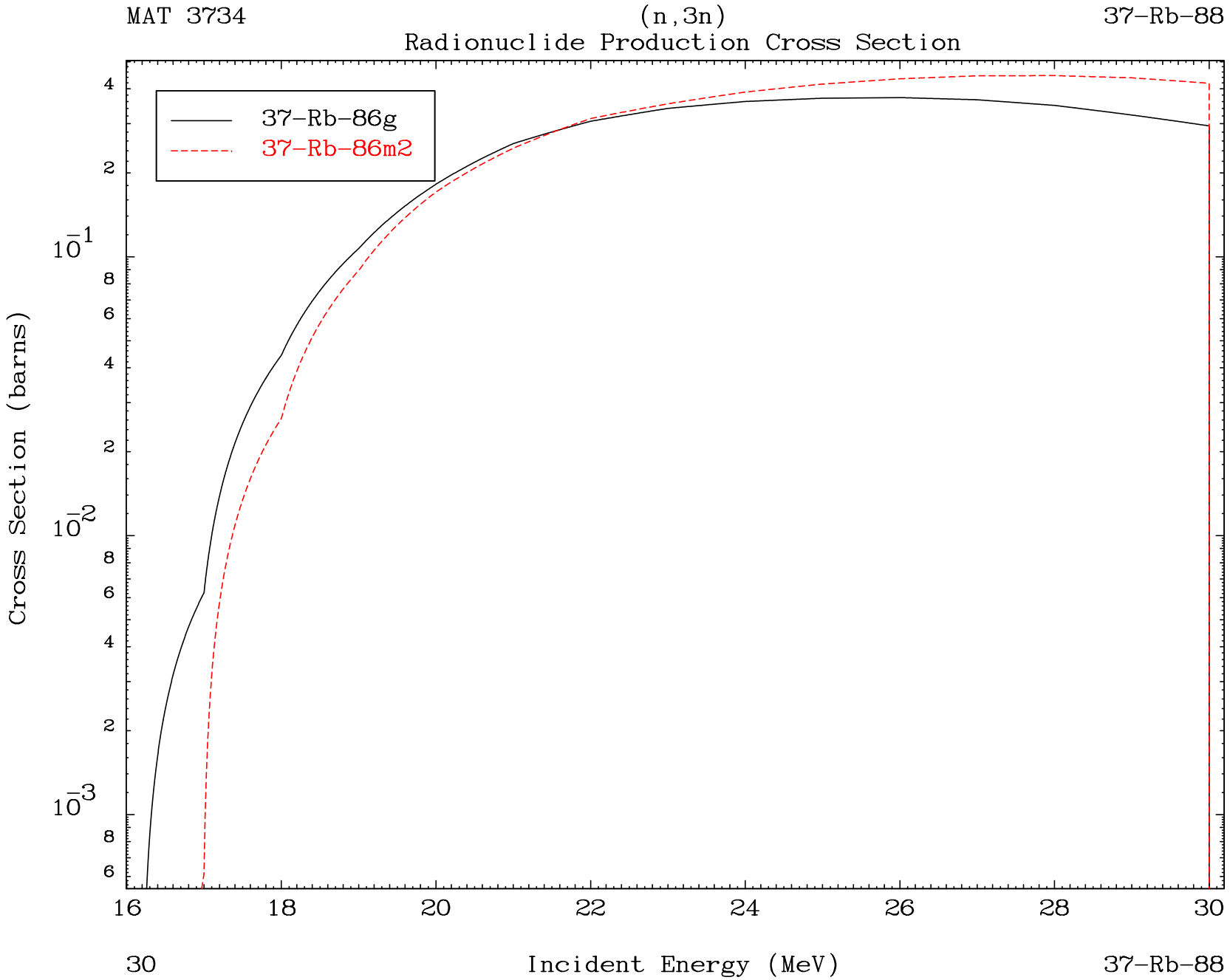

MAT 3734
(n,remainder)
37-Rb-88
Radionuclide Production Cross Section
Cross Section (barns)
10-2
10-4
10-6
10-8
35-Br-82g
35-Br-82m1
35-Br-83g
35-Br-84g
35-Br-84m1
35-Br-85g
35-Br-86g
36-Kr-76g
36-Kr-77g
36-Kr-78g
36-Kr-79g
3
4
5
6
7
8
9
10 2
2
25
Incident Energy (MeV)
37-Rb-88

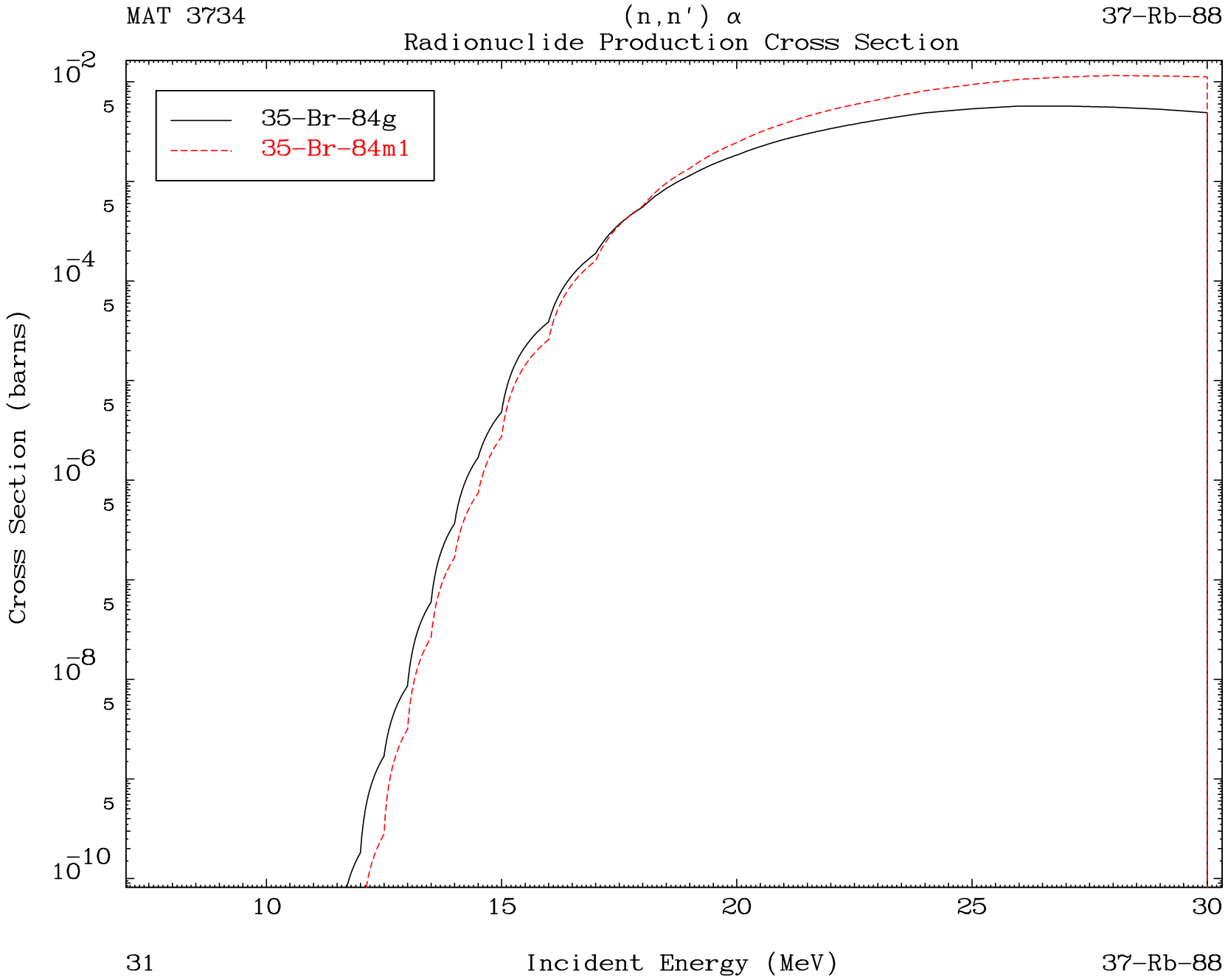

MAT 3734
(n,remainder)
37-Rb-88
Radionuclide Production Cross Section
Cross Section (barns)
10-2
10-4
10-6
10-8
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
26
37-Rb-88
36-Kr-79m1
36-Kr-80g
36-Kr-81g
36-Kr-81m1
36-Kr-82g
36-Kr-83g
36-Kr-83m1
36-Kr-84g
36-Kr-85g
36-Kr-85m1
36-Kr-86g

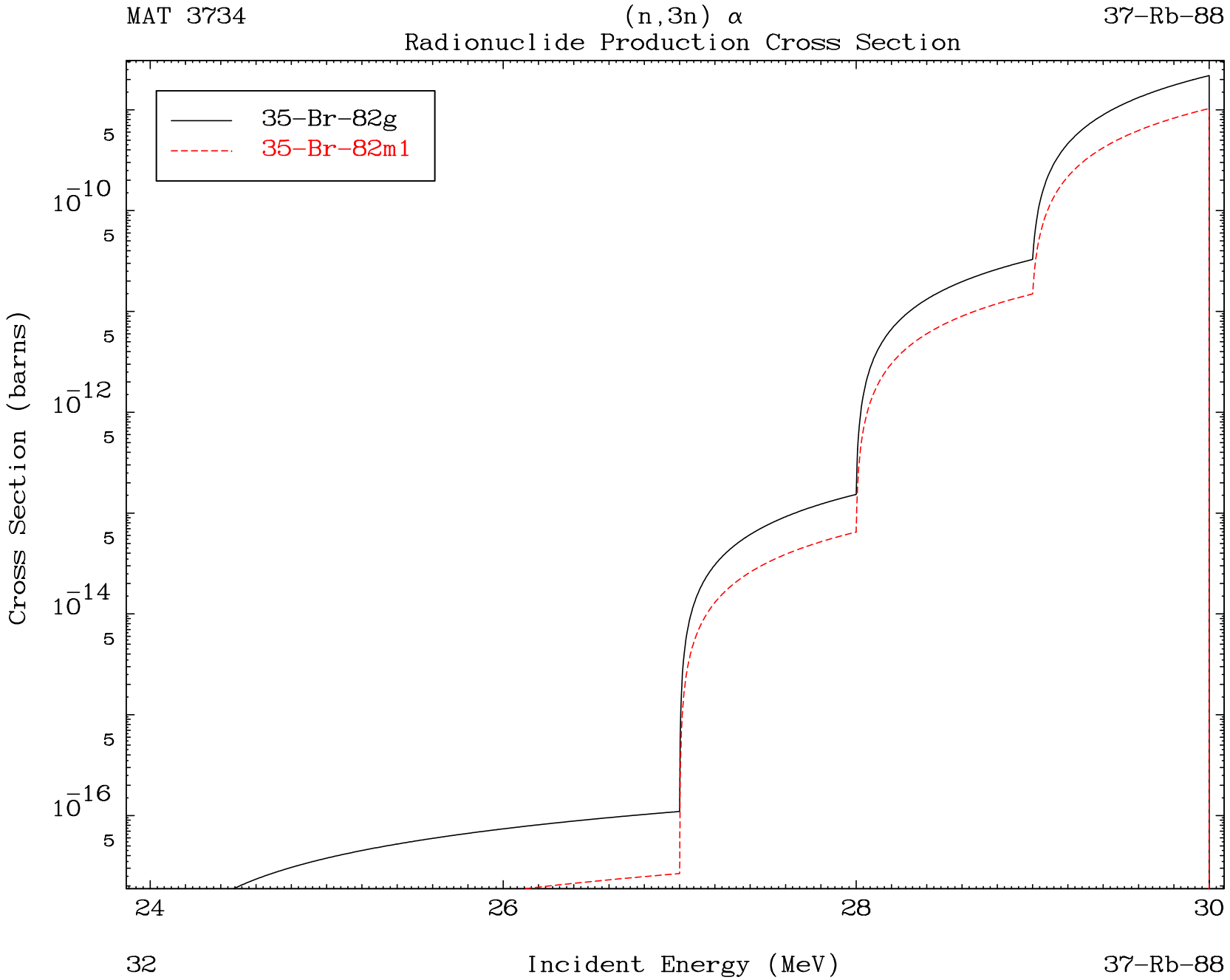

MAT 3734
(n,remainder)
37-Rb-88
Radionuclide Production Cross Section
36-Kr-87g
36-Kr-88g
37-Rb-78g
37-Rb-78m1
37-Rb-79g
37-Rb-80g
37-Rb-81g
37-Rb-81m1
37-Rb-82g
37-Rb-82m1
37-Rb-83g
Cross Section (barns)
10^4
10^2
10^0
10^-2
10^-4
10^-6
10^-8
3
4
5
6
7
8
9
10^2
2
27
Incident Energy (MeV)
37-Rb-88

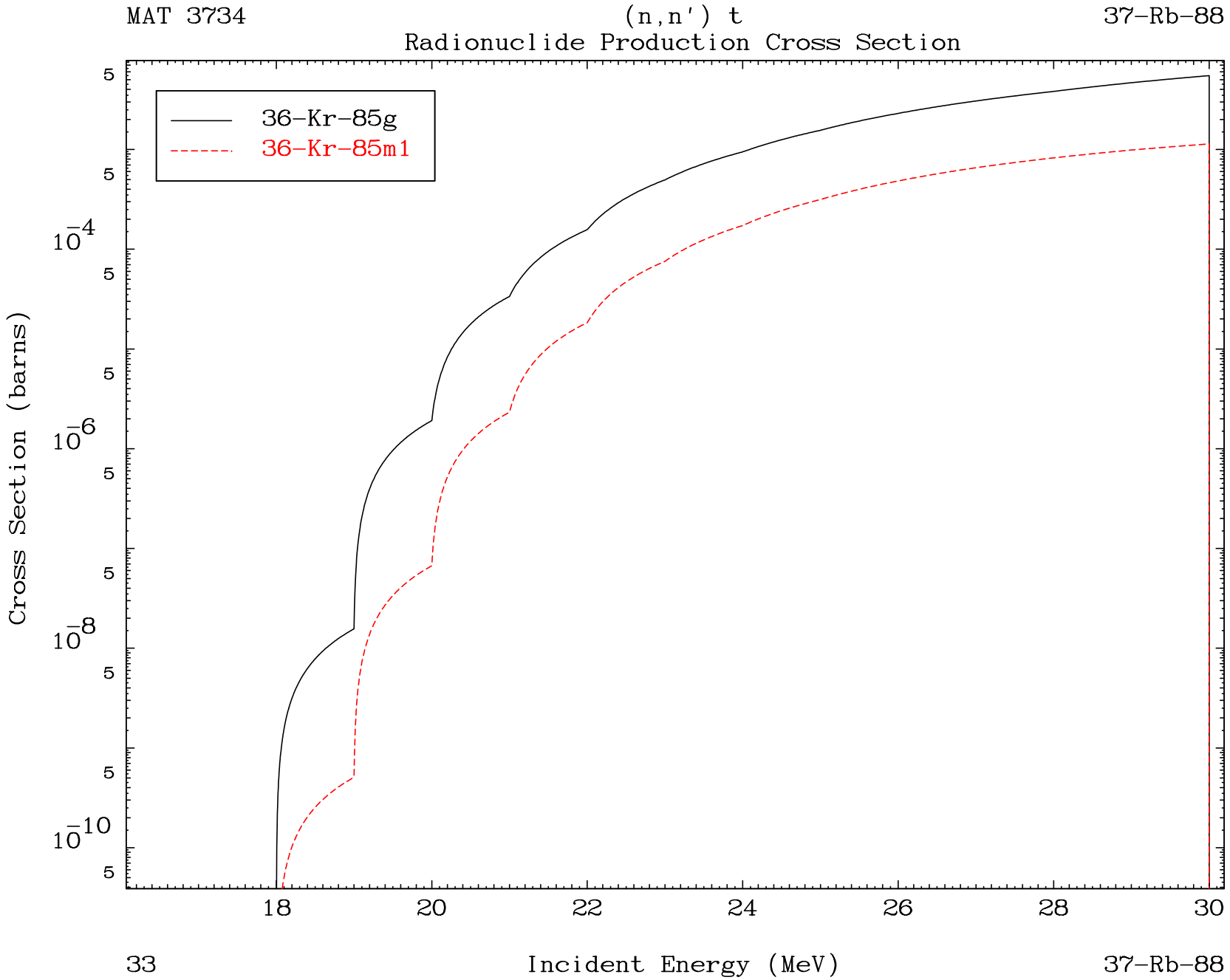

MAT 3734
(n,remainder)
37-Rb-88
Radionuclide Production Cross Section
37-Rb-84g
37-Rb-84m1
37-Rb-85g
37-Rb-86g
37-Rb-86m1
37-Rb-87g
37-Rb-88g
37-Rb-89g
Photon
Cross Section (barns)
10^4
10^2
10^0
10^-2
10^-4
3
4
5
6
7
8
9
10^2
2
28
Incident Energy (MeV)
37-Rb-88

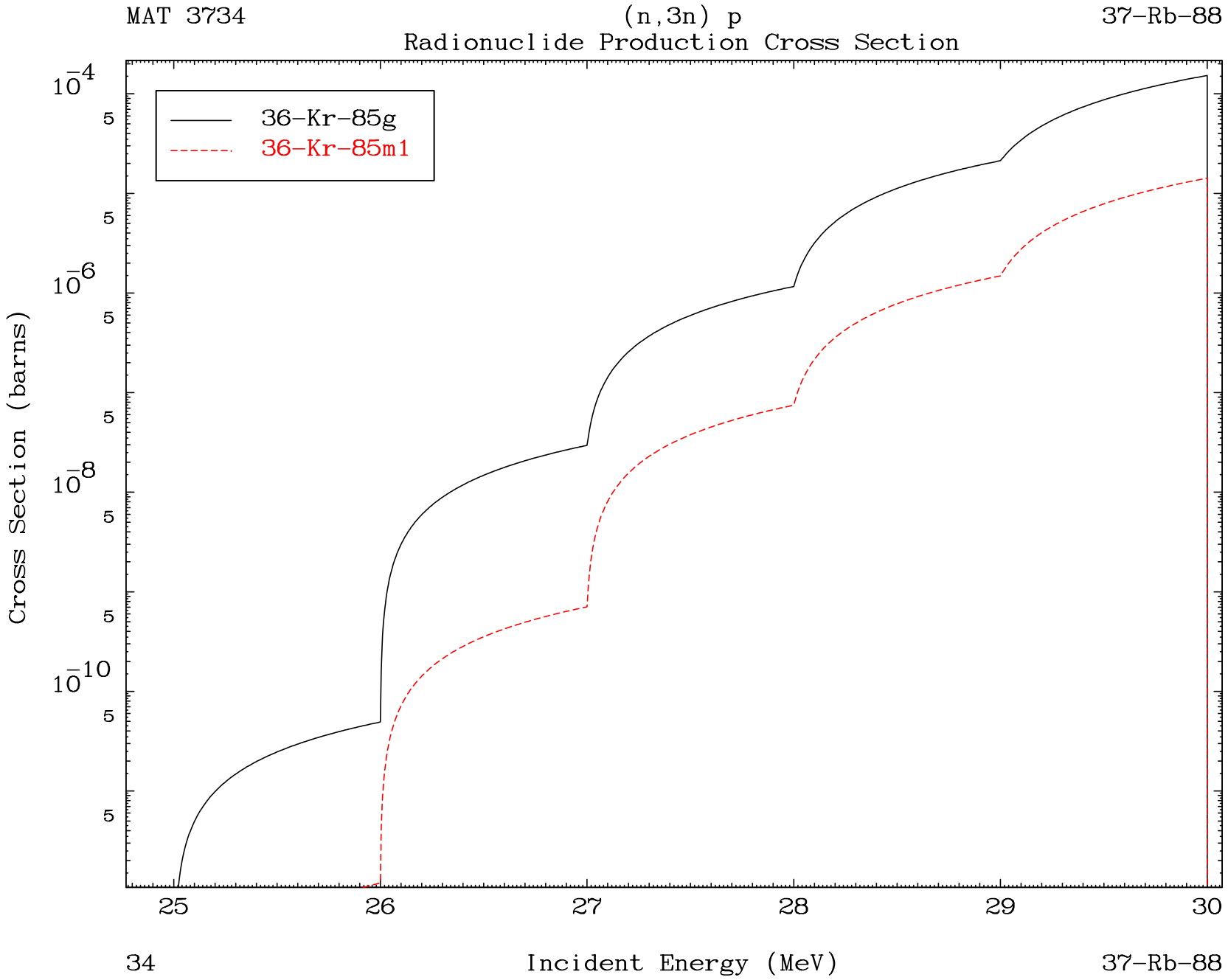

MAT 3734
(n,2n) d
37-Rb-88
Radionuclide Production Cross Section
36-Kr-85g
36-Kr-85m1
Cross Section (barns)
10-4
10-6
10-8
10-10
5
24
26
28
30
29
Incident Energy (MeV)
37-Rb-88

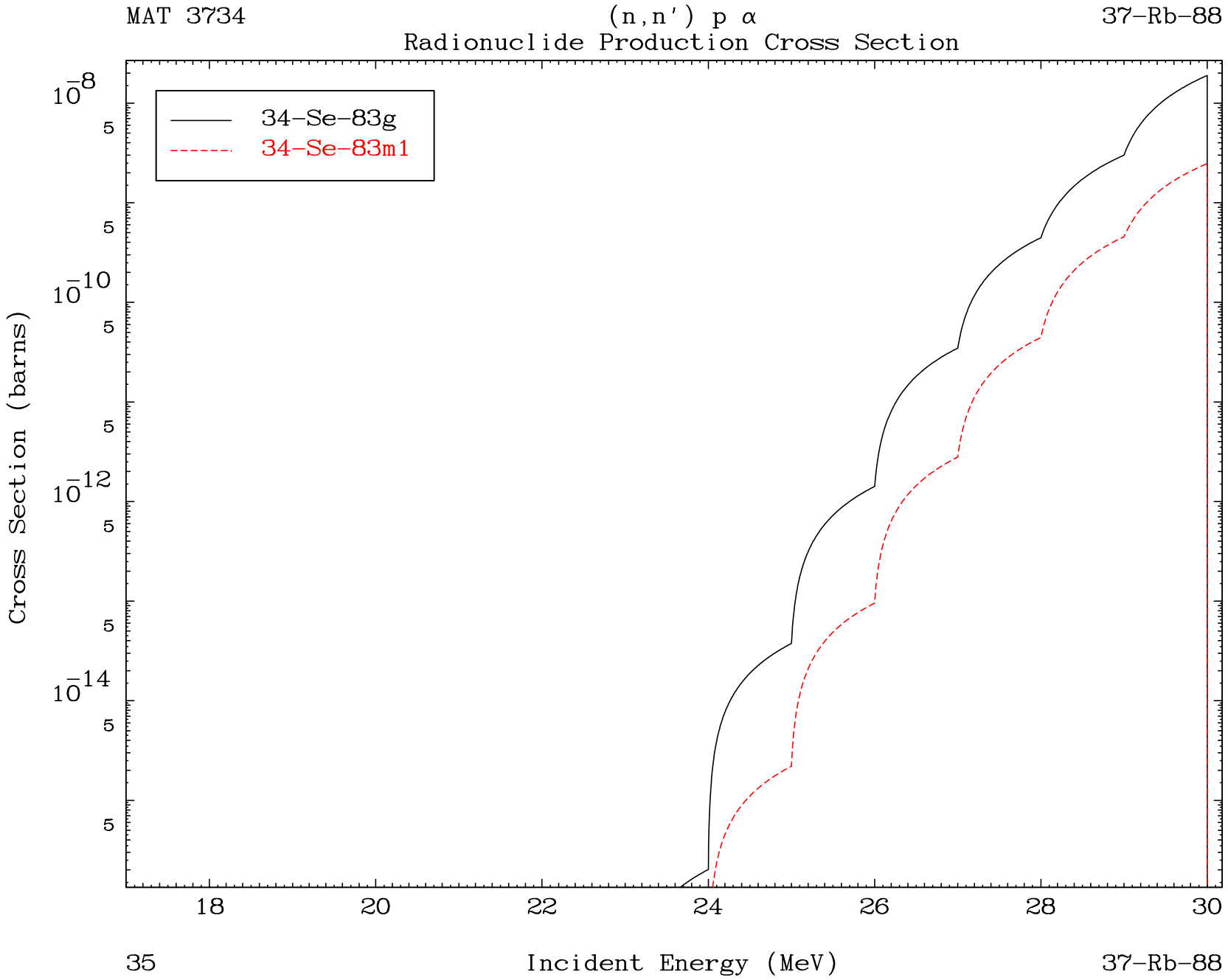

MAT 3734
(n,3n)
37-Rb-88
Radionuclide Production Cross Section
37-Rb-86g
37-Rb-86m2
Cross Section (barns)
10-1
10-2
10-3
4
2
8
6
16
18
20
22
24
26
28
30
30
Incident Energy (MeV)
37-Rb-88

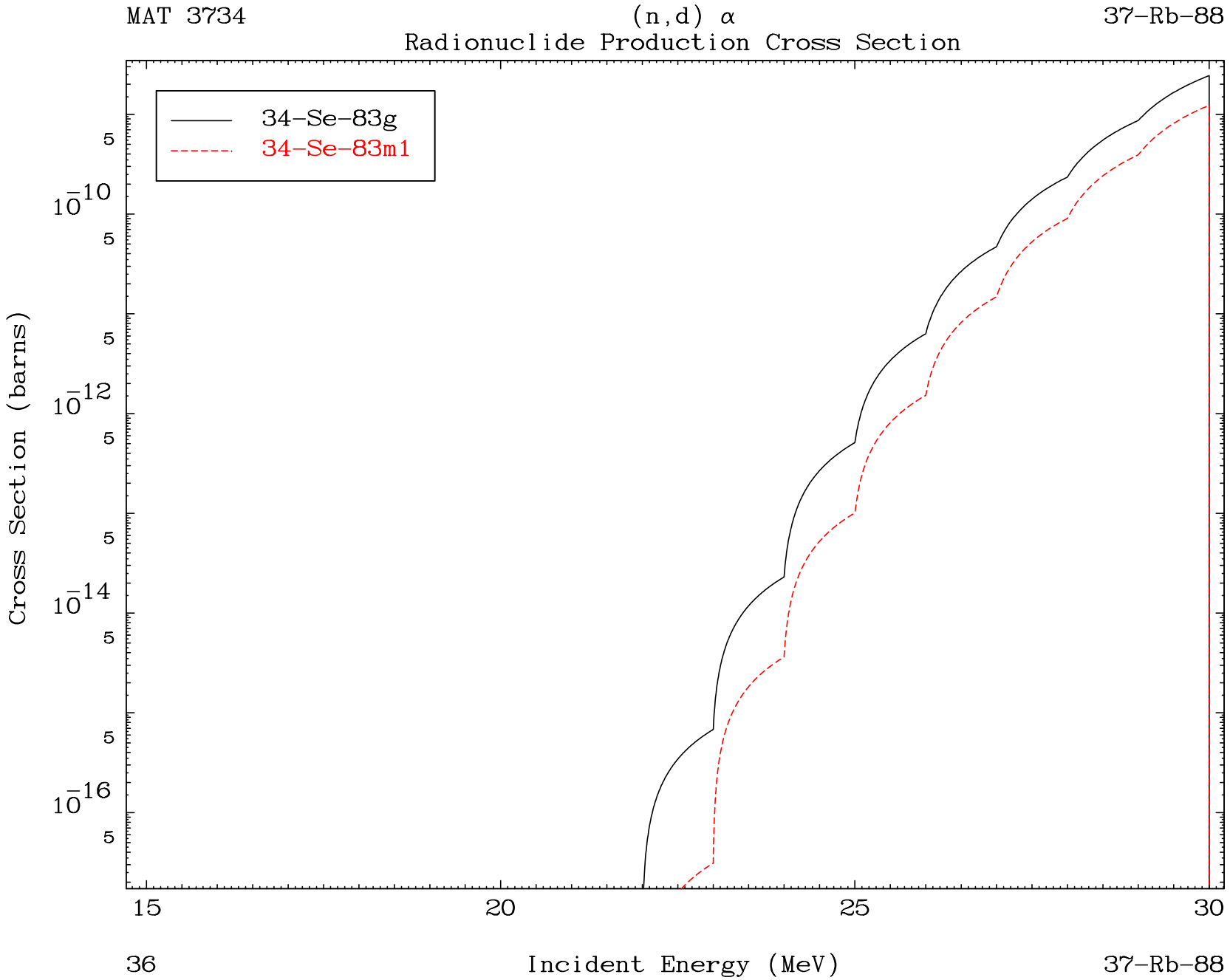

MAT 3734
(n,n') α
37-Rb-88
Radionuclide Production Cross Section
35-Br-84g
35-Br-84m1
Cross Section (barns)
10^-2
5
10^-4
5
10^-6
5
10^-8
5
10^-10
10
15
20
25
30
31
Incident Energy (MeV)
37-Rb-88


MAT 3734
(n,3n) α
37-Rb-88
Radionuclide Production Cross Section
35-Br-82g
35-Br-82m1
Cross Section (barns)
10-10
10-12
10-14
10-16
5
24
26
28
30
32
Incident Energy (MeV)
37-Rb-88


MAT 3734
(n,n') t
37-Rb-88
Radionuclide Production Cross Section
36-Kr-85g
36-Kr-85m1
Cross Section (barns)
10-4
10-6
10-8
10-10
18
20
22
24
26
28
30
33
Incident Energy (MeV)
37-Rb-88


MAT 3734
(n,3n) p
37-Rb-88
Radionuclide Production Cross Section
36-Kr-85g
36-Kr-85m1
Cross Section (barns)
10-4
5
10-6
5
10-8
5
10-10
5
5
25
26
27
28
29
30
34
Incident Energy (MeV)
37-Rb-88


MAT 3734
(n,n') p α
37-Rb-88
Radionuclide Production Cross Section
34-Se-83g
34-Se-83m1
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
18
20
22
24
26
28
30
35
Incident Energy (MeV)
37-Rb-88


MAT 3734
(n,d) α
37-Rb-88
Radionuclide Production Cross Section
34-Se-83g
34-Se-83m1
Cross Section (barns)
10-10
10-12
10-14
10-16
5
15
20
25
30
36
Incident Energy (MeV)
37-Rb-88