

EXFOR data: <http://www-nds.iaea.org/EXFOR/21209.004>

Data retrieved 2024-11-08 from the EXFOR database version of 2024-10-30.

ENTRY 21209001 20071219 20080131 20080123 2190

SUBENT 21209001 20071219 20080131 20080123 2190

BIB 12 28

INSTITUTE (2UK ALD)

#(2UK ALD) Atomic Weapons Establishment (AWE), Aldermaston, United Kingdom

REFERENCE (J,JNE/AB,14,85,1961)

#(J,JNE/AB,14,85,1961) Jour: J.Nuclear Energy A&B (Reactor Sci. and Technol.), Vol.14, p.85 (1961), UK

#+ #URL=[http://dx.doi.org/10.1016/0368-3230\(61\)90096-9](http://dx.doi.org/10.1016/0368-3230(61)90096-9)

#+ #DOI=[10.1016/0368-3230\(61\)90096-9](https://doi.org/10.1016/0368-3230(61)90096-9)

#+ #Title=-The energy dependence of the fission cross-sections of U-238, U-235 and Pu-239 for neutrons in the energy range 12.6 to 20 MeV-

#+ #Authors=B.Adams,R.Batchelor,T.S.Green

AUTHOR (B.Adams,R.Batchelor,T.S.Green)

TITLE -The energy dependence of the fission cross-sections of U-238, U-235 and Pu-239 for neutrons in the energy range 12.6 to 20 MeV-

FACILITY (VDG) 6 MeV Van de Graaff.

#(VDG) Van de Graaff

INC-SOURCE (D-T) Up to 3.7 MeV deuterons incident on tritium gas cell through a 0.0002 inch thick nickel window. Gas cell at 1 atmosphere pressure.

#(D-T)  $3\text{H(d,n)}$

METHOD .Measurement of fission events.

DETECTOR (FISCH) Multiplate fission chamber consisting of platinum backings coated with 1.5 mg/cm-sq thick layers of fissile material.

(TELES) Proton recoil telescope to measure neutron flux.

(LONGC) Long counter placed in forward direction to monitor neutron production.

#(FISCH) Fission chamber

#(TELES) Counter telescope

#(LONGC) Long counter

MONITOR (92-U-238(N,F),,SIG) 14 MeV cross-section from a.Moat, private communication.

STATUS (NDD) From NEUDADA.

#(NDD) Data converted from NEUDADA file

HISTORY (19791211T)

(19800110E)

(19810504A) Data pointers corrected.

(19810722E)

(20060809A) Date and reference code corrected  
 (20071219U) Last checking has been done.  
 CORRECTION .Background measured by removing the gas from the cell.  
 ENDBIB 28  
 NOCOMMON  
 ENDSUBENT 31  
 SUBENT 21209004 20071219 20080131 20080123 2190  
 BIB 5 10  
 REACTION 1((94-PU-239(N,F),,SIG,,REL)/(92-U-238(N,F),,SIG,,REL))  
     Normalized to unity at 14 MeV.  
     2(94-PU-239(N,F),,SIG)  
     # 1 ((94-PU-239(N,F),,SIG,,REL)/(92-U-238(N,F),,SIG,,REL)) #R-combi:A/B a/a  
     # Target:PU-  
 239 #Projectile:N #Reaction:N,F #Process:F:Fission #Quantity:,SIG:CS:Cross  
 section #Modifiers:REL:Relative data  
     # Target:U-  
 238 #Projectile:N #Reaction:N,F #Process:F:Fission #Quantity:,SIG:CS:Cross  
 section #Modifiers:REL:Relative data  
     # 2 (94-PU-239(N,F),,SIG)  
     # Target:PU-  
 239 #Projectile:N #Reaction:N,F #Process:F:Fission #Quantity:,SIG:CS:Cross section  
 SAMPLE .20 mg Pu-239 loaded in fission counter. Isotopic  
     composition- Pu-239 (97.9 percent), Pu-240 (2.1  
     percent).  
 ERR-ANALYS Declared by authors for pointer 1  
     <DATA-ERR> Not specified for pointer 2  
 STATUS .Data from tables 2 and 3 of the publication.  
 HISTORY (20071219U) Last checking has been done.  
 ENDBIB 10  
 COMMON 1 1 12  
 #Legend: 1 x 1 x 12 : data columns \* lines \* column width

#EN-NRM	Incident projectile energy used for normalization	MEV	MeV
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#/Legend

EN-NRM

MEV

1.4e+01

ENDCOMMON

DATA 5 13 12

#Legend: 5 x 13 x 12 : data columns \* lines \* column width

#EN		Energy of incident projectile, laboratory system	MEV	MeV
#DATA	1	Value of quantity specified under REACTION #+ (94-PU-239(N,F),,SIG,,REL)/(92-U-238(N,...	ARB- UNITS	arbitrary Units

#ERR-S	1	Statistical uncertainty (1-Sigma)	ARB-UNITS	arbitrary Units
#DATA	2	Cross section #+ 94-PU-239(N,F),,SIG	B	barns
#DATA-ERR	2	Error in value of quantity, defined under ERR-ANALYS	B	barns

#/Legend

EN DATA 1 ERR-S 1 DATA 2 DATA-ERR 2

MEV ARB-UNITS ARB-UNITS B B

1.3400e+01 1.0100e+00 2.0000e-02 2.4800e+00 1.0e-01  
1.4000e+01 1.0000e+00 1.0000e-02 2.6100e+00 8.0e-02  
1.4400e+01 9.7000e-01 2.0000e-02 2.6400e+00 1.0e-01  
1.4900e+01 9.1000e-01 2.0000e-02 2.5800e+00 1.1e-01  
1.5300e+01 9.2000e-01 2.0000e-02 2.6600e+00 1.1e-01  
1.6000e+01 8.6000e-01 2.0000e-02 2.5400e+00 1.1e-01  
1.6500e+01 8.4000e-01 2.0000e-02 2.5200e+00 1.1e-01  
1.6900e+01 8.3000e-01 2.0000e-02 2.5000e+00 1.1e-01  
1.7500e+01 8.2000e-01 3.0000e-02 2.5100e+00 1.3e-01  
1.8000e+01 7.9000e-01 3.0000e-02 2.4500e+00 1.3e-01  
1.8400e+01 7.9000e-01 3.0000e-02 2.5000e+00 1.3e-01  
1.9000e+01 7.6000e-01 3.0000e-02 2.4800e+00 1.3e-01  
1.9400e+01 7.6000e-01 3.0000e-02 2.6100e+00 1.5e-01

ENDDATA

ENDSUBENT 34