17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section

Cross section (barns)

Energy (MeV)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance total cross section
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ resonance absorption cross sections

Cross section (barns)

Energy (MeV)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

![Graph showing energy (MeV) vs. cross section (barns) for capture cross sections with sharp peaks at various energies.](image-url)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
resonance absorption cross sections

Energy (MeV)

Cross section (barns)

10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^0

10^1
10^2
10^3
10^4
10^5
10^6

capture
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ resonance absorption cross sections

![Graph showing energy (MeV) on the x-axis and cross section (barns) on the y-axis, with a curve labeled "capture" indicating the cross section behavior over a range of energies.](image)
Damage

Energy (MeV)

Damage (MeV-barns)

-10^1
-10^{-2}
-10^{-3}
-10^{-4}
-10^{-5}
-10^{-6}
-10^{-9}
-10^{-11}

-10^{-3}
-10^{-5}
-10^{-7}
-10^{-9}
-10^{-11}

10^1
10^{-1}
10^{-3}
10^{-5}
10^{-7}
10^{-9}
10^{-11}

17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+

Damage

damage
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Non-threshold reactions

Energy (MeV)

Cross section (barns)

(n,gma)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Principal cross sections

Energy (MeV)

Cross section (barns)

total
absorption
elastic
gamma production
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+

Heating

![Graph showing the relationship between Energy (MeV) and Heating (MeV/reaction). The graph displays a positive correlation, with Heating increasing as Energy increases.](image-url)
Non-threshold reactions
Inelastic levels

Energy (MeV)

Cross section (barns)

(n,n\textsuperscript{1})

(n,n\textsuperscript{2})

(n,n\textsuperscript{3})

(n,n\textsuperscript{4})

(n,n\textsuperscript{5})
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

Energy (MeV)

Cross section (barns)

*10^{-3}

(n,n*6)
(n,n*7)
(n,n*8)
(n,n*9)
(n,n*10)

Energy (MeV)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

![Graph showing cross section versus energy for different inelastic levels (n,n*11) to (n,n*15). The x-axis represents energy in MeV, ranging from 4 to 20, and the y-axis represents cross section in barns, ranging from 0 to 50.*10^-3. Curves for each level are distinguished by different colors.](Image)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

Cross section (barns)

Energy (MeV)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

![Graph showing cross sections for different reactions as a function of energy (MeV).](image)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Inelastic levels

![Graph showing cross section vs. energy for (n,n*26) and (n,n*27)]
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

![Graph showing cross sections of different reactions vs energy (MeV). The graph includes lines for (n,x), (n,2n), (n,3n), (n,n*)a, and (n,n*)p. The cross sections are measured in barns.]
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

Energy (MeV)

Cross section (barns)

- (n,d*0)
- (n,d*1)
- (n,d*2)
- (n,d*3)
- (n,d*4)

Energy (MeV)
Threshold reactions

Cross section (barns) vs. Energy (MeV) graph showing different reactions:
- \((n,d^{*10})\)
- \((n,d^{*11})\)
- \((n,d^{*c})\)
- \((n,t^{*0})\)
- \((n,t^{*1})\)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

Cross section (barns)

Energy (MeV)

- (n,t*7)
- (n,t*8)
- (n,t*9)
- (n,t*10)
- (n,t*11)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Threshold reactions

![Graph showing cross section vs. energy](image)

- $(n,t^{*12})$
- $(n,t^{*13})$
- $(n,t^{*14})$
- $(n,t^{*15})$
- $(n,t^{*c})$
Threshold reactions

Cross section (barns) vs. Energy (MeV)

- (n,a*0)
- (n,a*1)
- (n,a*2)
- (n,a*3)
- (n,a*4)
Threshold reactions

Cross section (barns)

Energy (MeV)

17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+

(n,a*5)

(n,a*c)
angular distribution for elastic
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for elastic
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*1)
angular distribution for $(n,n^*2)$
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*3)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*4)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*5)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*6)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*7)
angular distribution for (n,n*8)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*10)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n'11)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*12)
angular distribution for (n,n*13)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^*14)\)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*15)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*16)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^*17)\)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for \((n,n^{*18})\)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*19)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*20)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*21)
angular distribution for (n,n*22)
angular distribution for (n,n*23)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,n*24)
angular distribution for (n,n*25)
angular distribution for (n,n*26)
angular distribution for (n,n*27)
Neutron emission for (n,x)
Neutron emission for (n,2n)

Energy (MeV)

Secondary Energy

Probability/MeV

17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for \((n,3n)\)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*)a
Neutron emission for \((n,n^*)p\)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Neutron emission for (n,n*)d

![Graph showing neutron emission for (n,n*)d](image-url)
Neutron emission for (n,n*c)
Photon emission for (n,\gamma)
Photon emission for (n,x)
Photon emission for (n,2n)
Photon emission for \((n,3n)\)
Photon emission for \((n,n^*)a\)
Photon emission for \((n,n^*)p\)
Photon emission for (n,n*)d

- \( E_\gamma \) (MeV)
- \( E_n \) (MeV)
- Probit/MeV

10^{-1} to 10^{0}
Photon emission for (n,n*1)
Photon emission for (n,n*2)
Photon emission for (n,n*3)
Photon emission for (n,n*4)

17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,n*5)
Photon emission for (n,n*6)
Photon emission for (n,n*7)
Photon emission for \((n, n^*8)\)
Photon emission for (n,n*9)
Photon emission for (n,n*10)
Photon emission for (n,n*11)
Photon emission for \((n,n^{*12})\)
Photon emission for (n,n*13)
Photon emission for (n,n*14)
Photon emission for $(n,n^\ast 15)$
Photon emission for (n,n*16)
Photon emission for (n,n*17)
Photon emission for $(n,n^{*}18)$
Photon emission for (n,n*19)
Photon emission for (n,n*20)
 Photon emission for (n,n*21)
Photon emission for (n,n*22)
Photon emission for \((n,n'23)\)
Photon emission for \((n,n^*25)\)
Photon emission for \((n,n^{*26})\)
Photon emission for (n,n*27)
Photon emission for (n,n*c)
Photon emission for (n,p*c)
Photon emission for (n,d*2)

17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for \((n,d^*3)\)
Photon emission for (n,d*5)
Photon emission for (n,d*6)

\[ E_\gamma (\text{MeV}) \]

\[ E_n (\text{MeV}) \]

\[ \text{Prob}/\text{MeV} \]
Photon emission for (n,d*7)
Photon emission for (n,d*8)
Photon emission for (n,d*9)
Photon emission for (n,d*11)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,d*c)
Photon emission for \((n,t^*1)\)
Photon emission for \((n,t^*2)\)

\[
\frac{\text{Prob/MeV}}{E_\gamma \text{ (MeV)}} \quad E_n \text{ (MeV)}
\]

- \(E_\gamma\) (MeV)
  - 1
  - 2
  - 3
- \(E_n\) (MeV)
  - 80
  - 100
  - 120
  - 140
  - 160

\[
E_{\gamma}^2 \quad E_n
\]
Photon emission for (n,t*3)
Photon emission for (n,t*4)
Photon emission for (n,\(t^*5\))
Photon emission for (n,t*6)
Photon emission for (n,t*7)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,t*8)
Photon emission for (n,t*9)
Photon emission for (n,t*10)
Photon emission for (n,t*11)
Photon emission for (n,t*12)
Photon emission for (n,t*14)
Photon emission for (n,t*15)

Graph showing probability per MeV as a function of $E_{\gamma}$ (MeV) and $E_n$ (MeV).
Photon emission for (n,t*c)
Photon emission for (n,a*1)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
Photon emission for (n,a*2)
Photon emission for (n,a*3)
Photon emission for (n,α*4)
Photon emission for (n,a*5)
Photon emission for (n,a*c)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
thermal capture photon spectrum
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
14 MeV photon spectrum
Particle heating contributions

Energy (MeV)

MeV/collision

Energy (MeV)

protons

deuterons

tritons

alphas
Recoil Heating

Energy (MeV) vs Heating (MeV/reaction)

The graph shows the relationship between energy (in MeV) and heating (in MeV/reaction) for recoil heating. The heating increases with energy until around 100 MeV, after which it starts to decrease.
Particle production cross sections

- Protons
- Deuterons
- Tritons
- Alphas

Energy (MeV) vs. Cross section (barns)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ protons from (n,x)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
protons from (n,n*)p
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
protons from (n,p*c)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
deuterons from (n,x)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
deuterons from \((n,n^*)d\)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,d*0) deuteron

Prob|Cos

10^0

10^-1

1.0 0.5 0.0 -0.5 -1.0

Cosine

Energy (MeV)

20 40 60 80 100 120 140 160
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,d*1) deuteron
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,d*2) deuteron
angular distribution for (n,d*3) deuteron
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,d*4) deuteron
angular distribution for \((n,d^*5)\) deuteron

- Energy (MeV)
- Cosine
- Prob/Cos
angular distribution for (n,d*6) deuteron
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,d^7) deuteron
angular distribution for (n,d^8) deuteron
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,d*9) deuteron
angular distribution for (n,d*10) deuteron

17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,d*11) deuteron
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
dejterons from (n,d*c)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
tritons from (n,x)
angular distribution for (n,t*0) triton
angular distribution for (n, t*1) triton
angular distribution for (n,t*2) triton
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,t*3) triton

Prob/Cos

Energ (MeV)

Cosine

10^0

10^-1

10^-2
angular distribution for (n,t*5) triton
angular distribution for \((n,t^*6)\) triton
angular distribution for \((n, t^7)\) triton
angular distribution for (n,t*8) triton
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,t*9) triton
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,t*10) triton
angular distribution for (n,t*11) triton
angular distribution for (n,t*12) triton
angular distribution for (n,t*13) triton
angular distribution for (n,t*14) triton
angular distribution for (n,t*15) triton
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
tritons from (n,t*c)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+ alphas from (n,x)
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
alphas from (n,n*)a
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,a*0) alpha
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,a*1) alpha
angular distribution for (n,a*2) alpha
angular distribution for \((n, a^3)\) alpha
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
angular distribution for (n,a*4) alpha
angular distribution for (n,a*5) alpha
17-CL-37 FOR FENDL-3.2 FROM FENDL-3.2 BY NJOY2016.60+
alphas from (n,a*c)