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INTEGRAL CHARGED PARTICLE NUCLEAR DATA BIBLIOGRAPHY

Literature scanned from April 1, 1986, through April 10, 1987

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April 1987

(in support of the International Nuclear Reaction Data Centers Network)

BROOKHAVEN NATIONAL LABORATORY

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I. INTRODUCTION

This publication is the annual supplement to the first edition published in 1984. The primary goal of this publication has been to satisfy the need expressed by the Nuclear Reaction Data Center Network^{*} for a concise and comprehensive bibliography of integral charged-particle cross section data. The reader is referred to Table 2 for a partial list of other bibliographies relevant to charged-particle induced reaction data and to "A Source List of Nuclear Data Bibliographies, Compilations, and Evaluations"¹ for a more comprehensive list. Since this publication is not cumulative, earlier versions are also shown in Table 2.

This publication makes use of a modification to the database of the Nuclear Structure References (NSR) file (see the first entry in Table 2). This modification allows the retrieval of integral charged particle nuclear data entries from the NSR file. In recent years, the presentation of various sections was changed, as a result of users' suggestions. The authors continue to welcome users' comments.

Table 1 Centers Participating in the Compilation and Exchange of Charged-Particle Nuclear Data[†]

Center for Nuclear Structure and Reaction Data of the USSR State Committee on the Utilization of Atomic Energy, I.V.Kurchatov Institute of Atomic Energy,
Moscow, USSR

Service area: Union of Soviet Socialist Republics

National Nuclear Data Center, Brookhaven National Laboratory
Upton, NY USA 11973

Service area: United States and Canada

Nuclear Data Section, International Atomic Energy Agency
P.O.B. 100, A-1400,
Vienna, Austria

Service area: Non-OECD countries except for the USSR

Nuclear Energy Agency Data Bank

B.P. 9, F-91190

Gif-sur-Yvette, France

Service area: OECD countries except for the United States and Canada

Nuclear Data Group

RIKEN Institute of Physical and Chemical Research

Wako-Shi, Saitama, Japan 351-01

Chinese Nuclear Data Center

Institute of Atomic Energy,

Academia Sinica, P.O.Box 275

Beijing, China

^{*}See Table 1 and the introduction to CINDA, *The Index to Literature and Computer Files on Microscopic Neutron Data*, published by the International Atomic Energy Agency, Vienna, for members of the network.

¹T.W. Burrows and N.E. Holden, *A Source List of Nuclear Data Bibliographies, Compilations, and Evaluations*, BNL-NCS-50702, Second Edition (1978).

[†]NOTE: Requests for information should be directed to the appropriate service center.

Table 2

Other Nuclear Data Bibliographic Sources

1. S. Ramavataram, *et al.* "Recent References". 3 issues. year in Nuclear Data Sheets. Academic Press, NY.
W.B. Ewbank, *et al.* Nuclear Structure References. 1969-1974. Nuclear Data Sheets 16, Supplement 1. Academic Press, NY (1975)
2. INIS Atomindex. International Atomic Energy Agency, Vienna.
3. Atomic Data Nuclear Data Tables 18, 1. Academic Press, NY (1976).
Atomic Data Nuclear Data Tables 15, 189. Academic Press, NY (1975).
F.K. McGowan and W.T. Milner. *Reaction List for Charged-Particle-Induced Reactions*. Atomic Data Nuclear Data Reprints 2. Academic Press, NY (1974).
Atomic Data Nuclear Data Tables 12, 499. Academic Press, NY (1973).
Nuclear Data Tables A11, 1. Academic Press (1972).
4. N.E. Holden and T.W. Burrows. *The Bibliography of Integral Charged Particle Nuclear Data*. BNL-NCS-50640 (1982). Fourth Edition, Supplement 2.
T.W. Burrows and G. Wyant. *The Bibliography of Integral Charged Particle Nuclear Data*. BNL-NCS-50640 (1981). Fourth Edition, Supplement 1.
T.W. Burrows and P. Dempsey. *The Bibliography of Integral Charged Particle Nuclear Data*. BNL-NCS-50640 (1980). Fourth Edition. (Archival Edition).
5. N.E. Holden, *et al.* *Integral Charged Particle Nuclear Data Bibliography*. BNL-NCS-51771 (1986). First Edition, Supplement 2.
N.E. Holden, *et al.* *Integral Charged Particle Nuclear Data Bibliography*. BNL-NCS-51771 (1985). First Edition, Supplement 1.
N.E. Holden, *et al.* *Charged Particle Nuclear Data Bibliography*. BNL-NCS-51771 (1984). First Edition.

II. SCOPE

For the purposes of this bibliography, integral charged particle data may be defined as data which have been integrated over the product angle, and energy or data which may be easily converted to such a representation. General criteria for inclusion of data in this bibliography are the following:

1. Excitation functions, thick target, or product yields[§] leading to the formation of a ground or metastable state. This includes such quantities as fission yields, isomeric ratios, and excitation functions for specific particle groups, where such data can readily yield information on the excitation functions or the thick target yields for the metastable or the ground state.
2. The atomic mass and charge of the incident particle must be greater than or equal to 1.
3. The atomic mass of the target must be greater than or equal to 1.
4. The atomic masses of the outgoing and residual nuclei must be greater than or equal to 1 with the exception of processes which do not lead to a definite residual nucleus (*e.g.* total cross sections) and of gamma-ray production cross sections.

[§]Thick target yields are defined as measurements made upon targets, whose thickness is sufficient to degrade the incident particle energy below the reaction threshold. The term product yield is employed when, in our opinion, there is an ambiguity as to what quantity has been measured.

5. The incident particle energy must have a minimum of less than 100 MeV in the laboratory system.

EXCEPTIONS: 1. If there are data in an article satisfying the above criteria and additional data satisfying all the criteria except minimum energy, these additional data are also cited.

III. DATES OF COVERAGE

The coverage for this bibliography includes all journals, reports, and other publications scanned between April 1, 1986, and April 10, 1987.

Table 3 lists the coverage of 28 "core" journals to give an indication of how current this bibliography is in journal coverage. A complete list of the journal and report coverage may be obtained from the authors.

Table 3
"Core" Journal Coverage

Journal [†]	Last Issue Scanned		Journal [†]	Last Issue Scanned	
	Vol.	No.		Vol.	No.
Acta Phys.Pol.B	17	12	Nucl.Inst.Meth.	254	3
Ann.Nucl.Energy	14	2	Nucl.Phys.A	462	2
Ann.Phys.(N.Y.)	174	2	Nucl.Sci.Eng.	95	4
At.Energy	61	1	Nuovo Cim.A	95	3
Aust.J.Phys.	39	4	Phys.Scr.	35	2
Bull.Am.Phys.Soc.	32	3	Phys.Rev.C	35	3
Can.J.Phys.	65	1	Phys.Rev.Lett.	58	14
Czech.J.Phys.B	36	12	Phys.Lett.B	184	3
Helv.Phys.Acta	60	1	Pramana	27	5
Int.J.Appl.Radiat.Isotop.	38	1	Progr.Theor.Phys.	76	5
Izv.Akad.Nauk SSSR, Ser.Fiz.	50	9	Radiochim.Acta	40	1
J.Phys.Soc.Jpn.	55	12	Ukr.Fiz.Zh.	31	10
J.Phys.(London) G	13	3	Yad.Fiz.	44	5
J.Radioanal.Nucl.Chem.	102	1	Z.Phys.A	326	2

[†] Journal abbreviations are in agreement with those from the Chemical Abstracts Service for 1970. See also *Serial Titles*, DOE/TIC-4579-R14 (1986).

IV. SECONDARY SOURCES OF INFORMATION

Since this bibliography is designed to be both archival and current, abstracts, theses, progress reports, *etc.* have been included.

V. ORGANIZATION

This bibliography is divided into three sections, 'References', 'Target Index', and 'Residual Index'. The 'References' section contains all references satisfying the criteria noted previously and is organized as described in the next paragraph. Entries in the 'References' section are key-numbered. These keynumbers serve as a link between the three sections. The 'Target Index' section contains the incident particle energy and the abbreviated reference lines for all the entries, which contain information on a definite target nucleus and reaction. These reference lines contain the Journal name, followed by the volume and page number, as well as the keynumber of the reference. This section is described in more detail in a later paragraph. The 'Residual Index' section also contains the incident particle energy and the abbreviated reference lines for all the entries, which contain information on a definite residual nucleus, and a definite target-reaction, as well as the keynumber of the reference. This section is described in more detail in a later paragraph.

The 'References' section is ordered by keynumber. This keynumber is composed of two digits which correspond to the year of publication, followed by the first two letters of the first author's name, and completed with a two digit running number to distinguish entries which have the same first four symbols. The reference gives all authors by name and initials, the Journal title, volume number, page number, year and the full title of the article. A list of keywords is given, which are designed to tell the reader what experimental results are reported in the article and what the author concluded from these results.

The 'Target Index' section contains information on those references to a particular reaction on a particular target nucleus at a given energy. The section is ordered by increasing Z of the target nucleus, and by increasing A of the target. For a given target the ordering is by increasing Z and A of the incident projectile, and finally by increasing Z and A of the sum of the outgoing particles. The incident energy, the abbreviated reference and keynumber complete the entry line.

The 'Residual Index' section contains information on those references to the production of a particular residual nucleus at a given energy. The section is ordered by increasing Z and A of the residual nucleus, and then by increasing Z and A of the incident projectile. The incident energy, the abbreviated reference and the keynumber complete the entry line.

VI. COMPILATIONS AND EVALUATIONS

To enhance the usefulness of this bibliography several compilations, evaluations, and reviews are given in Table 4. Reference 1 contains a more comprehensive list.

Table 4

Selected Compilations, Evaluations, and Reviews of Charged-Particle Nuclear Data

1. R.J. Howerton. *Maxwell-Averaged Reaction Rates ($\overline{\sigma v}$) for Selected Reactions between Ions with Atomic Mass ≤ 11 . UCRL-50400 Vol. 21, Pt. A (1979).*
2. K.A. Keller, *et al.* *Q-Values and Excitation Functions of Nuclear Reactions.* Landholt-Boernstein, Group I, Vol. 5. Parts A-C. Springer-Verlag, Berlin (1973).

3. H. J. Kim, *et al.* *Nuclear Cross Sections for Charged-Particle-Induced Reactions*. Nucl. Data A3, 123. Academic Press, NY (1967).
Nucl. Data A2, 1. Academic Press, NY (1966).
Nucl. Data A1, 203. Academic Press, NY (1965).
4. H. Liskien and A. Paulsen. *Neutron Production Cross Sections and Energies for the Reactions $T(p,n)^3\text{He}$, $D(d,n)^3\text{He}$, and $T(d,n)^4\text{He}$* . Nucl. Data Tables 11, 569. Academic Press, NY (1973).
Neutron Production Cross Sections and Energies for the Reactions $^7\text{Li}(p,n)^7\text{Be}$ and $^7\text{Li}(p,n)^7\text{Be}^$* . At. Data Nucl. Data Tables 15, 57. Academic Press, NY (1975).
5. F. K. McGowan, *et al.* *Nuclear Cross Sections for Charged-Particle Induced Reactions Mn, Fe, Co*. ORNL-CPX-1 (1964).
F. K. McGowan, *et al.* *Nuclear Cross Sections for Charged-Particle Induced Reactions Ni, Cu*. ORNL-CPX-2 (1964).
6. H. Muenzel, *et al.* *Karlsruhe Charged Particle Reaction Data Compilation*.
Physik Daten 15-5 (1982).
Physik Daten 15-4 (1982).
Physik Daten 15-3 (1982).
Physik Daten 15-2 (1979).
Physik Daten 15-1 (1979).
Physik Daten 15-Index (1979).
7. W. Neubert. *Peak Cross Sections for (H, xn) Reactions*. Nucl. Data Tables A11, 531. Academic Press, NY (1973).
8. S. Pearlstein. *Starter Evaluated Charged Particle Data Library*. BNL-19148 (1974).
9. S.T. Perkins and D.E. Cullen. *Experimental and Evaluated Nuclear Plus Interference Cross Sections for Light Charged Particles*. Nucl. Sci. Eng. 77(1), 20 (1981).
ibid. UCRL-50400 Vol. 15, Pt. F.

VII. METHODS OF RADIOISOTOPE PRODUCTION

While this publication should be very useful in providing the sources of cross section data for radioisotope production, its scope does not include the indexing of techniques for radioisotope or labelled compound production. The Radiopharmaceutical Research Group, Chemistry Department, Brookhaven National Laboratory does index such techniques for accelerators.²

VIII. RETRIEVAL CAPABILITIES

Retrievals may be obtained from this Charged-Particle Bibliography using the Nuclear Structure References file, based on target nucleus, incident particle, outgoing particles or reactions, residual nuclide, topic, or any combination of these. The term topic refers to the integral cross section, (σ), the thick target yield, (TTY), or the product yield, (yield). Additional criteria are lists of keynumbers of the references, publication date, and entry date. Send requests to:

National Nuclear Data Center
Building 197D
Upton, NY 11973
U.S.A.

²D.R. Christman and K.I. Karlstrom. *Accelerator Produced Nuclides for Use in Biology and Medicine. A Bibliography, 1939-1973*. BNL-50448 (1975).

K.I. Karlstrom and D.R. Christman. *Accelerator Produced Nuclides for Use in Biology and Medicine. A Bibliography, January 1974 - June 1976*. BNL-50448-Vol. II (1978).

K.I. Karlstrom and D.R. Christman. *Accelerator Produced Nuclides for Use in Biology and Medicine. A Bibliography, July 1976 - December 1980*. BNL-50448-Vol. III (1983).

For more detailed information, contact the authors.

All Information Analysis Centers supported by the Department of Energy are required to conform with a DOE plan for charging services. There are no charges to the DOE and its contractors; however, there could be nominal charges for others. Further information will be supplied upon request.

IX. ACKNOWLEDGEMENTS

The charged-particle activities at the National Nuclear Data Center have been supported by the Office of Basic Energy Sciences, U.S. Department of Energy.

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NUCLEAR REACTIONS $^{24}\text{Mg}(^{15}\text{N},\alpha\text{n})$, E=19-31 MeV; measured E_{γ} , I_{γ} , residual yield, $\sigma(E)$.
- 85Di17 Th.Diacio, C.Friedli, P.Lerch - Radiochim.Acta 38, 185 (1985) - Excitation Functions for the $^9\text{Be}(^{18}\text{O},2\alpha)^{18}\text{O}$ and $^9\text{Be}(^{18}\text{O},d)^{25}\text{Na}$ Reactions
NUCLEAR REACTIONS $^9\text{Be}(^{18}\text{O},2\alpha)$, $(^{18}\text{O},d)$, E=10-40 MeV; measured E_{γ} , I_{γ} , residual yield, $\sigma(E)$.
- 85Ko43 Y.Kondo, B.A.Robson, R.Smith - Nucl.Phys. A437, 117 (1985) - Coupled-Channel Description of Resonant Structures in the $^{18}\text{O} + ^{20}\text{Ne}$ System
NUCLEAR REACTIONS $^{20}\text{Ne}(^{18}\text{O},^{18}\text{O})$, $(^{18}\text{O},^{18}\text{O})$, E(cm)=24.5-35.5 MeV; analyzed $\sigma(\theta)$, $\sigma(E)$, reaction $\sigma(E)$. ^{36}S deduced resonances, J, π . Coupled-channels model.
- 85MaZQ M.Marten, F.Binasch, H.J.Probst, W.Scobel - JUL-Spez-305, p.71 (1985) - Spin Depletion by Preequilibrium Neutron Emission
NUCLEAR REACTIONS $^{111}\text{Cd}(p,n)$, $(p,2n)$, $(p,3n)$, $(p,4n)$, E=threshold-45 MeV; measured residual + isomer production $\sigma(E)$. $^{109}\text{Ag}(^3\text{He},n)$, $(^3\text{He},2n)$, $(^3\text{He},3n)$, $(^3\text{He},4n)$, E not given; analyzed $\sigma(E)$. ^{110}In deduced high to low spin state population isomeric σ ratio.
- 85Mi22 R.Michel, F.Pfeiffer - JUL-Spez-305, p.74 (1985) - Experimental Excitation Functions for p-Induced Reactions on Lutetium Compared with Hybrid Model Calculations
NUCLEAR REACTIONS $\text{Lu}(p,xn)^{173}\text{Lu}$, E $\approx$ 17.5-45 MeV; $\text{Lu}(p,xnp)^{172}\text{Lu}$, E=25-45 MeV; $\text{Lu}(p,xnp)^{171}\text{Lu}$, E $\approx$ 27.5-45 MeV; measured residual production $\sigma(E)$.
- 85Ro23 F.Rosch, J.Henniger, G.-J.Beyer, R.Dreyer - J.Radioanal.Nucl.Chem. 96, 319 (1985) - Optimization of Bombardment Conditions of the $^{209}\text{Bi}/\alpha,2n$ /Cyclotron Production of ^{211}At
NUCLEAR REACTIONS $^{209}\text{Bi}(\alpha,2n)$, $(\alpha,3n)$, E $\approx$ 21-40 MeV; calculated residual yields vs E; deduced optimum E α for ^{211}At production.
- 85Su18 K.Sueki, Y.Nagame, M.Takahashi, H.Kudo, H.Nakahara, I.Kohno - Radiochim.Acta 38, 117 (1985) - Incident Energy Dependence of Isotopic Yield Distributions of Target-Like and Fission-Like Products in ^{14}N Induced Reaction on ^{62}Ni
NUCLEAR REACTIONS $^{62}\text{Ni}(^{14}\text{N},X)^{61}\text{Co}/^{60}\text{Co}/^{58}\text{Co}/^{57}\text{Co}/^{56}\text{Co}/^{55}\text{Co}/^{44}\text{Sc}/^{44m}\text{Sc}/^{46}\text{Sc}/^{47}\text{Sc}/^{48}\text{Sc}$, E=70-122 MeV; measured residual production $\sigma(E)$, isotopic yields. Activation technique.
- 85Vi09 A.C.C.Villari, F.I.A.Almeida, A.Lepine-Szily - Phys.Lett. 165B, 247 (1985) - Total Reaction Cross Section Determination from Light Heavy Ion Elastic Scattering Data
NUCLEAR REACTIONS $^{16}\text{O}(^{12}\text{C},^{12}\text{C})$, E(cm)=10-24 MeV; $^{14}\text{N}(^{12}\text{C},^{12}\text{C})$, E(cm)=9-25 MeV; $^{28}\text{Si}(^{16}\text{O},^{16}\text{O})$, E(cm)=20-52 MeV; analyzed $\sigma(\theta)$; deduced reaction $\sigma(E)$. Optical theorem approach.
- 86Ab04 S.N.Abramovich, B.Ya.Guzhovskiy, A.G.Zvenigorodskiy, S.V.Trusillo, S.A.Dunaeva - Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 65 (1986) - Study of Highly Excited States of ^9Be from the $^6\text{Li}(t,p)^8\text{Li}$ and $^7\text{Li}(d,p)^8\text{Li}$ Reactions
NUCLEAR REACTIONS $^6\text{Li}(t,p)$, $^7\text{Li}(d,p)$, E=2-10 MeV; measured $\sigma(E)$. ^9Be deduced levels. Natural, enriched targets, plastic detector.
- 86Ab10 S.N.Abramovich, B.Ya.Guzhovskiy, A.V.Ershov, L.M.Lazarev - Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2021 (1986) - Near-Threshold Phenomenon in the Reaction of Light Nuclei
NUCLEAR REACTIONS $^7\text{Li}(t,p)$, (t,n) , $(^3\text{He},p)$, $(^3\text{He},n)$, E=5-13 MeV; analyzed $\sigma(E)$. ^7Be , ^{10}B , ^{12}C , ^{13}C , ^{14}N , ^{15}N , ^{16}O , ^{17}O , ^{18}O deduced levels, J, π , T, Γ .
- 86Ag02 E.F.Aguilera, J.J.Kolata, P.A.DeYoung, J.J.Vega - Phys.Rev. C33, 1961 (1986) - Search for Structure in the Fusion of $^{28}\text{Si} + ^{28}\text{Si}$ and $^{30}\text{Si} + ^{30}\text{Si}$
NUCLEAR REACTIONS $^{28}\text{Si}(^{28}\text{Si},X)^{56}\text{Cr}/^{53}\text{Mn}/^{53}\text{Fe}/^{51}\text{Mn}/^{48}\text{Cr}/^{52}\text{Mn}/^{49}\text{V}/^{46}\text{Ti}/^{55}\text{Fe}/^{54}\text{Mn}/^{54}\text{Fe}/^{49}\text{V}/^{51}\text{Cr}/^{57}\text{Co}/^{57}\text{Fe}$, $^{30}\text{Si}(^{30}\text{Si},X)^{60}\text{Cr}/^{57}\text{Fe}/^{51}\text{Mn}/^{48}\text{Cr}/^{52}\text{Mn}/^{49}\text{V}/^{46}\text{Ti}/^{55}\text{Fe}/^{54}\text{Mn}/^{54}\text{Fe}/^{49}\text{V}/^{51}\text{Cr}/^{57}\text{Co}/^{57}\text{Fe}$, E=56-100 MeV; measured fusion $\sigma(E)$; deduced $\sigma(E)$, model parameter. Barrier penetration model.
- 86Ba38 F.C.Barker, R.H.Spear - Astrophys.J. 307, 847 (1986) - A Comment on the $^7\text{Be}(p,\gamma)^8\text{B}$ Cross Section and the Solar Neutrino Problem
NUCLEAR REACTIONS $^7\text{Li}(d,p)$, E=0.77 MeV; analyzed σ . $^7\text{Be}(p,\gamma)$, E=0.1-4 MeV; analyzed σ , ratio to $^7\text{Li}(d,p)$, S-factor vs E data; deduced inaccuracies, consequences to solar neutrino problem.
- 86Be20 S.D.Beizin, M.G.Itkis, I.A.Kamenev, S.I.Mulgin, V.N.Okolovich, G.N.Smirenkin - Yad.Fiz. 43, 1373 (1986) - Angular Anisotropy and Critical Angular Momentum in Nuclear Fission Induced by Light Charged Particles

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- 86Bi03 M.Bini, P.G.Bizzeti, R.Fabene - J.Phys.(London) G12, 223 (1986) - Mean Lives of Excited Levels of ^{41}K
NUCLEAR REACTIONS ^{40}Ar (p, γ), $E=0.6-2.3$ MeV; measured E_γ , I_γ , DSA, $\gamma\gamma$ -coin, γ yields, $\sigma(E)$. ^{41}K deduced levels, J, π, γ -branching, $T_{1/2}$.
- 86Bi05 O.Birgul, L.Yaffe - J.Radioanal.Nucl.Chem. 103, 153 (1986) - The Fission of ^{197}Au by Protons of Energies of 52-65 MeV
NUCLEAR REACTIONS ^{197}Au (p,F) ^{96}Nb / ^{97}Nb / ^{98}Nb / ^{97}Zr , $E=52-65$ MeV; measured cumulative, independent residual production σ following fission; deduced charge dispersion, $(Z(A)-Z_p)$ vs E .
- 86Bo05 E.Bozek, D.M.De Castro-Rizzo, S.Cavallaro, B.Delaunay, J.Delaunay, H.Dumont, A.D'Onofrio, M.-G.Saint-Laurent, L.Sperduto, F.Terrasi - Nucl.Phys. A451, 171 (1986) - De-Excitation of $^{58,60,62}\text{Ni}$ Compound Nuclei Formed via Symmetric and Asymmetric Entrance Channels
NUCLEAR REACTIONS ^{48}Ti ($^{12}\text{C}, X$), $E(\text{cm})=17.21-45.05$ MeV; ^{30}Si ($^{28}\text{Si}, X$), $E(\text{cm})=25.79-43.9$ MeV; ^{48}Ti ($^{12}\text{C}, X$), $E(\text{cm})=16.43-46.18$ MeV; ^{30}Si ($^{30}\text{Si}, X$), $E(\text{cm})=27.18-47.43$ MeV; ^{50}Ti ($^{12}\text{C}, X$), $E(\text{cm})=17.23-47.27$ MeV; ^{44}Ca ($^{18}\text{O}, X$), $E(\text{cm})=19.44-42.25$ MeV; measured absolute residue production σ for $^{57,58,59,58}\text{Co}$, $^{56,55,54,57,58,59,53}\text{Fe}$, $^{58,57,60,59}\text{Ni}$, $^{55,54,53,52,51}\text{Mn}$, $^{51,49,50}\text{V}$.
- 86Br03 V.R.Brown, C.Wong, C.H.Poppe, J.D.Anderson, J.C.Davis, S.M.Grimes, V.A.Madsen - Phys.Rev. C33, 1235 (1986) - Cross Sections for the $\text{Ti}(p,n)$ Reaction to Analogs of Ground and 2^+ Excited States
NUCLEAR REACTIONS $^{46,47,48,49,50}\text{Ti}$ (p,n), $E=11.5-26$ MeV; measured $\sigma(E)$, $\sigma(\theta)$; deduced $\sigma, \beta(n)/\beta(p)$. $^{46,48,50}\text{Ti}$ levels deduced β .
- 86Br11 V.N.Bragin, R.Donangelo - Nucl.Phys. A454, 409 (1986) - Energy Dependence of the Optical Potential for $^{16}\text{O} + ^{28}\text{Si}$ Elastic Scattering in the Energy Range of $E = 55-215$ MeV
NUCLEAR REACTIONS ^{28}Si ($^{16}\text{O}, ^{16}\text{O}$), $E=55-215$ MeV; analyzed $\sigma(\theta)$; deduced potential parameters energy dependence, reaction $\sigma(E)$, real, imaginary term transition characteristics. Optical model.
- 86Br19 V.N.Bragin, G.Pollarolo, A.Winther - Nucl.Phys. A456, 175 (1986) - Coupled Channels Analysis of the $^{16}\text{O} + ^{28}\text{Si}$ Reaction near the Coulomb Barrier
NUCLEAR REACTIONS ^{28}Si ($^{16}\text{O}, ^{16}\text{O}$), ($^{16}\text{O}, ^{16}\text{O}$), ($^{16}\text{O}, X$), $E=21-38$ MeV; calculated $\sigma(\theta)$, fusion $\sigma(E)$; deduced potential parameters. Coupled-channels model, deformed optical potential.
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NUCLEAR REACTIONS $^2\text{H}(t, \alpha)$, $E=12.5-117$ keV; measured σ ; deduced astrophysical S-factor vs E . $^2\text{H}(d, n)$, (d, p), $E \leq 125$ keV; measured S-factor, anisotropy vs E . $^3\text{H}(t, \alpha)$, $E \leq 120$ keV; measured $\sigma(E, \alpha)$; deduced astrophysical S-factor vs E .
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 NUCLEAR REACTIONS $^{110}\text{Pd}(\text{Ar},\text{X})$, $E=150-300$ MeV; $^{62}\text{Ni}(\text{Cl},\text{X})$, $E=60-180$ MeV; ^{118}Sn , $^{141}\text{Pr}(\text{Cl},\text{X})$, $E(\text{cm})=120-240$ MeV; $^{208}\text{Pb}(\text{Mg},\text{X})$, $E=100-250$ MeV; $^{208}\text{Pb}(\text{Al},\text{X})$, $E \approx 100-250$ MeV; $^{76}\text{Ge}(\text{S},\text{X})$, $E(\text{cm}) \approx 70-250$ MeV; $^{32}\text{Cl}(\text{Al},\text{X})$, $E \approx 33.3-100$ MeV; $^{40}\text{Ca}(\text{O},\text{X})$, $E(\text{cm}) \approx 25-100$ MeV; $^{233}\text{U}(\alpha, \text{X})$, $E \approx 25-100$ MeV; $^{28}\text{Si}(\text{O},\text{X})$, $E(\text{cm}) \approx 16.6-100$ MeV; $^{23}\text{Na}(\text{F},\text{X})$, $E(\text{cm})=20-100$ MeV; $^{12}\text{C}(\text{F}, \text{X})$, $E(\text{cm}) \approx 10-33.3$ MeV; $^{26}\text{Mg}(\text{C},\text{X})$, $E(\text{cm}) \approx 12.5-50$ MeV; $^{14}\text{N}(\text{C},\text{X})$, $E(\text{cm}) \approx 14-100$ MeV; $^{10}\text{B}(\text{O},\text{X})$, $E(\text{cm}) \approx 8.5-33.3$ MeV; calculated fusion $\sigma(E)$, barrier heights, positions. Relaxed density potential.
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 NUCLEAR REACTIONS $^7\text{Li}(\text{p},\alpha)$, $E(\text{cm})=25-873$ keV; measured $\sigma(\theta)$; deduced σ , astrophysical S(E) factor.
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 NUCLEAR REACTIONS $^{27}\text{Al}(\text{p},\gamma)$, $E=988-998$ keV; measured thick target yield curves. D_2O -graphite detector.

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NUCLEAR REACTIONS $^{16}\text{O}(\text{p},\alpha)$, $E=6.5-16.5$ MeV; $^{14}\text{N}(\text{p},\text{pn})$, $E=12-30$ MeV; measured $\sigma(E)$; deduced thick target yields. Enriched gas target, residual ^{13}N activity.
- 86Sc10 M.Schadel, W.Bruchle, M.Brugger, H.Caggeler, K.J.Moody, D.Schardt, K.Summerer, E.K.Hulet, A.D.Dougan, R.J.Dougan, J.H.Landrum, R.W.Lougheed, J.F.Wild, G.D.O'Kelley - Phys.Rev. C33, 1547 (1986) - Transfer Cross Sections from Reactions with ^{254}Es as a Target
NUCLEAR REACTIONS $^{254}\text{Es}(^{16}\text{O},\text{X})$, $E=98$ MeV; measured production σ for No, Lr isotopes. $^{254}\text{Es}(^{18}\text{O},\text{X})^{260}\text{Md}/^{261}\text{Md}/^{260}\text{No}/^{261}\text{No}/^{262}\text{No}/^{261}\text{Lr}/^{262}\text{Lr}/^{263}\text{Lr}$, $E=98$ MeV; $^{254}\text{Es}(^{22}\text{Ne},\text{X})^{260}\text{Md}/^{261}\text{Md}/^{260}\text{No}/^{261}\text{No}/^{262}\text{No}/^{261}\text{Lr}/^{262}\text{Lr}/^{263}\text{Lr}$, $E=127$ MeV; measured residual production σ . Activation technique.
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NUCLEAR REACTIONS $^{26}\text{Si}(^3\text{He},\alpha)$, $E=15$ MeV; measured $\sigma(E\alpha)$, $\sigma(\theta)$; deduced $^{26}\text{Al}(\text{p},\gamma)^{27}\text{Si}$ stellar capture σ reaction rates. ^{27}Si deduced levels. Natural targets, magnetic spectrograph, position sensitive detectors, photographic plates.
- 86Sc28 C.J.S.Scholz, L.Ricken, E.Kuhlmann - Z.Phys. A325, 203 (1986) - Complete Fusion of $^7\text{Li} + ^{16}\text{O}$ in the Region of the Coulomb Threshold
NUCLEAR REACTIONS $^{16}\text{O}(^7\text{Li},\text{p}\gamma)$, $(^7\text{Li},\text{n}\gamma)$, $(^7\text{Li},\text{d}\gamma)$, $(^7\text{Li},\text{t}\gamma)$, $(^7\text{Li},\alpha\gamma)$, $(^7\text{Li},2\alpha\gamma)$, $(^7\text{Li},\text{p}\alpha\gamma)$, $(^7\text{Li},\text{n}\alpha\gamma)$, $(^7\text{Li},2\text{n}\gamma)$, $E=4-10$ MeV; measured γ production $\sigma(E)$, $E\gamma$, $\text{l}\gamma$, $\text{n}\gamma$ -coin, γ yields; deduced model parameters, fusion $\sigma(E)$, $L(\text{critical})$.
- 86Sc32 A.Scalia - Nuovo Cim. 94A, 88 (1986) - The Heavy-Ion Fusion in Terms of the Rutherford Trajectories
NUCLEAR REACTIONS $^{12}\text{C}, ^{24}\text{Mg}(^{18}\text{O},\text{X})$, $^{24}, ^{26}\text{Mg}(^{16}\text{O},\text{X})$, $^{24}\text{Mg}, ^{27}\text{Al}(^{12}\text{C},\text{X})$, $^{27}\text{Al}, ^{62}\text{Ni}(^{35}\text{Cl},\text{X})$, $^{76}\text{Ge}(^{32}\text{S},\text{X})$, $^{109}\text{Ag}, ^{163}\text{Ho}(^{40}\text{Ar},\text{X})$, $E \leq 350$ MeV; calculated fusion $\sigma(E)$. Elastic model, closest distance approach.
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NUCLEAR REACTIONS $^{41}\text{K}(\text{p},\alpha)$, (p,γ) , (p,n) , $(\text{p},\alpha\gamma)$, $(\text{p},\text{n}\gamma)$, $(\text{p},\text{p}'\gamma)$, $E=0.6-4$ MeV; $^{62}\text{Ni}(\alpha,\text{p})$, $E=6.5-9$ MeV; measured α -particle, γ -ray, neutron, proton yields; deduced $\sigma(E)$, thermonuclear reaction rates. Statistical-model analysis. Enriched targets.
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NUCLEAR REACTIONS $^{54}\text{Fe}(\text{d},\text{n})$, $E=12$ MeV; measured $E\gamma$, $\text{l}\gamma$; deduced residual yield.
- 86SiZW N.L.Singh, S.Agarwal, L.Chaturvedi, J.Rama Rao - Bull.Am.Phys.Soc. 31, No.8, 1306, P2.70 (1986) - Excitation Function for Radioactive Isotopes Produced by Alpha Particle Induced Reactions with Silver
NUCLEAR REACTIONS $^{107}\text{Ag}(\alpha,\text{n})$, $(\alpha,2\text{n})$, $(\alpha,\text{n}\alpha)$, $(\alpha,2\text{n}\alpha)$, $^{109}\text{Ag}(\alpha,2\text{n})$, $(\alpha,3\text{n})$, $(\alpha,4\text{n})$, $(\alpha,3\text{n}\alpha)$, $E=\text{threshold}-50$ MeV; measured $\sigma(E)$. Activation technique.
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NUCLEAR REACTIONS $^{24}\text{Mg}(\alpha,^{12}\text{C})$, (α,α') , $E=24.9-27.76$ MeV; measured $\sigma(E)$, $\sigma(E\alpha,\theta)$. ^{28}Si resonances deduced J,π .
- 86Sk03 E.A.Skakun, V.G.Baty, Yu.N.Rakivnenko, O.A.Rastrepin - Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2043 (1986) - Investigation of Cross Sections of Reactions $^{52}\text{Cr}(\text{p},\text{n})^{52}\text{Mn}$ and $^{54}\text{Cr}(\text{p},\text{n})^{54}\text{Mn}$ at Incident Energies of 5-9 MeV
NUCLEAR REACTIONS $^{52}, ^{54}\text{Cr}(\text{p},\text{n})$, $E=5-9$ MeV; measured reaction $\sigma(E)$. ^{52}Mn deduced isomer to ground state production σ ratio.
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NUCLEAR REACTIONS $^{12}\text{C}(^6\text{Li},\text{p})$, $E=28$ MeV; measured $\sigma(\theta)$; deduced σ , model parameters. ^{17}O deduced levels, J,π , T . Enriched target, multiangle spectrograph. Hauser-Feshbach, DWBA analyses.
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NUCLEAR REACTIONS $^{41}\text{K}(\text{p},\text{p}'),(\text{p},\text{p}'),\text{E}=62\text{ MeV};$ measured $\text{E}_\gamma, \text{I}_\gamma, \gamma\gamma(\text{t}), \text{DSA},$ relative level reaction σ . ^{41}K deduced levels, $\text{J}, \pi, \text{T}_{1/2}, \gamma$ -multipolarity, $\text{B}(\lambda)$. Shell model.
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NUCLEAR REACTIONS $^{232}\text{Th}(\text{p},\gamma),\text{E}=7-20\text{ MeV}; ^{232}\text{Th}(\text{p},\text{F}),\text{E}=11-20\text{ MeV};$ measured radiative capture, fission $\sigma(\text{E})$. ^{233}Pa deduced GDR excitation via DSD process.
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NUCLEAR REACTIONS $^{232}\text{Th}(\text{p},\gamma),\text{E}=7-20\text{ MeV}; ^{176}\text{Yb}(\text{p},\gamma),\text{E}=6-24\text{ MeV};$ analyzed $\sigma(\text{E})$. Direct-semidirect model.
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NUCLEAR REACTIONS $^{61}\text{Ni}(\text{p},\text{p}'),\text{E}=2-4.6\text{ MeV};$ measured $\text{E}_\gamma, \text{I}_\gamma$ following Coulomb excitation; calculated thick target yields. ^{61}Ni levels deduced $\text{B}(\text{E}2)$.
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NUCLEAR REACTIONS $^{63}\text{Cu}, ^{67}\text{Zn}(\text{p},\text{p}'),\text{E}=2-4\text{ MeV};$ measured thick target γ yield, Coulomb excitation. ^{63}Cu deduced level excitation mode, $\text{B}(\text{E}2)$. ^{67}Zn level deduced $\text{B}(\text{E}2)$.
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NUCLEAR REACTIONS $^{16,17,18}\text{O}(^{16}\text{O},\text{X}),\text{E}=14-25\text{ MeV};$ measured $\text{E}_\gamma, \text{I}_\gamma,$ fusion $\sigma(\text{E})$. Different model analyses.
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NUCLEAR REACTIONS $^{180}\text{Os}(^{12}\text{C},3\text{n}),(^{12}\text{C},4\text{n}),(^{12}\text{C},5\text{n}),(^{12}\text{C},6\text{n}),(^{12}\text{C},7\text{n}),\text{E}=70-110\text{ MeV};$ measured $\sigma(\text{E}), \text{E}_\gamma, \text{I}_\gamma(\text{t}), \gamma\gamma(\text{t}),$ sum spectra, $\text{I}(\text{ce}), \sigma(\text{E}_\gamma, \theta)$; $^{180}\text{Hg}(\alpha,6\text{n}),\text{E}=75\text{ MeV};$ measured $\text{E}_\gamma, \text{I}_\gamma(\text{t}), \gamma\gamma(\text{t}),$ sum spectra, $\text{I}(\text{ce}), \sigma(\text{E}_\gamma, \theta)$. $^{184,186}\text{Pb}$ deduced levels, J, π, γ -branching, $\text{T}_{1/2}, \text{B}(\lambda)$. Enriched targets, Ge(Li), Ge, Si(Li) detectors, sum spectrometer, mini-orange filter.
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NUCLEAR REACTIONS $^{18}\text{O}(\text{p},\text{n})^{18}\text{F},\text{E}=72\text{ MeV};$ measured residual production σ . Activation technique.
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NUCLEAR REACTIONS $^{209}\text{Bi}, ^{208}\text{Pb}(^{16}\text{O},\text{X}),(^{16}\text{O},\text{F}),(^{16}\text{O},^{16}\text{O}), ^{208}\text{Pb}(^{18}\text{O},\text{X}),(^{18}\text{O},\text{F}),(^{18}\text{O},^{18}\text{O}),\text{E}(\text{cm})=70-98\text{ MeV}; ^{209}\text{Bi}(^{15}\text{N},\text{X}),\text{E}(\text{cm}) \approx 64-90\text{ MeV};$ measured fusion, evaporation residue $\sigma(\text{E})$, fission fragment, elastic $\sigma(\theta)$; deduced parameters.
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NUCLEAR REACTIONS $^{36}\text{S}(^{14}\text{C},2n), (^{14}\text{C},3n), (^{14}\text{C},np), (^{14}\text{C},2np), (^{14}\text{C},n\alpha), (^{14}\text{C},2n\alpha), E=18\text{--}38\text{ MeV}$; measured $E\gamma, \gamma\gamma$ -coin, $\gamma(\theta)$, DSA, $\sigma(E\gamma, E)$; deduced residual production σ . $^{47,48}\text{Ti}$, ^{47}Sc , $^{44,45}\text{Ca}$ deduced levels, J, π, γ -branching, $B(\lambda)$, $T_{1/2}, \gamma$ -multipolarity, $\delta, B(\lambda)$, configuration.
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NUCLEAR REACTIONS $^2\text{H}(d,\gamma), E=0.7\text{--}14.9\text{ MeV}$; measured $E\gamma, I\gamma, \gamma(\theta), \sigma(E)$. ^4He deduced asymptotic D-to-S state ratio.
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NUCLEAR REACTIONS $^{21}\text{Na}(p,\gamma), E=0.22, 0.34, 0.47\text{ MeV}$; $^{22}\text{Na}(p,\gamma), E=0.11\text{--}0.614\text{ MeV}$; calculated capture σ reaction rates vs temperature.
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NUCLEAR REACTIONS $^{90}\text{Zr}(^{50}\text{Ti}, X), E(\text{cm}) \approx 101\text{--}118\text{ MeV}$; $^{90}\text{Zr}(^{48}\text{Ti}, X), E(\text{cm})=100\text{--}118\text{ MeV}$; $^{93}\text{Nb}(^{46}\text{Ti}, X), (^{50}\text{Ti}, X), E(\text{cm}) \approx 100\text{--}120\text{ MeV}$; calculated fusion $\sigma(E)$; $^{90,94}\text{Zr}(^{81}\text{Br}, X), E(\text{cm})=150\text{--}162.5\text{ MeV}$; calculated fusion $\sigma(E)$ ratio. Relative motion, collective surface excitation coupling model.
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NUCLEAR REACTIONS $^{144}\text{Sm}(\alpha,2n), E=23\text{--}28\text{ MeV}$; measured $\sigma(E), E\gamma, I\gamma, \gamma(\theta), I(\text{ce}), \gamma\gamma$ -coin. ^{148}Gd deduced levels, γ -multipolarity, ICC, γ -branching, J, π . Ge(Li) detectors, coincidence measurements.
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NUCLEAR REACTIONS $^2\text{H}(\text{polarized } d,n), (d,n), E(\text{cm})=20\text{--}150\text{ MeV}$; calculated fusion $\sigma(E), \sigma(\theta)$ anisotropy. DWBA.
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NUCLEAR REACTIONS $^{13}\text{C}(p,\gamma), E \approx 1460\text{ keV}$; $^{15}\text{N}(p,\gamma), E \approx 430, 900\text{ keV}$; $^{20}\text{Ne}(p,\gamma), E \approx 380\text{ keV}$; $^{31}\text{P}(p,\gamma), E \approx 1250\text{ keV}$; measured $\sigma(E, E\gamma), \gamma$ yield vs $E, \sigma(E)$. $^{14}\text{N}, ^{18}\text{O}, ^{21}\text{Na}, ^{32}\text{S}$ deduced resonance strengths, γ -branching ratios, $B(M2), \Gamma\gamma, \Gamma p, \Gamma\alpha, \Gamma T$. Enriched, implanted targets.
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NUCLEAR REACTIONS $^7\text{Be}(p,\gamma), E \leq 2.5\text{ MeV}$; calculated $\sigma(E), \sigma(\theta)$, spectroscopic factors; deduced solar temperature astrophysical factor, d-wave capture role. Radiative direct capture model.
- 87Lo01 M.Lozano, A.Vitturi - Phys.Rev. C35, 367 (1987) - Effect of Elastic Transfer in Sub-Barrier Fusion between Similar Nuclei
NUCLEAR REACTIONS $^{18}\text{O}(^{18}\text{O}, X), E(\text{cm})=7\text{--}13\text{ MeV}$; calculated fusion $\sigma(E)$, target dependent enhancement factors. Sub-barrier fusion.
- 87Sk01 R.T.Skelton, R.W.Kavanagh, D.G.Sargood - Phys.Rev. C35, 45 (1987) - $^{26}\text{Mg}(p,n)^{26}\text{Al}$ and $^{23}\text{Na}(\alpha, n)^{26}\text{Al}$ Reactions
NUCLEAR REACTIONS $^{26}\text{Mg}(p,n), ^{23}\text{Na}(\alpha, n), E=3.5\text{--}5.8\text{ MeV}$; measured $\sigma(E)$; deduced inverse reaction $^{26}\text{Al}(n,p), (n,\alpha)$ $\sigma(E)$, thermal reaction rates vs temperature. Graphite cube neutron detector system.

TARGET INDEX

TARGET	REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
¹ H	(p,p)	E=threshold-800 MeV	JOUR Nuovo Cim. 94, 319	86By02
² H	(d,γ)	E=0.7-14.9 MeV	JOUR Phys.Rev. C34, 32	86We07
	(d,n)	E(cm)=20-150 MeV	JOUR Phys.Rev.Lett. 57, 1410	86Zh05
	(t,α)	E=12.5-117 keV	JOUR Radiat.Eff. 92, 45	86Br20
	(α,γ)	E≈0.5-5 MeV	JOUR Nucl.Phys. A457, 351	86La22
	(α,γ)	E≤3 MeV	JOUR Z.Phys. A325, 193	86La27
³ H	(d,γ)	E=0.0-0.72 MeV	JOUR Phys.Rev. C33, 1224	86Mo05
	(d,n)	E=0.0-0.72 MeV	JOUR Phys.Rev. C33, 1224	86Mo05
	(α,γ)	E(cm)≤2.5 MeV	JOUR Nucl.Phys. A460, 559	86Ka45
	(α,γ)	E≤3 MeV	JOUR Nucl.Phys. A459, 387	86Me13
³ He	(α,γ)	E(cm)≤2.5 MeV	JOUR Nucl.Phys. A460, 559	86Ka45
	(α,γ)	E=0.1-4 MeV	JOUR Phys.Rev. C33, 1561	86Li04
	(α,γ)	E≤3 MeV	JOUR Nucl.Phys. A459, 387	86Me13
⁶ Li	(t,p)	E=2-10 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 65	86Ab04
⁷ Li	(p,α)	E(cm)=25-873 keV	JOUR Nucl.Phys. A455, 179	86Ro13
	(d,p)	E=2-10 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 65	86Ab04
	(d,p)	E=0.77 MeV	JOUR Astrophys.J. 307, 847	86Ba38
	(t,n)	E=5-13 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2021	86Ab10
	(t,p)	E=5-13 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2021	86Ab10
	(³ He,n)	E=5-13 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2021	86Ab10
	(³ He,p)	E=5-13 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2021	86Ab10
⁷ Be	(p,γ)	E=0.1-4 MeV	JOUR Astrophys.J. 307, 847	86Ba38
	(p,γ)	E≤2.5 MeV	JOUR Phys.Rev. C35, 363	87Ki01
⁹ Be	(α,γ)	E≤1.1 MeV	JOUR Z.Phys. A324, 147	86La16
	(⁹ Be,p)	E(cm)≈1.25-3 MeV	JOUR Nucl.Phys. A453, 505	86Cu02
	(⁹ Be,2n)	E(cm)≈1.25-3 MeV	JOUR Nucl.Phys. A453, 505	86Cu02
	(⁹ Be,np)	E(cm)≈1.25-3 MeV	JOUR Nucl.Phys. A453, 505	86Cu02
	(⁹ Be, ³ He)	E(cm)≈1.25-3 MeV	JOUR Nucl.Phys. A453, 505	86Cu02
	(⁹ Be,X)	E(cm)≈1.25-3 MeV	JOUR Nucl.Phys. A453, 505	86Cu02
	(¹² C,X)	E=10-30 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(¹² C,X)	E(cm)=10-40 MeV	JOUR Phys.Rev. C34, 357	86Ka22
	(¹⁸ O,d)	E=10-40 MeV	JOUR Radiochim.Acta 38, 185	85Li17
	(¹⁸ O,2α)	E=10-40 MeV	JOUR Radiochim.Acta 38, 185	85Di17
¹⁰ B	(⁹ Be,nα)	E(cm)≈1.25-3 MeV	JOUR Nucl.Phys. A453, 505	86Cu02
	(⁹ Be, ⁸ Be)	E(cm)≈1.25-3 MeV	JOUR Nucl.Phys. A453, 505	86Cu02
	(⁹ Be,X)	E(cm)≈1.25-3 MeV	JOUR Nucl.Phys. A453, 505	86Cu02
	(¹⁸ O,X)	E(cm)≈8.5-33.3 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
¹¹ B	(¹² C,X)	E=10-30 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(¹² C,X)	E=52.36 MeV	JOUR Phys.Rev. C33, 1307	86Ma13
¹² C	(⁶ Li,p)	E=28 MeV	JOUR J.Phys.(London) G12, 985	86Sm10
	(¹¹ B,X)	E=48 MeV	JOUR Phys.Rev. C33, 1307	86Ma13
	(¹² C, ¹² C)	E(cm)≈5.5-33 MeV	JOUR Phys.Lett. 173, 39	86Or01
	(¹² C,X)	E=10-30 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(¹² C,X)	E(cm)=10-30 MeV	JOUR Phys.Rev. C34, 357	86Ka22
	(¹² C,X)	E(cm)=2-8 MeV	JOUR Phys.Lett. 177, 147	86Ma44
	(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
	(¹⁷ O, ¹⁶ O)	E=40-70 MeV	JOUR Phys.Rev. C33, 1275	86Fr04
	(¹⁷ O, ¹⁷ O)	E=40-70 MeV	JOUR Phys.Rev. C33, 1275	86Fr04
	(¹⁷ O, ¹⁷ O)	E(cm)≈8-28 MeV	JOUR Phys.Rev. C33, 1280	86Ci01
	(¹⁷ O, ¹⁷ O)	E=40-70 MeV	JOUR Phys.Rev. C33, 1275	86Fr04
	(¹⁸ O,X)	E≤350 MeV	JOUR Nuovo Cim. 94, 88	86Sc32
	(¹⁹ F,X)	E(cm)≈10-33.3 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
	(²⁸ Si,X)	E(cm)=39-54 MeV	JOUR Phys.Rev. C34, 552	86Ha33
¹³ C	(p,γ)	E≈1460 keV	JOUR Nucl.Phys. A460, 181	86Zi08
	(⁹ Be, ³ He)	E(cm)≈2-5 MeV	JOUR Nucl.Phys. A453, 505	86Cu02

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TARGET	REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
¹³ C	(⁹ Be,X)	E(cm)≈2-5 MeV	JOUR Nucl.Phys. A453, 505	86Cu02
	(¹² C,X)	E=10-30 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(¹³ C,α)	E(cm)=6.25-9.125 MeV	JOUR Phys.Rev. C34, 152	86Gi09
	(¹⁸ O,2n)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	(¹⁸ O,np)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	(¹⁶ O,2p)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	(¹⁶ O,α)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	(¹⁶ O,nα)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	(¹⁶ O,pα)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	(¹⁶ O,2α)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	(¹⁶ O,X)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	(¹⁷ O, ¹⁷ O')	E(cm)≈8-28 MeV	JOUR Phys.Rev. C33, 1280	86Ci01
¹⁴ N	(p,np)	E=12-30 MeV	JOUR Radiochim.Acta 39, 165	86Sa33
	(¹² C, ¹² C)	E(cm)=9-25 MeV	JOUR Phys.Lett. 165, 247	85Vi09
	(¹² C,X)	E=10-30 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(¹³ C,X)	E(cm)≈14-100 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
¹⁵ N	(p,γ)	E≈430,900 keV	JOUR Nucl.Phys. A460, 181	86Zi08
	(p,p)	E≈30-33 MeV	JOUR J.Phys.(London) G12, 821	86K106
	(p,p')	E≈30-33 MeV	JOUR J.Phys.(London) G12, 821	86K106
	(α,n)	Ez threshold	JOUR Int.J.Appl.Radiat.Isotop. 37, 649	86Ni09
	(¹² C,X)	E=10-30 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
¹⁶ O	(p,α)	E=6.5-16.5 MeV	JOUR Radiochim.Acta 39, 165	86Sa33
	(t,n)	Ez threshold	JOUR Int.J.Appl.Radiat.Isotop. 37, 649	86Ni09
	(³ He,p)	E=36 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 853	86Kn07
	(³ He,X)	Ez threshold	JOUR Int.J.Appl.Radiat.Isotop. 37, 649	86Ni09
	(α,γ)	E(cm)≈5 MeV	JOUR Nucl.Phys. A459, 374	86De27
	(α,np)	Ez threshold	JOUR Int.J.Appl.Radiat.Isotop. 37, 649	86Ni09
	(⁶ Li,n)	E=4.1-12.5 MeV	JOUR Nucl.Phys. A452, 150	86G102
	(⁶ Li,p)	E=4.5-8 MeV	JOUR Nucl.Phys. A452, 150	86G102
	(⁶ Li,p)	E=4.1-12.5 MeV	JOUR Nucl.Phys. A452, 150	86G102
	(⁶ Li,α)	E=4.1-12.5 MeV	JOUR Nucl.Phys. A452, 150	86G102
	(⁶ Li,X)	E=12-35 MeV	JOUR Phys.Rev. C33, 1649	86Ma19
	(⁷ Li,nγ)	E=4-10 MeV	JOUR Z.Phys. A325, 203	86Sc28
	(⁷ Li,p)	E=4-10 MeV	JOUR Z.Phys. A325, 203	86Sc28
	(⁷ Li,2n)	E=4-10 MeV	JOUR Z.Phys. A325, 203	86Sc28
	(⁷ Li,d)	E=4-10 MeV	JOUR Z.Phys. A325, 203	86Sc28
	(⁷ Li,t)	E=4-10 MeV	JOUR Z.Phys. A325, 203	86Sc28
	(⁷ Li,α)	E=4-10 MeV	JOUR Z.Phys. A325, 203	86Sc28
	(⁷ Li,nα)	E=4-10 MeV	JOUR Z.Phys. A325, 203	86Sc28
	(⁷ Li,pα)	E=4-10 MeV	JOUR Z.Phys. A325, 203	86Sc28
	(⁷ Li,2α)	E=4-10 MeV	JOUR Z.Phys. A325, 203	86Sc28
	(¹² C, ¹² C)	E(cm)=10-24 MeV	JOUR Phys.Lett. 165, 247	85Vi09
	(¹² C,X)	E≈8-333.3 MeV	JOUR Ann.Phys.(New York) 169, 167	86Ca11
	(¹² C,X)	E=10-30 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
	(¹⁶ O,X)	E=14-25 MeV	JOUR Phys.Rev. C33, 1679	86Th01
	(¹⁶ O,X)	E(cm)=7-13 MeV	JOUR Phys.Rev. C35, 367	87Lo01
¹⁷ O	(¹² C,X)	E=10-30 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(¹³ C, ¹³ C')	E(cm)≈15-25 MeV	JOUR Phys.Rev. C33, 1674	86Pa04
	(¹⁸ O,X)	E=14-25 MeV	JOUR Phys.Rev. C33, 1679	86Th01
¹⁸ O	(p,n)	E=15 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 397	86De19
	(p,n)	Ez threshold	JOUR Int.J.Appl.Radiat.Isotop. 37, 649	86Ni09
	(p,n)	E=3-16 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	(p,n)	E=72 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 448	86Vo08
	(¹² C,X)	E≈8-333.3 MeV	JOUR Ann.Phys.(New York) 169, 167	86Ca11
	(¹² C,X)	E=10-30 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(¹⁶ O,X)	E=14-25 MeV	JOUR Phys.Rev. C33, 1679	86Th01
	(¹⁶ O,X)	E(cm)=7-13 MeV	JOUR Phys.Rev. C35, 367	87Lo01
¹⁹ F	(¹² C,X)	E≈8-333.3 MeV	JOUR Ann.Phys.(New York) 169, 167	86Ca11
	(¹² C,X)	E=10-30 MeV	JOUR J.Phys.(London) G12, 537	86Ha13

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TARGET	REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
²⁰ Ne	(p,γ)	E≈380 keV	JOUR Nucl.Phys. A460, 181	86Zi08
	(d,α)	Ez threshold	JOUR Int.J.Appl.Radiat.Isotop. 37, 649	86Ni09
	(d,α)	E=2-14 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	(¹² C,X)	E(cm)≈0-10 MeV	JOUR Phys.Lett. 166, 385	86Gi03
	(¹² C,X)	E=10-30 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(¹⁸ O, ¹⁸ O)	E(cm)=24.5-35.5 MeV	JOUR Nucl.Phys. A437, 117	85Ko43
	(¹⁸ O, ¹⁸ O')	E(cm)=24.5-35.5 MeV	JOUR Nucl.Phys. A437, 117	85Ko43
²¹ Na	(p,γ)	E=0.22,0.34,0.47 MeV	JOUR Z.Phys. A325, 309	86Wi13
²² Na	(μ,γ)	E=0.11-0.614 MeV	JOUR Z.Phys. A325, 309	86Wi13
²³ Na	(α,n)	E=3.5-5.8 MeV	JOUR Phys.Rev. C35, 45	87Sk01
	(¹⁹ F,X)	E(cm)=20-100 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
	(²³ Na,X)	E(cm)≈50-220 MeV	JOUR Nucl.Phys. A451, 338	86Fr03
²⁴ Mg	(α,α')	E=24.9-27.76 MeV	JOUR Nucl.Phys. A452, 432	86Sk01
	(α, ¹² C)	E=24.9-27.76 MeV	JOUR Nucl.Phys. A452, 432	86Sk01
	(¹² C,X)	E=10-30 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(¹² C,X)	E≤350 MeV	JOUR Nuovo Cim. 94, 88	86Sc32
	(¹⁵ N,nα)	E=19-31 MeV	JOUR Radiochim.Acta 38, 181	85Co29
	(¹⁸ O,X)	E≈13-150 MeV	JOUR Ann.Phys.(New York) 169, 167	86Ca11
	(¹⁸ O,X)	E≤350 MeV	JOUR Nuovo Cim. 94, 88	86Sc32
	(¹⁸ O,X)	E≈20-40 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(¹⁸ O,X)	E≤350 MeV	JOUR Nuovo Cim. 94, 88	86Sc32
	(¹⁹ F,X)	E=72-87.9 MeV	JOUR Rev.Roum.Phys. 31, 29	86Bu05
²⁵ Mg	(p,γ)	E=0.31-1.84 MeV	JOUR Nucl.Phys. A459, 61	86En04
	(p,p')	E=0.31-1.84 MeV	JOUR Nucl.Phys. A459, 61	86En04
²⁶ Mg	(p,n)	E=3.5-5.8 MeV	JOUR Phys.Rev. C35, 45	87Sk01
	(p,p)	E=6.5-7.6 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 129	86Ro09
	(¹² C,X)	E(cm)≈12.5-50 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
	(¹⁸ O,X)	E≤350 MeV	JOUR Nuovo Cim. 94, 88	86Sc32
²⁷ Al	(p,γ)	E=3.1-3.6 MeV	JOUR Phys.Rev. C34, 2319	86Pr07
	(p,γ)	E=988-998 keV	JOUR Nucl.Instr.Methods Phys.Res. A247, 507	86Ro18
	(p,p')	E=3.1-3.6 MeV	JOUR Phys.Rev. C34, 2319	86Pr07
	(p,α)	E=3.1-3.6 MeV	JOUR Phys.Rev. C34, 2319	86Pr07
	(α,n)	E=3.04-3.66 MeV	JOUR Phys.Scr. 33, 107	86Ho02
	(α,xnyp)	E=46.8,44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	(⁶ Li,α)	E=32 MeV	JOUR Phys.Rev. C33, 1294	86Dh01
	(¹² C,X)	E≈13-150 MeV	JOUR Ann.Phys.(New York) 169, 167	86Ca11
	(¹² C,X)	E≤350 MeV	JOUR Nuovo Cim. 94, 88	86Sc32
	(¹⁶ O,X)	E≈13-150 MeV	JOUR Ann.Phys.(New York) 169, 167	86Ca11
	(¹⁹ F,X)	E≈20-40 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(³⁵ Cl,X)	E≤350 MeV	JOUR Nuovo Cim. 94, 88	86Sc32
²⁸ Si	(p,γ)	E=7-24 MeV	JOUR Nucl.Phys. A449, 301	86Li02
	(³ He,α)	E=15 MeV	JOUR Nucl.Phys. A457, 182	86Sc21
	(⁶ Li,X)	E(cm)=10-40 MeV	JOUR Phys.Rev. C34, 357	86Ka22
	(¹⁶ O, ¹⁶ O)	E(cm)=20-52 MeV	JOUR Phys.Lett. 165, 247	85Vi09
	(¹⁶ O, ¹⁶ O)	E=55-215 MeV	JOUR Nucl.Phys. A454, 409	86Br11
	(¹⁶ O, ¹⁶ O)	E=21-38 MeV	JOUR Nucl.Phys. A456, 475	86Br19
	(¹⁶ O, ¹⁶ O')	E=21-38 MeV	JOUR Nucl.Phys. A456, 475	86Br19
	(¹⁶ O,X)	E=21-38 MeV	JOUR Nucl.Phys. A456, 475	86Br19
	(¹⁶ O,X)	E(cm)≈16.6-100 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
	(¹⁹ F,X)	E≈20-40 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(²⁸ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
³⁰ Si	(¹⁹ F,X)	E≈20-40 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(²⁸ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	(²⁸ Si,X)	E(cm)=25.79-43.9 MeV	JOUR Nucl.Phys. A451, 171	86Bo05
	(³⁰ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	(³⁰ Si,X)	E(cm)=27.18-47.43 MeV	JOUR Nucl.Phys. A451, 171	86Bo05

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TARGET	REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
³¹ P	(p,γ)	E≈1250 keV	JOUR Nucl.Phys. A460, 181	86Zi08
³² S	(²⁴ Mg,X)	E≈25-200 MeV	JOUR Ann.Phys.(New York) 169, 167	86Ca11
³⁶ S	(¹⁴ C,2n)	E=18-38 MeV	JOUR Phys.Rev. C34, 136	86Wa19
	(¹⁴ C,np)	E=18-38 MeV	JOUR Phys.Rev. C34, 136	86Wa19
	(¹⁴ C,3n)	E=18-38 MeV	JOUR Phys.Rev. C34, 136	86Wa19
	(¹⁴ C,2np)	E=18-38 MeV	JOUR Phys.Rev. C34, 136	86Wa19
	(¹⁴ C,nα)	E=18-38 MeV	JOUR Phys.Rev. C34, 136	86Wa19
	(¹⁴ C,2nα)	E=18-38 MeV	JOUR Phys.Rev. C34, 136	86Wa19
³⁵ Cl	(²⁷ Al,X)	E≈33.3-100 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
⁴⁰ Ar	(p,γ)	E=0.6-2.3 MeV	JOUR J.Phys.(London) G12, 223	86Bi03
⁴¹ K	(p,γ)	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
	(p,n)	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
	(p,n)	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
	(p,p')	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
	(p,p')	E=62 MeV	JOUR Z.Phys. A325, 163	86St10
	(p,α)	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
	(p,α)	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
	(p,α)	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
⁴⁰ Ca	(α,α)	E=10-27 MeV	JOUR Phys.Rev. C34, 1248	86Mi21
	(α,X)	E=10-27 MeV	JOUR Phys.Rev. C34, 1248	86Mi21
	(¹⁶ O,X)	E≈25-200 MeV	JOUR Ann.Phys.(New York) 169, 167	86Ca11
	(¹⁶ O,X)	E≈20-40 MeV	JOUR J.Phys.(London) G12, 537	86Ha13
	(¹⁶ O,X)	E(cm)≈25-100 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
	(¹⁶ O,X)	E≈50-500 MeV	JOUR Ann.Phys.(New York) 169, 167	86Ca11
	(¹⁶ O,X)	E≈50-500 MeV	JOUR Ann.Phys.(New York) 169, 167	86Ca11
⁴⁴ Ca	(¹⁸ O,X)	E(cm)=19.44-42.25 MeV	JOUR Nucl.Phys. A451, 171	86Bo05
⁴⁶ Ti	(p,γ)	E=0.4-1.8 MeV	JOUR Nucl.Phys. A454, 1	86De13
	(p,n)	E=11.5-26 MeV	JOUR Phys.Rev. C33, 1235	86Br03
	(¹² C,X)	E(cm)=17.21-45.05 MeV	JOUR Nucl.Phys. A451, 171	86Bo05
⁴⁷ Ti	(p,n)	E=11.5-26 MeV	JOUR Phys.Rev. C33, 1235	86Br03
⁴⁸ Ti	(p,n)	E=11.5-26 MeV	JOUR Phys.Rev. C33, 1235	86Br03
	(¹² C,X)	E(cm)=16.43-46.18 MeV	JOUR Nucl.Phys. A451, 171	86Bo05
	(²³ Na,X)	E=48-72.5 MeV	JOUR Phys.Rev.Lett. 57, 2002	86Bu15
	(²³ Na,X)	E(cm)<100 MeV	JOUR Nucl.Phys. A451, 338	86Fr03
⁴⁹ Ti	(p,n)	E=11.5-26 MeV	JOUR Phys.Rev. C33, 1235	86Br03
	(p,n)	E=11.5-26 MeV	JOUR Phys.Rev. C33, 1235	86Br03
⁵⁰ Ti	(α,α)	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	(α,α')	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	(¹² C,X)	E(cm)=17.23-47.27 MeV	JOUR Nucl.Phys. A451, 171	86Bo05
	(¹² C,X)	E(cm)=17.23-47.27 MeV	JOUR Nucl.Phys. A451, 171	86Bo05
⁵¹ V	(p,p)	E=20.8-47.8 MeV	JOUR Can.J.Phys. 64, 685	86Mc12
	(⁷ Li,X)	E(cm)=10-20 MeV	JOUR Nucl.Phys. A451, 338	86Fr03
⁵² Cr	(p,n)	E=5-9 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2043	86Sk03
	(α,α)	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	(α,α')	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
⁵⁴ Cr	(p,n)	E=5-9 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2043	86Sk03
⁵⁴ Fe	(p,p)	E=20.8-47.8 MeV	JOUR Can.J.Phys. 64, 685	86Mc12
	(d,n)	E=12 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 105	86Sh09
	(α,α)	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	(α,α')	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	(²⁸ Si,X)	E=75-145 MeV	JOUR Phys.Lett. 178, 339	86Ni07
	(²⁸ Si,X)	E=75-145 MeV	JOUR Phys.Lett. 178, 339	86Ni07
⁵⁶ Fe	(p,γ)	E=3760-3840 keV	JOUR Phys.Rev. C34, 1620	86El06

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TARGET	REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
⁵⁶ Fe	(p,p)	E=20.8-47.8 MeV	JOUR Can.J.Phys. 64, 685	86Mc12
	(p,p')	E=3760-3840 keV	JOUR Phys.Rev. C34, 1620	86E106
⁵⁷ Fe	(p,p)	E=20.8-47.8 MeV	JOUR Can.J.Phys. 64, 685	86Mc12
⁵⁸ Fe	(α,α)	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	(α,α')	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
Co	(α,xn)	E=10-120 MeV	JOUR Bull.Am.Phys.Soc. 31, 1304,P2.57	86Ra2R
⁵⁹ Co	(p,p)	E=20.8-47.8 MeV	JOUR Can.J.Phys. 64, 685	86Mc12
	(³ He,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	(α,X)	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁵⁸ Ni	(α,α)	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	(α,α')	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	(²⁸ Si,X)	E=68.4-94 MeV	JOUR Nucl.Phys. A456, 509	86St08
	(³⁰ Si,X)	E=68.4-94 MeV	JOUR Nucl.Phys. A456, 509	86St08
	(³² S,X)	E=79.6-152 MeV	JOUR Nucl.Phys. A456, 509	86St08
	(³⁴ S,X)	E=79.6-152 MeV	JOUR Nucl.Phys. A456, 509	86St08
	(³⁶ S,X)	E=79.6-152 MeV	JOUR Nucl.Phys. A456, 509	86St08
⁶¹ Ni	(p,p')	E=2-4.6 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.50	86Ta2V
⁶² Ni	(α,p)	E=6.5-9 MeV	JOUR Nucl.Phys. A454, 128	86Se02
	(¹⁴ N,X)	E=70-122 MeV	JOUR Radiochim.Acta 38, 117	85Su18
	(²⁸ Si,X)	E=68.4-94 MeV	JOUR Nucl.Phys. A456, 509	86St08
	(³⁰ Si,X)	E=68.4-94 MeV	JOUR Nucl.Phys. A456, 509	86St08
	(³² Cl,X)	E=60-180 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
	(³⁵ Cl,X)	E≤350 MeV	JOUR Nuovo Cim. 94, 88	86Sc32
⁶⁴ Ni	(α,α)	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	(α,α')	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	(²⁸ Si,X)	E=68.4-94 MeV	JOUR Nucl.Phys. A456, 509	86St08
	(³⁰ Si,X)	E=68.4-94 MeV	JOUR Nucl.Phys. A456, 509	86St08
	(³² S,X)	E=79.6-152 MeV	JOUR Nucl.Phys. A456, 509	86St08
	(³⁴ S,X)	E=79.6-152 MeV	JOUR Nucl.Phys. A456, 509	86St08
	(³⁶ S,X)	E=79.6-152 MeV	JOUR Nucl.Phys. A456, 509	86St08
⁶³ Cu	(p,p')	E=2-4 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.48	86Ta2W
	(α,xnyp)	E=47 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
⁶⁵ Cu	(α,xnyp)	E=47 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
⁶⁷ Zn	(p,p')	E=2-4 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.48	86Ta2W
⁷⁶ Ge	(³² S,X)	E(cm)≈70-250 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
	(³² S,X)	E≤350 MeV	JOUR Nuovo Cim. 94, 88	86Sc32
⁷⁵ As	(³ He,2n)	E=10-30 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	(³ He,2n)	E=10-18 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	(³ He,3n)	E=25-36 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	(³ He,3n)	E=17-35 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	(α,n)	E=threshold-28 MeV	JOUR Radiochim.Acta 39, 57	86Qa03
	(α,2n)	E=14-28 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	(α,2n)	E=threshold-28 MeV	JOUR Radiochim.Acta 39, 57	86Qa03
⁷⁶ Se	(p,n)	E=10-25 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	(p,2n)	E=21.5-28 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	(p,2n)	E=16-35 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	(³ He,3n)	E=30-36 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	(³ He,3n)	E=30-36 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
⁷⁷ Se	(p,n)	E=12 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	(p,n)	E=10-25 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05

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TARGET	REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
⁷⁸ Se	(p,p)	E=5-6.2 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 135	86Ro10
	(p,2n)	E=20-26 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
⁸⁰ Se	(p,p)	E=3.5-6 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 135	86Ro10
⁸² Se	(p,p)	E=4.9-6.8 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 135	86Ro10
Br	(p,xn)	E=50-90 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	(p,xn)	E=50-80 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	(d,xn)	E=50-90 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	(d,xn)	E=25-50 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	(d,xn)	E=50-80 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
⁷⁹ Br	(p,3n)	E=45,65 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
⁷⁸ Kr	(p,α)	E=12-15 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
Sr	(p,2n)	E=20-26 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 297	86Ja06
⁸⁶ Sr	(p,2n)	E=20-26 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 297	86Ja06
⁹⁰ Zr	(⁴⁶ Ti,X)	E(cm)=100-118 MeV	JOUR Nucl.Phys. A457, 401	86Wu02
	(⁵⁰ Ti,X)	E(cm)≈101-116 MeV	JOUR Nucl.Phys. A457, 401	86Wu02
	(⁸¹ Br,X)	E(cm)=150-162.5 MeV	JOUR Nucl.Phys. A457, 401	86Wu02
⁹² Zr	(⁶⁴ Ni,X)	E=200-300 MeV	JOUR Phys.Lett. 181, 16	86Ja16
⁹⁴ Zr	(⁸¹ Br,X)	E(cm)=150-162.5 MeV	JOUR Nucl.Phys. A457, 401	86Wu02
⁹³ Nb	(α,nα)	E≈10-40 MeV	JOUR J.Radioanal.Nucl.Chem. 98, 121	86Ra04
	(α,xn)	E≈ threshold-40 MeV	JOUR J.Radioanal.Nucl.Chem. 98, 121	86Ra04
	(⁴⁶ Ti,X)	E(cm)≈100-120 MeV	JOUR Nucl.Phys. A457, 401	86Wu02
	(⁵⁰ Ti,X)	E(cm)≈100-120 MeV	JOUR Nucl.Phys. A457, 401	86Wu02
Mo	(p,F)	E=800 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
⁹⁴ Mo	(α,n)	E=12-18 MeV	JOUR Phys.Rev. C34, 1629	86Ka37
	(⁶ Li,2np)	E=20-34 MeV	JOUR Phys.Rev. C34, 1629	86Ka37
¹⁰⁰ Mo	(α,n)	E=12-18 MeV	JOUR Phys.Rev. C34, 1629	86Ka37
⁹⁹ Ru	(p,p')	E=3 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.51	86MeZY
¹⁰¹ Ru	(p,p')	E=3 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.51	86MeZY
¹¹⁰ Pd	(⁴⁰ Ar,X)	E=150-300 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
¹⁰⁷ Ag	(α,n)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
	(α,2n)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
	(α,nα)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
	(α,2nα)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
¹⁰⁹ Ag	(³ He,n)	E not given	REPT JUL-Spez-305,P71	85MaZQ
	(³ He,2n)	E not given	REPT JUL-Spez-305,P71	85MaZQ
	(³ He,3n)	E not given	REPT JUL-Spez-305,P71	85MaZQ
	(³ He,4n)	E not given	REPT JUL-Spez-305,P71	85MaZQ
	(α,n)	E≈10-50 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 319	86Wa10
	(α,2n)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
	(α,2n)	E≈20-50 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 319	86Wa10
	(α,3n)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
	(α,4n)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
	(α,3nα)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
	(⁴⁰ Ar,X)	E≈350 MeV	JOUR Nuovo Cim. 94, 88	86Sc32
¹⁰⁶ Cd	(³ He,np)	E=20 MeV	JOUR Nucl.Phys. A455, 301	86Ki11
	(α,2np)	E=35-50 MeV	JOUR Nucl.Phys. A455, 301	86Ki11

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TARGET	REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
¹¹¹ Cd	(p,n)	E=threshold-45 MeV	REPT JUL-Spez-305,P71	85MaZQ
	(p,2n)	E=threshold-45 MeV	REPT JUL-Spez-305,P71	85MaZQ
	(p,3n)	E=threshold-45 MeV	REPT JUL-Spez-305,P71	85MaZQ
	(p,4n)	E=threshold-45 MeV	REPT JUL-Spez-305,P71	85MaZQ
¹¹² Sn	(¹⁶ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁷ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁸ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
¹¹⁸ Sn	(¹⁶ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁷ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁸ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(⁹⁰ Cl,X)	E(cm)=120-240 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
¹¹⁷ Sn	(¹⁶ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁷ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁸ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
¹¹⁸ Sn	(¹⁶ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁷ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁸ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
¹¹⁹ Sn	(¹⁶ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁷ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁸ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
¹²⁰ Sn	(¹⁶ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁷ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁸ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
¹²² Sn	(¹⁶ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁷ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁸ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
¹²⁴ Sn	(¹⁶ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁷ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
	(¹⁸ O,X)	E=51-90 MeV	JOUR Phys.Lett. 175, 271	86Ja11
¹²⁷ I	(p,n)	E=5.3-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 823	86La32
	(p,n)	E=45.8-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 835	86La33
	(p,p')	E=3.7 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.49	86ChZL
	(p,p')	E=3.7 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.51	86MeZY
	(p,3n)	E=5.3-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 823	86La32
	(p,3n)	E=45.8-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 835	86La33
	(p,5n)	E=5.3-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 823	86La32
	(p,5n)	E=45.8-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 835	86La33
	(p,5n)	E=200 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 843	86Ma63
	(p,6n)	E=5.3-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 823	86La32
	(p,6n)	E=45.8-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 835	86La33
	(p,7n)	E=5.3-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 823	86La32
¹²³ Xe	(p,2n)	E=14-30 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	(p,np)	E=14-30 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
¹³³ Cs	(²² Ne,3n)	E=92.6-145 MeV	JOUR Phys.Rev. C34, 899	86Mo16
	(²² Ne,4n)	E=92.6-145 MeV	JOUR Phys.Rev. C34, 899	86Mo16
	(²² Ne,5n)	E=92.6-145 MeV	JOUR Phys.Rev. C34, 899	86Mo16
	(²² Ne,6n)	E=92.6-145 MeV	JOUR Phys.Rev. C34, 899	86Mo16
	(²² Ne,7n)	E=92.6-145 MeV	JOUR Phys.Rev. C34, 899	86Mo16
	(²² Ne,3nα)	E=92.6-145 MeV	JOUR Phys.Rev. C34, 899	86Mo16
	(²² Ne,8n)	E=92.6-145 MeV	JOUR Phys.Rev. C34, 899	86Mo16
	(²² Ne,4nα)	E=92.6-145 MeV	JOUR Phys.Rev. C34, 899	86Mo16
	(²² Ne,9n)	E=92.6-145 MeV	JOUR Phys.Rev. C34, 899	86Mo16
	(²² Ne,5nα)	E=92.6-145 MeV	JOUR Phys.Rev. C34, 899	86Mo16
	(²² Ne,6nα)	E=92.6-145 MeV	JOUR Phys.Rev. C34, 899	86Mo16

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TARGET	REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
¹³⁹ La	(¹⁹ F,F)	E=70-129 MeV	JOUR Nucl.Phys. A457, 441	86Ch30
	(¹⁹ F,X)	E=70-129 MeV	JOUR Nucl.Phys. A457, 441	86Ch30
¹⁴¹ Pr	(³⁵ Cl,X)	E(cm)=120-240 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
¹⁴² Nd	(α ,2n)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	(α ,2n)	E≈65-95 MeV	REPT JUL-Spez-344,P33	86LuZZ
	(α ,3n)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	(α ,3n)	E≈65-95 MeV	REPT JUL-Spez-344,P33	86LuZZ
	(α ,4n)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	(α ,4n)	E≈65-95 MeV	REPT JUL-Spez-344,P33	86LuZZ
	(α ,5n)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	(α ,5n)	E≈65-95 MeV	REPT JUL-Spez-344,P33	86LuZZ
	(α ,6n)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	(α ,6n)	E≈65-95 MeV	REPT JUL-Spez-344,P33	86LuZZ
	(α ,6np)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	(α ,6np)	E≈65-95 MeV	REPT JUL-Spez-344,P33	86LuZZ
¹⁴⁴ Nd	(p, α)	E=25 MeV	JOUR Z.Phys. A323, 249	86Ga02
	(¹⁶ O,2n)	E=76-105 MeV	JOUR Z.Phys. A325, 85	86To09
	(¹⁶ O,3n)	E=76-105 MeV	JOUR Z.Phys. A325, 85	86To09
	(¹⁶ O,4n)	E=76-105 MeV	JOUR Z.Phys. A325, 85	86To09
	(¹⁶ O,5n)	E=76-105 MeV	JOUR Z.Phys. A325, 85	86To09
	(¹⁶ O,6n)	E=76-105 MeV	JOUR Z.Phys. A325, 85	86To09
¹⁴⁴ Sm	(α ,2n)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	(α ,2n)	E≈65-107 MeV	REPT JUL-Spez-344,P33	86LuZZ
	(α ,2n)	E=23-28 MeV	JOUR Z.Phys. A324, 417	86Ya06
	(α ,3n)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	(α ,3n)	E≈65-107 MeV	REPT JUL-Spez-344,P33	86LuZZ
	(α ,4n)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	(α ,4n)	E≈65-107 MeV	REPT JUL-Spez-344,P33	86LuZZ
	(α ,5n)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	(α ,5n)	E≈65-107 MeV	REPT JUL-Spez-344,P33	86LuZZ
	(α ,6n)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	(α ,6n)	E≈65-107 MeV	REPT JUL-Spez-344,P33	86LuZZ
	(α ,6np)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	(α ,6np)	E≈65-107 MeV	REPT JUL-Spez-344,P33	86LuZZ
	(¹² C,X)	E=50-90 MeV	JOUR Phys.Lett. 181, 16	86Ja16
	(¹⁶ O,X)	E=63-72 MeV	JOUR Phys.Lett. 176, 322	86Di08
¹⁴⁸ Sm	(¹⁶ O,X)	E=60-75 MeV	JOUR Nucl.Phys. A453, 162	86Ki06
¹⁵⁰ Sm	(¹⁸ O,F)	E=65-124 MeV	JOUR Nucl.Phys. A457, 441	86Ch30
	(¹⁸ O,X)	E=65-124 MeV	JOUR Nucl.Phys. A457, 441	86Ch30
¹⁵² Sm	(¹⁶ O,X)	E=60-75 MeV	JOUR Nucl.Phys. A453, 162	86Ki06
¹⁵⁹ Tb	(¹⁹ F,F)	E=70-129 MeV	JOUR Nucl.Phys. A457, 441	86Ch30
	(¹⁹ F,X)	E=70-129 MeV	JOUR Nucl.Phys. A457, 441	86Ch30
¹⁶² Dy	(³ He,F)	E=60-65 MeV	JOUR Yad.Fiz. 43, 1101	86Gr12
¹⁶⁵ Ho	(⁴⁰ Ar,X)	E(cm)≈150-300 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 1887	86Pe20
	(⁴⁰ Ar,X)	E=350 MeV	JOUR Nuovo Cim. 94, 88	86Sc32
¹⁶⁹ Tm	(³ He,F)	E=60-65 MeV	JOUR Yad.Fiz. 43, 1101	86Gr12
	(¹⁹ F,F)	E=70-129 MeV	JOUR Nucl.Phys. A457, 441	86Ch30
	(¹⁹ F,X)	E=70-129 MeV	JOUR Nucl.Phys. A457, 441	86Ch30
	(³⁰ Si,4n)	E=142 MeV	JOUR Phys.Rev. C33, 1641	86Lo05
¹⁷⁶ Yb	(p, γ)	E=6-24 MeV	JOUR Z.Phys. A324, 439	86Sz03
Lu	(p,xn)	E≈17.5-45 MeV	REPT JUL-Spez-305,P74	85MiZZ
	(p,xnp)	E=25-45 MeV	REPT JUL-Spez-305,P74	85MiZZ
	(p,xnp)	E≈27.5-45 MeV	REPT JUL-Spez-305,P74	85MiZZ

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TARGET	REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
¹⁷⁶ Hf	(³ He,F)	E=60-65 MeV	JOUR Yad.Fiz. 43, 1101	86Gr12
¹⁸¹ Ta	(³ He,F)	E=60-65 MeV	JOUR Yad.Fiz. 43, 1101	86Gr12
¹⁸⁰ W	(³ He,F)	E=60-65 MeV	JOUR Yad.Fiz. 43, 1101	86Gr12
	(α ,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	(α ,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
¹⁸² W	(p,F)	E $\approx$ 35-75 MeV	JOUR Yad.Fiz. 43, 1373	86Be20
	(α ,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	(α ,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	(α ,F)	E $\approx$ 35-75 MeV	JOUR Yad.Fiz. 43, 1373	86Be20
	(¹⁸ F,6n)	E=85-135 MeV	JOUR Phys.Rev. C33, 1641	86Lo05
¹⁸³ W	(α ,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	(α ,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
¹⁸⁴ W	(α ,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	(α ,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
¹⁸⁶ W	(α ,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	(α ,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
¹⁸⁵ Re	(p,F)	E $\approx$ 35-75 MeV	JOUR Yad.Fiz. 43, 1373	86Be20
	(α ,F)	E $\approx$ 35-75 MeV	JOUR Yad.Fiz. 43, 1373	86Be20
¹⁸⁸ Os	(¹² C,3n)	E=70-110 MeV	JOUR Nucl.Phys. A449, 579	86Va03
	(¹² C,4n)	E=70-110 MeV	JOUR Nucl.Phys. A449, 579	86Va03
	(¹² C,5n)	E=70-110 MeV	JOUR Nucl.Phys. A449, 579	86Va03
	(¹² C,6n)	E=70-110 MeV	JOUR Nucl.Phys. A449, 579	86Va03
	(¹² C,7n)	E=70-110 MeV	JOUR Nucl.Phys. A449, 579	86Va03
¹⁹² Os	(¹⁸ O,F)	E=65-124 MeV	JOUR Nucl.Phys. A457, 441	86Ch30
	(¹⁸ O,X)	E=65-124 MeV	JOUR Nucl.Phys. A457, 441	86Ch30
¹⁹⁷ Au	(p,F)	E $\approx$ 35-75 MeV	JOUR Yad.Fiz. 43, 1373	86Be20
	(p,F)	E=52-85 MeV	JOUR J.Radioanal.Nucl.Chem. 103, 153	86Bi05
	(α ,F)	E $\approx$ 35-75 MeV	JOUR Yad.Fiz. 43, 1373	86Be20
²⁰³ Tl	(p,F)	E $\approx$ 35-75 MeV	JOUR Yad.Fiz. 43, 1373	86Be20
	(α ,F)	E $\approx$ 35-75 MeV	JOUR Yad.Fiz. 43, 1373	86Be20
²⁰⁶ Pb	(p,F)	E $\approx$ 35-75 MeV	JOUR Yad.Fiz. 43, 1373	86Be20
	(α ,F)	E $\approx$ 35-75 MeV	JOUR Yad.Fiz. 43, 1373	86Be20
²⁰⁸ Pb	(α , ⁶ He)	E=109 MeV	JOUR Nucl.Phys. A457, 45	86Ku12
	(¹⁶ O, ¹⁶ O)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	(¹⁶ O,F)	E=77-86 MeV	JOUR Phys.Rev. C34, 1353	86Mu13
	(¹⁶ O,F)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	(¹⁶ O,X)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	(¹⁸ O, ¹⁸ O)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	(¹⁸ O,F)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	(¹⁸ O,X)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	(²³ Na,X)	E=108-120 MeV	JOUR Phys.Rev.Lett. 57, 2002	86Bu10
	(²⁶ Mg,X)	E=100-250 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
	(²⁷ Al,X)	E $\approx$ 100-250 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
²⁰⁸ Bi	(p,F)	E $\approx$ 35-75 MeV	JOUR Yad.Fiz. 43, 1373	86Be20
	(α ,2n)	E $\approx$ 21-40 MeV	JOUR J.Radioanal.Nucl.Chem. 96, 319	85Ro23
	(α ,3n)	E $\approx$ 21-40 MeV	JOUR J.Radioanal.Nucl.Chem. 96, 319	85Ro23
	(α ,3n)	E=threshold-47 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	(α ,4n)	E=threshold-47 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	(α ,5n)	E=threshold-47 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	(α ,F)	E $\approx$ 35-75 MeV	JOUR Yad.Fiz. 43, 1373	86Be20
	(¹⁵ N,X)	E(cm) $\approx$ 64-90 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	(¹⁸ O, ¹⁸ O)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01

TARGET INDEX

TARGET	REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
²⁰⁹ Bi	(¹⁶ O,F)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	(¹⁶ O,X)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
²²⁸ Ra	(p,F)	E=13 MeV	JOUR Yad.Fiz. 43, 1125	86It01
	(α,F)	E=17 MeV	JOUR Yad.Fiz. 43, 1125	86It01
²³² Th	(p,γ)	E=7-20 MeV	JOUR Z.Phys. A323, 97	86Sz01
	(p,γ)	E=7-20 MeV	JOUR Z.Phys. A324, 439	86Sz03
	(p,F)	E=11-20 MeV	JOUR Z.Phys. A323, 97	86Sz01
	(d,n)	E=8-880 MeV	JOUR Nucl.Phys. A448, 365	86Ra02
	(d,p)	E=8-880 MeV	JOUR Nucl.Phys. A448, 365	86Ra02
	(d,2n)	E=8-880 MeV	JOUR Nucl.Phys. A448, 365	86Ra02
	(d,4n)	E=8-880 MeV	JOUR Nucl.Phys. A448, 365	86Ra02
	(d,6n)	E=8-880 MeV	JOUR Nucl.Phys. A448, 365	86Ra02
	(d,xnyp)	E≈10-80 MeV	REPT JUL-Spez-344,P19	86RaZV
	(⁶ Li,nα)	E=28-48 MeV	JOUR Nucl.Phys. A448, 365	86Ra02
	(⁶ Li,nα)	E=8-80 MeV	REPT JUL-Spez-344,P19	86RaZV
	(⁶ Li,pα)	E=28-48 MeV	JOUR Nucl.Phys. A440, 365	86Ra02
	(⁶ Li,pα)	E=8-80 MeV	REPT JUL-Spez-344,P19	86RaZV
	(⁶ Li,2nα)	E=28-48 MeV	JOUR Nucl.Phys. A448, 365	86Ra02
	(⁶ Li,2nα)	E=8-80 MeV	REPT JUL-Spez-344,P19	86RaZV
	(⁶ Li,4nα)	E=28-48 MeV	JOUR Nucl.Phys. A448, 365	86Ra02
	(⁶ Li,4nα)	E=8-80 MeV	REPT JUL-Spez-344,P19	86RaZV
	(¹⁶ O,F)	E=77-86 MeV	JOUR Phys.Rev. C34, 1353	86Mu13
²³³ U	(α,X)	E≈25-100 MeV	JOUR J.Phys.(London) G12, 623	86Ro12
²³⁶ U	(¹² C,F)	E=60-68 MeV	JOUR Phys.Rev. C34, 1353	86Mu13
²³⁸ U	(α,2n)	E=20.1-27.3 MeV	JOUR Z.Phys. A323, 101	86De04
²³⁷ Np	(p,F)	E=9-16 MeV	REPT RIKEN-85,P40	86OhZV
²⁵⁴ Es	(¹⁶ O,X)	E=98 MeV	JOUR Phys.Rev. C33, 1547	86Sc10
	(¹⁸ O,X)	E=98 MeV	JOUR Phys.Rev. C33, 1547	86Sc10
	(²² Ne,X)	E=127 MeV	JOUR Phys.Rev. C33, 1547	86Sc10

RESIDUAL INDEX

RESIDUAL	TARGET-REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
^1n	$^2\text{H}(\text{t}, \alpha)$	$E=12.5-117 \text{ keV}$	JOUR Radiat.Eff. 92, 45	86Br20
^1H	$^1\text{H}(\text{p}, \text{p})$	$E=\text{threshold}-800 \text{ MeV}$	JOUR Nuovo Cim. 94, 319	86By02
^3He	$^2\text{H}(\text{d}, \text{n})$	$E(\text{cm})=20-150 \text{ MeV}$	JOUR Phys.Rev.Lett. 57, 1410	86Zh05
^4He	$^7\text{Li}(\text{p}, \alpha)$	$E(\text{cm})=25-873 \text{ keV}$	JOUR Nucl.Phys. A455, 179	86Ro13
	$^2\text{H}(\text{d}, \gamma)$	$E=0.7-14.9 \text{ MeV}$	JOUR Phys.Rev. C34, 32	86We07
	$^3\text{H}(\text{d}, \text{n})$	$E=0.0-0.72 \text{ MeV}$	JOUR Phys.Rev. C33, 1224	86Mo05
	$^{24}\text{Mg}(^{19}\text{F}, \text{X})$	$E=72-87.9 \text{ MeV}$	JOUR Rev.Roum.Phys. 31, 29	86Bu05
^5He	$^3\text{H}(\text{d}, \gamma)$	$E=0.0-0.72 \text{ MeV}$	JOUR Phys.Rev. C33, 1224	86Mo05
^6Li	$^2\text{H}(\alpha, \gamma)$	$E \approx 0.5-5 \text{ MeV}$	JOUR Nucl.Phys. A457, 351	86La22
	$^2\text{H}(\alpha, \gamma)$	$E \leq 3 \text{ MeV}$	JOUR Z.Phys. A325, 193	86La27
^7Li	$^3\text{H}(\alpha, \gamma)$	$E(\text{cm}) \leq 2.5 \text{ MeV}$	JOUR Nucl.Phys. A460, 559	86Ka45
	$^3\text{H}(\alpha, \gamma)$	$E \leq 3 \text{ MeV}$	JOUR Nucl.Phys. A459, 387	86Me13
^8Li	$^7\text{Li}(\text{d}, \text{p})$	$E=2-10 \text{ MeV}$	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 65	86Ab04
	$^7\text{Li}(\text{d}, \text{p})$	$E=0.77 \text{ MeV}$	JOUR Astrophys.J. 307, 847	86Ba38
	$^6\text{Li}(\text{t}, \text{p})$	$E=2-10 \text{ MeV}$	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 65	86Ab04
^9Li	$^7\text{Li}(\text{t}, \text{p})$	$E=5-13 \text{ MeV}$	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2021	86Ab10
^7Be	$^3\text{He}(\alpha, \gamma)$	$E(\text{cm}) \leq 2.5 \text{ MeV}$	JOUR Nucl.Phys. A460, 559	86Ka45
	$^3\text{He}(\alpha, \gamma)$	$E=0.1-4 \text{ MeV}$	JOUR Phys.Rev. C33, 1561	86Li04
	$^3\text{He}(\alpha, \gamma)$	$E \leq 3 \text{ MeV}$	JOUR Nucl.Phys. A459, 387	86Me13
^8Be	$^7\text{Li}(\text{t}, \text{n})$	$E=5-13 \text{ MeV}$	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2021	86Ab10
	$^7\text{Li}(^3\text{He}, \text{p})$	$E=5-13 \text{ MeV}$	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2021	86Ab10
^9B	$^7\text{Be}(\text{p}, \gamma)$	$E=0.1-4 \text{ MeV}$	JOUR Astrophys.J. 307, 847	86Ba38
	$^7\text{Be}(\text{p}, \gamma)$	$E \leq 2.5 \text{ MeV}$	JOUR Phys.Rev. C35, 363	87Ki01
^9B	$^7\text{Li}(^3\text{He}, \text{n})$	$E=5-13 \text{ MeV}$	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2021	86Ab10
^{11}B	$^{10}\text{B}(^9\text{Be}, ^9\text{Be})$	$E(\text{cm}) \approx 1.25-3 \text{ MeV}$	JOUR Nucl.Phys. A453, 505	86Cu02
^{12}C	$^{12}\text{C}(^{12}\text{C}, ^{12}\text{C})$	$E(\text{cm})=5.5-33 \text{ MeV}$	JOUR Phys.Lett. 173, 39	86r01
	$^{12}\text{C}(^{17}\text{O}, ^{17}\text{O})$	$E=40-70 \text{ MeV}$	JOUR Phys.Rev. C33, 1275	86Fr04
	$^{12}\text{C}(^{17}\text{O}, ^{17}\text{O}')$	$E(\text{cm}) \approx 8-28 \text{ MeV}$	JOUR Phys.Rev. C33, 1280	86Ci01
	$^{12}\text{C}(^{17}\text{O}, ^{17}\text{O}')$	$E=40-70 \text{ MeV}$	JOUR Phys.Rev. C33, 1275	86Fr04
^{13}C	$^9\text{Be}(\alpha, \gamma)$	$E \leq 1.1 \text{ MeV}$	JOUR Z.Phys. A324, 147	86La16
	$^9\text{Be}(^9\text{Be}, ^5\text{He})$	$E(\text{cm}) \approx 2-5 \text{ MeV}$	JOUR Nucl.Phys. A453, 505	86Cu02
	$^{12}\text{C}(^{17}\text{O}, ^{16}\text{O})$	$E=40-70 \text{ MeV}$	JOUR Phys.Rev. C33, 1275	86Fr04
	$^{13}\text{C}(^{17}\text{O}, ^{17}\text{O}')$	$E(\text{cm}) \approx 8-28 \text{ MeV}$	JOUR Phys.Rev. C33, 1280	86Ci01
^{13}N	$^{14}\text{N}(\text{p}, \text{n}, \text{p})$	$E=6.5-16.5 \text{ MeV}$	JOUR Radiochim.Acta 39, 165	86Sa33
	$^{16}\text{O}(\text{p}, \alpha)$	$E=12-30 \text{ MeV}$	JOUR Radiochim.Acta 39, 165	86Sa33
^{14}N	$^{12}\text{C}(\text{p}, \gamma)$	$E \approx 430,900 \text{ keV}$	JOUR Nucl.Phys. A460, 181	86Zi08
	$^{10}\text{B}(^9\text{Be}, \text{n}, \alpha)$	$E(\text{cm}) \approx 1.25-3 \text{ MeV}$	JOUR Nucl.Phys. A453, 505	86Cu02
	$^{10}\text{B}(^9\text{Be}, \text{X})$	$E(\text{cm}) \approx 1.25-3 \text{ MeV}$	JOUR Nucl.Phys. A453, 505	86Cu02
	$^{14}\text{N}(^{12}\text{C}, ^{12}\text{C})$	$E(\text{cm})=20-52 \text{ MeV}$	JOUR Phys.Lett. 165, 247	85Vi09
^{15}N	$^{15}\text{N}(\text{p}, \text{p})$	$E \approx 30-33 \text{ MeV}$	JOUR J.Phys.(London) G12, 821	86K106
	$^{15}\text{N}(\text{p}, \text{p}')$	$E \approx 30-33 \text{ MeV}$	JOUR J.Phys.(London) G12, 821	86K106
	$^{16}\text{O}(^7\text{Li}, 2\alpha)$	$E=4-10 \text{ MeV}$	JOUR Z.Phys. A325, 203	86Sc28
^{16}N	$^9\text{Be}(^9\text{Be}, \text{n}, \text{p})$	$E(\text{cm}) \approx 1.25-3 \text{ MeV}$	JOUR Nucl.Phys. A453, 505	86Cu02
^{17}N	$^9\text{Be}(^9\text{Be}, \text{p})$	$E(\text{cm}) \approx 1.25-3 \text{ MeV}$	JOUR Nucl.Phys. A453, 505	86Cu02
^{16}O	$^{15}\text{N}(\text{p}, \gamma)$	$E \approx 380 \text{ keV}$	JOUR Nucl.Phys. A460, 181	86Zi08

RESIDUAL INDEX

RESIDUAL	TARGET-REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
^{18}O	$^{24}\text{Mg}(\alpha, ^{12}\text{C})$	$E=24.9-27.76\text{ MeV}$	JOUR Nucl.Phys. A452, 432	86Sk01
	$^9\text{Be}(^9\text{Be}, 2n)$	$E(\text{cm})\approx 1.25-3\text{ MeV}$	JOUR Nucl.Phys. A453, 505	86Cu02
	$^9\text{Be}(^9\text{Be}, X)$	$E(\text{cm})\approx 1.25-3\text{ MeV}$	JOUR Nucl.Phys. A453, 505	86Cu02
	$^{16}\text{O}(^{12}\text{C}, ^{12}\text{C})$	$E(\text{cm})=9-25\text{ MeV}$	JOUR Phys.Lett. 165, 247	85Vi09
^{17}O	$^{12}\text{C}(^6\text{Li}, p)$	$E=28\text{ MeV}$	JOUR J.Phys.(London) G12, 985	86Sm10
	$^{13}\text{C}(^9\text{Be}, ^3\text{He})$	$E(\text{cm})\approx 2-5\text{ MeV}$	JOUR Nucl.Phys. A453, 505	86Cu02
	$^{13}\text{C}(^9\text{Be}, X)$	$E(\text{cm})\approx 1.25-3\text{ MeV}$	JOUR Nucl.Phys. A453, 505	86Cu02
	$^{17}\text{O}(^{13}\text{C}, ^{13}\text{C})$	$E(\text{cm})\approx 15-25\text{ MeV}$	JOUR Phys.Rev. C33, 1674	86Pa04
^{18}O	$^{16}\text{O}(^7\text{Li}, p\alpha)$	$E=4-10\text{ MeV}$	JOUR Z.Phys. A325, 203	86Sc28
^{19}O	$^9\text{Be}(^{18}\text{O}, 2\alpha)$	$E=10-40\text{ MeV}$	JOUR Radiochim.Acta 38, 185	85Di17
^{18}F	$^{18}\text{O}(p, n)$	$E=15\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 397	86De19
	$^{18}\text{O}(p, n)$	$E=15\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 397	86De19
	$^{18}\text{O}(p, n)$	$E\geq\text{threshold}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 649	86Ni09
	$^{18}\text{O}(p, n)$	$E=2-14\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	$^{18}\text{O}(p, n)$	$E=72\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 448	86Vo08
	$^{18}\text{O}(p, n)$	$E=72\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 448	86Vo08
	$^{20}\text{Ne}(d, \alpha)$	$E\geq\text{threshold}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 649	86Ni09
	$^{20}\text{Ne}(d, \alpha)$	$E=16-35\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	$^{18}\text{O}(t, n)$	$E\geq\text{threshold}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 649	86Ni09
	$^{16}\text{O}(^3\text{He}, p)$	$E=36\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 853	86Kn07
	$^{16}\text{O}(^3\text{He}, X)$	$E\geq\text{threshold}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 649	86Ni09
	$^{15}\text{N}(\alpha, n)$	$E\geq\text{threshold}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 649	86Ni09
	$^{16}\text{O}(\alpha, np)$	$E\geq\text{threshold}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 649	86Ni09
	$^{16}\text{O}(^6\text{Li}, \alpha)$	$E=4.5-8\text{ MeV}$	JOUR Nucl.Phys. A452, 150	86G102
	$^{16}\text{O}(^7\text{Li}, n\alpha)$	$E=4-10\text{ MeV}$	JOUR Z.Phys. A325, 203	86Sc28
^{19}F	$^{16}\text{O}(^7\text{Li}, \alpha)$	$E=4-10\text{ MeV}$	JOUR Z.Phys. A325, 203	86Sc28
^{20}Ne	$^{16}\text{O}(\alpha, \gamma)$	$E(\text{cm})\leq 5\text{ MeV}$	JOUR Nucl.Phys. A459, 374	86De27
	$^{16}\text{O}(^7\text{Li}, t)$	$E=4-10\text{ MeV}$	JOUR Z.Phys. A325, 203	86Sc28
	$^{13}\text{C}(^9\text{Be}, X)$	$E(\text{cm})\approx 1.25-3\text{ MeV}$	JOUR Nucl.Phys. A453, 505	86Cu02
	$^{20}\text{Ne}(^{16}\text{O}, ^{16}\text{O})$	$E(\text{cm})=24.5-35.5\text{ MeV}$	JOUR Nucl.Phys. A437, 117	85Ko43
	$^{20}\text{Ne}(^{16}\text{O}, ^{16}\text{O})$	$E(\text{cm})=24.5-35.5\text{ MeV}$	JOUR Nucl.Phys. A437, 117	85Ko43
	$^{16}\text{O}(^{16}\text{O}, X)$	$E=70-130\text{ MeV}$	JOUR Nucl.Phys. A456, 298	86Ik03
^{21}Ne	$^{16}\text{O}(^6\text{Li}, p)$	$E=4.5-8\text{ MeV}$	JOUR Nucl.Phys. A452, 150	86G102
	$^{16}\text{O}(^6\text{Li}, p)$	$E=4.1-12.5\text{ MeV}$	JOUR Nucl.Phys. A452, 150	86G102
	$^{16}\text{O}(^7\text{Li}, d)$	$E=4-10\text{ MeV}$	JOUR Z.Phys. A325, 203	86Sc28
	$^{13}\text{C}(^9\text{Be}, X)$	$E(\text{cm})\approx 1.25-3\text{ MeV}$	JOUR Nucl.Phys. A453, 505	86Cu02
	$^{13}\text{C}(^{16}\text{O}, 2\alpha)$	$E(\text{cm})=7.8-14.6\text{ MeV}$	JOUR Phys.Rev. C34, 196	86Pa10
	$^{13}\text{C}(^{16}\text{O}, X)$	$E(\text{cm})=7.8-14.6\text{ MeV}$	JOUR Phys.Rev. C34, 196	86Pa10
	$^{16}\text{O}(^{16}\text{O}, X)$	$E=70-130\text{ MeV}$	JOUR Nucl.Phys. A456, 298	86Ik03
^{22}Ne	$^{16}\text{O}(^7\text{Li}, p)$	$E=4-10\text{ MeV}$	JOUR Z.Phys. A325, 203	86Sc28
	$^{13}\text{C}(^{13}\text{C}, \alpha)$	$E(\text{cm})=6.25-9.125\text{ MeV}$	JOUR Phys.Rev. C34, 152	86Gi09
	$^{16}\text{O}(^{16}\text{O}, X)$	$E=70-130\text{ MeV}$	JOUR Nucl.Phys. A456, 298	86Ik03
^{21}Na	$^{20}\text{Ne}(p, \gamma)$	$E\approx 1250\text{ keV}$	JOUR Nucl.Phys. A460, 181	86Zi08
	$^{16}\text{O}(^6\text{Li}, n)$	$E=4.1-12.5\text{ MeV}$	JOUR Nucl.Phys. A452, 150	86G102
	$^{16}\text{O}(^7\text{Li}, 2n)$	$E=4-10\text{ MeV}$	JOUR Z.Phys. A325, 203	86Sc28
	$^{12}\text{C}(^{16}\text{O}, X)$	$E=70-130\text{ MeV}$	JOUR Nucl.Phys. A456, 298	86Ik03
^{22}Na	$^{27}\text{Al}(\alpha, xn\gamma p)$	$E=47\text{ MeV}$	JOUR Radiochim.Acta 39, 61	86Ra10
	$^{16}\text{O}(^7\text{Li}, n\gamma)$	$E=4-10\text{ MeV}$	JOUR Z.Phys. A325, 203	86Sc28
	$^{12}\text{C}(^{16}\text{O}, X)$	$E=70-130\text{ MeV}$	JOUR Nucl.Phys. A456, 298	86Ik03
	$^{16}\text{O}(^{16}\text{O}, X)$	$E=70-130\text{ MeV}$	JOUR Nucl.Phys. A456, 298	86Ik03
^{23}Na	$^{27}\text{Al}(\alpha, xn\gamma p)$	$E=47\text{ MeV}$	JOUR Radiochim.Acta 39, 61	86Ra10
	$^{12}\text{C}(^{16}\text{O}, X)$	$E=70-130\text{ MeV}$	JOUR Nucl.Phys. A456, 298	86Ik03
	$^{16}\text{O}(^{16}\text{O}, X)$	$E=70-130\text{ MeV}$	JOUR Nucl.Phys. A456, 298	86Ik03
^{24}Na	$^{13}\text{C}(^{16}\text{O}, p\alpha)$	$E(\text{cm})=7.8-14.6\text{ MeV}$	JOUR Phys.Rev. C34, 196	86Pa10

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RESIDUAL	TARGET-REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
²⁴ Na	¹² C(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
	¹³ C(¹⁶ O,X)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	¹⁸ O(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
²⁵ Na	¹² C(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
	¹⁸ O(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
	⁹ Be(¹⁸ O,d)	E=10-40 MeV	JOUR Radiochim.Acta 38, 185	85Di17
²² Mg	²¹ Na(p,γ)	E=0.11-0.614 MeV	JOUR Z.Phys. A325, 309	86Wi13
²³ Mg	²² Na(p,γ)	E=0.22,0.34,0.47 MeV	JOUR Z.Phys. A325, 309	86Wi13
	¹⁸ O(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
²⁴ Mg	²⁷ Al(p,α)	E=3.1-3.6 MeV	JOUR Phys.Rev. C34, 2319	86Pr07
	²⁴ Mg(α,α')	E=24.9-27.76 MeV	JOUR Nucl.Phys. A452, 432	86Sk01
	¹³ C(¹⁶ O,nα)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	¹³ C(¹⁶ O,X)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	¹⁸ O(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
²⁵ Mg	²⁵ Mg(p,p')	E=0.31-1.84 MeV	JOUR Nucl.Phys. A459, 61	86En04
	¹³ C(¹⁶ O,α)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	¹³ C(¹⁶ O,X)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	¹⁸ O(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
²⁶ Mg	²⁶ Mg(p,p)	E=6.5-7.6 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 129	86Ro09
	¹⁸ O(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
²⁷ Mg	¹³ C(¹⁶ O,2p)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	¹³ C(¹⁶ O,X)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
²⁸ Mg	²⁷ Al(α,xnyp)	E=47 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
²⁵ Al	¹² C(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
²⁶ Al	²⁵ Mg(p,γ)	E=0.31-1.84 MeV	JOUR Nucl.Phys. A459, 61	86En04
	²⁶ Mg(p,n)	E=3.5-5.8 MeV	JOUR Phys.Rev. C35, 45	87Sk01
	²³ Na(α,n)	E=3.5-5.8 MeV	JOUR Phys.Rev. C35, 45	87Sk01
	¹² C(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
	¹⁸ O(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
²⁷ Al	²⁷ Al(p,p')	E=3.1-3.6 MeV	JOUR Phys.Rev. C34, 2319	86Pr07
	¹³ C(¹⁶ O,np)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	¹³ C(¹⁶ O,X)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	¹⁸ O(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
²⁸ Al	¹⁶ O(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
²⁷ Si	²⁸ Si(³ He,α)	E=15 MeV	JOUR Nucl.Phys. A457, 182	86Sc21
	¹³ C(¹⁶ O,2n)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	¹³ C(¹⁶ O,X)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	¹⁸ O(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
²⁸ Si	²⁷ Al(p,γ)	E=3.1-3.6 MeV	JOUR Phys.Rev. C34, 2319	86Pr07
	²⁷ Al(p,γ)	E=988-998 keV	JOUR Nucl.Instr.Methods Phys.Res. A247, 507	86Ro18
	²⁸ Si(¹⁶ O, ¹⁶ O)	E(cm)=10-24 MeV	JOUR Phys.Lett. 165, 247	85Vi09
	²⁸ Si(¹⁶ O, ¹⁶ O)	E=55-215 MeV	JOUR Nucl.Phys. A454, 409	86Br11
	²⁸ Si(¹⁶ O, ¹⁶ O)	E=21-38 MeV	JOUR Nucl.Phys. A456, 475	86Br19
	²⁸ Si(¹⁶ O, ¹⁶ O')	E=21-38 MeV	JOUR Nucl.Phys. A456, 475	86Br19
	¹³ C(¹⁶ O,X)	E(cm)=7.8-14.6 MeV	JOUR Phys.Rev. C34, 196	86Pa10
	¹⁸ O(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
²⁹ Si	²⁷ Al(⁶ Li,α)	E=32 MeV	JOUR Phys.Rev. C33, 1294	86Dh01
	¹⁸ O(¹⁶ O,X)	E=70-130 MeV	JOUR Nucl.Phys. A456, 298	86Ik03
²⁹ P	²⁸ Si(p,γ)	E=7-24 MeV	JOUR Nucl.Phys. A449, 301	86Li02

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RESIDUAL	TARGET-REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
³⁰ P	²⁷ Al(α ,n)	E=3.04-3.66 MeV	JOUR Phys.Scr. 33, 107	86HoD2
³² S	³¹ P(p, γ)	E $\approx$ 1460 keV	JOUR Nucl.Phys. A460, 181	86ZiO8
³⁴ Cl	²⁴ Mg(¹⁵ N,n α)	E=19-31 MeV	JOUR Radiochim.Acta 38, 181	85Co29
³⁸ Ar	⁴¹ K(p, α)	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
	⁴¹ K(p, α)	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
⁴¹ K	⁴⁰ Ar(p, γ)	E=0.6-2.3 MeV	JOUR J.Phys.(London) G12, 223	86BiO3
	⁴¹ K(p,p')	E=6.5-9 MeV	JOUR Nucl.Phys. A454, 128	86Se02
	⁴¹ K(p,p')	E=62 MeV	JOUR Z.Phys. A325, 163	86St10
⁴⁰ Ca	⁴⁰ Ca(α , α)	E=10-27 MeV	JOUR Phys.Rev. C34, 1248	86Mi21
⁴¹ Ca	⁴¹ K(p,n)	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
	⁴¹ K(p,n)	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
⁴² Ca	⁴¹ K(p, γ)	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
⁴⁴ Ca	³⁶ S(¹⁴ C,2n α)	E=18-38 MeV	JOUR Phys.Rev. C34, 136	86Wa19
⁴⁵ Ca	³⁶ S(¹⁴ C,n α)	E=18-38 MeV	JOUR Phys.Rev. C34, 135	86Wa19
⁴⁴ Sc	⁵⁸ Co(³ He,X)	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	⁶² Ni(¹⁴ N,X)	E=70-122 MeV	JOUR Radiochim.Acta 38, 117	85Su18
⁴⁶ Sc	⁶² Ni(¹⁴ N,X)	E=70-122 MeV	JOUR Radiochim.Acta 38, 117	85Su18
⁴⁷ Sc	³⁶ S(¹⁴ C,2np)	E=18-38 MeV	JOUR Phys.Rev. C34, 136	86Wa19
	⁶² Ni(¹⁴ N,X)	E=70-122 MeV	JOUR Radiochim.Acta 38, 117	85Su18
⁴⁸ Sc	⁵⁸ Co(³ He,X)	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	³⁶ S(¹⁴ C,np)	E=18-38 MeV	JOUR Phys.Rev. C34, 136	86Wa19
	⁶² Ni(¹⁴ N,X)	E=70-122 MeV	JOUR Radiochim.Acta 38, 117	85Su18
⁴⁶ Ti	²⁸ Si(²⁸ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(²⁸ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(³⁰ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
⁴⁷ Ti	³⁶ S(¹⁴ C,3n)	E=18-38 MeV	JOUR Phys.Rev. C34, 136	86Wa19
⁴⁸ Ti	⁵⁸ Co(α ,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	³⁶ S(¹⁴ C,2n)	E=18-38 MeV	JOUR Phys.Rev. C34, 136	86Wa19
⁵⁰ Ti	⁵⁰ Ti(α , α)	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	⁵⁰ Ti(α , α')	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	⁵⁹ Co(α ,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁴⁶ V	⁴⁶ Ti(p,n)	E=11.5-26 MeV	JOUR Phys.Rev. C33, 1235	86Br03
⁴⁷ V	⁴⁸ Ti(p, γ)	E=0.4-1.8 MeV	JOUR Nucl.Phys. A454, 1	86De13
	⁴⁷ Ti(p,n)	E=11.5-26 MeV	JOUR Phys.Rev. C33, 1235	86Br03
⁴⁸ V	⁴⁸ Ti(p,n)	E=11.5-26 MeV	JOUR Phys.Rev. C33, 1235	86Br03
	⁵⁸ Co(³ He,X)	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	⁵⁹ Co(α ,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁴⁹ V	⁴⁹ Ti(p,n)	E=11.5-26 MeV	JOUR Phys.Rev. C33, 1235	86Br03
	⁵⁸ Co(α ,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	²⁸ Si(²⁸ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	²⁸ Si(²⁸ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(²⁸ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(²⁸ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(²⁸ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(³⁰ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(³⁰ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(³⁰ Si,X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02

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RESIDUAL	TARGET-REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
^{50}V	$^{50}\text{Ti}(p,n)$	E=11.5-26 MeV	JOUR Phys.Rev. C33, 1235	86Br03
^{51}V	$^{51}\text{V}(p,p)$	E=20.8-47.8 MeV	JOUR Can.J.Phys. 64, 685	86Mc12
^{49}Cr	$^{28}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{30}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
^{50}Cr	$^{50}\text{Co}(\alpha,X)$	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	$^{28}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{30}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
^{51}Cr	$^{59}\text{Co}(^3\text{He},X)$	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	$\text{Co}(\alpha,xn)$	E=10-120 MeV	JOUR Bull.Am.Phys.Soc. 31, 1304,P2.57	86RaZR
	$^{59}\text{Co}(\alpha,X)$	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	$^{28}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{30}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
^{52}Cr	$^{52}\text{Cr}(\alpha,\alpha)$	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	$^{52}\text{Cr}(\alpha,\alpha')$	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	$^{59}\text{Co}(\alpha,X)$	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
^{53}Cr	$^{59}\text{Co}(\alpha,X)$	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
^{54}Cr	$^{59}\text{Co}(\alpha,X)$	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
^{51}Mn	$^{59}\text{Co}(\alpha,X)$	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	$^{28}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{30}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
^{52}Mn	$^{52}\text{Cr}(p,n)$	E=5-9 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2043	86Sk03
	$^{59}\text{Co}(^3\text{He},X)$	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	$\text{Co}(\alpha,xn)$	E=10-120 MeV	JOUR Bull.Am.Phys.Soc. 31, 1304,P2.57	86RaZR
	$^{59}\text{Co}(\alpha,X)$	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	$^{28}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{30}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
^{53}Mn	$^{59}\text{Co}(\alpha,X)$	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	$^{28}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
^{54}Mn	$^{54}\text{Cr}(p,n)$	E=5-9 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 2043	86Sk03
	$^{59}\text{Co}(^3\text{He},X)$	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	$\text{Co}(\alpha,xn)$	E=10-120 MeV	JOUR Bull.Am.Phys.Soc. 31, 1304,P2.57	86RaZR
	$^{59}\text{Co}(\alpha,X)$	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	$^{28}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{30}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
^{55}Mn	$^{59}\text{Co}(\alpha,X)$	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
^{56}Mn	$^{59}\text{Co}(^3\text{He},X)$	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
^{52}Fe	$^{59}\text{Co}(^3\text{He},X)$	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	$^{59}\text{Co}(\alpha,X)$	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
^{53}Fe	$^{59}\text{Co}(\alpha,X)$	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	$^{28}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{28}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	$^{30}\text{Si}(^{30}\text{Si},X)$	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
^{54}Fe	$^{54}\text{Fe}(p,p)$	E=20.8-47.8 MeV	JOUR Can.J.Phys. 64, 685	86Mc12

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RESIDUAL	TARGET-REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
⁵⁴ Fe	⁵⁴ Fe(α, α)	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	⁵⁴ Fe(α, α')	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	²⁸ Si(²⁸ Si, X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(²⁸ Si, X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(³⁰ Si, X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
⁵⁵ Fe	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	²⁸ Si(²⁸ Si, X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(²⁸ Si, X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(³⁰ Si, X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
⁵⁶ Fe	⁵⁶ Fe(p, p)	E=20.8-47.8 MeV	JOUR Can.J.Phys. 64, 685	86Mc12
	⁵⁶ Fe(p, p')	E=3760-3840 keV	JOUR Phys.Rev. C34, 1620	86E106
	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁵⁷ Fe	⁵⁷ Fe(p, p)	E=20.8-47.8 MeV	JOUR Can.J.Phys. 64, 685	86Mc12
	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	²⁸ Si(²⁸ Si, X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(²⁸ Si, X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(³⁰ Si, X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
⁵⁸ Fe	⁵⁸ Fe(α, α)	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	⁵⁸ Fe(α, α')	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁵⁹ Fe	⁵⁹ Co(³ He, X)	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	Co(α, xn)	E=10-120 MeV	JOUR Bull.Am.Phys.Soc. 31, 1304,P2.57	86RaZR
	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁵⁵ Co	⁵⁴ Fe(d, n)	E=12 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 105	86Sh09
	⁵⁹ Co(³ He, X)	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	⁶² Ni(¹⁴ N, X)	E=70-122 MeV	JOUR Radiochim.Acta 38, 117	85Su18
⁵⁶ Co	⁵⁹ Co(³ He, X)	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	Co(α, xn)	E=10-120 MeV	JOUR Bull.Am.Phys.Soc. 31, 1304,P2.57	86RaZR
	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	⁶² Ni(¹⁴ N, X)	E=70-122 MeV	JOUR Radiochim.Acta 38, 117	85Su18
⁵⁷ Co	⁵⁸ Fe(p, γ)	E=3760-3840 keV	JOUR Phys.Rev. C34, 1620	86E106
	⁵⁹ Co(³ He, X)	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	Co(α, xn)	E=10-120 MeV	JOUR Bull.Am.Phys.Soc. 31, 1304,P2.57	86RaZR
	⁶³ Cu($\alpha, xnyp$)	E=46.8, 44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	⁶⁵ Cu($\alpha, xnyp$)	E=46.8, 44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	⁶² Ni(¹⁴ N, X)	E=70-122 MeV	JOUR Radiochim.Acta 38, 117	85Su18
	²⁸ Si(²⁸ Si, X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(²⁸ Si, X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
	³⁰ Si(³⁰ Si, X)	E=56-100 MeV	JOUR Phys.Rev. C33, 1961	86Ag02
⁵⁸ Co	⁵⁹ Co(³ He, X)	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	Co(α, xn)	E=10-120 MeV	JOUR Bull.Am.Phys.Soc. 31, 1304,P2.57	86RaZR
	⁶³ Cu($\alpha, xnyp$)	E=46.8, 44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	⁶⁵ Cu($\alpha, xnyp$)	E=46.8, 44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	⁶² Ni(¹⁴ N, X)	E=70-122 MeV	JOUR Radiochim.Acta 38, 117	85Su18
⁵⁹ Co	⁵⁹ Co(p, p)	E=20.8-47.8 MeV	JOUR Can.J.Phys. 64, 685	86Mc12
	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁶⁰ Co	Co(α, xn)	E=10-120 MeV	JOUR Bull.Am.Phys.Soc. 31, 1304,P2.57	86RaZR
	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	⁶² Ni(¹⁴ N, X)	E=70-122 MeV	JOUR Radiochim.Acta 38, 117	85Su18
⁶¹ Co	⁵⁹ Co(α, X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09

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RESIDUAL	TARGET-REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
⁶¹ Co	⁶² Ni(¹⁴ N,X)	E=70-122 MeV 5	JOUR Radiochim.Acta 38, 117	85Su18
⁵⁸ Ni	Co(α,xn)	E=10-120 MeV	JOUR Bull.Am.Phys.Soc. 31, 1304,P2.57	86RaZR
⁵⁷ Ni	⁵⁹ Co(³ He,X)	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	Co(α,xn)	E=10-120 MeV	JOUR Bull.Am.Phys.Soc. 31, 1304,P2.57	86RaZR
	⁵⁹ Co(α,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁵⁸ Ni	⁵⁸ Ni(α,α)	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	⁵⁸ Ni(α,α')	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	⁵⁹ Co(α,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁵⁹ Ni	⁵⁹ Co(α,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁶⁰ Ni	⁵⁹ Co(α,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁶¹ Ni	⁶¹ Ni(p,p')	E=2-4.6 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.50	86TaZV
⁶² Ni	⁵⁹ Co(α,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁶⁴ Ni	⁶⁴ Ni(α,α)	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
	⁶⁴ Ni(α,α')	E=100 MeV	JOUR Yad.Fiz. 43, 1368	86Bu11
⁵⁹ Cu	⁵⁹ Co(α,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁶⁰ Cu	⁵⁹ Co(α,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁶¹ Cu	⁵⁹ Co(³ He,X)	E=20.1-198.9 MeV	JOUR Phys.Rev. C34, 60	86Ja09
	⁶³ Cu(α,xnyp)	E=46.8,44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	⁶⁵ Cu(α,xnyp)	E=46.8,44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	⁵⁹ Co(α,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁶² Cu	⁵⁹ Co(α,X)	E=11-44.2 MeV	JOUR Phys.Rev. C34, 60	86Ja09
⁶³ Cu	⁶³ Cu(p,p')	E=2-4 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.48	86TaZW
⁶⁴ Cu	⁶³ Cu(α,xnyp)	E=46.8,44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	⁶⁵ Cu(α,xnyp)	E=46.8,44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
⁶⁵ Cu	⁶² Ni(α,p)	E=0.6-4 MeV	JOUR Nucl.Phys. A454, 128	86Se02
⁶⁵ Zn	⁶³ Cu(α,xnyp)	E=46.8,44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	⁶⁵ Cu(α,xnyp)	E=46.8,44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
⁶⁷ Zn	⁶⁷ Zn(p,p')	E=2-4 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.48	86TaZW
⁶⁸ Ga	⁶³ Cu(α,xnyp)	E=46.8,44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	⁶⁵ Cu(α,xnyp)	E=46.8,44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
⁶⁷ Ga	⁶³ Cu(α,xnyp)	E=46.8,44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
	⁶⁵ Cu(α,xnyp)	E=46.8,44.3 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
⁷⁸ Se	⁷⁸ Se(p,p)	E=3.5-6 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 135	86Ro10
⁸⁰ Se	⁸⁰ Se(p,p)	E=4.9-6.8 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 135	86Ro10
⁸² Se	⁸² Se(p,p)	E=5-6.2 MeV	JOUR Izv.Akad.Nauk SSSR, Ser.Fiz. 50, 135	86Ro10
⁷⁵ Br	⁷⁸ Se(p,2n)	E=12-15 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	⁷⁸ Se(p,2n)	E=17-35 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	⁷⁸ Kr(p,α)	E=10-30 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	⁷⁵ As(³ He,3n)	E=21.5-28 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	⁷⁵ As(³ He,3n)	E=50-80 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
⁷⁶ Br	⁷⁸ Se(p,n)	E=10-18 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	⁷⁵ As(³ He,2n)	E=50-90 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64

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RESIDUAL	TARGET-REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
^{76}Br	$^{75}\text{As}(^3\text{He},2n)$	$E=3-16\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
^{77}Br	$^{77}\text{Se}(p,n)$	$E=20-26\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	$^{77}\text{Se}(p,n)$	$E=10-18\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	$^{76}\text{Se}(p,2n)$	$E=800\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	$^{75}\text{As}(\alpha,2n)$	$E=12\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	$^{75}\text{As}(\alpha,2n)$	$E=\text{threshold}-28\text{ MeV}$	JOUR Radiochim.Acta 39, 57	86Qa03
	$^{75}\text{As}(\alpha,2n)$	$E=\text{threshold}-28\text{ MeV}$	JOUR Radiochim.Acta 39, 57	86Qa03
^{78}Br	$^{75}\text{As}(\alpha,n)$	$E=\text{threshold}-28\text{ MeV}$	JOUR Radiochim.Acta 39, 57	86Qa03
	$^{75}\text{As}(\alpha,n)$	$E=\text{threshold}-28\text{ MeV}$	JOUR Radiochim.Acta 39, 57	86Qa03
^{74}Kr	$^{54}\text{Fe}(^{28}\text{Si},X)$	$E=75-145\text{ MeV}$	JOUR Phys.Lett. 178, 339	86Ni07
^{76}Kr	$\text{Br}(p,xn)$	$E=30-36\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	$\text{Br}(p,xn)$	$E=30-36\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	$\text{Br}(d,xn)$	$E=50-90\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	$\text{Br}(d,xn)$	$E=30-36\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	$^{76}\text{Se}(^3\text{He},3n)$	$E=14-28\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	$^{76}\text{Se}(^3\text{He},3n)$	$E=10-25\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	$^{54}\text{Fe}(^{28}\text{Si},X)$	$E=75-145\text{ MeV}$	JOUR Phys.Lett. 178, 339	86Ni07
^{77}Kr	$^{79}\text{Br}(p,3n)$	$E=25-36\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
	$\text{Br}(d,xn)$	$E=45,65\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 703	86Ma64
^{78}Kr	$^{54}\text{Fe}(^{28}\text{Si},X)$	$E=75-145\text{ MeV}$	JOUR Phys.Lett. 178, 339	86Ni07
^{78}Rb	$^{54}\text{Fe}(^{28}\text{Si},X)$	$E=75-145\text{ MeV}$	JOUR Phys.Lett. 178, 339	86Ni07
^{78}Sr	$^{54}\text{Fe}(^{28}\text{Si},X)$	$E=75-145\text{ MeV}$	JOUR Phys.Lett. 178, 339	86Ni07
^{79}Sr	$^{54}\text{Fe}(^{28}\text{Si},X)$	$E=75-145\text{ MeV}$	JOUR Phys.Lett. 178, 339	86Ni07
^{80}Sr	$^{54}\text{Fe}(^{28}\text{Si},X)$	$E=75-145\text{ MeV}$	JOUR Phys.Lett. 178, 339	86Ni07
^{86}Y	$\text{Sr}(p,2n)$	$E=20-26\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 297	86Ja06
	$^{88}\text{Sr}(p,2n)$	$E=20-26\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 297	86Ja06
^{87}Y	$\text{Sr}(p,2n)$	$E=20-26\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 297	86Ja06
	$\text{Sr}(p,2n)$	$E=20-26\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 297	86Ja06
	$^{88}\text{Sr}(p,2n)$	$E=20-26\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 297	86Ja06
	$^{88}\text{Sr}(p,2n)$	$E=20-26\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 297	86Ja06
^{88}Y	$\text{Sr}(p,2n)$	$E=20-26\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 297	86Ja06
	$^{88}\text{Sr}(p,2n)$	$E=20-26\text{ MeV}$	JOUR Int.J.Appl.Radiat.Isotop. 37, 297	86Ja06
^{87}Zr	$^{187}\text{Au}(p,F)$	$E=52-85\text{ MeV}$	JOUR J.Radioanal.Nucl.Chem. 103, 153	86Bi05
^{92}Nb	$^{93}\text{Nb}(\alpha,n\alpha)$	$E\approx\text{threshold}-40\text{ MeV}$	JOUR J.Radioanal.Nucl.Chem. 98, 121	86Ra04
	$^{93}\text{Nb}(\alpha,n\alpha)$	$E\approx\text{threshold}-40\text{ MeV}$	JOUR J.Radioanal.Nucl.Chem. 98, 121	86Ra04
^{96}Nb	$^{187}\text{Au}(p,F)$	$E=52-85\text{ MeV}$	JOUR J.Radioanal.Nucl.Chem. 103, 153	86Bi05
^{97}Nb	$^{187}\text{Au}(p,F)$	$E=52-85\text{ MeV}$	JOUR J.Radioanal.Nucl.Chem. 103, 153	86Bi05
^{98}Nb	$^{187}\text{Au}(p,F)$	$E=52-85\text{ MeV}$	JOUR J.Radioanal.Nucl.Chem. 103, 153	86Bi05
^{94}Tc	$^{93}\text{Nb}(\alpha,xn)$	$E\approx 10-40\text{ MeV}$	JOUR J.Radioanal.Nucl.Chem. 98, 121	86Ra04
^{95}Tc	$^{93}\text{Nb}(\alpha,xn)$	$E\approx 10-40\text{ MeV}$	JOUR J.Radioanal.Nucl.Chem. 98, 121	86Ra04
^{96}Tc	$^{93}\text{Nb}(\alpha,xn)$	$E\approx 10-40\text{ MeV}$	JOUR J.Radioanal.Nucl.Chem. 98, 121	86Ra04
^{97}Ru	$^{94}\text{Mo}(\alpha,n)$	$E=20-34\text{ MeV}$	JOUR Phys.Rev. C34, 1629	86Ka37
	$^{94}\text{Mo}(^6\text{Li},2np)$	$E=12-18\text{ MeV}$	JOUR Phys.Rev. C34, 1629	86Ka37

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RESIDUAL	TARGET-REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
⁹⁹ Ru	⁹⁹ Ru(p,p')	E=3.7 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.51	86MeZY
¹⁰¹ Ru	¹⁰¹ Ru(p,p')	E=3.7 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.51	86MeZY
¹⁰³ Ru	¹⁰⁰ Mo(α,n)	E=20-34 MeV	JOUR Phys.Rev. C34, 1629	86Ka37
¹⁰⁵ Ag	¹⁰⁷ Ag(α,2nα)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
¹⁰⁶ Ag	¹⁰⁷ Ag(α,nα)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
	¹⁰⁹ Ag(α,3nα)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
¹⁰⁷ In	¹⁰⁶ Cd(³ He,np)	E=35-50 MeV	JOUR Nucl.Phys. A455, 301	86Ki11
	¹⁰⁶ Cd(α,2np)	E=20 MeV	JOUR Nucl.Phys. A455, 301	86Ki11
¹⁰⁸ In	¹¹¹ Cd(p,4n)	E=threshold-45 MeV	REPT JUL-Spez-305,P71	85MaZQ
	¹⁰⁹ Ag(³ He,4n)	E not given	REPT JUL-Spez-305,P71	85MaZQ
¹⁰⁹ In	¹¹¹ Cd(p,3n)	E=threshold-45 MeV	REPT JUL-Spez-305,P71	85MaZQ
	¹⁰⁹ Ag(³ He,3n)	E not given	REPT JUL-Spez-305,P71	85MaZQ
	¹⁰⁷ Ag(α,2n)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
	¹⁰⁹ Ag(α,4n)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
¹¹⁰ In	¹¹¹ Cd(p,2n)	E=threshold-45 MeV	REPT JUL-Spez-305,P71	85MaZQ
	¹⁰⁹ Ag(³ He,2n)	E not given	REPT JUL-Spez-305,P71	85MaZQ
	¹⁰⁷ Ag(α,n)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
	¹⁰⁹ Ag(α,3n)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
¹¹¹ In	¹¹¹ Cd(p,n)	E=threshold-45 MeV	REPT JUL-Spez-305,P71	85MaZQ
	¹⁰⁹ Ag(³ He,n)	E not given	REPT JUL-Spez-305,P71	85MaZQ
	¹⁰⁹ Ag(α,2n)	E=threshold-50 MeV	JOUR Bull.Am.Phys.Soc. 31, 1306,P2.70	86SiZW
	¹⁰⁹ Ag(α,2n)	E≈10-50 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 319	86Wa10
¹¹² In	¹⁰⁹ Ag(α,n)	E≈20-50 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 319	86Wa10
¹²⁷ I	¹²⁷ I(p,p')	E=3.7 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.49	86ChZL
	¹²⁷ I(p,p')	E=3 MeV	JOUR Bull.Am.Phys.Soc. 31, 1303,P2.51	86MeZY
¹²¹ Xe	¹²⁷ I(p,7n)	E=5.3-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 823	86La32
	¹²⁷ I(p,7n)	E=45.8-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 835	86La33
¹²² Xe	¹²³ Xe(p,np)	E=3-16 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
	¹²⁷ I(p,6n)	E=5.3-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 823	86La32
	¹²⁷ I(p,6n)	E=45.8-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 835	86La33
¹²³ Xe	¹²⁷ I(p,5n)	E=5.3-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 823	86La32
	¹²⁷ I(p,5n)	E=45.8-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 835	86La33
	¹²⁷ I(p,5n)	E=200 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 843	86Ma63
¹²⁵ Xe	¹²⁷ I(p,3n)	E=5.3-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 823	86La32
	¹²⁷ I(p,3n)	E=45.8-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 835	86La33
¹²⁷ Xe	¹²⁷ I(p,n)	E=5.3-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 823	86La32
	¹²⁷ I(p,n)	E=45.8-67.5 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 835	86La33
¹²² Cs	¹²³ Xe(p,2n)	E=14-30 MeV	JOUR Int.J.Appl.Radiat.Isotop. 37, 803	86Qa05
¹⁴¹ Pr	¹⁴⁴ Nd(p,α)	E=25 MeV	JOUR Z.Phys. A323, 249	86Ga02
¹³⁹ Pm	¹⁴² Nd(α,6np)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	¹⁴² Nd(α,6np)	E≈65-107 MeV	REPT JUL-Spez-344,P33	86LuZZ
¹⁴⁰ Sm	¹⁴² Nd(α,6n)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	¹⁴² Nd(α,6n)	E≈65-95 MeV	REPT JUL-Spez-344,P33	86LuZZ
¹⁴¹ Sm	¹⁴² Nd(α,5n)	E=65-107 MeV	JOUR Z.Phys. A324, 433	86Lu07
	¹⁴² Nd(α,5n)	E≈65-95 MeV	REPT JUL-Spez-344,P33	86LuZZ

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RESIDUAL	TARGET-REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
^{142}Sm	$^{142}\text{Nd}(\alpha, 4n)$	$E=65-107\text{ MeV}$	JOUR Z.Phys. A324, 433	86Lu07
	$^{142}\text{Nd}(\alpha, 4n)$	$E\approx 65-95\text{ MeV}$	REPT JUL-Spez-344,P33	86LuZZ
^{143}Sm	$^{142}\text{Nd}(\alpha, 3n)$	$E=65-107\text{ MeV}$	JOUR Z.Phys. A324, 433	86Lu07
	$^{142}\text{Nd}(\alpha, 3n)$	$E\approx 65-95\text{ MeV}$	REPT JUL-Spez-344,P33	86LuZZ
^{144}Sm	$^{142}\text{Nd}(\alpha, 2n)$	$E=65-107\text{ MeV}$	JOUR Z.Phys. A324, 433	86Lu07
	$^{142}\text{Nd}(\alpha, 2n)$	$E\approx 65-95\text{ MeV}$	REPT JUL-Spez-344,P33	86LuZZ
^{141}Eu	$^{144}\text{Sm}(\alpha, 6np)$	$E=65-107\text{ MeV}$	JOUR Z.Phys. A324, 433	86Lu07
	$^{144}\text{Sm}(\alpha, 6np)$	$E\approx 65-95\text{ MeV}$	REPT JUL-Spez-344,P33	86LuZZ
^{145}Eu	$^{133}\text{Cs}(^{22}\text{Ne}, 6n\alpha)$	$E=92.6-145\text{ MeV}$	JOUR Phys.Rev. C34, 899	86Mo16
^{146}Eu	$^{133}\text{Cs}(^{22}\text{Ne}, 5n\alpha)$	$E=92.6-145\text{ MeV}$	JOUR Phys.Rev. C34, 899	86Mo16
^{147}Eu	$^{133}\text{Cs}(^{22}\text{Ne}, 4n\alpha)$	$E=92.6-145\text{ MeV}$	JOUR Phys.Rev. C34, 899	86Mo16
^{148}Eu	$^{133}\text{Cs}(^{22}\text{Ne}, 3n\alpha)$	$E=92.6-145\text{ MeV}$	JOUR Phys.Rev. C34, 899	86Mo16
^{142}Gd	$^{144}\text{Sm}(\alpha, 6n)$	$E=65-107\text{ MeV}$	JOUR Z.Phys. A324, 433	86Lu07
	$^{144}\text{Sm}(\alpha, 6n)$	$E\approx 65-107\text{ MeV}$	REPT JUL-Spez-344,P33	86LuZZ
^{143}Gd	$^{144}\text{Sm}(\alpha, 5n)$	$E=65-107\text{ MeV}$	JOUR Z.Phys. A324, 433	86Lu07
	$^{144}\text{Sm}(\alpha, 5n)$	$E\approx 65-107\text{ MeV}$	REPT JUL-Spez-344,P33	86LuZZ
^{144}Gd	$^{144}\text{Sm}(\alpha, 4n)$	$E=65-107\text{ MeV}$	JOUR Z.Phys. A324, 433	86Lu07
	$^{144}\text{Sm}(\alpha, 4n)$	$E\approx 65-107\text{ MeV}$	REPT JUL-Spez-344,P33	86LuZZ
^{145}Gd	$^{144}\text{Sm}(\alpha, 3n)$	$E=65-107\text{ MeV}$	JOUR Z.Phys. A324, 433	86Lu07
	$^{144}\text{Sm}(\alpha, 3n)$	$E\approx 65-107\text{ MeV}$	REPT JUL-Spez-344,P33	86LuZZ
^{146}Gd	$^{144}\text{Sm}(\alpha, 2n)$	$E=65-107\text{ MeV}$	JOUR Z.Phys. A324, 433	86Lu07
	$^{144}\text{Sm}(\alpha, 2n)$	$E\approx 65-107\text{ MeV}$	REPT JUL-Spez-344,P33	86LuZZ
	$^{144}\text{Sm}(\alpha, 2n)$	$E=23-28\text{ MeV}$	JOUR Z.Phys. A324, 417	86Ya06
^{146}Tb	$^{133}\text{Cs}(^{22}\text{Ne}, 9n)$	$E=92.6-145\text{ MeV}$	JOUR Phys.Rev. C34, 899	86Mo16
^{147}Tb	$^{133}\text{Cs}(^{22}\text{Ne}, 8n)$	$E=92.6-145\text{ MeV}$	JOUR Phys.Rev. C34, 899	86Mo16
^{148}Tb	$^{133}\text{Cs}(^{22}\text{Ne}, 7n)$	$E=92.6-145\text{ MeV}$	JOUR Phys.Rev. C34, 899	86Mo16
^{149}Tb	$^{133}\text{Cs}(^{22}\text{Ne}, 6n)$	$E=92.6-145\text{ MeV}$	JOUR Phys.Rev. C34, 899	86Mo16
^{150}Tb	$^{133}\text{Cs}(^{22}\text{Ne}, 5n)$	$E=92.6-145\text{ MeV}$	JOUR Phys.Rev. C34, 899	86Mo16
^{151}Tb	$^{133}\text{Cs}(^{22}\text{Ne}, 4n)$	$E=92.6-145\text{ MeV}$	JOUR Phys.Rev. C34, 899	86Mo16
^{152}Tb	$^{133}\text{Cs}(^{22}\text{Ne}, 3n)$	$E=92.6-145\text{ MeV}$	JOUR Phys.Rev. C34, 899	86Mo16
^{154}Er	$^{144}\text{Nd}(^{16}\text{O}, 6n)$	$E=76-105\text{ MeV}$	JOUR Z.Phys. A325, 85	86To09
^{155}Er	$^{144}\text{Nd}(^{16}\text{O}, 5n)$	$E=76-105\text{ MeV}$	JOUR Z.Phys. A325, 85	86To09
^{156}Er	$^{144}\text{Nd}(^{16}\text{O}, 4n)$	$E=76-105\text{ MeV}$	JOUR Z.Phys. A325, 85	86To09
^{157}Er	$^{144}\text{Nd}(^{16}\text{O}, 3n)$	$E=76-105\text{ MeV}$	JOUR Z.Phys. A325, 85	86To09
^{158}Er	$^{144}\text{Nd}(^{16}\text{O}, 2n)$	$E=76-105\text{ MeV}$	JOUR Z.Phys. A325, 85	86To09
^{171}Lu	$\text{Lu}(p, xnp)$	$E\approx 17.5-45\text{ MeV}$	REPT JUL-Spez-305,P74	85MiZZ
^{172}Lu	$\text{Lu}(p, xnp)$	$E\approx 27.5-45\text{ MeV}$	REPT JUL-Spez-305,P74	85MiZZ
^{177}Lu	$^{178}\text{Yb}(p, \gamma)$	$E=7-20\text{ MeV}$	JOUR Z.Phys. A324, 439	86Sz03

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RESIDUAL	TARGET-REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
¹⁷³ Hf	Lu(p,xn)	E=25-45 MeV	REPT JUL-Spez-305,P74	85MiZZ
¹⁸³ Re	¹⁸⁰ W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸² W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸³ W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁴ W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁶ W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁰ W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸² W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸³ W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁴ W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁶ W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
¹⁸⁴ Re	¹⁸⁰ W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸² W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸³ W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁴ W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁶ W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁰ W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸² W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸³ W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁴ W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁶ W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
¹⁸⁵ Os	¹⁸⁰ W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸² W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸³ W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁴ W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁶ W(α,xn)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁰ W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸² W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸³ W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁴ W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
	¹⁸⁶ W(α,xp)	E=65 MeV	JOUR Radiochim.Acta 39, 159	86Li18
¹⁹³ Pb	¹⁸⁸ Os(¹² C,7n)	E=70-110 MeV	JOUR Nucl.Phys. A449, 579	86Va03
¹⁹⁴ Pb	¹⁸⁸ Os(¹² C,6n)	E=70-110 MeV	JOUR Nucl.Phys. A449, 579	86Va03
¹⁹⁵ Pb	¹⁸⁸ Os(¹² C,5n)	E=70-110 MeV	JOUR Nucl.Phys. A449, 579	86Va03
¹⁹⁶ Pb	¹⁸⁸ Os(¹² C,4n)	E=70-110 MeV	JOUR Nucl.Phys. A449, 579	86Va03
¹⁹⁷ Pb	¹⁸⁸ Os(¹² C,3n)	E=70-110 MeV	JOUR Nucl.Phys. A449, 579	86Va03
²⁰⁶ Pb	²⁰⁸ Pb(α, ⁶ He)	E=109 MeV	JOUR Nucl.Phys. A457, 45	86Ku12
²⁰⁸ Pb	²⁰⁸ Pb(¹⁶ O, ¹⁶ O)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	²⁰⁸ Pb(¹⁶ O,F)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	²⁰⁸ Pb(¹⁶ O,X)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	²⁰⁸ Pb(¹⁸ O, ¹⁸ O)	E(cm)≈64-90 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	²⁰⁸ Pb(¹⁸ O,F)	E(cm)≈64-90 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	²⁰⁸ Pb(¹⁸ O,X)	E(cm)≈64-90 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
¹⁹⁵ Bi	¹⁸² W(¹⁹ F,6n)	E=142 MeV	JOUR Phys.Rev. C33, 1641	86Lo05
	¹⁶⁹ Tm(³⁰ Si,4n)	E=85-135 MeV	JOUR Phys.Rev. C33, 1641	86Lo05
²⁰⁹ Bi	²⁰⁹ Bi(¹⁶ O, ¹⁶ O)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	²⁰⁹ Bi(¹⁸ O,F)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
	²⁰⁹ Bi(¹⁸ O,X)	E(cm)=70-98 MeV	JOUR Phys.Rev. C33, 2017	86Vu01
²⁰⁸ At	²⁰⁹ Bi(α,5n)	E=threshold-47 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
²⁰⁹ At	²⁰⁹ Bi(α,4n)	E=threshold-47 MeV	JOUR Radiochim.Acta 39, 61	86Ra10
²¹⁰ At	²⁰⁹ Bi(α,3n)	E≈21-40 MeV	JOUR J.Radioanal.Nucl.Chem. 96, 319	85Ro23

RESIDUAL INDEX

RESIDUAL	TARGET-REACTION	INCIDENT ENERGY	REFERENCE	KEY NUMBER
^{210}At	$^{209}\text{Bi}(\alpha, 3n)$	$E = \text{threshold} - 47 \text{ MeV}$	JOUR Radiochim. Acta 39, 61	86Ra10
^{211}At	$^{209}\text{Bi}(\alpha, 2n)$	$E \approx 21 - 40 \text{ MeV}$	JOUR J. Radioanal. Nucl. Chem. 96, 319	85Ro23
^{232}Th	$^{232}\text{Th}(d, p)$	$E = 8 - 880 \text{ MeV}$	JOUR Nucl. Phys. A448, 365	86Ra02
	$^{232}\text{Th}(^6\text{Li}, p\alpha)$	$E = 28 - 48 \text{ MeV}$	JOUR Nucl. Phys. A448, 365	86Ra02
	$^{232}\text{Th}(^6\text{Li}, p\alpha)$	$E = 8 - 80 \text{ MeV}$	REPT JUL-Spez-344, P19	86Ra2V
^{228}Pa	$^{232}\text{Th}(d, 6n)$	$E = 8 - 880 \text{ MeV}$	JOUR Nucl. Phys. A448, 365	86Ra02
^{230}Pa	$^{232}\text{Th}(d, 4n)$	$E = 8 - 880 \text{ MeV}$	JOUR Nucl. Phys. A448, 365	86Ra02
	$^{232}\text{Th}(^6\text{Li}, 4n\alpha)$	$E = 28 - 48 \text{ MeV}$	JOUR Nucl. Phys. A448, 365	86Ra02
	$^{232}\text{Th}(^6\text{Li}, 4n\alpha)$	$E = 8 - 80 \text{ MeV}$	REPT JUL-Spez-344, P19	86Ra2V
^{232}Pa	$^{232}\text{Th}(d, 2n)$	$E = 8 - 880 \text{ MeV}$	JOUR Nucl. Phys. A448, 365	86Ra02
	$^{232}\text{Th}(^6\text{Li}, 2n\alpha)$	$E = 28 - 48 \text{ MeV}$	JOUR Nucl. Phys. A448, 365	86Ra02
	$^{232}\text{Th}(^6\text{Li}, 2n\alpha)$	$E = 8 - 80 \text{ MeV}$	REPT JUL-Spez-344, P19	86Ra2V
^{233}Pa	$^{232}\text{Th}(p, \gamma)$	$E = 11 - 20 \text{ MeV}$	JOUR Z. Phys. A323, 97	86Sz01
	$^{232}\text{Th}(p, \gamma)$	$E = 6 - 24 \text{ MeV}$	JOUR Z. Phys. A324, 439	86Sz03
	$^{232}\text{Th}(d, n)$	$E = 8 - 880 \text{ MeV}$	JOUR Nucl. Phys. A448, 365	86Ra02
	$^{232}\text{Th}(^6\text{Li}, n\alpha)$	$E = 28 - 48 \text{ MeV}$	JOUR Nucl. Phys. A448, 365	86Ra02
	$^{232}\text{Th}(^6\text{Li}, n\alpha)$	$E = 8 - 80 \text{ MeV}$	REPT JUL-Spez-344, P19	86Ra2V
^{240}Pu	$^{238}\text{U}(\alpha, 2n)$	$E = 20.1 - 27.3 \text{ MeV}$	JOUR Z. Phys. A323, 101	86De04
^{260}Md	$^{254}\text{Es}(^{18}\text{O}, X)$	$E = 127 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
	$^{254}\text{Es}(^{22}\text{Ne}, X)$	$E = 98 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
^{261}Md	$^{254}\text{Es}(^{18}\text{O}, X)$	$E = 127 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
	$^{254}\text{Es}(^{22}\text{Ne}, X)$	$E = 98 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
^{260}No	$^{254}\text{Es}(^{18}\text{O}, X)$	$E = 127 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
	$^{254}\text{Es}(^{22}\text{Ne}, X)$	$E = 98 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
^{261}No	$^{254}\text{Es}(^{18}\text{O}, X)$	$E = 127 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
	$^{254}\text{Es}(^{22}\text{Ne}, X)$	$E = 98 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
^{262}No	$^{254}\text{Es}(^{18}\text{O}, X)$	$E = 127 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
	$^{254}\text{Es}(^{22}\text{Ne}, X)$	$E = 98 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
^{261}Lr	$^{254}\text{Es}(^{18}\text{O}, X)$	$E = 127 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
	$^{254}\text{Es}(^{22}\text{Ne}, X)$	$E = 98 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
^{262}Lr	$^{254}\text{Es}(^{18}\text{O}, X)$	$E = 127 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
	$^{254}\text{Es}(^{22}\text{Ne}, X)$	$E = 98 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
^{263}Lr	$^{254}\text{Es}(^{18}\text{O}, X)$	$E = 127 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10
	$^{254}\text{Es}(^{22}\text{Ne}, X)$	$E = 98 \text{ MeV}$	JOUR Phys. Rev. C33, 1547	86Sc10