13-Al-27 (n, α) 11-Na-24

Abundance (%) = 100
Q = -3.13284 MeV E_{thr} = 3.24996 MeV
$T_{1/2}$ = 14.9590 h 12
E_γ = 1368.633 keV I_γ = 100.0 β^-
E_γ = 2754.028 keV I_γ = 99.944 ± 0.004 β^-

IRDF-90 - eval. - Apr 1990 Y. Hanrong.
D-99 (JENDL/D-99) - eval. - Mar 1996 K. Kobayashi, Y. Uno.
ENDF/B-VI - eval. - Sep 1994 P. Young.
JENDL-3.2 - eval. - Mar 1988 Y. Harima, H. Kitazawa, T. Fukahori.
JEF-2 - eval. - Jun 1986 EC Blanket Technology, Task B2.
CENDL-2 - eval. - Aug 1991 B. Yu, S. Chiba, Y. Harima et al.

Tabl. 1

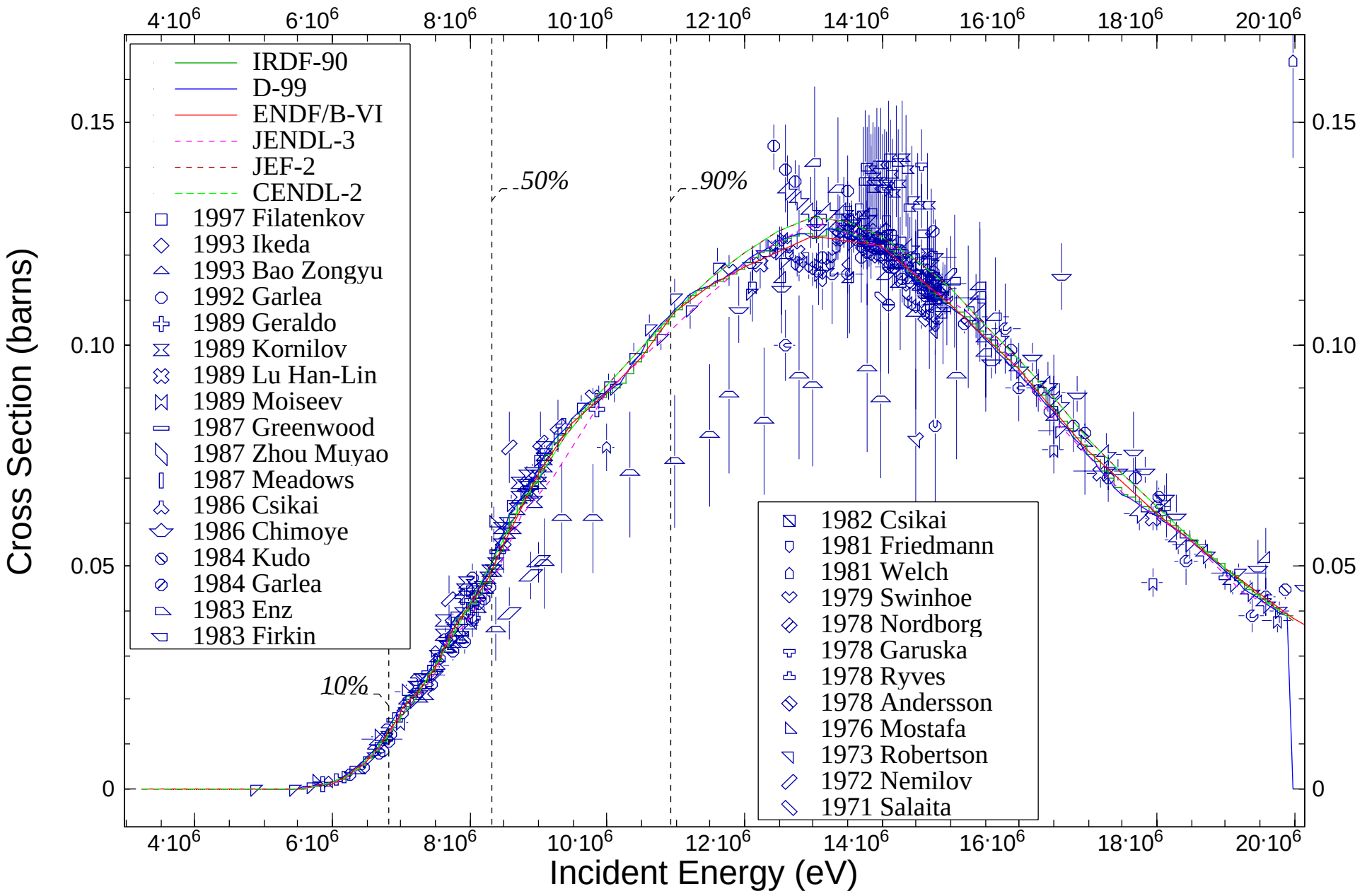
U-235						
	IRDF-90	**D-99**	**ENDF/B-VI**	**JENDL-3**	**JEF-2**	**CENDL-2**
10%	6.80	6.80	6.79	6.80	6.70	6.70
50%	8.30	8.30	8.30	8.40	8.40	8.40
90%	10.90	10.90	10.90	10.90	10.90	10.90
ACS	**6.95E-04**	**6.95E-04**	**6.95E-04**	**6.64E-04**	**6.93E-04**	**6.94E-04**

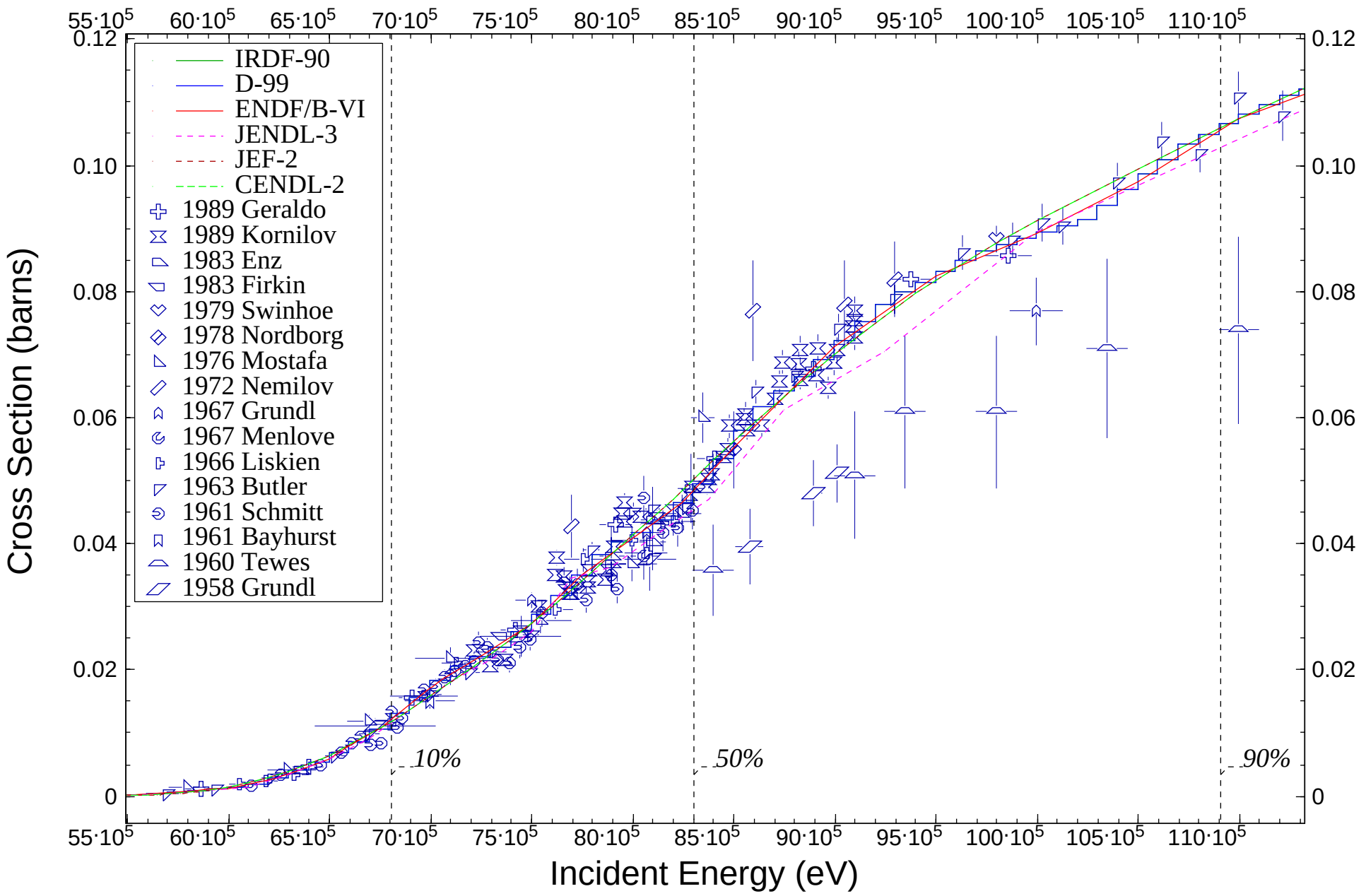
Tabl. 2

Cf-252						
	IRDF-90	**D-99**	**ENDF/B-VI**	**JENDL-3**	**JEF-2**	**CENDL-2**
10%	6.90	6.90	6.90	6.90	6.90	6.90
50%	8.60	8.60	8.60	8.60	8.60	8.60
90%	11.30	11.30	11.30	11.40	11.40	11.40
ACS	**1.06E-03**	**1.06E-03**	**1.06E-03**	**1.01E-03**	**1.06E-03**	**1.06E-03**

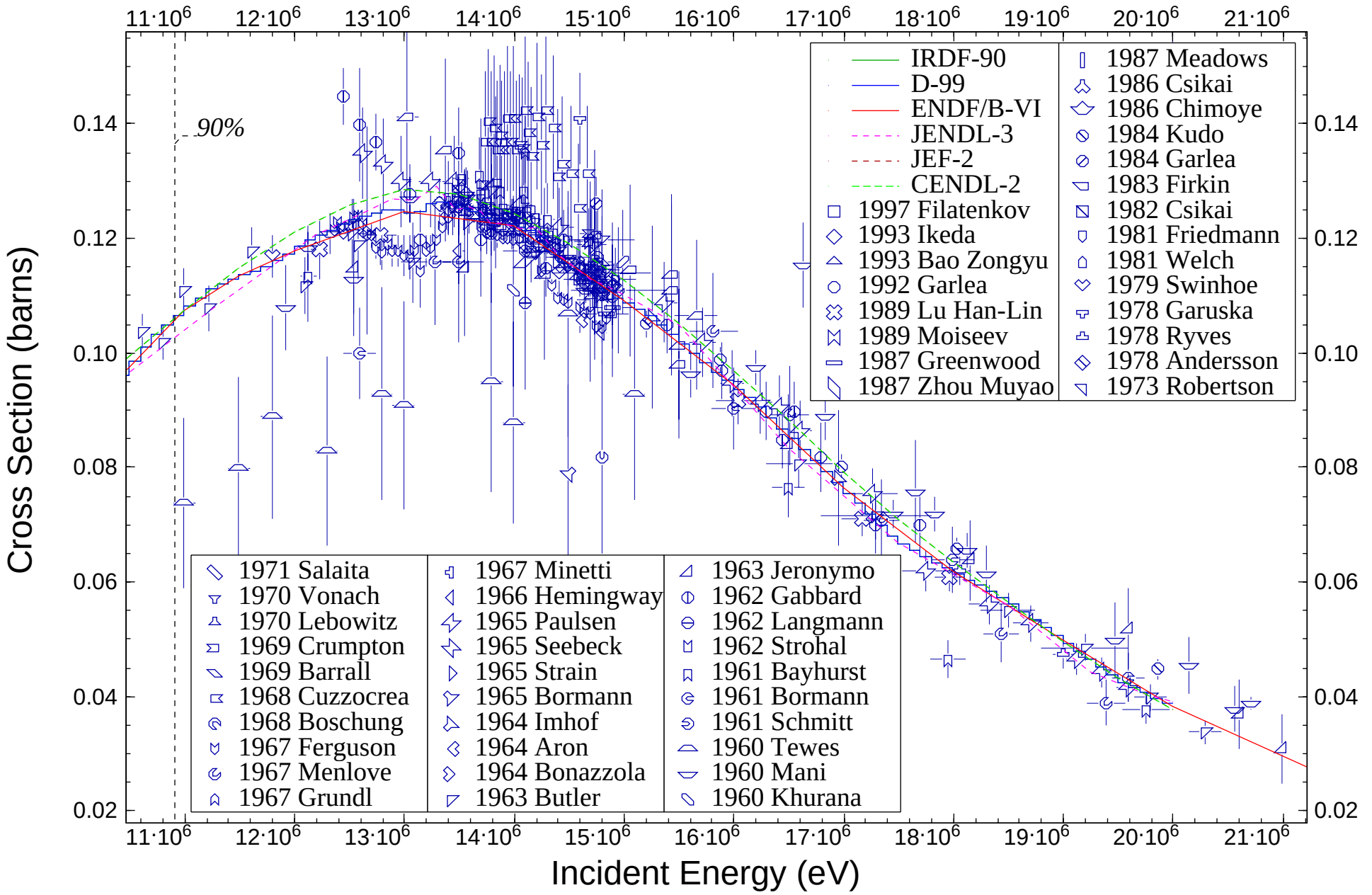
Tabl. 3

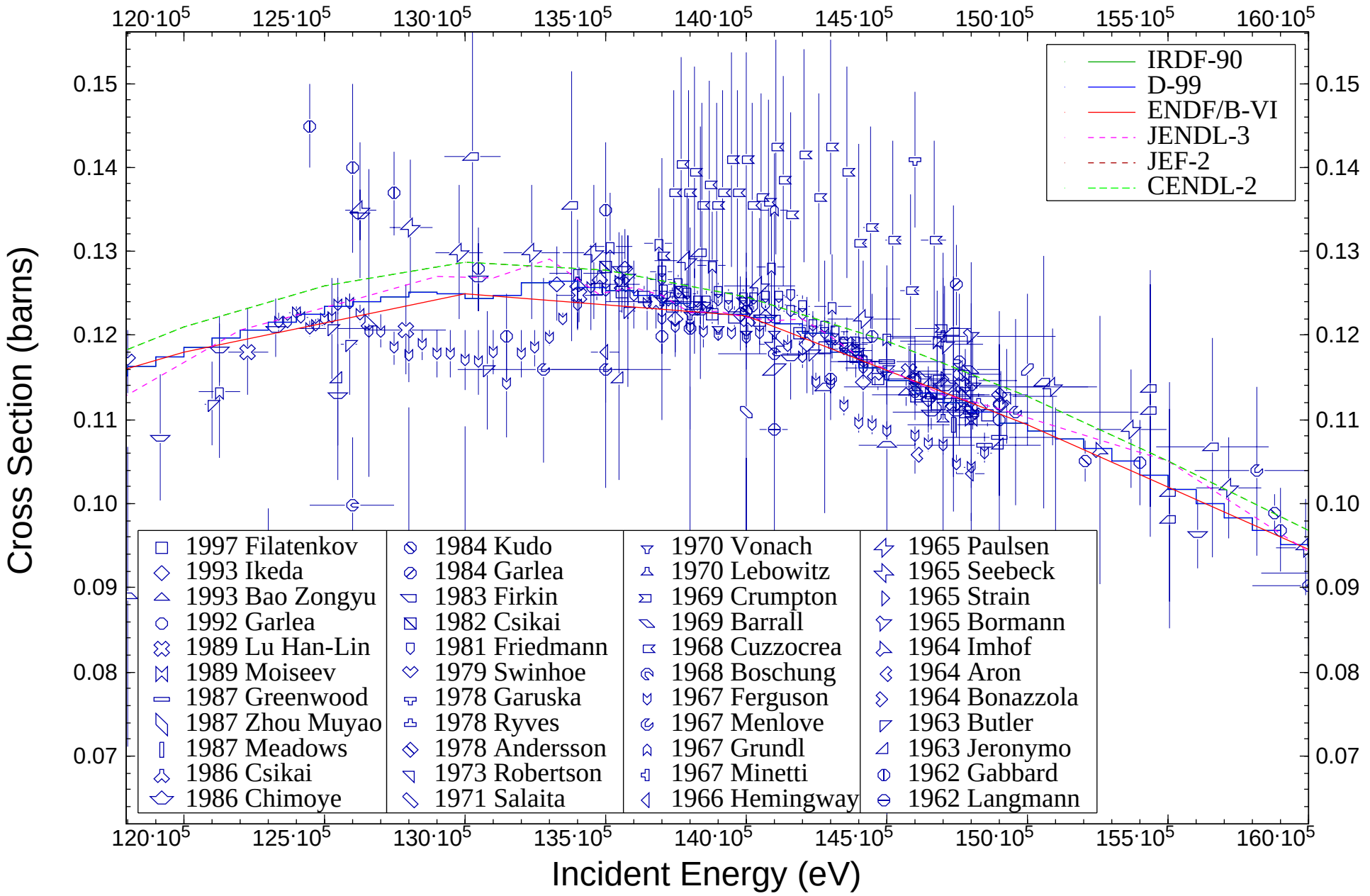
1.5+07 1.5+07	1	3CPRAEP	R,INDC(CPR)-16	8908 LU HAN-LIN,	30523002
1.2+07 1.8+07	10	3CPRAEP	R,INDC(CPR)-16	8908 LU HAN-LIN,	30523003
1.3+07 1.5+07	5	3HUNKOS	C,82ANTWER,,414	8209 J.CSIKAI	30640002
1.5+07 1.5+07	1	3CPRSST	J,CNP,9,34	8702 ZHOU MUYAO,	30755002
1.5+07 1.5+07	1	3RUMPIT	J,RRP,29,421	84 I.GARLEA,	30813002
1.4+07 1.5+07	5	3TAICHM	J,ZP/A,235,69	8609 T.CHIMOYE,	30821002
1.3+07 1.5+07	12	3HUNKOS	J,ZP/A,325,69	86 J.CSIKAI,	30933002
1.5+07 1.5+07	1	3CPRAEP	J,CNP,15,(4),341	93 BAO ZONGYU,	30993002
1.5+07 1.5+07	1	3RUMBUC	J,RRP,37,(1),19	92 I.GARLEA,	31459008
7.7+06 9.3+06	4	4CCPRI	R,YK-9,53	72 JU.A.NEMILOV.JU.N.	40135002
1.5+07 1.5+07	1	4CCPRI	J,AE,16,(4),370	6404 P.M.ARON,	40686002
7.1+06 9.1+06	23	4CCPFEI 3HUNKOS	J,PR/C,39,(3),789	8903 N.V.KORNILOV,	41048002
7.6+06 9.1+06	19	4CCPFEI 3HUNKOS	J,PR/C,39,(3),789	8903 N.V.KORNILOV,	41048003
7.6+06 9.1+06	19	4CCPFEI 3HUNKOS	J,PR/C,39,(3),789	8903 N.V.KORNILOV,	41048004
1.5+07 1.5+07	1	4CCPMIM	J,YK,,(3),101	8912 N.N.MOISEEV,	41051002
1.5+07 1.5+07	1	4CCPMIM	J,YK,,(3),101	8912 N.N.MOISEEV,	41051003
1.5+07 1.5+07	1	4CCPMIM	J,YK,,(3),101	8912 N.N.MOISEEV,	41051004
1.3+07 1.5+07	15	4RUSRI	R,INDC(CCP)-402	9701 A.A.FILATENKOV,	41240002


^{27}Al(n,a)^{24}Na
Cross Section (barns)
Incident Energy (eV)
4·10^6
6·10^6
8·10^6
10·10^6
12·10^6
14·10^6
16·10^6
18·10^6
20·10^6
0
0.05
0.10
0.15
10%
50%
90%
IRDF-90
D-99
ENDF/B-VI
JENDL-3
JEF-2
CENDL-2
1997 Filatenkov
1993 Ikeda
1993 Bao Zongyu
1992 Garlea
1989 Geraldo
1989 Kornilov
1989 Lu Han-Lin
1989 Moiseev
1987 Greenwood
1987 Zhou Muyao
1987 Meadows
1986 Csikai
1986 Chimoye
1984 Kudo
1984 Garlea
1983 Enz
1983 Firkin
1982 Csikai
1981 Friedmann
1981 Welch
1979 Swinhoe
1978 Nordborg
1978 Garuska
1978 Ryves
1978 Andersson
1976 Mostafa
1973 Robertson
1972 Nemilov
1971 Salaita


^{27}Al(n,a)^{24}Na
IRDF-90
D-99
ENDF/B-VI
JENDL-3
JEF-2
CENDL-2
1989 Geraldo
1989 Kornilov
1983 Enz
1983 Firkin
1979 Swinhoe
1978 Nordborg
1976 Mostafa
1972 Nemilov
1967 Grundl
1967 Menlove
1966 Liskien
1963 Butler
1961 Schmitt
1961 Bayhurst
1960 Tewes
1958 Grundl
10%
50%
90%
Cross Section (barns)
Incident Energy (eV)
0
0.02
0.04
0.06
0.08
0.10
0.12
55·10^5
60·10^5
65·10^5
70·10^5
75·10^5
80·10^5
85·10^5
90·10^5
95·10^5
100·10^5
105·10^5
110·10^5

$^{27}Al(n,a)^{24}Na$


Cross Section (barns)
Incident Energy (eV)
11·10^6
12·10^6
13·10^6
14·10^6
15·10^6
16·10^6
17·10^6
18·10^6
19·10^6
20·10^6
21·10^6
0.02
0.04
0.06
0.08
0.10
0.12
0.14
90%
IRDF-90
D-99
ENDF/B-VI
JENDL-3
JEF-2
CENDL-2
1997 Filatenkov
1993 Ikeda
1993 Bao Zongyu
1992 Garlea
1989 Lu Han-Lin
1989 Moiseev
1987 Greenwood
1987 Zhou Muyao
1987 Meadows
1986 Csikai
1986 Chimoye
1984 Kudo
1984 Garlea
1983 Firkin
1982 Csikai
1981 Friedmann
1981 Welch
1979 Swinhoe
1978 Garuska
1978 Ryves
1978 Andersson
1973 Robertson
1971 Salaita
1970 Vonach
1970 Lebowitz
1969 Crumpton
1969 Barrall
1968 Cuzzocrea
1968 Boschung
1967 Ferguson
1967 Menlove
1967 Grundl
1967 Minetti
1966 Hemingway
1965 Paulsen
1965 Seebeck
1965 Strain
1965 Bormann
1964 Imhof
1964 Aron
1964 Bonazzola
1963 Butler
1963 Jeronymo
1962 Gabbard
1962 Langmann
1962 Strohal
1961 Bayhurst
1961 Bormann
1961 Schmitt
1960 Tewes
1960 Mani
1960 Khurana


27Al(n,a)24Na
Cross Section (barns)
Incident Energy (eV)
120·10^5
125·10^5
130·10^5
135·10^5
140·10^5
145·10^5
150·10^5
155·10^5
160·10^5
0.15
0.14
0.13
0.12
0.11
0.10
0.09
0.08
0.07
IRDF-90
D-99
ENDF/B-VI
JENDL-3
JEF-2
CENDL-2
1997 Filatenkov
1993 Ikeda
1993 Bao Zongyu
1992 Garlea
1989 Lu Han-Lin
1989 Moiseev
1987 Greenwood
1987 Zhou Muyao
1987 Meadows
1986 Csikai
1986 Chimoye
1984 Kudo
1984 Garlea
1983 Firkin
1982 Csikai
1981 Friedmann
1979 Swinhoe
1978 Garuska
1978 Ryves
1978 Andersson
1973 Robertson
1971 Salaita
1970 Vonach
1970 Lebowitz
1969 Crumpton
1969 Barrall
1968 Cuzzocrea
1968 Boschung
1967 Ferguson
1967 Menlove
1967 Grundl
1967 Minetti
1966 Hemingway
1965 Paulsen
1965 Seebeck
1965 Strain
1965 Bormann
1964 Imhof
1964 Aron
1964 Bonazzola
1963 Butler
1963 Jeronymo
1962 Gabbard
1962 Langmann