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Bibliography on Atomic Transition Probabilities (1914 through October 1977)

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Foreword

The National Standard Reference Data System was established in 1963 for the purpose of promoting the critical evaluation and dissemination of numerical data of the physical sciences. The program is coordinated by the Office of Standard Reference Data of the National Bureau of Standards but involves the efforts of many groups in universities, government laboratories, and private industry. The primary aim of the program is to provide compilations of critically evaluated physical and chemical property data. These tables are published in the *Journal of Physical and Chemical Reference Data*, in the NSRDS-NBS series of the National Bureau of Standards, and through other appropriate channels.

The task of critical evaluation is carried out in various data centers, each with a well-defined technical scope. A necessary preliminary step to the critical evaluation process is the retrieval from the world scientific literature of all papers falling within the scope of the center. Each center, therefore, builds up a comprehensive well-indexed bibliographical file which forms the base for the evaluation task. Bibliographies derived from these files are published when they appear to be of value to research workers and others interested in the particular technical area.

Further information on NSRDS and the publications which form the primary output of the program may be obtained by writing to the Office of Standard Reference Data, National Bureau of Standards, Washington, DC 20234.

David R. Lide, Jr., Chief
Office of Standard Reference Data

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Bibliography on Atomic Transition Probabilities (1914 through October 1977)

J. R. Fuhr, B. J. Miller, and G. A. Martin

A revised and updated annotated bibliography on atomic transition probabilities covering the literature from 1914 through October 1977 is presented. It contains approximately 2400 references and is divided into four main sections, with each article assigned a number. The first section contains a listing, by number, of articles of general interest. The second section lists by number all articles containing numerical data; it is arranged by element and stage of ionization and is further subdivided according to theoretical and experimental methods, comments, and compilations. The third section contains a listing of all articles, including number, authors, title, and journal reference; it is arranged by year of publication and alphabetically by authors' names within the year. All foreign language papers are identified, and their titles are translated into English. The final section contains a listing of all authors and the numbers of the papers they have authored or co-authored.

Key words: Allowed; atomic; discrete; forbidden; intensity; lifetime; line strength; oscillator strength; transition probability.

A. Introduction

Many new articles have appeared in the literature in the four years that have passed since the publication of the latest supplemental bibliography by the Data Center on Atomic Transition Probabilities [1].¹ Moreover, in the eight years since the last "complete" bibliography appeared [2], several critical compilations of transition probability data have been published by this data center [3-6], and additional evaluation/compilation work is in progress. The evaluation work has enabled us to make judgments concerning the accuracy and reliability of published data. Thus we felt that this would be an appropriate time to publish a complete updated and revised bibliography which supersedes the previous ones and which is somewhat selective in the sense that for many spectra the less reliable material is excluded.

As in the past, this publication includes sources of data on atomic transition probabilities—or, equivalently, oscillator strengths, line strengths, intensities—for both "allowed" (i.e., electric dipole) and "forbidden" (electric quadrupole, magnetic dipole, etc.) radiative transitions of atoms and atomic ions. Sources of data on radiative lifetimes of atomic and ionic states are also included, as well as a selection of articles of general interest which do not necessarily contain numerical data.

A.1 Arrangement of the Bibliography

The format of the present bibliography has been changed considerably from that of our previous publications. We have used computer cataloging and sorting routines to order the references primarily by year of publication and alphabetically by authors' names within the year. Each reference is assigned a number according to this scheme, so that the number provides a relative indication of the year of publication.

The bibliography is divided into four main sections. The first section provides a listing, by number, of articles of general interest, along with some additional annotation as to subject matter. The second section contains a listing, by number, of all articles containing numerical data (with the exception of papers listed under 1.1, Tables of Numerical Values, which are *not* listed in the second section under the individual spectra covered). This section is arranged alphabetically by chemical symbol of the elements and is ordered by stage of ionization within each element. A distinction is made between articles containing data on allowed transitions and those which treat forbidden transitions. The references are further subdivided according to theoretical and experimental methods, comments, or compilations. (See table 1 for a listing of abbreviations used in this section to indicate subject matter.) Many articles now contain data or formulae for given transitions along an entire isoelectronic sequence or for many members of that sequence. For purposes of this bibliography, an article containing data on an isoelectronic sequence is defined as one that contains data, in numerical and/or graphical form, for ten or more members of that sequence. We list the numbers of such articles under the first (neutral) element of that isoelectronic sequence. Thus all articles containing data on the sodium sequence are listed under the heading "Na (Sodium) Sequence," immediately preceding the listing, by number, of articles containing numerical data on individual spectra of sodium.

The third section provides a listing of all entries, including the number of the article, authors' names, title, and full journal reference. Foreign language papers are identified as such whenever applicable (see table 2 for a listing of abbreviations of foreign languages). This listing is arranged by year of publication and alphabetically by authors' names within the year, in keeping with the general numerical scheme referred to above. The reader

¹ Figures in brackets indicate literature references on page vi of this paper.

will note that there are several "open" numbers throughout this section; such a gap in the numbering is an indication that an additional reference exists but that it has been excluded from the bibliography. There are several possible reasons why a particular article may have been excluded: (1) the data contained in the article are believed to be unreliable; (2) the article was published in the form of a thesis or an internal report, a copy of which would be difficult to acquire after a sufficiently long period of time; (3) the same results have appeared in another publication by the same author(s); (4) the results were considered preliminary and have been revised in a later publication. There are also several "open" numbers at the end of each year, beginning with 1959, to allow for articles which may be acquired later on by this data center. As a result of corrections and additions that have been made since the initial ordering, for the year 1976 the articles are not listed in strict alphabetical order, although the ordering by number is strictly maintained.

The final section of the bibliography contains a listing of all authors and the numbers of the articles they have authored or co-authored.

A.2 Conversion Factors

The numerical factors relating the quantities A_{ki} , f_{ik} , and S are given in table 3, where:

A_{ki} is the transition probability for spontaneous emission (s^{-1});

f_{ik} is the absorption oscillator strength (dimensionless);

S is the line strength in atomic units, which are: for electric dipole transitions (allowed—denoted by E_d):

$$a_0^2 e^2 = 7.1884 \times 10^{-59} m^2 C^2;$$

for electric quadrupole transitions (forbidden—denoted by E_q):

$$a_0^4 e^2 = 2.0129 \times 10^{-79} m^4 C^2;$$

for magnetic dipole transitions (forbidden—denoted by M_d):

$$e^2 \hbar^2 / 4 m_e^2 = 8.601 \times 10^{-47} J^2 T^{-2}.$$

The wavelength λ is given in angstrom units. g is the statistical weight. The upper energy level of a transition is denoted by the subscript k , the lower by i . The subscript denoting the initial state is written first; i.e., ik refers to an absorption process. For the atomic constants entering into the above relations, as well as into table 3, we have used the recommendations of the CODATA Task Group on Fundamental Constants [J. Phys. Chem. Ref. Data **2**, 663 (1973)].

Besides the quantities introduced above, the following are used occasionally and are related to the former as follows:

1. Transition probability of absorption, B_{ik} :

$$B_{ik} = 6.01 \lambda^3 \frac{g_k}{g_i} A_{ki};$$

2. Transition probability of induced emission B_{ki} :

$$B_{ki} = 6.01 \lambda^3 A_{ki};$$

3. Emission oscillator strength f_{ki} :

$$f_{ki} = \frac{-g_i}{g_k} f_{ik}.$$

Finally, it should be noted that the line strength S is symmetrical:

$$S = S_{ik} = S_{ki}.$$

Since intensity-related quantities for hydrogen-like ions (i.e., ions having one electron and nuclear charge Z) are simply related to the case of the hydrogen atom (at least in the nonrelativistic case), papers dealing with these ions are, for the most part, excluded from this bibliography. For convenience, the relations are given below:

$$f_Z = f_H \quad S_Z = Z^{-2} S_H \quad A_Z = Z^4 A_H.$$

We gratefully acknowledge the many helpful comments and suggestions of Dr. W. L. Wiese in the course of the planning and preparation of this bibliography.

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B. Numerical Tables of Critically Evaluated Transition Probabilities

1. For the elements hydrogen through neon:

Wiese, W. L., Smith, M. W., and Glennon, B. M., Atomic Transition Probabilities, Nat. Stand. Ref. Data Ser., Nat. Bur. Stand. (U.S.), 4, Vol. I, 157 pages (May 1966).

2. For the elements sodium through calcium:

Wiese, W. L., Smith, M. W., and Miles, B. M., Atomic Transition Probabilities, Nat. Stand. Ref. Data Serv., Nat. Bur. Stand. (U. S.), 22, Vol. II, 306 pages (Oct. 1969).

3. For Ba I and II:

Miles, B. M. and Wiese, W. L., Critically Evaluated Transition Probabilities for Ba I and II, Nat. Bur. Stand. (U.S.), Tech. Note 474, 24 pages (Jan. 1969); At Data 1, 1 (1969).

4. Selected updated material for elements hydrogen through calcium:

Wiese, W. L. and Glennon, B. M., American

Institute of Physics Handbook, Ch. 7, 200-263, 3rd Ed. (McGraw-Hill Book Co., Inc., New York, N.Y., 1972).

5. For forbidden lines of the iron group elements:

Smith, M. W. and Wiese, W. L., J. Phys. Chem. Ref. Data 2, 85 (1973).

6. For allowed lines of scandium and titanium:

Wiese, W. L. and Fuhr, J. R., J. Phys. Chem. Ref. Data 4, 263 (1975).

7. For ions of the lithium isoelectronic sequence:

Martin, G. A. and Wiese, W. L., J. Phys. Chem. Ref. Data 5, 537 (1976).

8. For allowed lines of vanadium through manganese:

Younger, S. M., Fuhr, J. R., Martin, G. A., and Wiese, W. L., J. Phys. Chem. Ref. Data (in press).

Table 1. Key to Code Words and Abbreviations Used in Section C.2

Except where "rel." (relative) appears, absolute values have been determined. Material on forbidden transitions is denoted as "forb."

A. Theoretical methods (T):

1. Quant.—quantum mechanical (including self-consistent field) calculations.
2. CA—Coulomb approximation.
3. Estim.—estimations from sum rules, etc.
4. Interp.—interpolation within isoelectronic sequences, spectral series, or homologous atoms; also, data that are presented in graphical, rather than tabular, form.

B. Experimental methods (E):

1. Emiss.—measurements in emission (arc, furnace, discharge tube, shock tube, etc.).
2. Absorpt.—measurements in absorption (King furnace, absorption tube, etc.).
3. Life—lifetime measurements (including Hanle-effect).
4. Hook—anomalous dispersion measurements.
5. Misc.—miscellaneous experimental methods (for example, Stark effect, astrophysical measurements, etc.).

C. Other:

1. Comm.—additions or suggested revisions to data in previous articles, comments on particular theoretical or experimental methods, etc.
 2. Compil.—data compilations.
-

Table 2. Key to Abbreviations of Foreign Languages Used in Section C.3

Dut.	Dutch
Fr.	French
Ger.	German
Hung.	Hungarian
Ital.	Italian
Jap.	Japanese
Pol.	Polish
Rom.	Romanian
Russ.	Russian
Span.	Spanish

Table 3. Numerical Conversion Factors

The transition probability is listed in units s^{-1} , the f -value is dimensionless, and the line strength is in atomic units. The wavelength λ is in angstrom units, and g_i and g_k are the statistical weights of the lower and upper states, respectively. E_d denotes electric dipole (allowed) transitions, E_q electric quadrupole (forbidden) transitions, and M_d magnetic dipole (forbidden) transitions.

Transition Probability $A_{ki} =$	_____	$\frac{6.670_2 \times 10^{15}}{\lambda^2} \frac{g_i}{g_k} f_{ik}$	$E_d \quad \frac{2.096_1 \times 10^{18}}{g_k \lambda^3} S$
			$E_q \quad \frac{1.679_9 \times 10^{18}}{g_k \lambda^5} S$
			$M_d \quad \frac{2.697_3 \times 10^{13}}{g_k \lambda^3} S$
Oscillator Strength $f_{ik} =$	$1.4992 \times 10^{-16} \lambda^2 \frac{g_k}{g_i} A_{ki}$	_____	$E_d \quad \frac{303.7_6}{g_i \lambda} S$
			$E_q \quad \frac{251.9}{g_i \lambda^3} S$
			$M_d \quad \frac{4.043_8 \times 10^{-3}}{g_i \lambda} S$
Line Strength $S =$	$E_d \quad 4.935_5 \times 10^{-19} g_k \lambda^3 A_{ki}$	$E_d \quad 3.292_1 \times 10^{-3} g_i \lambda f_{ik}$	_____
	$E_q \quad 5.953 \times 10^{-19} g_k \lambda^5 A_{ki}$	$E_q \quad 3.971 \times 10^{-3} g_i \lambda^3 f_{ik}$	
	$M_d \quad 3.707_3 \times 10^{-14} g_k \lambda^5 A_{ki}$	$M_d \quad 247.2_9 g_i \lambda f_{ik}$	

C. BIBLIOGRAPHICAL MATERIAL

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314	L. Biermann, Oscillator Strengths and Lifetimes of Excited States of Atoms, Atomic Ions, and Molecules
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- 1192 R. Hefferlin & L. Rascon, Oscillator Strengths in Isoelectronic Sequences
- 1215 J. L. Kohl, A New Experimental Technique for Measuring Atomic Transition Probabilities
- 1251 B. Warner & C. R. Cowley, On Systematic Errors in Oscillator Strengths Measured in a Free-Burning Arc
- 1318 R. H. Garstang, Octupole Transitions in Excitation by Electron Impact
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- 1592 G. zu Putlitz, On Fermi's Paper Concerning Spin-Orbit Perturbation and the Intensity Ratios of Doublet Lines in Heavy Alkalis
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- 1695 A. Corney, The Measurement of Lifetimes of Free Atoms, Molecules, and Ions
- 1698 L. J. Curtis, H. G. Berry, & J. Bromander, Analysis of Multi-Exponential Decay Curves
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1805	R. J. Takens, On the Determination of Oscillator Strengths from Free-Burning Arcs
1808	A. K. Valters, On the Accuracy of Oscillator Strength Measurements Using the Outer Hooks of Two Closely Located Absorption Lines
1812	W. L. Wiese, Atomic Transition Probabilities. A Survey of our Present Knowledge and Future Needs
1904	S. Feneuille, Relativistic Treatment of Transition Probabilities in Atoms
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2062	H. G. Berry, L. J. Curtis, & J. L. Subtil, Cascade-Induced Alignment Changes of Intensity-Decay Curves
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- 2470 M. T. Anderson & F. Weinhold, Relative Accuracy of Length and Velocity Forms in Oscillator-Strength Calculations
- 2533 I. P. Grant, Gauge Invariance and Relativistic Radiative Transitions
- 2588 E. H. Pinnington, A. E. Livingston, & J. A. Kernahan, Comment on the Reliability of Experimental Atomic Mean Lives Obtained with the Beam-Foil Technique
- 2594 D. Rosenthal, R. P. McEachran, & M. Cohen, Sum Rules for Electric Quadrupole Transitions
- 2595 Z. B. Rudzikas, Relativistic Consideration of Many-Electron Atoms
- 2653 L. Armstrong, Jr. & S. Feneuille, Theoretical Analysis of the Phase Shift Measurement of Lifetimes Using Monochromatic Light
- 2681 F. E. Cummings, Oscillator Strength Sums $S(-3)$ to $S(2)$ and C_6 for the Atoms He to Kr
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- 2916 R. Crossley & S. Richards, Coulomb Methods in Atomic Transition Probability Calculations
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*The numbers refer to paper identification numbers of Part 3.

1.7 ENVIRONMENTAL INFLUENCES ON TRANSITION PROBABILITIES

<u>Reference No.*</u>	<u>Author(s) and Title</u>
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261	F. Möglich & R. Rompe, Radiation Properties and Energy Divergence for Densely Packed Atoms of the Same Kind
459	J. A. Galt & H. L. Welsh, Influence of Foreign Gases at High Pressures on the Selective Reflection from Mercury Vapor
467	A. Michels, H. de Kluiver, & B. Castle, The Influences of Argon and Neon on the 2536.52 Å Line of Mercury
503	A. Michels, H. de Kluiver, & D. Middelkoop, The Effects on the Vapour Pressure of Mercury and the Oscillator Strength of the 2536.52 Å ($^1S_0 - ^3P_1$) Resonance Line by the Presence of Argon at High Density
2870	S. A. Bagaev, V. B. Smirnov, & M. P. Chaika, Effect of Laboratory Magnetic Fields on the Results of Lifetime Measurements by the Time Analysis Method

*The numbers refer to paper identification numbers of Part 3.

2. LITERATURE REFERENCES CONTAINING NUMERICAL DATA

(References on individual elements and stages of ionization,
classified according to method)

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
Ag (Silver)		life	687,1301,1445,1801, 1803,1842,2006,2213, 2360,3146
	<u>Ag I</u>	T: CA	1510,2241
E: absorpt.	826,827,963,1097, 2281	quant.	294,1061,1062,1614, 2056,2612,2678,2945, 3019,3157
emiss.	448,465,520	quant. forb.	1093
emiss. rel.	516,1722	(see also references on Al sequence)	
hook	790,1109		
hook rel.	149,151	<u>Al II</u>	
life	1038,1169,1842,1871, 1967,2143,2751	E: life	1445,1667,1678,1801, 1844
T: CA	2153	T: CA	2241
quant.	2056	quant.	857,1254,1261,1410, 2612,2762,3073,3157
Comment:	447	(see also references on Mg sequence)	
	<u>Ag II</u>	<u>Al III</u>	
E: life	1967	E: emiss. rel.	772
		life	1445,1667,1678,3076
Al (Aluminum) Sequence		T: CA	1886
T: estim.	3168	quant.	998,1040,1357,1567, 1569,2599,2946,3020
interp.	3077	quant. forb.	1839,2169
quant.	1314,2523	Comment (forb);	2365
CA forb.	2976	(see also references on Na sequence)	
quant. forb.	1416	<u>Al IV</u>	
		T: quant.	2822
Al (Aluminum)		(see also references on Ne sequence)	
	<u>Al I</u>	<u>Al V</u>	
E: emiss.	2333	T: quant. forb.	1093
hook	980	(see also references on F sequence)	
hook rel.	980		

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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Al VI

T: quant. forb.	969
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(see also references on O sequence)

Al VII

T: quant. forb.	233
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(see also references on N sequence)

Al IX

T: interp.	1612
quant.	2000
quant. forb. rel.	1527

(see also references on B sequence)

Al X

T: quant.	2830,3016
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(see also references on Be sequence)

Al XI

E: life forb.	2724,3027
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(see also references on Li sequence)

Al XII

T: quant.	1185,2980,3129
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(see also references on He sequence)

Ar (Argon) Sequence

T: interp.	3160
quant.	1357

Ar (Argon)

Ar I

E: absorpt.	1464,1934,2610
absorpt. rel.	1773,2076,2182
emiss.	985,988,1030,1042, 1086,1164,1189, 1242,1258,1291, 1308,1388,1419, 1464,1475,1618, 1622,1715,1925, 2011,2049,2154, 2162,2180,2294, 2300,2434,2438, 2439,2444,2591, 2605,2682,3031, 3180,3181

<u>Description</u>	<u>Reference No.*</u>
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emiss. rel.	1407,1773
hook rel.	2294
life	850,1213,1233,1341, 1353,1355,1407,1482, 1682,1773,1915,1916, 2136,2258,2287,2296, 2322,2375,2499,2584

misc.	1292,1557,1725,2508, 2766,2910,3195
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life forb.	2172
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T: CA	1372,2181,2623,2647, 2691,2997
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quant.	946,1062,1203,1300, 1571,1654,1696,1786, 1877,2058,2223,2351, 2466,2474,2568,2616, 2718,2892,3160
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quant. rel.	1372,1373
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quant. forb.	2009,2102,2502,2819
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Comment:	1222,1258,1492,1912, 2345,2791
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(see also references on Ar sequence)

Ar II

E: emiss.	1136,1140,1291,1386, 1600,1715,1925,2162, 2168,2180,2438,2876, 3031,3180,3181
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emiss. rel.	1478,2134,2608
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life	926,1018,1134,1290, 1417,1477,1547,1555, 1564,1653,1685,1701, 1717,1738,1847,1879, 2050,2126,2132,2136, 2167,2322,2354,2497, 2584,2675,2984,2985, 3024,3053
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misc.	2739
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T: CA	380
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quant.	997,1062,1240,1538, 1545,1911,1931,2133, 2673,3143,3157
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quant. rel.	380
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quant. forb.	1093
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Comment:	1241,1769,1914,2416, 2665
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Compilation:	2164
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(see also references on Cl sequence)

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
<u>Ar III</u>			
E: life	1491,1555,1717,1738, 1876,1879,1980,2132	CA forb.	2548
misc.	2406	quant. forb.	969
T: CA	1876	(see also references on O sequence)	
quant.	2221,3157	<u>Ar XII</u>	
quant. forb.	761	T: CA	2548
(see also references on S sequence)		CA forb.	2548
<u>Ar IV</u>		(see also references on N sequence)	
E: life	1555,1980,2132,2322	<u>Ar XIII</u>	
T: CA	2548	T: CA	2548
quant.	1062,1645,2221	CA forb.	2548
quant. forb.	761	quant. forb.	1073
<u>Ar V</u>		(see also references on C sequence)	
E: life	1980,2132,2322,3044	<u>Ar XIV</u>	
T: interp.	2479	E: emiss. forb. rel.	1296
quant.	1062,1611,2476	T: quant.	2000
quant. forb.	761	quant. forb.	1073
(see also references on Si sequence)		(see also references on B sequence)	
<u>Ar VI</u>		<u>Ar XV</u>	
E: life	2132,2322,2883,3044	T: quant.	3077,3130
T: quant.	1062,2945	quant. forb.	1073
(see also references on Al sequence)		(see also references on Be sequence)	
<u>Ar VII</u>		<u>Ar XVI</u>	
E: life	2132,2322,2355,2882, 2883,3044	E: life	2161,2390,2414
T: quant.	3016,3130	T: quant.	3130
(see also references on Mg sequence)		quant. forb.	2500
<u>Ar VIII</u>		(see also references on Li sequence)	
E: emiss.	1950	<u>Ar XVII</u>	
life	2132,2322,2882,2883, 3044	E: life	3133
T: quant.	2026,2088,2096,2946, 3130	life forb.	2139,2308
(see also references on Na sequence)		T: quant.	2597,2956
<u>Ar X</u>		quant. forb.	1507,2100,2651,2956, 2974
T: quant. forb.	1073	(see also references on He sequence)	
(see also references on F sequence)		<u>Ar XVIII</u>	
<u>Ar XI</u>		E: life forb.	2139
T: CA	2548	(see also references on H sequence)	

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
As (Arsenic)		<u>Au XLIII</u>	
		T: quant.	3130
		quant. forb.	3130
<u>As I</u>		<u>Au XLIV</u>	
E: life	2467	T: quant.	3130
T: quant.	2731	quant. forb.	3130
quant. rel.	1220		
quant. forb.	848	<u>Au XLV</u>	
<u>As II</u>		T: quant.	3130
T: quant.	1326,1611	quant. forb.	3130
<u>As III</u>		<u>Au XLVI</u>	
E: life	2214,3103	T: quant.	3130
T: quant.	3018	(see also references on Se sequence)	
quant. forb.	848,1416	<u>Au XLVII</u>	
<u>As IV</u>		T: quant.	3130
E: life	2426	<u>Au XLVIII</u>	
T: quant.	1429,2620	T: quant.	3130
<u>As V</u>		quant. forb.	3130
E: life	2426	<u>Au XLIX</u>	
T: quant.	2944	T: quant.	3130
(see also references on Cu sequence)		quant. forb.	3130
Au (Gold)		<u>Au L</u>	
<u>Au I</u>		T: quant.	3130
E: absorpt.	963,1097	quant. forb.	3130
emiss.	520	<u>Au LI</u>	
emiss. rel.	1722	T: quant.	3130
hook	790	(see also references on Cu sequence)	
life	1037,1901	<u>Au LII</u>	
T: quant.	1243,2056,2687,3021	T: quant.	3130
<u>Au III</u>		<u>Au LIII</u>	
T: quant. rel.	1227	T: quant. forb.	3130
<u>Au XXXV</u>		<u>Au LIV</u>	
T: quant. forb.	3130	T: quant. forb.	3130
<u>Au XXXVI</u>		<u>Au LX</u>	
T: quant. forb.	3130	T: quant. forb.	3130
<u>Au XLII</u>		<u>Au LXI</u>	
T: quant. forb.	3130	T: quant.	3130
		quant. forb.	3130
		(see also references on K sequence)	

*The numbers refer to paper identification numbers of Part 3.

Description Reference No.*

Au LXII

T: quant. forb. 3130
(see also references on Ar sequence)

Au LXIII

T: quant. forb. 3130
(see also references on Cl sequence)

Au LXVIII

T: quant. 3130
(see also references on Mg sequence)

Au LXIX

T: quant. 3130
(see also references on Na sequence)

Au LXXVI

T: quant. 3130
(see also references on Be sequence)

Au LXXVII

T: quant. 3130
(see also references on Li sequence)

B (Boron) Sequence

T: estim. 3168
 interp. 2004,2420,2421,3056
 quant. 833,1062,1595,2418,
 2809
 CA forb. 2976
 quant. forb. 1093,1416

B (Boron)

B I

E: life 1078,1333,1446,1763,
 1801,1869,2006,2263,
 2746
T: CA 2241
 quant. 368,418,1612,1964,
 1969,2163,2187,2347,
 2378,2443,2563,2684,
 2788,2789,2817,2923,
 2954,3029,3055,3107,
 3156
 quant. forb. 887
(see also references on B sequence)

Description

Reference No.*

B II

E: life 1078,1276,1446,1760,
 1763,1869,2263,2404,
 2746,2804
T: quant. 1062,1180,1770,2075,
 2347,2380,2477,2540,
 2563,2788,2823,2966,
 3016,3026,3055,3107,
 3134

(see also references on Be sequence)

B III

E: life 1446,1447,1760,1763,
 1869,2249,2252,2404,
 2746,2987
T: quant. 801,1162,1441,2144,
 2775
 quant. forb. 2814

(see also references on Li sequence)

B IV

E: life 1760,1763,2252,2746
T: quant. 1161,1170,1173,1255,
 1293,1392,1596,1993,
 2083,2084,2722,2759,
 2767,2922,2974,3026
 quant. forb. 1093,2117,2974

(see also references on He sequence)

B V

E: life 2252,3066
(see also references on H sequence)

Ba (Barium)

Ba I

E: absorpt. 1496,1734,2135
 emiss. 690
 hook 727,3039
 hook rel. 67,586
 life 615,859,1482,1559,
 1702,1842,1891,1892,
 1990,2247,2411,2556,
 2938,3150
 misc. 1584,2879,2880
T: quant. 1502,1816,2109,2124,
 2575,2579,2703
 quant. rel. 735

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
quant. forb.	2579		<u>Be II</u>
Comment:	1396	E: life	1446,1447,1760,1861, 1869,2112,2250
	<u>Ba II</u>	T: CA	2241,2769
E: emiss.	1394	quant.	801,1162,1441,1569, 1664,2144,2602,2775
emiss. rel.	713	quant. forb.	2500,2814
life	1035,1181,1482,1990, 2219,2220,2537,2538, 2654,2865,2949,3048, 3145,3200	(see also references on Li sequence)	
T: CA	713		<u>Be III</u>
quant.	1412,2599	E: life	1446,2250
quant. forb.	1412	T: quant.	1053,1071,1161,1170, 1173,1180,1255,1293, 1392,1596,1993,2083, 2084,2759,2767,2922, 2954,3026
	<u>Ba IV</u>	quant. forb.	1093,2117
T: quant. forb.	1416	(see also references on He sequence)	

Be (Beryllium) Sequence

T: estim.	3168
interp.	2004,2866,2983,3077
quant.	833,1185,1442,1560, 1579,1595,1952,2383, 2418,2559,2790,2809, 2866,3028,3127,3158, 3184,3196,3197
quant. forb.	1093,3028
Comment:	3127

Be (Beryllium)

	<u>Be I</u>
E: absorpt.	2135
life	1446,1844,1861,1869, 2112,2577,2804
T: CA	2241,2935
quant.	368,816,862,884,983, 1053,1062,1077,1111, 1180,1191,1568,1770, 1816,1937,1969,2075, 2109,2127,2176,2315, 2347,2380,2417,2433, 2477,2540,2563,2567, 2620,2684,2788,2817, 2823,2824,2862,2954, 2966,3016,3026,3055
quant. forb.	1183
(see also references on Be sequence)	

Bi (Bismuth)

	<u>Bi I</u>
E: absorpt.	967,987,2091
emiss.	448
emiss. rel.	266
life	1169,2051,2166
emiss. forb. rel.	1330
T: quant.	2731,2755
quant. forb.	848
Comment:	447

	<u>Bi II</u>
E: emiss. forb. rel.	2989
T: quant.	1326
quant. forb.	848

	<u>Bi III</u>
T: quant.	3018
quant. forb.	848,1416

	<u>Bi IV</u>
E: life	2053

	<u>Bi V</u>
E: life	2053
T: quant.	3021

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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Br (Bromine)

	<u>Br I</u>
E: absorpt.	2503
emiss.	1857
T: quant.	3143
quant. rel.	1220
quant. forb.	848,1416
Comment:	3064

	<u>Br II</u>
E: emiss.	2878
T: quant.	1521
quant. forb.	652,848

(see also references on Se sequence)

	<u>Br IV</u>
E: life	3044
T: quant.	1611

	<u>Br V</u>
E: life	3178
T: quant. forb.	1416

	<u>Br VI</u>
E: life	3154,3178
T: interp.	2216,2426
quant.	1429,2620,3130

	<u>Br VII</u>
E: life	3154,3178
T: interp.	2216,2426
quant.	3130

(see also references on Cu sequence)

	<u>Br VIII</u>
T: quant.	3130

	<u>Br XXXI</u>
T: quant.	2420,2421,3056

(see also references on B sequence)

C (Carbon) Sequence

T: estim.	3168
interp.	2004

<u>Description</u>	<u>Reference No.*</u>
quant.	833,1062,1377,1595, 1611,2418,2566,2809
quant. rel.	1377
quant. forb.	969,1052,1093

C (Carbon)

	<u>C I</u>
E: emiss.	370,513,694,695,758, 950,1501,1718,2012, 2104,2580,2607,2955
emiss. rel.	2305
life	1078,1767,1777,1869, 1985,2137,3120
misc.	2377,2489
T: CA	1510,2239,2241
quant.	425,697,1253,1260, 1325,1397,1787,1969, 2002,2145,2187,2378, 2563,2684,2788,2816, 2954,3007,3008,3012, 3055
quant. forb.	333,366,1970,2382, 2418
Compilation:	1260

(see also references on C sequence)

	<u>C II</u>
E: emiss.	370,2515,2955
emiss. rel.	1239,2580
life	1078,1530,1588,1590, 1688,1761,1767,1777, 1869,1927,1983,1985, 2137,2255,3125
T: quant.	294,1253,1260,1615, 1964,2187,2347,2378, 2563,2788,2789,3055, 3156
quant. forb. rel.	1527
quant. forb.	887,975
Compilation:	1260

(see also references on B sequence)

	<u>C III</u>
E: life	1302,1530,1588,1590, 1688,1761,1767,1777, 1869,1983,1985,2255, 3125
T: quant.	983,1062,1111,1180, 1499,1770,1903,1974,

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
quant. (cont.)	2075,2147,2148,2347, 2380,2477,2540,2544, 2563,2823,2824,2830, 2966,3016,3026,3055, 3183	T: CA	1510,2241
(see also references on Be sequence)		quant.	689,1256,1412,1569, 1787,2026,2065,2184, 2431,3036
		quant. forb.	340,1412,1554,1839
		(see also references on K sequence)	
<u>C IV</u>		<u>Ca III</u>	
E: life	927,1760,1761,1946, 1983,1985,2236,2255, 2987	E: life	2649,2694
T: quant.	801,1162,1415,1441, 2128,2775	T: quant.	1062,1300,1696,2223, 2534,3160
quant. forb.	1415,2500	quant. rel.	1373
(see also references on Li sequence)		(see also references on Ar sequence)	
<u>C V</u>		<u>Ca IV</u>	
E: life	1712,1761,1983,1985, 2254,2255,2987	T: quant. forb.	1093
T: quant.	1161,1170,1173,1255, 1392,1596,1993,2083, 2084,2759,2767,2922, 3026	(see also references on Cl sequence)	
quant. forb.	1093,1485,1507,2117	<u>Ca V</u>	
(see also references on He sequence)		E: life	2215,2649
		T: quant.	2221
		(see also references on S sequence)	
Ca (Calcium)		<u>Ca VI</u>	
<u>Ca I</u>		T: CA	2548
E: absorpt.	2135,2820	quant.	1645
absorpt. rel.	539	quant. forb.	233
emiss.	866	<u>Ca VII</u>	
hook	793,3039	T: quant.	1062,2476,2479,2603, 3055
hook rel.	67,134,654	quant. forb.	1073
life	859,876,1110,1158, 1338,1467,1468,1649, 1801,1842,2006,2306, 2556,2618,2694,2707, 2714,2953,3147	(see also references on Si sequence)	
T: CA	1510,2241	<u>Ca VIII</u>	
quant.	1130,1191,1205,1352, 1502,1568,2109,2124, 2292,2466,2575,2620, 3036,3072,3170	T: quant.	1062
Comment:	1466	(see also references on Al sequence)	
<u>Ca II</u>		<u>Ca IX</u>	
E: life	1181,1649,1801,2006, 2694,3048	T: quant.	1261
		(see also references on Mg sequence)	
		<u>Ca X</u>	
		T: quant.	998,2704,2946
		(see also references on Na sequence)	
		<u>Ca XII</u>	
		T: quant.	2779

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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quant. forb.	1073,2779
(see also references on F sequence)	

Ca XIII

T: CA	2548
quant.	2722,2779,3117
CA forb.	2548
quant. forb.	1073,2511,2779
(see also references on O sequence)	

Ca XIV

T: CA	2548
quant.	1536,2722
CA forb.	2548
(see also references on N sequence)	

Ca XV

T: CA	2548
quant.	1196,2722,2779,3118
CA forb.	2548
quant. forb.	1073,2779
(see also references on C sequence)	

Ca XVI

T: quant.	2722,3056
(see also references on B sequence)	

Ca XVII

T: quant.	2147,2722
quant. forb.	2760
(see also references on Be sequence)	

Ca XVIII

T: quant.	2101
quant. forb.	2500
(see also references on Li sequence)	

Ca XIX

T: quant.	2722
(see also references on He sequence)	

Cd (Cadmium)

Cd I

E: absorpt.	129,231,826,827,967, 1095,1284,2135
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<u>Description</u>	<u>Reference No.*</u>
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emiss.	433,520,2211
emiss. rel.	225,264,499,507,589, 649
hook	2782,3023
hook rel.	131,589
life	71,75,140,267,273, 372,571,594,609,755, 821,830,877,996,1114, 1354,1526,1659,1749, 1780,1842,1989,2052, 2217,2245,2336,2670, 2677,2758,2919,2995, 3035
misc.	34,35,158,1281,2725, 2726
misc. rel.	120
T: quant.	362,395,479,701,734, 857,1069,1191,1284, 2027,2185,2575,2620
quant. rel.	228,735,1206
quant. forb.	1183
Comment:	153

Cd II

E: life	571,755,1659,1704, 1741,1989,2217,2535, 2536,2598,2815,2829, 2864,3048,3063,3075
T: quant.	1027,1928,2055,2068, 2756

Ce (Cerium)

Ce II

E: life	2650
Comment:	2015

Ce III

E: life	2468
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Cl (Chlorine) Sequence

T: CA forb.	2976
quant. forb.	1416

*The numbers refer to paper identification numbers of Part 3.

Description Reference No.*

Cl (Chlorine)

Cl I

E: absorpt. 3128
 emiss. 535,694,1195,1857
 life 1220
 T: quant. 1062,2509,3143,3157
 quant. rel. 1220
 quant. forb. 1093
 (see also references on Cl sequence)

Cl II

E: emiss. 535,694,1857
 life 1555,1849,1961,3011
 T: quant. 2221,3157
 quant. forb. 761
 (see also references on S sequence)

Cl III

E: life 1849,1961
 T: quant. 1062,2061,2221,2418,
 2604,3157
 quant. forb. 761

Cl IV

E: life 1849,1961,2231,2484
 T: interp. 2479,3055
 quant. 1062,1325,1611,2476
 quant. forb. 761
 (see also references on Si sequence)

Cl V

E: life 1849,1961
 T: quant. 1062,2945
 (see also references on Al sequence)

Cl VI

E: life 1849,1961,2231,2484,
 2882,2883
 T: quant. 3073
 (see also references on Mg sequence)

Cl VII

E: life 1849,1961,2151,2231,
 2484,2882,2883

Description Reference No.*

T: quant. 998
 (see also references on Na sequence)

Cl VIII

E: life 2231,2484
 T: quant. 2822
 (see also references on Ne sequence)

Cl IX

E: life 2231,2484
 T: quant. forb. 1093
 (see also references on F sequence)

Cl X

T: quant. forb. 969
 (see also references on O sequence)

Cl XV

E: life 2161,2266,2388,2390,
 2414
 life forb. 2506
 (see also references on Li sequence)

Cl XVI

E: life 2266,2267,2506,3071
 life forb. 2504,2506,2662
 T: quant. 2597
 (see also references on He sequence)

Co (Cobalt)

Co I

E: absorpt. 963,2281
 absorpt. rel. 404,2387
 emiss. 448,465,520,882
 emiss. rel. 107,2593
 hook rel. 509
 life 1528,2360,2590,2699,
 3162,3179
 T: CA 559
 quant. 998
 Comment: 559

Co II

E: emiss. rel. 1250,2593

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
life	2590	life	1880,2360,2395,2778, 2964,3060,3108,3167
T: CA	1250	T: quant.	2948
quant.	1384,1408,1747,2341, 2993		<u>Cr II</u>
quant. rel.	704	E: absorpt.	1336
quant. forb.	1747	emiss.	1426
Comment:	3058	life	2395,2695
	<u>Co III</u>	T: quant.	2993
T: quant.	2885	quant. forb.	848,1775
quant. forb.	1594	Comment:	3058
	<u>Co VIII</u>		<u>Cr III</u>
T: quant.	1610	E: life	3104
quant. forb.	1610	T: quant.	1553,2885
	<u>Co X</u>		<u>Cr IV</u>
T: quant. forb.	1608	T: quant. forb.	233,848,1594
(see also references on Ar sequence)			<u>Cr V</u>
	<u>Co XII</u>	T: quant.	1610
T: quant. forb.	891,1073	quant. forb.	1610
(see also references on S sequence)			<u>Cr VI</u>
	<u>Co XV</u>	T: quant.	1166
T: quant. forb.	891,2511	(see also references on K sequence)	
(see also references on Al sequence)			<u>Cr VII</u>
	<u>Co XVII</u>	T: quant.	1300,1696
T: quant.	1766,2016	quant. rel.	1373
quant. forb.	2170	quant. forb.	1608
(see also references on Na sequence)		(see also references on Ar sequence)	
	<u>Co XIX</u>		<u>Cr IX</u>
T: quant.	1295	T: quant. forb.	233,1073,2511
(see also references on F sequence)		(see also references on S sequence)	
	<u>Co XX</u>		<u>Cr X</u>
T: quant.	1921	T: CA	2548
(see also references on O sequence)		quant.	1645
			<u>Cr XI</u>
Cr (Chromium)		T: interp.	2479
	<u>Cr I</u>	quant. forb.	891,1073,3130
E: absorpt.	1336,2887	(see also references on Si sequence)	
emiss.	1426,1621,2268		<u>Cr XII</u>
hook	2732	T: quant. forb.	3130
		(see also references on Al sequence)	

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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Cr XIII

T: quant. forb.	3130
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(see also references on Mg sequence)

Cr XV

T: quant. forb.	3130
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(see also references on Ne sequence)

Cr XVI

T: quant.	2926
quant. forb.	2926,3130

(see also references on F sequence)

Cr XVII

T: CA	2548
quant.	2722
CA forb.	2548
quant. forb.	3130

(see also references on O sequence)

Cr XVIII

T: CA	2548
quant.	2722
CA forb.	2548
quant. forb.	3130

(see also references on N sequence)

Cr XIX

T: CA	2548
quant.	2722
CA forb.	2548
quant. forb.	3130

(see also references on C sequence)

Cr XX

T: quant.	2722
quant. forb.	3130

(see also references on B sequence)

Cr XXI

T: quant.	2722
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(see also references on Be sequence)

Cr XXII

T: quant. forb.	2500
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(see also references on Li sequence)

<u>Description</u>	<u>Reference No.*</u>
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Cs (Cesium)

Cs I

E: absorpt.	4,9,91,1014,2262, 2398,2939,3043,3174
absorpt. rel.	1,111,1945,2557,2803
emiss.	813,1060,2940,2941
emiss. rel.	319,951,2557
hook	87,357
hook rel.	181,394
life	397,522,681,879,920, 1084,1182,1224,1425, 1603,1646,1647,1791, 2157,2371,2581,2622, 2685,2747,2797,2825, 2899,3010,3013,3033, 3102,3135,3161
misc.	105
absorpt. forb.	1987
misc. forb.	1531,2893
T: CA	632,1207
estim.	452,1363
quant.	106,452,479,631,732, 734,754,998,1015, 1069,1328,1412,1661, 2010,2175,2385,2894, 2940,2941
quant. forb. rel.	1262
quant. forb.	1412
Comment:	17,143,630,732,1083
Comment (rel.):	179

Cs III

T: quant. forb.	848,1416
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Cs IV

T: quant.	1521
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(see also references on Te sequence)

Cu (Copper) Sequence

T: interp.	3079
quant.	2212

*The numbers refer to paper identification numbers of Part 3.

Description Reference No.*

Cu (Copper)

Cu I

E: absorpt.	231,482,1097,1662, 1864,2281
absorpt. rel.	976,1757,2780
emiss.	448,520,895,1343, 1804
emiss. rel.	207,264,838,1409, 1599,1722,2344
hook	474,1109
hook rel.	413
life	1038,1102,1169,1346, 1842,2601,2753,2918
misc.	1096,1474
T: CA	2153,2240,2753
quant.	998,1569,1864,2056, 2753,2944

Comment: 1694

Compilation: 2666

(see also references on Cu sequence)

Cu II

E: emiss.	1343
emiss. rel.	1922
life	2918,3011
T: quant. forb.	848

Cu III

T: quant.	2885
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Cu IV

T: quant.	3017
quant. rel.	3017

Cu XII

T: quant. forb.	1608
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(see also references on Ar sequence)

Cu XIX

T: quant.	998
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(see also references on Na sequence)

Cu XXI

T: quant.	1295,2261
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(see also references on F sequence)

Description Reference No.*

Cu XXII

T: quant.	1921
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(see also references on O sequence)

Dy (Dysprosium)

Dy I

E: hook	3042
hook rel.	2586,3042
T: quant.	2270

Er (Erbium)

Er I

E: hook rel.	3112
T: quant.	2270

Er II

E: life	2936
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Eu (Europium)

Eu I

E: absorpt.	3042
absorpt. rel.	1757
hook	1344,2334
hook rel.	2394,3042
life	1076,1524,1550,2394

F (Fluorine) Sequence

T: estim.	3168
interp.	2004,2875
quant.	833,1062,1595,1644, 1840,1919,2106,2418, 2809
CA forb.	2976
quant. forb.	1416

*The numbers refer to paper identification numbers of Part 3.

Description Reference No.*

F (Fluorine)

F I

E: emiss. 1857,2660
 life 2319,3045
 T: quant. 1969,2187,2563,2875
 quant. forb. 1093

(see also references on F sequence)

F II

E: emiss. 1340
 life 2319,2501,3045
 T: quant. 1615,2187,2378,2563,
 3008,3055
 quant. forb. 333,1093

(see also references on O sequence)

F III

E: emiss. 1340
 life 1670,3045
 T: estim. 1700
 quant. 2347,2378,2563,2875,
 2923,3055

(see also references on N sequence)

F IV

E: emiss. 1340
 life 1670,2229,2319,3045
 T: estim. 1700
 quant. 425,1325,2415,3055
 quant. forb. 333

(see also references on C sequence)

F V

E: emiss. 1340
 life 2229,2968
 T: interp. 1612
 quant. 368,1100,2347,3055
 quant. forb. rel. 1527

(see also references on B sequence)

F VI

E: life 1462,1670,2229,2968
 quant. 1100,1770,2075,2347,
 2380,2540,2823,2830,

Description Reference No.*

quant. (cont.) 2966,3026,3055
 (see also references on Be sequence)

F VII

E: life 927,1657,1895,1999,
 2400,2414,2968

T: quant. 801,1441,2775

(see also references on Li sequence)

F VIII

E: life 2376,2390,2400,2784,
 2968

T: quant. 1170,1173,1255,1392,
 1596,1993,2597,2759,
 2974,3026

quant. forb. 1093,2117

(see also references on He sequence)

F IX

E: life 2505

(see also references on H sequence)

Fe (Iron)

Fe I

E: absorpt. 252,338,482,1336,
 1513,1662,2115,2281,
 2669,2888

absorpt. rel. 189,222,905,956,
 1586,1757,2796

emiss. 183,448,465,520,651,
 729,813,835,882,
 1155,1298,1509,1675,
 1788,1813,1867,1960,
 2025,2491,2531,2578

emiss. rel. 27,31,39,266,306,
 316,377,506,507,533,
 534,645,720,777,960,
 1043,1099,1512

hook 2114,2115,2227,2543

hook rel. 390,906

life 443,480,658,1607,
 1617,1801,1845,1944,
 2057,2316,2519,2522,
 2699,2818,2895

misc. 564

misc. rel. 548,2289

T: CA 559,1510

estim. 156,707,1841

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
quant.	994,998,1384,1408, 1937,2405,2564	quant. forb.	233,848,1610
quant. rel.	296	<u>Fe VIII</u>	
estim. forb.	1516	T: quant.	1044,1166,2683,3130
quant. forb.	1917	quant. forb.	1044
Comment:	208,290,414,502,559, 611,650,651,718,776, 835,894,1043,1167, 1856,2889,2913,3058	(see also references on K sequence)	
Compilation:	835	<u>Fe IX</u>	
<u>Fe II</u>		T: quant.	1179,1300,1311,1696, 2099,3136,3160
E: absorpt.	1513	quant. rel.	1373
emiss.	729,1658,2025,2248, 2425	quant. forb.	1507,1608,2018,3136
emiss. rel.	74,266,316,373,970, 1250	(see also references on Ar sequence)	
hook	2543	<u>Fe X</u>	
life	1800,2057,2895	E: misc.	588
misc.	564,629,756,1144, 2490	misc. forb.	276
T: CA	1250	T: quant.	1179,1311,2023,2099, 2779,3032,3115
estim.	156	quant. forb.	251,959,2511,2779, 3166
quant.	1552,1745,1951,2341, 2993	Comment:	702
quant. rel.	110	(see also references on Cl sequence)	
quant. forb.	698,1594,1774	<u>Fe XI</u>	
Comment:	3058	E: misc. forb.	276
<u>Fe III</u>		T: quant.	1179,1311,2023,2099, 2779,3115
E: emiss. rel.	1848	quant. forb.	233,251,959,2779, 3166
life	3104	(see also references on S sequence)	
T: CA	1000	<u>Fe XII</u>	
estim.	627	T: CA	2548
quant.	2885	quant.	1311,1593,1645,2023, 2099
quant. forb.	461	quant. rel.	3137
<u>Fe IV</u>		estim. forb.	959
T: quant. forb.	492	quant. forb.	1073,2102,3137
<u>Fe V</u>		<u>Fe XIII</u>	
T: quant. forb.	461	E: misc. forb.	276
<u>Fe VI</u>		T: quant.	1196,1311,2023,2099, 2235,2479,2526,2603, 3055
T: quant. forb.	233,848	quant. forb.	251,775,959,1073, 2293,3130
<u>Fe VII</u>		(see also references on Si sequence)	
T: quant.	1610		

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
<u>Fe XIV</u>		<u>Fe XX</u>	
E: misc. forb.	276	T: CA	2548
T: CA	702	quant.	2520,2689,2722,3116
quant.	307,458,1111,1311, 1866,2023,2099,2779, 2945	CA forb.	2548
quant. forb.	251,702,959,1111, 2511,2779,3130	quant. forb.	3130
(see also references on Al sequence)		(see also references on N sequence)	
<u>Fe XV</u>		<u>Fe XXI</u>	
T: quant.	693,846,959,1111, 2099,2271,3106,3130	T: CA	2548
quant. forb.	251,340,455,959, 1507,3130	quant.	2000,2520,2689,2698, 2722,3118
(see also references on Mg sequence)		CA forb.	2548
<u>Fe XVI</u>		quant. forb.	3130
T: CA	2548	(see also references on C sequence)	
quant.	846,959,998,1111, 1357,1766,2016,2704, 2946,3130	<u>Fe XXII</u>	
quant. forb.	959,2170	T: quant.	1480,2520,2689,2698, 2722
Comment:	1172	quant. forb.	3130
(see also references on Na sequence)		(see also references on B sequence)	
<u>Fe XVII</u>		<u>Fe XXIII</u>	
T: CA	2906	T: quant.	1480,2093,2147,2698, 2722,3077,3130
quant.	1056,1179,1956,2774, 3183	quant. forb.	1507,2760
quant. rel.	1457	(see also references on Be sequence)	
quant. forb.	1507,3130	<u>Fe XXIV</u>	
(see also references on Ne sequence)		T: quant.	1480,2093,2101,2171, 3130
<u>Fe XVIII</u>		quant. forb.	2500
T: CA	2906,2977	(see also references on Li sequence)	
quant.	2261,2926,3119	<u>Fe XXV</u>	
quant. forb.	2926,3130	E: life	3142
(see also references on F sequence)		life forb.	2532
<u>Fe XIX</u>		T: quant.	1480,2171,2722
T: CA	2548,2906	quant. forb.	1507,2974
quant.	2520,2689,2722,3117, 3119	(see also references on He sequence)	
CA forb.	2548	Ga (Gallium)	
quant. forb.	3130	<u>Ga I</u>	
(see also references on O sequence)		E: absorpt.	963,1236
		absorpt. rel.	1757

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
emiss.	448		<u>Ge II</u>
emiss. rel.	874	E: emiss.	2369
hook	510,512,787,788,980, 1236	life	3103
hook rel.	980	T: quant.	2339,3022
life	613,658,687,1169, 1842,1972,2054,2213, 2937,3146	quant. rel.	2339
T: quant.	1061,2056,2238,3019	quant. forb.	848,1416
quant. rel.	2368		<u>Ge III</u>
quant. forb.	848,1416	E: life	2426
Comment:	447,575,981	T: quant.	1429,2620
	<u>Ga II</u>		<u>Ge IV</u>
E: life	2054,2426	E: life	2426
T: quant.	857,1429,2620	(see also references on Cu sequence)	
	<u>Ga III</u>		<u>Ge VI</u>
E: life	2054,2426	T: quant.	1337
T: quant.	2944,3020		<u>Ge XXIII</u>
(see also references on Cu sequence)		T: quant.	2674
	<u>Ga V</u>	(see also references on Ne sequence)	
T: quant.	1337		<u>Ge XXIV</u>
		T: quant.	3122
		(see also references on F sequence)	

Gd (Gadolinium)

	<u>Gd I</u>
E: hook rel.	2391,3042
life	2795

Ge (Germanium)

	<u>Ge I</u>
E: absorpt. rel.	711,770,1757
emiss.	2369
emiss. rel.	770
hook rel.	901
life	1220,2649
T: quant.	643,1326,1611,2541
quant. rel.	1220
quant. forb.	848
Comment:	770

H (Hydrogen) Sequence

T: estim.	3168
interp.	2837
quant.	3151
quant. forb.	1430,1539,1854,2119, 2120,2572

H (Hydrogen)

	<u>H I</u>
E: absorpt.	971,1278,1520
emiss.	1092,1520
emiss. rel.	2313
life	922,1029,1058,1066, 1187,1294,1714,1965, 1996,2256,2430
emiss. forb.	2754
T: quant.	192,365,395,432, 462,537,547,635,

*The numbers refer to paper identification numbers of Part 3.

Description	Reference No.*	Description	Reference No.*
quant. (cont.)	642,880,1323,1476, 1574,2123,2658,2837	quant.	171,214,227,478,857, 897,919,1053,1059, 1071,1161,1170,1173, 1180,1249,1255,1293, 1392,1428,1542,1596, 1683,1703,1707,1868, 1941,1991,1992,1993, 2022,2080,2083,2084, 2092,2140,2243,2469, 2470,2524,2554,2565, 2658,2702,2759,2767, 2836,2861,2862,2922, 2954,2956,3026,3029
quant. forb.	1814,2121	quant. forb.	881,1093,1183,1310, 1933,2085,2117,2898, 2956
(see also references on H sequence)		Comment:	938,961,1222,2927 (see also references on He sequence)

He (Helium) Sequence

T: estim.	3168		
interp.	2004,2597		
quant.	833,1160,1303,1395, 1443,1790,1884,2070, 2094,2276,2346,2532, 2721,2749,2973,3068, 3153,3159,3184,3186		
quant. forb.	1494,1518,1854,1896, 1902,1905,2532,2546, 2742,2973,3159		
Comment:	1723,2513		

He (Helium)

	<u>He I</u>
E: absorpt.	958,1934
absorpt. rel.	1846,2278
emiss.	1082
emiss. rel.	907
life	434,508,526,819,843, 858,870,871,922,926, 945,979,1017,1134, 1147,1151,1211,1233, 1353,1375,1379,1424, 1444,1449,1465,1472, 1504,1563,1677,1691, 1692,1737,1762,1776, 1858,1862,1863,1872, 1873,1874,1875,1929, 2062,2063,2073,2079, 2152,2155,2224,2226, 2237,2244,2257,2259, 2286,2325,2332,2396, 2441,2442,2549,2609, 2727,2827,2868,2869, 3062,3121,3124
misc.	2342,2657,2766,2910, 3198
misc. rel.	931
emiss. forb.	2373,2833
life forb.	2017
T: estim.	457,487,565

	<u>He II</u>
E: emiss. rel.	3155
life	1193,1204,1233,1379, 1706,1754,1850,1900, 2082,2125,2156,2931, 2967
T: quant.	1188,1580
(see also references on H sequence)	

Hf (Hafnium)

	<u>Hf II</u>
E: life	2863

Hg (Mercury)

	<u>Hg I</u>
E: absorpt.	9,10,47,54,62,82, 113,712,1201,1284, 1753,2135,2208,2735, 2859
emiss.	263,520,2429,2801, 3132
emiss. rel.	262,406,649,1033, 1178
hook	83,102,161,162
life	18,42,92,108,109, 118,135,175,323,349, 350,398,450,456,488, 523,528,542,750,751, 815,852,924,929,966, 1019,1114,1202,1221,

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
life (cont.)	1226,1231,1358,1380, 1685,1705,1784,1842, 1888,1893,2217,2542, 2555,2582,2584,2748, 2794,2835,2905	I II	
misc.	463,820,1982,2165, 2713	T: quant.	1521
absorpt. forb.	1143	quant. forb.	580,848
life forb.	2234	(see also references on Te sequence)	
T: quant.	325,358,362,479,701, 734,857,998,1069, 1132,1191,1284,2575, 2687	In (Indium)	
quant. rel.	228,406,735,1206	In I	
quant. forb.	1143,1183	E: absorpt.	527,963,1236,2407
Comment:	17,44,103,153,224,515	emiss. rel.	498
Comment (forb.):	77	hook	510,511,512,787,788, 1236
		life	859,1169,1842,1972, 2054,2213,2938,3146
		T: quant.	518,575,1061,1448, 2238,3019
		quant. rel.	2368
		quant. forb.	848,1416
		Comment:	981
		In II	
		E: life	2053,2054
		T: quant.	857
		In III	
		E: life	2053
		T: quant.	3020

Hg II

E: absorpt.	2492
emiss. rel.	2680
life	2217,2864
T: quant.	2055,3021
quant. forb.	848

Hg LXXIX

T: quant.	2974
(see also references on He sequence)	

Ho (Holmium)

Ho I

Compilation:	2891
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K (Potassium) Sequence

T: quant.	2886,3110
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I (Iodine)

I I

E: absorpt.	2503
life	1220,1887,2615,2909
misc.	2186
life forb.	1048,1199,1889,2048
T: quant.	3143
quant. rel.	1220
quant. forb.	848,1416,1583
Comment:	17,3064

K (Potassium)

K I

E: absorpt.	1565,2569
emiss.	204,2569
hook	726
life	1084,1385,2013,2621, 2838,2899
misc.	2279
misc. forb.	1332,1532
T: CA	632,1207,1510,2241
estim.	1363

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
quant.	363,817,1256,1328, 1412,1569,1661,2010, 2021,2026,2175,2516, 2602,2655	<u>K XII</u> T: quant. forb. 969 (see also references on O sequence)	
quant. forb. rel.	1262	<u>K XIII</u> T: quant. 3116 (see also references on N sequence)	
quant. forb.	1318,1412,1839 (see also references on K sequence)		
<u>K II</u> E: life 1651,1668,1678,1984, 2338 T: quant. 1062,1300,1696,2223, 2356,3160 quant. rel. 1373 (see also references on Ar sequence)		<u>K XIV</u> T: quant. forb. 1073 (see also references on C sequence)	
<u>K III</u> E: life 1651,1984 T: quant. 3157 quant. forb. 1093 (see also references on Cl sequence)		Kr (Krypton) <u>Kr I</u> E: absorpt. 570,590,768,1001, 1157,1519,1934 emiss. 844,1807,2294 emiss. rel. 2141 hook 791,2942 hook rel. 2294 life 850,999,1233,1406, 2090,2244,2343,2359, 2763,2764,2969 misc. 1725,2766,2925 life forb. 2172 T: CA 1372,2517,2691,2997 quant. 684,839,1049,1190, 1654,2058,2466,2517, 2658,2720 quant. rel. 475,795,1372 quant. forb. 2009,2502,2819 Comment: 1222,1259	
<u>K IV</u> E: life 2215,2649 T: quant. 2221 (see also references on S sequence)			
<u>K V</u> E: life 2215,2649 T: quant. 1645,2221			
<u>K VI</u> T: interp. 2479 quant. 1062,2476 (see also references on Si sequence)			
<u>K VII</u> T: quant. 1062,2945 (see also references on Al sequence)		<u>Kr II</u> E: emiss. 1807,1953 emiss. rel. 2141,2397 life 1717,2050,2090,2126, 2359,2688,2969,3169 misc. 2739 T: CA 2934 quant. 1545,2692,2934,3143, 3191 quant. forb. 848,1416 Compilation: 2810	
<u>K IX</u> T: quant. 2026 (see also references on Na sequence)			
<u>K XI</u> T: quant. forb. 891,1073,2511 (see also references on F sequence)			

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
	<u>Kr III</u>		<u>Kr XXIII</u>
E: life	1717,2969	T: quant. forb.	3130
T: quant.	1521	(see also references on Si sequence)	
quant. forb.	340,848		<u>Kr XXIV</u>
(see also references on Se sequence)		T: quant. forb.	3130
	<u>Kr IV</u>	(see also references on Al sequence)	
E: life	2969,2998		<u>Kr XXV</u>
	<u>Kr V</u>	T: quant.	3130
E: life	2969,2998,3044	quant. forb.	3130
	<u>Kr VI</u>	(see also references on Mg sequence)	
E: life	2969,2998,3044		<u>Kr XXVI</u>
	<u>Kr VII</u>	T: quant.	3130
E: life	2928,2969,2998,3044,3154	(see also references on Na sequence)	
T: interp.	2216,2426		<u>Kr XXVIII</u>
quant.	3130	T: quant. forb.	3130
	<u>Kr VIII</u>	(see also references on F sequence)	
E: life	2928,2969,3044,3154		<u>Kr XXIX</u>
T: interp.	2216,2426	T: quant. forb.	3130
quant.	2944,3130	(see also references on O sequence)	
(see also references on Cu sequence)			<u>Kr XXX</u>
	<u>Kr IX</u>	T: quant. forb.	3130
T: quant.	3130	(see also references on N sequence)	
	<u>Kr XVIII</u>		<u>Kr XXXI</u>
T: quant.	3130	T: quant. forb.	3130
quant. forb.	3130	(see also references on C sequence)	
(see also references on K sequence)			<u>Kr XXXII</u>
	<u>Kr XIX</u>	T: quant. forb.	3130
T: quant. forb.	3130	(see also references on B sequence)	
(see also references on Ar sequence)			<u>Kr XXXIII</u>
	<u>Kr XX</u>	T: quant.	3077,3130
T: quant. forb.	3130	(see also references on Be sequence)	
(see also references on Cl sequence)			<u>Kr XXXIV</u>
	<u>Kr XXI</u>	T: quant.	3130
T: quant. forb.	3130	(see also references on Li sequence)	
(see also references on S sequence)			<u>Kr XXXV</u>
	<u>Kr XXII</u>	E: life	2956,3142
T: quant. forb.	3130	life forb.	2956

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
T: quant.	2956
quant. forb.	2956,2974
(see also references on He sequence)	

La (Lanthanum)

	<u>La I</u>
E: life	1730,1731,1732

	<u>La II</u>
E: life	2650,3105
misc. rel.	564

	<u>La III</u>
E: emiss. rel.	1351

Li (Lithium) Sequence

T: estim.	3168
interp.	2004,2866,2914,2983, 3014
quant.	2026,2349,2583,2596, 2792,2807,2809,2866, 3110,3111,3138,3187
quant. forb.	2760,2793
Compilation:	3014,3015

Li (Lithium)

	<u>Li I</u>
E: absorpt.	1312
hook rel.	117
life	1149,1150,1208,1460, 1463,1471,1505,1535, 1760,1861,1862,2064, 2237,2253,2412,3188
T: CA	632,1207,2241
estim.	1363
quant.	801,860,1161,1162, 1328,1441,1569,1606, 1661,1971,2010,2078, 2144,2210,2358,2475, 2516,2602,2711,2775, 2787,2823,2862,2875, 2894,2954,3054,3172
quant. forb.	2560,2676,2814
(see also references on Li sequence)	

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
	<u>Li II</u>
E: life	1150,1447,1463,1505, 1679,1861,1986,2062, 2158,2209,2237,2253, 2256,2412,2413,2813, 2961
T: quant.	857,1053,1071,1170, 1173,1180,1255,1293, 1392,1596,1993,2083, 2084,2469,2470,2702, 2759,2767,2922,2954, 3026
quant. forb.	1093,2085,2117
(see also references on He sequence)	
	<u>Li III</u>
E: life	2158,2159,2256
(see also references on H sequence)	

Lu (Lutetium)

	<u>Lu I</u>
E: life	1726,1727,1913,2304
Compilation:	2891

	<u>Lu II</u>
E: life	2468,2650

Mg (Magnesium) Sequence

T: estim.	3168
interp.	2004,3077,3106,3126
quant.	1062,1168,1579,1940, 3126,3190
quant. forb.	1093

Mg (Magnesium)

	<u>Mg I</u>
E: absorpt.	484,2135
emiss.	1234
emiss. rel.	241,1954
hook	2781
hook rel.	727
life	875,1110,1338,1649, 1667,1678,1801,1842, 1923,1988,2006,2052,

<u>Description</u>	<u>Reference No.*</u>
life (cont.)	2314,2357,2360,2471, 2556,2606,2617,2708, 2714,2865,3034,3065, 3081,3147
misc.	1352
T: CA	1510,2241
quant.	328,701,1094,1131, 1191,1254,1261,1414, 2061,2109,2124,2232, 2418,2433,2567,2602, 2620,2700,2701,3051, 3073,3106,3157,3170
quant. forb.	1094,1183
(see also references on Mg sequence)	

Mg II

E: life	1110,1649,1667,1678, 1801,1988,2006,2052, 2357,2959,3048
T: CA	1510,2241,2769
quant.	294,998,1040,1357, 1412,1567,1569,2026, 2065,2599,2946,3051
quant. forb.	1412,1839,2169
Comment (forb.):	2365
(see also references on Na sequence)	

Mg III

E: life	1650,2357,2649
T: quant.	2107,2312,2822
(see also references on Ne sequence)	

Mg IV

E: life	2357
T: CA	2977
quant. forb.	1093
(see also references on F sequence)	

Mg V

T: quant.	563
quant. forb.	969
(see also references on O sequence)	

Mg VI

T: CA	2548
CA forb.	2548
(see also references on N sequence)	

Mg VII

T: CA	2548
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<u>Description</u>	<u>Reference No.*</u>
CA forb.	2548
(see also references on C sequence)	
<u>Mg VIII</u>	
T: interp.	1612
quant. forb. rel.	1527
(see also references on B sequence)	
<u>Mg IX</u>	
T: quant.	2147,2830,3016
(see also references on Be sequence)	

Mg X

T: quant. forb.	2500
(see also references on Li sequence)	

Mg XI

T: quant.	1185
(see also references on He sequence)	

Mn (Manganese)

Mn I

E: absorpt.	525,2066
emiss.	1117
emiss. rel.	1117
hook	474
life	2274,2360,2363,2589, 2737,2778,2964
T: quant. forb.	2149

Mn II

E: emiss.	1117
life	2274,2363,2589
T: quant.	2993
Comment:	3058

Mn III

E: life	2589,3104
T: quant.	2885

Mn V

T: quant. forb.	233,848
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Mn VI

T: quant.	1610
quant. forb.	848,1610

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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Mn VII

T: quant.	1166
(see also references on K sequence)	

Mn VIII

T: quant. rel.	1373
quant. forb.	1608
(see also references on Ar sequence)	

Mn X

T: quant. forb.	233
(see also references on S sequence)	

Mn XI

T: quant.	1645
quant. forb.	891

Mn XII

T: interp.	2479
quant. forb.	1073
(see also references on Si sequence)	

Mn XIII

T: quant. forb.	891,1073,2511
(see also references on Al sequence)	

Mn XVII

T: quant.	1295
(see also references on F sequence)	

Mn XXI

T: quant.	2420,2421,3056
(see also references on B sequence)	

Mo (Molybdenum)

Mo I

E: absorpt.	2091
emiss.	1943
emiss. rel.	838
hook rel.	440

Mo VIII

T: quant. forb.	1416
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Mo IX

T: quant.	2904
(see also references on Se sequence)	

<u>Description</u>	<u>Reference No.*</u>
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Mo XIII

T: quant.	3130
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Mo XIV

T: quant.	2944,3130
(see also references on Cu sequence)	

Mo XV

T: quant.	3130,3160
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Mo XVI

T: quant. forb.	3130
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Mo XXIV

T: quant.	3130
quant. forb.	3130
(see also references on K sequence)	

Mo XXV

T: quant.	3130
quant. forb.	3130
(see also references on Ar sequence)	

Mo XXVI

T: quant.	3130
quant. forb.	3130
(see also references on Cl sequence)	

Mo XXVII

T: quant.	3130
quant. forb.	3130
(see also references on S sequence)	

Mo XXVIII

T: quant.	3130
quant. forb.	3130

Mo XXIX

T: quant.	3130
quant. forb.	3130
(see also references on Si sequence)	

Mo XXX

T: quant.	3130
quant. forb.	3130
(see also references on Al sequence)	

Mo XXXI

T: quant.	3130
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*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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quant. forb.	3130
(see also references on Mg sequence)	

Mo XXXII

T: quant.	3130
(see also references on Na sequence)	

Mo XXXIV

T: quant.	3130
quant. forb.	3130
(see also references on F sequence)	

Mo XXXV

T: quant.	3130
quant. forb.	3130
(see also references on O sequence)	

Mo XXXVI

T: quant.	3130
quant. forb.	3130
(see also references on N sequence)	

Mo XXXVII

T: quant.	3130
quant. forb.	3130
(see also references on C sequence)	

Mo XXXVIII

T: quant.	3130
quant. forb.	3130
(see also references on B sequence)	

Mo XXXIX

T: quant.	2983,3077,3130
(see also references on Be sequence)	

Mo XL

T: quant.	2983,3130
(see also references on Li sequence)	

N (Nitrogen) Sequence

T: estim.	3168
interp.	2004,2875
quant.	833,1062,1595,2418, 2809,3050,3185

<u>Description</u>	<u>Reference No.*</u>
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N (Nitrogen)

N I

E: absorpt.	971,1752
absorpt. rel.	2428
emiss.	410,660,900,962, 1370,1578,2600
emiss. rel.	1364
life	1078,1454,1802,1859, 1890,1927,2097,2137, 2288,2514,2553,3120, 3125
misc.	832
emiss. forb. rel.	1364
T: CA	2241
quant.	863,864,896,998,1016, 1219,1260,1543,1615, 1969,2187,2297,2347, 2378,2563,2684,2787, 2872,2874,2875,2923, 3007,3055,3172,3006
quant. forb. rel.	329
quant. forb.	352,429,1770,1970, 2382,2418
Comment:	865
Compilation:	1260,2514
(see also references on N sequence)	

N II

E: emiss.	2600
emiss. rel.	501,1623
life	1078,1194,1223,1307, 1589,1782,1802,1859, 1890,1927,1963,2072, 2097,2137,2150,2330, 2514,2553,2770,2929, 2982,3001,3125
T: quant.	425,863,864,998,1260, 1325,1397,1543,1615, 2187,2378,2563,2816, 2872,2873,3007,3012, 3055,3006
quant. forb. rel.	1262
quant. forb.	333,366,975,1770,1970, 2382,2418
Compilation:	1260,2514
(see also references on C sequence)	

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
T: quant.	1190,1697,2311,2822
(see also references on Ne sequence)	

<u>Na III</u>	
E: life	1651,1899,2251
T: quant.	1615,2378,2563,2875, 3055
quant. forb.	1093
(see also references on F sequence)	

<u>Na IV</u>	
E: life	1899,2251
T: quant.	563,3055
quant. forb.	969
(see also references on O sequence)	

<u>Na V</u>	
E: life	2251
T: quant.	2923
quant. forb.	233
(see also references on N sequence)	

<u>Na VII</u>	
T: interp.	1612
quant.	2705
quant. forb. rel.	1527
quant. forb.	2705
(see also references on B sequence)	

<u>Na VIII</u>	
T: quant.	2147,2830
(see also references on Be sequence)	

<u>Na X</u>	
T: quant.	1185
(see also references on He sequence)	

Nb (Niobium)

<u>Nb VII</u>	
T: quant.	2498
quant. forb.	1416

<u>Nb VIII</u>	
T: quant.	2904
(see also references on Se sequence)	

<u>Description</u>	<u>Reference No.*</u>
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Nd (Neodymium)

<u>Nd I</u>	
E: hook rel.	2392,3042

<u>Nd II</u>	
E: life	2650
Comment:	2015

<u>Nd LIX</u>	
T: quant.	2974
quant. forb.	2974
(see also references on He sequence)	

Ne (Neon) Sequence

T: estim.	3168
interp.	2004
quant.	1062,1210,2272,3184
quant. rel.	1373

Ne (Neon)

<u>Ne I</u>	
E: absorpt.	1159,1934
absorpt. rel.	205,1376
emiss.	172,844,1047,1248, 1665,1676,2294,2318, 2733,2734,3131,3164
emiss. rel.	212,1063,1070,1359, 1376,1798,2353,2384
hook	791
hook rel.	2273,2294,2679
life	416,834,850,926,957, 1025,1074,1075,1104, 1133,1134,1156,1217, 1232,1304,1305,1334, 1342,1376,1479,1482, 1540,1541,1549,1556, 1609,1653,1736,1847, 1874,1936,1938,1948, 1949,1955,2050,2077, 2320,2326,2350,2366, 2386,2396,2409,2410, 2538,2558,2584,2611, 2619,2800,2835,2884, 2961,2978,3025,3163, 3164

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
misc.	157,869,1389,1561, 1725,2129,2766,2910, 3198	quant. forb.	333,569 (see also references on N sequence)
life forb.	2172		<u>Ne V</u>
T: CA	1348,1372,2107,2310, 2645,2646,2768,2996, 2997	E: emiss.	1064
		life	1700,1938,2320,2672, 3152
quant.	864,989,998,1190, 1391,1400,1570,1654, 1716,1795,1796,1947, 2107,2187,2310,2427, 2465,2561,2574,2656, 2719,2822,2834,2892	T: CA	2548
		quant.	425
quant. rel.	198,219,839,1372, 1393,1798,2410,2768	CA forb.	2548
		quant. forb.	975 (see also references on C sequence)
quant. forb.	2009,2502,2819		<u>Ne VI</u>
Comment:	198,867,1259	E: emiss.	1064
(see also references on Ne sequence)		life	822,1021,1688,1700, 1938,2320,2672,3044, 3152
	<u>Ne II</u>	T: quant.	1100,1612,2000,2347
E: emiss.	867,1064,1733	quant. forb.	887 (see also references on B sequence)
emiss. rel.	2134		<u>Ne VII</u>
life	1108,1232,1334,1488, 1674,1700,1717,1729, 1938,2320,2350,2510, 2512,2558,2584,3152, 3165	E: emiss.	1064
T: CA	380	life	2060,2230,2320,2478, 2672
quant.	884,941,1545,1615, 1931,1957,2187,2378, 2563,2673,2875,3055	T: quant.	1100,1499,2075,2147, 2347,2380,2540,2544, 2823,2830,2966,2983, 3016,3026,3055,3130 (see also references on Be sequence)
quant. rel.	380		<u>Ne VIII</u>
quant. forb.	975,1093	E: emiss.	1064
Comment:	1781	life	927,1712,1946,2230, 2254,2478,2659
(see also references on F sequence)		life forb.	2717
	<u>Ne III</u>	T: quant.	801,1664,2096,2983, 3130
E: emiss.	1064	quant. forb.	2500 (see also references on Li sequence)
life	1334,1700,1717,1938, 2320,2558,3152		<u>Ne IX</u>
T: quant.	563,2378,2563,3055	E: life	1712,2254
quant. forb.	333,975,1093	T: quant.	1170,1173,1255,1392, 1596,1993,2722,2759, 2956,3026
(see also references on O sequence)		quant. forb.	1485,1507,2117,2956, 2974 (see also references on He sequence)
	<u>Ne IV</u>		
E: emiss.	1064		
life	822,1021,1700,1938, 2320,2672,3152		
T: quant.	2347,2875,2923,3055		

*The numbers refer to paper identification numbers of Part 3.

Description Reference No.*

Ne X

T: quant. 2837
(see also references on H sequence)

Ni (Nickel)

Ni I

E: absorpt. 332,963,2281
absorpt. rel. 298,1750,2387
emiss. 448,465,520,882,936,
 2352,2539,2715,2765
emiss. rel. 107,583,1024,1724
hook rel. 390
life 2138,2213,2246,2352,
 2481,2728,2765
misc. 564
misc. rel. 301
T: CA 559
quant. 998
quant. forb. 848
Comment: 414,559,936

Ni II

E: emiss. 2539,2715
emiss. rel. 107,1024
misc. 564,629
T: quant. 1551,2993
quant. rel. 705,1091
quant. forb. 493
Comment: 3058

Ni III

E: life 3104
T: quant. 1384,1408,2885
quant. forb. 493

Ni IV

T: quant. forb. 1319,1594

Ni V

T: quant. rel. 3047
quant. forb. 3047

Ni VII

T: quant. forb. 2729

Description Reference No.*

Ni IX

T: quant. 1610
quant. forb. 1610

Ni XI

T: quant. 1300,1311,1696
quant. forb. 1608,2018
(see also references on Ar sequence)

Ni XII

E: misc. forb. 276
T: quant. 1311,3032
quant. forb. 251,1073,2511
(see also references on Cl sequence)

Ni XIII

E: misc. forb. 276
T: quant. 1311
quant. forb. 251
(see also references on S sequence)

Ni XIV

T: quant. 1311
quant. forb. 2102

Ni XV

E: misc. forb. 276
T: quant. forb. 251,1073,2511,3130
(see also references on Si sequence)

Ni XVI

E: misc. forb. 276
T: quant. forb. 251,1073,2511,3130
(see also references on Al sequence)

Ni XVII

T: quant. forb. 3130
(see also references on Mg sequence)

Ni XVIII

T: quant. 1766,2016
quant. forb. 2170
(see also references on Na sequence)

Ni XIX

T: quant. 2774
quant. forb. 3130
(see also references on Ne sequence)

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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Ni XX

T: quant.	2926
quant. forb.	2926,3130

(see also references on F sequence)

Ni XXI

T: quant.	1921,2722
quant. forb.	3130

(see also references on O sequence)

Ni XXII

T: quant.	2722
quant. forb.	3130

(see also references on N sequence)

Ni XXIII

T: quant.	2722
quant. forb.	3130

(see also references on C sequence)

Ni XXIV

T: quant.	2722
quant. forb.	3130

(see also references on B sequence)

Ni XXV

T: quant.	2722
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(see also references on Be sequence)

O (Oxygen) Sequence

T: estim.	3168
interp.	2004
quant.	833,1062,1522,1595, 1920,2418,2808,2809

O (Oxygen)

O I

E: absorpt.	971,1235,1752,1942, 2295,2432,2907
emiss.	384,665,695,903,1145, 1175,1370,1511,1578, 1976,2955
life	1108,1317,1710,1751, 1760,1881,1927,1962,

O III

E: emiss.	1138,1246
emiss. rel.	824
life	1331,1558,1666,1782, 1898,1962,2130,2587, 2901,3044,3125
T: quant.	425,863,864,941,998, 1016,1100,1325,1397,

<u>Description</u>	<u>Reference No.*</u>
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life (cont.)

2005,2118,2130,2137,
2331,2587,2613,3120,
3139

misc.

893,986

emiss. forb. rel.

1090

emiss. forb.

286,1079,1566,1998,
2743

life forb.

540,584,595,937,2086

misc. forb.

540,977

T: CA

626,2241,2547

quant.

327,479,863,864,865,
998,1016,1260,1543,
1787,1969,2145,2187,
2378,2408,2480,2563,
2684,2789,2872,2874,
3007,3009,3055,3057

quant. forb.

333,366,429,1093,
1262,1770,1970,2382,
2418,3055

Compilation:

1260

(see also references on O sequence)

O II

E: emiss.

1139,1246

emiss. rel.

501

life

1558,1751,1782,1881,
1898,1962,2005,2081,
2130,2131,2264,2364,
2587,2900,2901,3125

T: CA

380

quant.

437,863,864,941,998,
1016,1260,1543,1615,
2187,2347,2378,2563,
2816,2872,2875,2923,
3007,3009,3055

quant. rel.

380

quant. forb.

366,429,477,836,
1262,1770,1970,2382,
2418

Compilation:

1260

(see also references on N sequence)

*The numbers refer to paper identification numbers of Part 3.

Description	Reference No.*
quant. (cont.)	1543,1582,1615,1713, 2378,2563,3012,3055
CA forb.	2548
quant. forb.	333,366,975,1770,1970, 2382,2418

(see also references on C sequence)

O IV

E: emiss.	1246
emiss. rel.	1135
life	1497,1558,1688,1711, 1760,1962,2071,2130, 2587,2897,3044
T: interp.	1612
quant.	368,863,864,998,1016, 1100,1615,1964,2347, 2706,2789,3055
quant. forb. rel.	1527
quant. forb.	887,975,2706

(see also references on B sequence)

O V

E: emiss.	1246
life	1028,1462,1497,1558, 1688,1897,1962,2071, 2130,2587,2752,2897
T: quant.	863,864,983,1062,1100, 1111,1180,1499,1770, 2075,2147,2277,2347, 2380,2477,2540,2544, 2777,2823,2824,2830, 2966,3016,3026,3055, 3183
quant. forb.	2777

(see also references on Be sequence)

O VI

E: emiss.	1246
life	927,1558,1709,1712, 1895,1946,1962,1999, 2254,2372,2390,2401, 2414,2587,2752,2897, 2963,2987,3067
life forb.	2717
T: quant.	801,864,1415,1441, 2101,2775
quant. forb.	1415,2500

(see also references on Li sequence)

O VII

E: life	1390,1712,1794,2254,
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Description	Reference No.*
life (cont.)	2372,2401,2963,3067, 3193
T: quant.	1170,1173,1255,1392, 1596,1993,2083,2084, 2722,2759,3026
quant. forb.	1093,1183,1485,2117

(see also references on He sequence)

O VIII

E: life	2505,2963
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(see also references on H sequence)

P (Phosphorus)

P I

E: emiss.	1966
life	1883,1961,2771
T: CA	2241
quant.	1062,2221,3157
quant. rel.	1220
quant. forb.	761

P II

E: emiss.	1673,1966
life	1108,1883,1961,1967, 2771
T: CA	2241
quant.	1062,1325,1611,2061, 2418,2476,2479,2603, 2788,3055,3157
quant. forb.	761

(see also references on Si sequence)

P III

E: emiss.	1673
life	1648,1883,1961,2771
T: quant.	1062,2945,3018,3157

(see also references on Al sequence)

P IV

E: life	1648,1883,1961,1967, 2355,2771
T: quant.	1261,2061,2418,3073

(see also references on Mg sequence)

P V

E: life	1648,1883,1961,1967, 2771
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*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
T: quant.	1357,2599		<u>Pb III</u>
(see also references on Na sequence)		E: emiss. rel.	1247
	<u>P VII</u>	life	2053
T: quant. forb.	1093	T: quant. rel.	1206
(see also references on F sequence)			<u>Pb IV</u>
	<u>P VIII</u>	E: emiss. rel.	1247
T: quant. forb.	969	life	2053
(see also references on O sequence)		T: quant.	3121
	<u>P XI</u>		<u>Pb LIII</u>
T: interp.	1612	T: quant.	3130
quant.	2420,2421,3056		<u>Pb LIV</u>
(see also references on B sequence)		T: quant.	3130
		(see also references on Cu sequence)	

Pb (Lead)

	<u>Pb I</u>	
E: absorpt.	427,578,610,967,2281	
absorpt. rel.	644,770,2337	
emiss.	448,577,578,1032	
emiss. rel.	538,644,770,2303	
hook	789	
life	888,1105,1106,1107, 1169,1309,1907,2213, 2225,2737	
emiss. forb. rel.	232,239	
emiss. forb.	1067	
life forb.	2103	
T: quant.	634,643,1326,2541	
quant. rel.	1220	
quant. forb.	237,848,1067	
Comment:	447,770,1381	
Compilation:	1514	

	<u>Pb II</u>	
E: emiss.	1032	
emiss. rel.	1247	
emiss. forb.	1067	
T: quant.	2562,3022	
quant. rel.	2562	
quant. forb.	848,1067,1416	

	<u>Pb LV</u>	
T: quant.	3130	

	<u>Pb LXIV</u>	
T: quant.	3130	
(see also references on K sequence)		

Pd (Palladium)

	<u>Pd I</u>	
E: absorpt.	963,2091	
life	1288,1851,1924,2571	

Po (Polonium)

	<u>Po I</u>	
T: quant. forb.	848	

Pr (Praseodymium)

	<u>Pr II</u>	
E: emiss.	2994	
life	2468,2650	

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
quant.	1062,2061,2221,2222, 2418,3157		<u>S XI</u>
quant. rel.	380	E: life	3040
quant. forb.	761	T: CA	2548
		quant.	1209
		CA forb.	2548
	<u>S III</u>	(see also references on C sequence)	
E: life	1671,2322,2930,2970, 3001,3002		<u>S XII</u>
T: quant.	1062,1325,1611,2061, 2418,2476,2479,3055, 3157	E: life	3040
quant. forb.	761	T: quant.	1209,2000,2705
(see also references on Si Sequence)		quant. forb.	891,1073,2511,2705
		(see also references on B sequence)	
	<u>S IV</u>		<u>S XIII</u>
E: life	1671,2322,2930,2970	E: life	3040,3177
T: quant.	1062,2026,2945	T: quant.	2147
(see also references on Al sequence)		(see also references on Be sequence)	
	<u>S V</u>		<u>S XIV</u>
E: life	1671,2322,2355,2871, 2930,2970,2999	E: life	2798,3176,3177
T: quant.	3073	life forb.	2507,2585,2724
(see also references on Mg sequence)		T: quant. forb.	2500
		(see also references on Li sequence)	
	<u>S VI</u>		<u>S XV</u>
E: life	1671,2322,2871,2930, 2970,2999	E: life	2798,3069,3070
T: quant.	1357,2704,2946	life forb.	2504,2507,2662
(see also references on Na sequence)		T: quant.	2722,2974
	<u>S VIII</u>	quant. forb.	2974
T: quant.	1209	(see also references on He sequence)	
quant. forb.	1093		<u>S XVI</u>
(see also references on F sequence)		E: life	1994,2798
	<u>S IX</u>	(see also references on H sequence)	
T: CA	2548		
quant.	1209		Sb (Antimony)
CA forb.	2548		<u>Sb I</u>
quant. forb.	969	E: absorpt.	967
(see also references on O sequence)		life	2298,2467,2482
	<u>S X</u>	T: quant.	1326,2731
E: life	3040	quant. forb.	848
T: CA	2548		<u>Sb II</u>
quant.	1209,1536	T: quant.	1611
CA forb.	2548		
(see also references on N sequence)			

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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Sb III

E: life	2214,3103
T: quant.	3018
quant. forb.	848,1416

Sb IV

E: life	2053
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Sb V

E: life	2053
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Sc (Scandium)

Sc I

E: absorpt.	2135,2877
hook	3038
life	1865,1870
T: CA	573
quant.	2487
Compilation:	2891

Sc II

E: life	1870,2867,3037,3061
T: quant.	2340,3072
Comment:	3058

Sc III

E: life	1870,3104
T: quant.	1256,2174,2885
quant. forb.	2174

(see also references on K sequence)

Sc IV

T: quant.	1696
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(see also references on Ar sequence)

Sc VII

T: quant.	1645
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Sc VIII

T: interp.	2479
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(see also references on Si sequence)

Sc IX

T: quant. forb.	887
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(see also references on Al sequence)

<u>Description</u>	<u>Reference No.*</u>
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Sc XIII

T: quant.	1295,2261
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(see also references on F sequence)

Se (Selenium) Sequence

T: quant.	1920
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Se (Selenium)

Se I

E: emiss. rel.	1347
life	2690
emiss. forb.	2981
T: quant.	1521,2529
quant. rel.	1220
quant. forb.	848

(see also references on Se sequence)

Se II

E: life	2291,2611
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Se III

T: quant.	1611
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Se IV

E: life	3103
T: quant. forb.	1416

Se V

E: life	2426
T: quant.	1429,2620

Se VI

E: life	2426
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(see also references on Cu sequence)

Se XXV

T: quant.	2674
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(see also references on Ne sequence)

Se XXVI

T: quant.	3122
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(see also references on F sequence)

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
Si (Silicon) Sequence		<u>Si IV</u>	
T: quant. forb.	969	E: life	1678,1860,2319,2322, 2999,3003
Si (Silicon)		T: quant.	689,1040,1357,1415, 2026,2599,2704,2946, 3055
<u>Si I</u>		quant. rel.	1349
E: absorpt. rel.	1757	quant. forb.	1415
emiss.	535,1597,1885,2160, 2301	(see also references on Na sequence)	
emiss. rel.	1347,1577,1817	<u>Si V</u>	
hook rel.	901	E: life	3001,3003,3140
life	1108,1220,2360,2510	T: quant.	2822,3055,3140
T: CA	1510,2241	(see also references on Ne sequence)	
quant.	703,1062,1325,1411, 1451,1611,1696,1787, 2476,2541,3157	<u>Si VI</u>	
quant. rel.	1220,1413	E: life	3140
quant. forb.	1411	T: quant.	1209,2379,2875,3055
(see also references on Si sequence)		quant. forb.	1093
<u>Si II</u>		(see also references on F sequence)	
E: emiss.	535,1597	<u>Si VII</u>	
emiss. rel.	1655,1817	T: CA	2548
life	1108,1860,1882,2319, 2322,2510,3001,3002, 3003	quant.	1209,2379,3055,3117
T: CA	1510,2241	CA forb.	2548
quant.	1054,1062,1172,1315, 2061,2184,2339,2418, 2788,2945,3022,3157, 3175	quant. forb.	969,2705
quant. rel.	1349,2339	(see also references on O sequence)	
quant. forb.	1093,3175	<u>Si VIII</u>	
Comment:	1399	E: life	3194
(see also references on Al sequence)		T: CA	2548
<u>Si III</u>		quant.	1179,1209,2379,2875, 2923,3055,3116
E: emiss. rel.	1655	CA forb.	2548
life	1678,1860,2319,2322, 2355,2510,2999,3001, 3002,3003	quant. forb.	233,2102
T: quant.	1254,1261,1604,2061, 2184,2418,3073,3157	(see also references on N sequence)	
(see also references on Mg sequence)		<u>Si IX</u>	
		E: life	3194
		T: CA	2548
		quant.	1179,1209,2379,3055, 3118
		CA forb.	2548
		(see also references on C sequence)	

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
<u>Si X</u>			
E: life	3194	emiss.	448,591,1234,3005, 3080
T: CA	702	emiss. rel.	644,770
interp.	1612	hook	789
quant.	1209,1713,2000,2379, 2705,2789,2921	life	1148,1220,1309,2051, 2111
quant. forb. rel.	1527	misc. rel.	1958
quant. forb.	702,2102	T: quant.	643,1326,1611,2541
(see also references on B sequence)		quant. rel.	1220
<u>Si XI</u>		quant. forb.	848
E: life	3194	Comment:	447,770
T: quant.	2147,2379,2380,2830, 3016	<u>Sn II</u>	
quant. forb.	1183,2760	E: emiss.	3080
(see also references on Be sequence)		life	3103
<u>Si XII</u>		T: quant.	2562,3022
E: life	3194	quant. rel.	2562
life forb.	2724	quant. forb.	848,1416
T: quant.	2101	<u>Sn III</u>	
quant. forb.	2500	E: life	2053
(see also references on Li sequence)		<u>Sn IV</u>	
<u>Si XIII</u>		E: life	2053
E: life	3069,3071	<u>Sn XXI</u>	
T: quant.	1185	T: quant.	3130
quant. forb.	1507	<u>Sn XXII</u>	
(see also references on He sequence)		T: quant.	2495,2944,3130
Sm (Samarium)		(see also references on Cu sequence)	
<u>Sm I</u>		<u>Sn XXIII</u>	
E: hook rel.	1742,3042,3113	T: quant.	2495,3130
life	1524,3114	<u>Sn XXIV</u>	
<u>Sm II</u>		T: quant.	2495
E: life	2650	<u>Sn XLVI</u>	
Sn (Tin)		T: quant.	3056
<u>Sn I</u>		(see also references on B sequence)	
E: absorpt.	963,2091	<u>Sn L</u>	
absorpt. rel.	644,711,770,1757, 2796	T: quant.	2837
		(see also references on H sequence)	

*The numbers refer to paper identification numbers of Part 3.

Sr (Strontium)

	<u>Sr I</u>
E: absorpt.	1743,2135
emiss.	399,520
emiss. rel.	138,264,505
hook	511,512,656,727, 3039
hook rel.	67
life	49,859,876,1012, 1362,1466,1468, 1585,1842,2282,2327, 2328,2552,2556,2652, 2741,2938,2962,2979, 3147
T: estim.	270
quant.	816,857,884,1191, 1815,2109,2124,2575, 2620,3144
quant. rel.	228,735
Comment:	407,656,981,1080

	<u>Sr II</u>
E: emiss.	1602
emiss. rel.	490,505,1728
hook	655
hook rel.	440
life	1181,2550,2551,3048
T: estim.	270
quant.	1412,1787
quant. rel.	825
quant. forb.	1412
Comment:	656

	<u>Sr IV</u>
T: quant. forb.	1416

	<u>Sr IX</u>
T: interp.	2216,2426

	<u>Sr X</u>
T: interp.	2216,2426

(see also references on Cu sequence)

Tb (Terbium)

	<u>Tb I</u>
E: emiss. rel.	1297
Compilation:	2891

Te (Tellurium) Sequence

T: quant.	1920
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Te (Tellurium)

	<u>Te I</u>
E: absorpt.	967
life	1908,2690
emiss. forb. rel.	1546
T: quant.	1521,2529
quant. forb.	848

(see also references on Te sequence)

	<u>Te IV</u>
E: life	3103
T: quant. forb.	1416

	<u>Te V</u>
E: life	2053

	<u>Te VI</u>
E: life	2053

Th (Thorium)

	<u>Th II</u>
E: life	2648
T: quant.	618,683

	<u>Th XC</u>
T: quant.	2837

(see also references on H sequence)

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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Ti (Titanium)

Ti I

E: absorpt.	1238,2664,2932
absorpt. rel.	222
emiss.	2329,2437,2773,2805, 3199
hook rel.	444
life	2024,2110,2403
T: quant.	2485

Ti II

E: emiss.	2403,2437,2805
emiss. rel.	2403
life	2403
T: quant.	2488,2993
Comment:	3058

Ti III

E: emiss.	2805
life	2403,3104
T: quant.	1610,2885,3072
quant. forb.	848,1610

Ti IV

E: life	2403
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(see also references on K sequence)

Ti V

T: quant.	1696
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(see also references on Ar sequence)

Ti VII

T: quant. forb.	233
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(see also references on S sequence)

Ti VIII

T: CA	2548
quant.	1645

Ti IX

T: interp.	2479
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(see also references on Si sequence)

Ti XV

T: CA	2548
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<u>Description</u>	<u>Reference No.*</u>
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quant.	2722
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CA forb.	2548
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(see also references on O sequence)

Ti XVI

T: CA	2548
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quant.	2722
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CA forb.	2548
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(see also references on N sequence)

Ti XVII

T: CA	2548
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quant.	2722
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CA forb.	2548
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(see also references on C sequence)

Ti XVIII

T: quant.	2722
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(see also references on B sequence)

Ti XIX

T: quant.	2722
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(see also references on Be sequence)

Ti XX

T: quant. forb.	2500
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(see also references on Li sequence)

Ti XXI

E: life	3142
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life forb.	2308
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T: quant.	2597
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(see also references on He sequence)

Tl (Thallium)

Tl I

E: absorpt.	177,178,195,386,963, 2992
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emiss.	465
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hook	150,253,285,787
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hook rel.	68,155,191,440
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life	26,347,613,664,687, 847,898,947,1169, 1587,1598,1663,1842, 1972,2054,2113,2213, 2393,2399,3141,3146, 3189
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*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
misc.	34	V (Vanadium)	
T: CA	2958	<u>V I</u>	
quant.	518,575,1061,1088, 1129,1672,2218,3019, 3171	E: absorpt.	2367
quant. forb.	848,1416,3171	absorpt. rel.	284
Comment:	254,494,518,981	emiss. rel.	2402
	<u>Tl II</u>	hook rel.	509
E: life	2053,2054,3189	life	2402
T: estim. rel.	436	T: quant.	2948
quant.	857	<u>V II</u>	
	<u>Tl III</u>	E: emiss.	2402
E: life	2053,3189	emiss. rel.	2402
T: quant.	3020	life	2402
	Tm (Thulium)	T: quant.	2993
	<u>Tm I</u>	Comment:	3058
E: hook	2890,3042	<u>V III</u>	
hook rel.	1544,2890,3042	E: life	2402,3104
life	1524,2173	T: quant.	2885
T: quant.	1686	quant. rel.	779
	<u>Tm II</u>	quant. forb.	1594
E: life	2274,2468	<u>V IV</u>	
	U (Uranium)	T: quant.	1610
	<u>U I</u>	quant. forb.	1610
E: emiss.	2828,3074	<u>V V</u>	
emiss. rel.	3201	E: life	2881,2882
life	2750,2902,2903,2971, 3059,3123	(see also references on K sequence)	
Compilation:	2912	<u>V VI</u>	
	<u>U II</u>	T: quant.	1300,3160
E: emiss.	2828	quant. rel.	1373
misc.	3123	(see also references on Ar sequence)	
Compilation:	2911	<u>V VIII</u>	
	<u>U LXXV</u>	T: quant. forb.	233
T: quant.	3160	(see also references on S sequence)	
(see also references on Ar sequence)		<u>V IX</u>	
		T: quant.	1645
		<u>V X</u>	
		T: interp.	2479
		quant. forb.	891,1073
		(see also references on Si sequence)	

*The numbers refer to paper identification number of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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V XIII

T: quant.	998
(see also references on Na sequence)	

V XV

T: quant.	1295
(see also references on F sequence)	

V XXII

E: life	3142
life forb.	2532
(see also references on He sequence)	

W (Tungsten)

W I

E: emiss.	1537
emiss. rel.	2265

W II

E: emiss. rel.	2265
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W XXVIII

T: quant. forb.	3130
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W XXX

T: quant. forb.	3130
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W XXXI

T: quant. forb.	3130
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W XXXVII

T: quant. forb.	3130
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W XXXVIII

T: quant.	3130
quant. forb.	3130

W XXXIX

T: quant.	3130
quant. forb.	3130

W XL

T: quant.	3130
quant. forb.	3130

W XLI

T: quant.	3130
quant. forb.	3130

(see also references on Se sequence)

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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W XLII

T: quant.	3130
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W XLIII

T: quant.	3130
quant. forb.	3130

W XLIV

T: quant.	3130
quant. forb.	3130

W XLV

T: quant.	3130
quant. forb.	3130

W XLVI

T: quant.	2944, 3130
(see also references on Cu sequence)	

W XLVII

T: quant.	3130
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W XLVIII, W XLIX

T: quant. forb.	3130
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W LV

T: quant. forb.	3130
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W LVI

T: quant.	3130
quant. forb.	3130
(see also references on K sequence)	

W LVII

T: quant.	3130, 3160
quant. forb.	3130
(see also references on Ar sequence)	

W LVIII

T: quant.	3130
quant. forb.	3130
(see also references on Cl sequence)	

W LIX

T: quant.	3130
(see also references on S sequence)	

W LX

T: quant.	3130
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<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
	<u>W LXI</u>		
T: quant.	3130	life	1444,1717,1935,2050, 2545,3169
quant. forb.	3130	T: CA	2545
(see also references on Si sequence)		quant.	2693,2933,2952,3143
	<u>W LXII</u>	quant. forb.	269,848,1416
T: quant.	3130	Comment:	2802
quant. forb.	3130	Compilation:	2811
(see also references on Al sequence)			<u>Xe III</u>
	<u>W LXIII</u>	E: life	2050
T: quant.	3130	T: quant.	1521
(see also references on Mg sequence)		quant. forb.	340,848
	<u>W LXIV</u>	(see also references on Te sequence)	
T: quant.	3130		<u>Xe VI</u>
(see also references on Na sequence)		E: life	3044
	<u>W LXXI</u>		<u>Xe VII</u>
T: quant.	2983,3130	E: life	3044
(see also references on Be sequence)			<u>Xe VIII</u>
	<u>W LXXII</u>	E: life	3044
T: quant.	2983,3130		<u>Xe XVIII</u>
(see also references on Li sequence)		T: quant. forb.	3130
			<u>Xe XIX</u>
Xe (Xenon)		T: quant. forb.	3130
	<u>Xe I</u>		<u>Xe XX</u>
E: absorpt.	1041,1116,1519,3182	T: quant. forb.	3130
emiss.	2108,2370		<u>Xe XXI</u>
life	921,1444,1481,1605, 1690,1878,1935,2116, 2280,2283,2436,2499, 2545,2821,2972,3192	T: quant. forb.	3130
misc.	1725,2530,2766,2806, 2924	(see also references on Se sequence)	
T: CA	2545,2691,2972		<u>Xe XXII</u>
quant.	1049,1190,1654,1689, 2058,2671,3004	T: quant. forb.	3130
quant. rel.	475,795,796,839		<u>Xe XXIII</u>
quant. forb.	269,2009,2502,2819	T: quant. forb.	3130
Comment:	1222,1259,2802		<u>Xe XXIV</u>
	<u>Xe II</u>	T: quant. forb.	3130
E: emiss.	1953,2108,2370		<u>Xe XXV</u>
emiss. rel.	2397	T: quant.	3130
		quant. forb.	3130
			<u>Xe XXVI</u>
		T: quant.	2944,3130
		(see also references on Cu sequence)	

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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Xe XXVII

T: quant.	3130
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Xe XXVIII

T: quant. forb.	3130
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Xe XXIX

T: quant. forb.	3130
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Xe XXXV

T: quant. forb.	3130
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Xe XXXVI

T: quant.	3130
(see also references on K sequence)	

Xe XXXVII

T: quant. forb.	3130
(see also references on Ar sequence)	

Xe XXXVIII

T: quant. forb.	3130
(see also references on Cl sequence)	

Xe XL

T: quant. forb.	3130
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Xe XLI

T: quant. forb.	3130
(see also references on Si sequence)	

Xe XLII

T: quant. forb.	3130
(see also references on Al sequence)	

Xe XLIII

T: quant.	3130
(see also references on Mg sequence)	

Xe XLIV

T: quant.	3130
(see also references on Na sequence)	

Xe LI

T: quant.	3077, 3130
(see also references on Be sequence)	

Xe LII

T: quant.	3130
(see also references on Li sequence)	

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>
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Y (Yttrium)

Y I

E: absorpt.	2991
life	1660, 1853
T: CA	573
Compilation:	2891

Y II

E: misc. rel.	564
T: quant.	1350

Y III

E: emiss. rel.	1351
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Y V

T: quant. forb.	1416
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Y VI

T: quant.	2904
(see also references on Se sequence)	

Yb (Ytterbium)

Yb I

E: absorpt.	1544, 3042
hook rel.	1544, 3042
life	1022, 1681, 2496, 2650, 3049
Compilation:	2891

Yb II

E: life	2496, 2650, 3049
Compilation:	2891

Yb LXX

T: quant.	2837
(see also references on He sequence)	

Zn (Zinc)

Zn I

E: absorpt.	165, 218, 220, 967, 1095, 1284, 1562, 2135, 2208, 2644, 2735
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<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
emiss. rel.	223,264,265,369, 589,649,773	<u>Zn XXVI</u>	
hook rel.	131,589	T: quant.	2722,3056
life	144,226,249,393, 571,581,582,594, 831,872,876,1020, 1659,1842,1975,1978, 2007,2087,2217,2960, 2990	(see also references on B sequence)	
misc.	1096	<u>Zn XXVII</u>	
misc. rel.	120	T: quant.	2722
T: estim.	67,156	(see also references on Be sequence)	
quant.	701,857,1069,1191, 1284,1429,1450,2466, 2525,2575,2620	<u>Zn XXIX</u>	
quant. rel.	228,735,1206	T: quant.	2974
quant. forb.	1183	(see also references on He sequence)	
Comment:	164	<u>Zn XXX</u>	
		T: quant.	2837
		(see also references on H sequence)	
		Zr (Zirconium)	
	<u>Zn II</u>	<u>Zr I</u>	
E: life	226,571,1659,2217, 2598,2864,3048	T: CA	573,638
T: estim.	156	<u>Zr II</u>	
quant.	1027,1569,1928,2055, 2944	E: misc. rel.	564
(see also references on Cu sequence)		Comment:	2860
	<u>Zn III</u>	<u>Zr VI</u>	
E: life	3104	T: quant.	2498
T: quant.	2885	quant. forb.	1416
	<u>Zn IV</u>	<u>Zr VII</u>	
T: quant.	1337	T: quant.	2904
	<u>Zn XXII</u>	(see also references on Se sequence)	
T: quant.	3122	<u>Zr XXXI</u>	
(see also references on F sequence)		T: quant.	2674
	<u>Zn XXIII</u>	(see also references on Ne sequence)	
T: quant.	2722	<u>Zr XXXVI</u>	
(see also references on O sequence)		T: quant.	3056
	<u>Zn XXIV</u>	(see also references on B sequence)	
T: quant.	2722		
(see also references on N sequence)			
	<u>Zn XXV</u>		
T: quant.	2722		
(see also references on C sequence)			

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Atkinson, J. B.	2797	Barnsley, M. F.	2658
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Bagaev, S. A.	2342,2870	Bauder, U.	1136
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Baumann, S. R.	1659	Berger, J. J.	2954
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Beer, H.	1660,1853	Bernhardt, A. F.	2879,2880
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Bridwell, L. B.	1714		
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		Büldt, G.	1731
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		Butaux, J.	609

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Buttlar, H. v.	1996,2158,2159, 2256,2412,2413, 2963,3067,3193, 3194	Ceyzeriat, P.	1590,1688,1700, 1709,1876,1897, 1985
Byard, P. L.	1155	Chaghtai, M. S. Z.	2498,2904
Bychkova, T. V.	1156	Chaika, M. P.	879,920,1075, 1224,1549,1736, 1765,1936,1949, 2325,2326,2870, 2975
Byron, F. W., Jr.	830,831	Chamberlain, J. E.	791
Cabannes, F.	1291	Chandler, C. D.	462
Cameron, S.	1683	Chang, M.-W.	2901,3125
Camhy, C. (also Camhy-Val, C.)	1290,1477,1685, 2665,2675	Chantepie, M.	2677,2758,2905, 2995
Camm, D. M.	2076,2508	Chapelle, J.	1291,2591,3195
Campbell, H. D.	1478	Chapman, R. D.	1040,1480,2261
Campbell, J., Jr.	2900	Chappey, B.	2279
Campos, J.	1873,2090,2257, 2258,2444,2497, 2545,2972,3163, 3164,3165	Chase, L. F.	2906
Camus, P.	1686,2891	Chashchina, G. I.	1041,1157,1292
Cardon, B. L.	2901	Chebotaev, V. P.	1047,1248
Carette, J. D.	2924,2925	Chen, C. J.	1689,1877
Cariou, J.	2773,3005	Chen, C. L.	2262
Carleton, N. P.	1079	Chen, I.-H.	2080
Carlson, L. R.	2902,2903,3059, 3123	Ch'en, S.-Y.	527
Carnevale, E. H.	1223,1426,1621	Chenevier, M.	1158,1481,1482, 1690,1878,2499
Carre, M.	1687,1874,1875, 1899,2072,2259, 3124	Cheng, K.-t.	2500,3126,3127
Carrington, C. G.	1479,2077	Cherepkov, N. A.	2466,2861,2862
Carriveau, G. W.	2395,2590	Chernysheva, L. V.	2466
Carter, V. L.	1734	Cheron, B.	820
Carter, W. W.	306	Chevaleyre, J.	3025
Castle, B.	467	Chiarini, F.	3102
Caves, T. C.	2078,2676	Chien, C. W. T.	2079
		Chihara, M.	2611,2829

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Chin-Bing, S. A.	1691,1692,2263, 2501	Cojan, J.-L.	323,528,820, 924,929,1019, 1033,1201,2677
Chinen, S.	2313	Collins, B. S.	2066
Chiu, L.-y. C.	2502,2819	Collins, C. B.	2398,2803
Chmiela, J.	2800	Comes, F. J.	2909
Chojnacki, D. A.	1699,1948,2409, 2410	Commins, E. D.	3171
Chong, D. P.	1293	Condon, E. U.	529
Chung, K. T.	2080	Conrads, H.	1296
Chung, S.	2335	Constantinides, E.	2277
Chupp, E. L.	1294,1706,1777	Cook, T. B.	2821
Church, D. A.	1879,2131,2264, 2354	Cooper, J. W.	684
Churchill, G. G.	2303	Cooper, W. S., III	927
Ciplys, J.	618,683	Copeland, G. E.	1881
Clark, J. H.	1693,2081	Copley, G.	1212,1327,2508, 2910
Clark, K. C.	832,893,986, 2295	Corcoran, C. T.	2565
Clarke, W. H.	1040	Corcoran, W. H.	1086,1308,1492
Clarkson, W.	74	Cordover, R. H.	834
Clawson, J. E.	2265	Corliss, C. H.	580,686,835, 936,956,1043, 1164,1297,1298, 1694,2911,2912, 2913
Clendenin, J. E.	2082,2125	Corney, A.	1479,1695,2086, 2269
Clyne, M. A. A.	2503,2907,3064, 3128	Cornille, M.	2678
Coates, P. B.	1042	Corrigan, S. J. B.	843
Cocke, C. L.	1674,1880,2246, 2266,2267,2268, 2504,2505,2506, 2507,2662,2908, 3069,3070,3071	Cortez, J.-L. M.	2070
Codling, K.	570,1159	Couturaud, J. C.	3129
Cohen, M.	833,1160,1161, 1162,1295,1567, 1683,1766,1964, 2016,2083,2084, 2085,2170,2365, 2594,2767	Cowan, R. D.	1166,1300,1311, 1696,2023,2093, 2099,2270,2271, 2495,2509,2520, 2674,2689,2698, 2914,3115,3119, 3122,3130
		Cowley, C. R.	1167,1251

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Crance, M.	1697,2272,2273, 2679	Dalgarno, A. (cont.)	2566,2583,2824, 2974,3138,3159
Crandall, D. H.	2680	Damaschini, R.	2278
Creek, D. M.	1363	Damelincourt, J. J.	3132
Cremer, G.	2087,2960	Damgaard, A.	303
Crosley, D. R.	2615	Damm, F. L.	1885
Crossley, R. J. S.	1168,1484,2915, 2916	Dankwort, W.	2921
Crosswhite, H. M.	316	Darrigo, R.	2279,2569
Cucurezeanu, I.	750,751,815	Datla, R. U.	1950,2088,2096, 2683
Cummings, F. E.	2681	Datta, D. K.	2922
Cunningham, P. T.	1169,1301	Davidovits, P.	1663
Curnutte, B.	1302,1674,1880, 1980,2246,2266, 2267,2504,2505, 2506,2507,2662, 3069,3070,3071	Davis, C. C.	2280
Curtis, L. J.	1698,1699,1802, 1860,1863,1870, 1882,1883,1948, 2005,2062,2274, 2363,2409,2510, 2577,2695,2867, 2868,2869,2915, 2917,2918,3037	Davis, J.	1886,2547,2689, 2980
		Davis, M. H.	404,482,525
		Davis, S. L.	2684,2817
		Davis, S. P.	1425
		Davis, W. A.	3133
		Dawe, J. A.	703
Curzon, F. L.	1389,2076	Dawson, H. R.	1066
Cussenot, J. R.	2941	Dawson, J. F.	2617
Cuvellier, J.	2957	Day, O. W.	3134
Cvejanovic, D.	2748,2919	Deakin, J. J.	1887
Czempiel, M.	2920	Decomps, B.	1304
Czernichowski, A.	1817,2682,2805, 3131	Deech, J. S.	1888,2685,3135
Czyzak, S. J.	761,836,959, 1044,1073,1284, 1350,2511	Degenkolb, E.	2686
		Dekker, E.	1486
Dalby, F. W.	526,2079	Delage, A.	2924,2925
Dalgarno, A.	457,487,565,833, 1168,1170,1303, 1310,1485,1884, 1952,2021,2078, 2276,2277,2347,	Delgado, A.	2090
		Delibas, M.	2091,2281
		Demtröder, W.	613,687,3188

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Denis, A.	1150,1305,1307, 1471,1488,1491, 1688,1700,1701, 1712,1876,1938	Donahue, D. J.	1058
Dennis, L. P.	1998	Donaldson, F. G.	2608
Derblom, H.	595	Donin, V. I.	1047
Derwent, R. G.	1889	Donnally, B. L.	1390,1794,1895, 1999,2389
Desai, S. V.	1308,1492	Donnelly, K. E.	2283,2512,2688, 2982,3152,3178
Desclaux, J. P.	2687,2950,2983	Donovan, R. J.	1048
Descoubes, J.-P.	488,522,945	Dontsov, Yu. P.	1623
Desesquelles, J.	1150,1305,1307, 1454,1461,1471, 1505,1648,1649, 1650,1651,1688, 1711,1712,1859, 1862,1874,1875, 1890,2063,2237, 2254,2259,2883	Doritch, M.	2155,2396
Dettmar, K.-H.	478	Doschek, G. A.	2093,2689,2926, 3122
Deuel, R. W.	838	Dosinas, G.	1384,1408
Devine, K. R.	2092	Dotchin, L. W.	1294,1706,1777,
Dexter, D. L.	436	Doucet, H. J.	2492
DeZafra, R. L.	876,1171,1309, 2316	Doughty, B. M.	1066
Dickerman, P. J.	838	Douglas, A. S.	689
Dickie, L. O.	1702,1891,1892, 2282	Dow, J. D.	1049
Dickinson, H. O.	1703	Drake, G. W. F.	1310,1485,1494, 1707,1896,2094, 2095,2284,2513, 2927
Dielis, J. W. H.	3053	Drapatz, S. W.	1496
Dienes, A.	1704	Dreux, M.	1477,1685,2675
Dinkelacker, O.	10	Drewell, N.	3167
Dobrin, R.	2343	Drouin, R.	1657,1938,1946, 2060,2229,2230, 2330,2331,2332, 2478,2558,2659, 2752,2968,2987, 2988,3066,3154
Dobrolez, B. V.	2557	Drtil, W.	1151
Do Cao, G.	2254	Druetta, M.	1497,1590,1688, 1709,1710,1711, 1879,1897,1898, 1985,2096,2672, 2897,2928
Dodd, J. N.	1705	Ducas, T.	2622
Dodsworth, B.	1893		
Dohnalik, T.	1894		

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Duclos, J.	1020	Eissner, W.	1499,1713
Duerre, D. E.	2879,2880	Eliason, A. Y.	160
Dufay, M.	1150,1305,1307, 1471,1491,1505, 1700,1712,1862, 1874,1875,1876, 1898,1899,1980, 2063,2071,2237	Eliseev, V.	2324
Dufayard, J.	1158	Ellett, A.	75,140
Dugan, C. H.	1050	Ellis, D. G.	1798,2410
Dumont, A.-M.	1290,1477,1685, 2665,2675	Ellis, P. G.	2516
Dumont, M.	1304	Ellis, R. S.	2932
Dumont, P. D.	2097,2514,2661, 2770,2871,2929, 2999,3000,3001, 3002,3139,3140	El Sherbini, Th. M.	2517,2691,2692, 2693,2933,2934, 2935
Dunn, G. H.	2680	Elston, S. B.	3040,3176,3177
Dunning, F. B.	2806,2821	Elton, R. C.	1173
Dupree, A. K.	1172	Emeleus, K. G.	1090
Dvornikova, I. V.	490	Emmoth, B.	2694
Dynefors, B. I.	2690,2930	Engler, H. D.	427
Eberhagen, A.	399	Engman, B.	2357,2695,2918, 2936,3061
Eck, J. van	1934,3198	Erdevdi, N. M.	2937,2938,3189
Eck, T. G.	1149	Erdmann, T. A.	2098
Eckerle, K. L.	824,1239	Eremenko, A. M.	2387,2796
Edelstein, S. A.	2710,2951	Erman, P.	2112,2286,2287, 2518,2519,2696, 2895
Ederer, D. L.	1159	Ervens, W.	1140,1500
Edlen, B.	251,269	Estabrook, F. B.	332
Eglais, M. O.	1448	Etherton, R. C.	1714
Ehrich, H.	2515	Euwema, R. N.	2511
Eibofner, A.	1850,1900,2931	Evans, D. L.	1715
Eichler, J.	1035	Evans, J. C.	2268
Eicke, H. F.	690	Evans, W. F. J.	937
Einfeld, D.	1871,1901	Exton, R. J.	2939
Einstein, A.	2,3	Fabrikant, I.	2026
		Fabrikant, V. A.	406,2359
		Fabry, M.	2940,2941

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Fairbairn, A. R.	1501	Fliflet, A. W.	2525,2703
Fairchild, C. E.	832,986,2288	Flower, D. R.	2293,2526,2704, 2705,2706,3136, 3137
Fajen, F. E.	1796	Fock, V.	168
Fan, C. Y.	1390	Forbrich, C. A., Jr.	1316,2294
Farghaly, A. S.	2289	Ford, L.	2583,2793
Faust, W. L.	839	Ford, W. K., Jr.	1653,2338
Fawcett, B. C.	1311,2099,2520, 2698,3115,3116, 3117,3118,3119	Forester, J. P.	3040,3176,3177
Feichtner, J. D.	1174	Forsman, E. N.	2295
Feiertag, D.	2290	Foster, E. W.	694,695,842, 1175,1718
Feinberg, G.	1902,2572	Fournier, P. R.	2957
Feklistova, T.	1903,2383,2790	Fowler, R. G.	843,938,1737, 1965,2827
Feldman, P.	762,1312	Fox, J. L.	3138
Feldman, U.	1295,2495,2689, 2926,3122	Freeman, F. F.	1905
Feneuille, S.	1654,1716,1904, 2100,2521,2653	Frerichs, R.	31
Ferfers, H.	2942	Friedrich, H.	1502,1719
Ferrario, A.	2291	Friedrichs, H.	844
Fielder, W. R.	2866,3160	Frish, M. S.	894,1099
Figger, H.	2098,2522,2699, 2728,2818	Frish, S. E.	319,1178
Filippov, A.	76,117,131,134, 149,150,151,155	Froese, C. (also Fischer, C. F.)	458,846,941, 1052,1053,1054, 1179,1180,1314, 1315,2292,2523, 2524,2700,2701, 2702,2915,2943, 2944,2945,2946, 2947,2948
Fink, U.	1717	Fry, E. S.	1424,1504
Firor, J.	693	Füchtbauer, Chr.	1,4,9,10
Fischer, C. F. (also Froese, C.)	458,846,941, 1052,1053,1054, 1179,1180,1314, 1315,2292,2523, 2524,2700,2701, 2702,2915,2943, 2944,2945,2946, 2947,2948	Fuhr, J. R.	2832
Fischer, E.	1807	Fujie, D.	2826
Fitchard, E. E.	2123	Fukuda, K.	2782,3023
		Furcinitti, P. S.	2618,2707,2708

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Fursova, E. V.	869	Garton, W. R. S.	570,590
Gabla, K.	1722,2407	Garz, D.	2300
Gabriel, A. H.	1723,1905,2101	Garz, T.	1509,1658,1724, 2301
Gabrielse, G.	2883	Gaupp, A.	2219,2220,2576, 2577,2652,2695, 2709
Gaillard, F.	1505	Gaustad, J. E.	627
Gaillard, M.	1317,1505,1687, 1701,1874,1875, 1899,2259,2471, 2483,2652,2709, 2949,3124,3200	Gaviola, E.	77
Gallagher, A.	847,1110,1181, 1182,1972,2528, 2570	Gay, J. C.	1893
Gallagher, J. H.	1174	Gaydon, A. G.	1042
Gallagher, T. F.	2710,2951	Gayler, J.	1012
Galleron-Julienne, C.	945	Gebauer, R.	1187
Galt, J. A.	459	Gebhard, D.	2713
Galy, J.	2296	Gee, P. T.	2302
Ganas, P. S.	2297,2408	Geiger, J.	850,1725,2530
Garbuny, M.	212	Gelebart, F.	2155
Gardiner, R. B.	2354	Geneux, E.	571
Garg, H. P.	2288	George, R. T., Jr.	1609
Garnir, H.	2871,2999,3001, 3002,3139,3140	George, S.	2734
Garpman, S.	1907,1908,2298, 2482,2529,2541, 2711,2952,3191	Gerjuoy, E.	237
Garrett, P. H.	118,135	Gezalov, Kh. V.	1322
Garrison, R. L.	1370,1578	Ghoshal, S. K.	2922
Garstang, R. H.	333,352,380, 429,460,461, 491,492,493, 569,626,689, 697,698,700, 701,702,703, 848,946,1056, 1183,1185,1318, 1319,1321,1357, 1507,1508,1689, 1909,1910,1911, 2102,2299	Giannaris, R. J.	1912
		Gibbs, E. E.	2953
		Gibbs, H. M.	2103,2303
		Gilbert, A.	2531
		Gilmour, R. M.	329
		Girardeau, R.	1283,1302
		Giusfredi, G.	2606,2714
		Gladushchak, V. I.	1292
		Glassgold, A. E.	816

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Glennon, B. M. (also Miles, B. M.)	1115,1575,1619, 2179	Grasdalen, G. L.	1513
Godefroid, M.	2954	Green, A. E., Jr.	1692
Göbel, L. H.	1726,1727,1913, 2304,2314,2481, 3065	Green, A. E. S.	2297
Gold, M. T.	307	Green, L. C.	462,1059
Gol'dberg, G. I.	430	Grevesse, N.	1514,1516,1917, 2241,2514,2661, 3001,3002,3140
Goldberg, L.	142,187,203, 208,227,573, 1172	Gridneva, S. M.	1060
Goldfarb, V. M.	1914	Griem, H. R.	1082,1518
Goldman, A.	1510	Griffin, D. C.	2914
Goldwire, H. C., Jr.	1188,1323,2806	Griffin, P. M.	1519,2151,2161, 2388,2389,2585, 2724,2784,3040, 3176,3177
Goly, A.	1189,1511,2104, 2305,2715,2955	Griffith, R.	1520
Goodman, A. S.	1029,1058	Griffiths, J. E.	2686
Gorbunova, T. M.	1512,1599	Griffiths, S. B.	3141
Gorini, G.	3102	Grigoreva, V. N.	2309
Gornik, W.	2306,2307	Groeneveld, K.-O.	2717,3176,3177
Gorshkov, V. N.	2584	Grosswendt, B.	1036
Goschler, J.	1467,1468	Groth, H.-G.	629
Goscinski, O.	2516	Gruen, N.	2465
Goss, W. M.	1188	Gruzdev, P. F.	574,704,705,894, 1061,1062,1190, 1191,1325,1326, 1521,1522,1523, 1919,1920,1921, 2106,2107,2310, 2311,2312,2356, 2534,2574,2645, 2646,2647,2718, 2719,2720,2958, 3004
Goto, T.	2581		
Gottschalk, W. M.	296	Gruzdeva, N. S.	2211
Gough, W.	898,947,3141	Guidotti, C.	2475,3080
Gould, H.	2308,2532,2956, 3142	Guiochon, M.-A.	463
Gouillet, G.	852,1482	Gupta, M. N.	3026
Gounand, F.	2957	Gupta, R.	2825,2899
Graef, W. P. M.	3053		
Grandin, J. P.	1915,1916		
Grant, I. P.	2533,2716		

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Gurchumeliya, A. D.	2721,2722	Haselton, H. H.	2585,2724,2784
Gurevich, D. B.	611,2211	Hashmi, M.	1728
Gurvich, L. V.	494	Hattori, S.	2313
Guthöhrlein, G.	2538	Hauge, Ö.	2863
Haag, T.	1475	Havey, M. D.	2962,3145,3146, 3147
Haas, D.	2158,2159,2256, 2412,2413	Hawkins, R. T.	2723
Habib, E. E.	1327	Hawkins, W. B.	631,1529
Hackmann, J.	1807,2108	Hayden, H. C.	3040
Hadeishi, T.	1955,2441,2442	Hayes, R. W.	2099,2520
Hänsch, Th.	1063	Head, C. E.	1691,1692,1693, 1729,1963,2081, 2263,2350,2404, 2501,2776,2900, 2984,3011
Hagstrom, S. A.	3054	Head, M. E. M.	1729
Hallin, R.	2483,2654,2867, 3105	Heavens, O. S.	632
Halpern, J. B.	2225	Heckmann, P. H.	1996,2158,2159, 2256,2963,3067, 3193,3194
Hameed, S.	1328,2109	Heddle, D. W. O.	1417
Hamel, J. (also Hamel-Garcia, J.)	2535,2536,2959, 2960	Heer, F. J. de	2134
Handrich, E.	1524	Heering, W.	2725,2726
Hanle, W.	1526	Hefferlin, R.	533,534,633, 1192,1922
Hannaford, P.	2953	Heierman, J. H.	204
Hannebauer, F.	2963	Heilig, K.	1923
Hansen, J. E.	1527,2703,2948, 3143,3144	Heine, G.	2727,3121
Hanus, W.	575,630	Heise, H.	1724,2539
Happer, W.	1107,1385,1791, 2825,2899	Held, E. F. M. van der	204
Harde, H.	2537,2538,2961, 3188	Heldt, J.	1330,2699,2728, 2964,3063
Harriman, J. M.	432	Helliwell, T. M.	634,857
Harting, D.	377	Hengstum, J. P. A. van	225,433
Hartree, D. R.	464	Henke, L.	2471
Hartrott, M. V.	1528		
Harvey, K. C.	2723		

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Henning, H.	950	Holt, R. A.	2542.
Henrichs, H. F.	2729	Holweger, H.	1658
Hentschel, W. R.	2314	Holys, A.	3131
Heppinstall, R.	1088	Holzberlein, T. M.	843,858,938
Heppke, G.	1038	Hontzeas, S.	2112
Herbet, P.	3132	Hopkins, F. F.	2400,2401
Herdan, R.	635	Horak, Z. J.	2349,2761
Heron, S.	434	Horie, H.	354,366
Heroux, L.	822,1021,1193, 1194,1331,1530	Horrigan, F. A.	997
Hertel, I. V.	1332,1531,1532	House, L. L.	1196,1608,2018
Hertzberg, M.	951	Houven van Oordt, A. J. van der	1728
Herzenberg, A.	1328	Houwelingen, D. van	1925
Hese, A.	1333,1730,1731, 1732,1924,2024, 2110	Houziaux, L.	638
Hesser, J.	1317,1334,1564	Hsieh, J. C.	2113
Hey, J. D.	3148	Huang, K.	276
Hey, P.	535	Huber, M.	1336,1513,1926, 2114,2115,2227, 2228,2543,2732
Hibbert, A.	2075,2315,2540, 2730,2965,2966	Hudson, R. D.	1734
Hilborn, R. C.	2316,2411	Huffman, R. E.	768,2432
Hilke, J.	2357	Hughes, A. L.	47
Hill, R. M.	2710,2951	Hughes, R. H.	979,1066,1211, 1449
Hinds, E. A.	2967	Hughes, T. P.	635
Hinnov, E.	465,1064	Hugon, M.	2671
Hodges, D.	1733	Hulpke, E.	859
Hofmann, W.	1,1195	Hults, M. E.	1067
Holl, M.	2256	Hummer, D. G.	2544
Holland, R.	951	Hunt, F. R.	398
Holmes, J. R.	1359,2318,2733, 2734	Husain, D.	1048,1199,1887, 2048
Holmgren, L.	2111,2298,2482, 2529,2541,2731	Husson, X.	2116,2764

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Hutcherson, J. W.	1519	Jacobs, V. L.	1933,2117
Hutchison, R. B.	1927	Jacobson, C. H.	843,938
Hylleraas, E. A.	214	Jacobson, T.	1773
Hyman, H. A.	1928	Jaeger, H.	1187
Ibbetson, P. A.	2669,2888,2889	James, M. G.	1328
Icole, A. M.	2492	Jamison, K. A.	2400,2401
Ilina, E. V.	1914	Janes, G. S.	2971
Imhof, R. E.	1929,2985,3149	Janke, W.	2224
Inaba, H.	2619,2835	Javan, A.	834
Inatsugu, S.	2318,2733,2734	Jazdyk, J.	2682
Incropera, F. P.	1912	Jean, P.	1201,1202
Innes, W. F.	1998	Jeannet, J. C.	1987
Ionescu-Pallas, N. J.	1069	Jefferies, J. T.	707
Irwin, D. J. G.	2060,2130,2132, 2319,2320,2322, 2355,2587,2659, 2746,2771,2968, 2969,2970,3003, 3045	Jenkins, F. A.	239
Irwin, J. C.	1070	Jessen, K. A.	1276,1445,1446, 1447,1648,1649, 1650,1651,1842
Ishii, K.	1931	Jimenez, E.	2545,2972
Islamov, I.	149,151	Jörgens, K.	478
Isler, R. C.	1535,1682	Johannin-Gilles, A.	2644,2735,2773, 2859,3005
Itzkan, I.	2971	Johnson, A. W.	1737
Ivanov, E. I.	1736	Johnson, B. M.	3027
Ivanov, L. N.	1536	Johnson, B. W.	2398,2803
Ivanov, V. K.	2466	Johnson, C. E.	2017,2118,2172, 2288
Ivanov, V. N.	2386,2584	Johnson, N. C.	1059
Ivanova, A. N.	860,1595,1790	Johnson, S. A.	2902,2903,3059, 3123
Ivanova, A. V.	860,1322	Johnson, W. R.	2119,2500,2546, 2973,2974,3126, 3127,3158,3159, 3190
Ivanova, E. P.	1536	Johnston, P. D.	1203
Ivezic, T.	1409	Johnston, R. R.	2906
Jackson, M.	2169,2170		

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<u>Author</u>	<u>Reference No.*</u>	<u>Author</u>	<u>Reference No.*</u>
Jones, A. V.	937	Karatsu, O.	2739
Jones, B. B.	1905	Karazija, R.	1337,2068
Jones, D. G. C.	1444	Kardashev, N. S.	537
Jones, H. W.	3170	Karimov, R. G.	1935
Jones, K. W.	3027	Karstensen, F.	1072,1208,1338
Jones, M.	1713	Karzas, W. J.	642
Jongh, J. P. de	1934	Kasabov, G. A.	1060,2324
Joos, G.	9,10	Kast, W.	138
Jordan, C.	1723,1905	Kastner, S. O.	1209,1210,1295, 2548,2976
Jordan, J. A., Jr.	1204	Kato, T.	2977
Jordan, W. C.	2906	Katskov, D. A.	1958
Jorgensen, S. W.	2214,2467	Katterbach, K.	1719
Joy, H. W.	1645	Katulín, V. A.	2186
Jucys, A.	368,418,896,989, 1337,1384,1408, 1594,1969,2068, 2187	Kauffman, R. L.	2400,2401
Jürgens, G.	384	Kaufman, F.	971,1235,1752
Julienne, P. S.	2547	Kaufman, V.	2509
Juncar, P.	2679	Kay, L.	2122
Kahan, W.	2209	Kay, R. B.	1211
Kaiser, D.	2306,2307,2736, 2949	Kazantsev, S. A.	1647,1936,2325, 2326,2549,2978
Kaliteevskii, N. I.	2975	Kegeľ, W. H.	756
Kalman, L. B.	2664	Kelleher, D. E.	1618
Kaminskas, V.	1969	Kelly, F. M.	1702,1891,1892, 2282,2327,2328, 2550,2551,2552, 2741,2979,3150
Kancerevicius, A. I.	1071,1205,1206, 1207	Kelly, H. P.	862,1937,2525, 2703
Kanda, T.	2371,2581	Kelly, P. S.	863,864,865, 1161,1162
Kandela, S.	2654	Kelsey, E. J.	2742,3151
Kaplan, S. A.	2120,2121	Kepple, P. C.	2980
Kaplan, S. N.	927	Kernahan, J. A.	1364,1365,1566, 1738,1938,2060, 2130,2320,2322,
Karabourniotis, D.	3132		
Karabut, E. K.	2737		

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Kernahan, J. A. (cont.)	2355,2553,2587, 2588,2743,2744, 2746,2771,2969, 2981,2982,3003, 3045,3152,3178	King, R. B.	189,222,231,252, 284,298,404,482, 525,539,610,771, 956,963,1617
Kerschbaum, H.	49	King, T. A.	1147,1465,1677, 2280
Kersten, J. A. H.	241	Kingston, A. E.	487
Kessler, K. G.	1939	Kirilov, A. E.	1599
Key, J.	179	Kirk, W.	1171
Keyser, L. F.	1235	Kirkpatrick, R. C.	1610,1611
Khadjavi, A.	1791	Kirkwood, J. G.	139
Khaikin, A. S.	1156	Kirpilenko, V. G.	1156
Khandelwal, G. S.	2123	Kirsanova, N. N.	1537,1943
Kharitonova, V. N.	1595,1790,1940	Kiselevskii, L. I.	1246,1247,1340, 1673
Khatoon, S.	2904	Kisiel, A.	772
Kherrmann, I.	1814	Kisling, A.	2325
Khokhlov, M. Z.	538,577,578,643, 644,711,770	Kitaeva, V. F.	1538
Khristenko, S. V.	1941,3153,3183, 3184	Klapisch, M.	1654,1716
Khvostenko, G.	1224	Klarsfeld, S.	1539
Kibble, B. P.	1212,1327	Kleef, Th. A. M. van	3047
Kielkopf, J. F.	2747	Kleiman, E. B.	2120,2121
Kikuchi, T. T.	1942	Klein, M. B.	1741
Kim, Y.-K.	1868,2124,2554, 2687,2950,2983	Klein, P.	2942
Kindlmann, P. J.	926,1025,2283, 2512,2688	Klemt, M.	2329
King, A. S.	189,222	Kleppner, D.	2622
King, D. B.	2984	Klimchitskaya, G. L.	2597,2749
King, D. G.	3011	Klimkin, V. M.	1935
King, G. C.	2555,2748,2815, 2919,2985,3024, 3169	Klose, J. Z.	957,1074,1213, 1341,1342,1540, 1541,1944,2750, 2751,2986
King, G. W.	228	Klotz, W. D.	2481

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Kluge, H.-J.	2556	Koozekanani, S. H.	997,1545
Kluiver, H. de	467,503	Kopfermann, H.	82,338
Klynning, L.	3061	Korff, D. F.	2335
Klyucharev, A. N.	1178,1945,2557	Korff, S. A.	141
Knox, H. O.	1542	Kornalewski, T.	773,1546,2989
Knox, R. S.	436,1049	Kornblith, R. L.	1618,2491,3074
Knystautas, E. J.	1657,1946,2060, 2230,2330,2331, 2332,2558,2752, 2987,2988,3154	Korolev, F. A.	645,869,958, 1547,2126
Kobzev, G. A.	1543	Korotkov, A. I.	2234
Kocher, C. A.	2082,2125	Koshelev, K. N.	2559
Kock, M.	1343,1509	Koster, G. F.	795,997
Koedam, M.	712	Kotlikov, E.	1549,1949,2245, 2336,2670
Koenig, E.	1716,1947,2100	Kouba, J. E.	2560
Koenig, H. D.	140	Kowalski, A.	3063
Körwien, H.	171	Kowalski, J.	1346,2247,2990
Köstlin, H.	866	Kozlov, M. G.	1743,2337,2991, 2992
Koh, T. K.	2282,2327,2328, 2550,2551,2552, 2741	Krätschmer, W.	1474
Kohl, J. L.	1215,1699,1948, 2333	Kramers, H. A.	13
Kohn, H.	465	Krause, L.	1212
Kohsiek, W.	3155	Kravchenko, V. F.	2737
Kolchin, E. K.	1059	Krebs, K.	205
Kolesnikov, V. N.	713	Krellmann, H.	2753
Kolesnikova, M. M.	1814	Kremenewsky, N.	134
Kolyniak, W.	2989	Krempf, H.	1347
Komarovskii, V. A.	1344,1544,1742, 2334,2391,2392, 2496,2586,2890, 3042,3112,3113, 3114	Kretzen, H.	1524,1550
Kononov, E. Ya.	2099,2559	Krey, R. U.	1370
Koopman, D. W.	867,1857	Krivchenkova, V. S.	1348,2561
		Krolas, I.	1349
		Krüger, H.	2754
		Krueger, T. K.	761,959,1044, 1073,1284,1350, 1864

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Kruglevskii, V. A.	2014	Kwong, H. S.	3167
Kruglikova, L. P.	1958	Kyckinas, I.	1553,1747
Kruithof, A. A.	712,1925	Labuhn, F.	962,1145
Kruithof, A. M.	270	Labzovskii, L. N.	2597,2721,2722, 2749
Krupenikova, T.	1075	Ladenburg, R.	5,36,83,84,102, 103,172
Krylov, B. E.	2992	Lage, C. S.	2994
Krysmanski, K. H.	960	Lagrue, J.	1033
Kucharski, M.	1027	Lambert, D.	1352,1554
Kuhlman, H.	1922	Lan, V. K.	2762
Kuhn, H. G.	870,871,961, 1217	Landaïs, J.	2677,2758,2905, 2995
Kuhn, P.	2891	Landman, A.	872
Kuhn, W.	25,26,34,35	Landman, D. A.	1353,2343
Kumar, C. K.	2338	Lange, W.	1076,1524,1550, 2306,2307
Kunin, P.	2014,2026	Langhoff, P. W.	2565
Kunisz, M. D.	369,498,715, 1351,1722,2339, 2562,2755,2756	Laniepce, B.	1354,1749,2087, 2905,2960,2995
Kunze, H.-J.	1950,2088,2096, 2683	La Paglia, S. R.	1077
Kunze, P.	62	Lapworth, K. C.	2344
Kupliauskene, A. V.	3157	Larche, K.	120
Kupliauskis, Z. I.	2563,3156,3157	Larcher, G.	2345
Kuroda, K.	2829,3075	Larrabee, J. C.	768
Kurt, V. G.	775	Larson, E. G.	3134
Kurucz, R. L.	2340,2564,2757	Larson, G. S.	1426
Kusch, H. J.	2515,2831	Larsson, S.	2210
Kuzmickyte, L.	1551,1552,1745, 1951,2341,2993	Lassettre, E. N.	2165
Kuznetsova, V. A.	1914	Latimer, C. J.	2821
Kvaratskheli, Yu. K.	645	Latter, R.	642
Kvater, G. S.	191,253,254,285, 357,2342	Laubert, R.	2585,2784,2798
Kvifte, G.	286	Laughlin, C.	1952,2127,2346, 2347,2349,2433,

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Laughlin, C. (cont.)	2566,2567,2759, 2760,2761,3072, 3073	Leung, C. Y.	1226
Laurent, J.	1750	Levchenko, M. A.	1953
Laviana, E.	2065	Levin, L.	2971
Lawrence, G. M.	963,1078,1108, 1219,1220,1355, 1555,1556,1751, 1960	Levinas, L. I.	425,437
Lawrence, T. N.	2350,3011	Levinger, J. S.	466
Layzer, D.	1357	Levinsonas, J. B.	425,437,964
Lazarenko, A. V.	1945	Levitt, M.	1312
Lazauskas, V. M.	2563	Levush, B. Kh.	2443
Leavitt, J. A.	2231,2901	Levy, R. H.	2971
Lebedeva, V. V.	406,1547,2126	Levy, S.	172
LeBlanc, F. J.	1079	Lewis, E. L.	961,1217,1222, 1557,2528,2570
Lecler, D.	1202,1358,1916	Lewis, M. N.	2349,2761
Lecluse, Y.	924,1019,1221	Lewis, M. R.	1223,1558
Le Dourneuf, M.	2762	Liao, P. F.	3041
Ledovskaya, E. A.	1975	Liberman, S.	1716
Lee, C.-M.	2351,2568	Lidholt, R.	2654
Lee, E. T. P.	1132	Lidö, G.	1559,1907,1908, 2247
Leibowitz, E. M.	2128	Liebermann, R.	1451
Lemoigne, J.-P.	2763,2764	Liening, H.	1851,2571
Lenadan, A.	2152	Lifshitz, C.	1281
Lennard, W. N.	2352,2765	Liljeby, L.	2868,2869,3061
Lennuier, R.	323	Lilly, R. A.	1359,2129,2768, 2996,2997
Leonard, P. J.	2766	Lin, C.-C.	1132,1588,1589, 1738,1796,2130, 2335
Leopold, J. G.	2767	Lin, C. D.	2973,2974,3158, 3159,3190
Leriche, M.	2208	Lin, C.-L.	1752
Les, Z.	499,649	Lin, C.-p.	2500,2546
Letfus, V.	650,651,718,776, 1080	Lin, D. L.	2572,2866,3160
Le Toulouzan, J. N.	2279,2569	Lincke, R.	1082,1753,1954

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Linderberg, J.	1560	Lurio, A.	664,847,875,876, 877,966,1385, 1396,1791,1872, 2884
Lindgard, A.	2769,3103		
Lingen, D. van	207	Luther, J.	1076,1550,2306, 2307
Link, J. K.	963,1083,1084, 1169	Lutz, H. O.	2395,2589,2590, 3179
Lis, L.	2353	Luyken, B. F. J.	1957,2133,2134
Liszt, H. S.	1556,2006	Luypaert, R.	2685,3135
Littman, M. G.	2622	L'vov, B. V.	967,1757,1958, 2135
Liu, C. H.	1879,1955,2131, 2264,2354	Lynn, N.	457
Livingston, A. E.	2130,2132,2319, 2320,2322,2355, 2553,2587,2588, 2746,2770,2771, 2871,2929,2969, 2970,2998,2999, 3000,3001,3002, 3003,3045,3140	Lyubimov, A.	2026
Lochte-Holtgreven, W.	1361	Lyyra, M.	2519,2895
Loginov, A. V.	2106,2107,2310, 2311,2312,2356, 2534,2574,2718, 2719,2720,3004	Lyzenga, G. A.	2877
Lombardi, M.	3124	Ma, I.-J.	1362,1559,2247
Lotrian, J.	2773,3005	MacDonald, J. R.	2266,2376,2390, 2505,2506
Loulergue, M.	1956,2774	Madden, R. P.	1159
Lu, K. T.	2351	Maddox, W. E.	1714
Lubowiecka, T.	874,1351	Madsen, O. H.	2050,2051,2215
Lucatorto, T.	2209	Maecker, H.	370
Luc-Koenig, E.	2575,3106	Maillot, P.	2345
Lübeck, K.	294	Majewski, J.	2439
Luken, W.	2420,2421,3006, 3007,3008,3009, 3056	Makarov, A. P.	1561
Lundberg, H.	3010	Malakhov, Yu. I.	2136,2359
Lundin, L.	1460,1463,1754, 1762,1863,2357, 3037	Malarz, M.	1349
Lunell, S.	2358,2775	Maleki, L.	2776,3011
		Malinovsky, M.	2777
		Mallia, E. A.	1554
		Mallow, J. V.	2137,3012
		Malone, B. S.	1086
		Malville, J. M.	969

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Mannervik, S.	2868	Marusin, V. D.	2244
Mannkopff, R.	407	Mashinskii, A. L.	1764,1765
Marantz, H.	1733	Mason, H. E.	2779,3166
Marchand, J. M.	1715	Mason, R. C.	223
Marcus, S.	1535	Masterson, K. D.	2364
Marek, J.	2138,2360,2778, 3013,3161,3162	Mastrup, F.	501
Margerie, J.	1916,2116,2536, 2764	Mathur, M. S.	2282,2327,2328, 2550,2551,2552, 2741,2979,3150
Margoshes, M.	777	Matilsky, T. A.	1564
Markov, V.	2326,2549	Matland, C. G.	372
Markova, G. V.	879,1224	Matthews, D. L.	2372
Marlow, W. C.	1225,1316	Maurer, J.	2803
Marr, G. V.	386,1088,1363, 1562	May, A.-D.	581,582,1226
Marrus, R.	2139,2308,2361, 2362,2505,2532, 2956,3133,3142	May, C. A.	2902,2903,3059, 3123
Marshall, A.	1309	May, M.	2578
Marshall, T.	1223	May, R. M.	880
Martens, K. H.	3065	Maydan, D.	1741
Martin, G. A.	2422,3014,3015	Mazing, M. A.	1565
Martin, I.	3016	McCavert, P.	2140,2579
Martin, M.	1201,1202	McConkey, J. W.	1090,1364,1365, 1566,2608
Martin, P.	3163,3164,3165	McCrocklin, W. B., Jr.	1963
Martin, W. C.	580,652	McDermott, M. N.	830,831,2143
Martinez-Garcia, M.	1617,1960	McDermott, W. E.	2780
Martinson, I.	1460,1462,1463, 1563,1666,1670, 1671,1754,1760, 1761,1762,1763, 1849,1861,1863, 1870,1883,1961, 1962,2112,2231, 2274,2287,2357, 2363,2519,2576, 2577,2694,2695, 2868,2869,2918, 2930,2936,3061, 3062	McDowell, M. R. C.	881
		McEachran, R. P.	1567,1683,1766, 1964,2016,2083, 2084,2085,2169, 2170,2365,2594
		McFarlane, R. A.	839
		McGinn, G.	1568,1569
		McKoy, V.	2836
		McWhirter, R. W. P.	434

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Measures, R. M.	3167	Migdalek, J.	2339,2368,2562, 2755,2756,3018, 3019,3020,3021, 3022
Meath, W. J.	2560		
Meekins, J. F.	2093	Mikhalevskii, V. S.	2737
Mehlhorn, R.	1570	Milaan, J. B. van	27,39
Meier, K.	2306	Miles, B. M. (also Glennon, B. M.)	1115,1575,1619, 2179
Meinders, E.	3017	Mileshina, S. A.	2337
Meiners, D.	2942	Miller, M.	1577,1665,1857, 1966,2141,2265, 2369,2370,2580, 2593,2878
Meiners, H. M.	1571	Miller, R. C.	1417
Meisel, G.	2723	Minaeva, L. A.	1400
Meister, T. G.	357	Minemoto, T.	2371,2581
Mel'nikov, O. A.	502	Minguzzi, P.	2606,2714
Melzacki, K.	2800	Minkowski, R.	105
Mendlowitz, H.	779,1091,1227	Mishra, B.	325,358
Menzel, D. H.	142,192,208, 247,995,1574	Mitchell, A. C. G.	153,175,176
Menzies, R. T.	2366	Mitchell, C. J.	2781
Mercer, G. N.	926	Mitrofanova, L. A.	373,505,583
Messenger, H. A.	92,273	Miyazaki, K.	2782,3023
Metag, V.	1474	Mizushima, M.	1093,1174
Metcalfe, H.	2411	Mleczko, W.	1817,1880
Metsch, B. C.	3047	Moe, G. W.	2143
Mewe, R.	3108,3168	Möglich, F.	261
Meyer, J.	1773	Möller, N. H.	1094
Meyer-Berkhout, U.	408	Mohamed, K. A.	2985,3024,3169
Michael, H.	2108	Mohr, P. J.	2532
Michael, J. V.	1092,1278	Moise, N. L.	1095,1096,1097
Michel, M. C.	2441,2442	Moitra, R. K.	2144
Michels, A.	467,503	Moity, J.	2715
Mickey, D. L.	1767,1800,1960	Molhave, L.	1967,2052
Mickish, R. A.	1965	Monteil, A.	3025
Middelkoop, D.	503		
Mie, K.	2367		

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Moore, C. F.	2372	Nagibina, I. M.	490,506,507,591, 1968
Moore, E. N.	919	Nanassy, A. J.	515
Moos, H. W.	2373,2833	Naqvi, A. M.	884,1100
Moran, K. A.	1090,1365	Nascimento, M. A. C.	2836
Morin, S.	1886	Nash, C. P.	2780
Morozova, N. G.	720,882,970, 1099	Naslenas, E.	1969,2187
Morris, J. C.	1370,1578	Nerheim, N. M.	1769
Morse, F. A.	971	Nesbet, R. K.	2678,3026,3029, 3170
Mortier, P.	2436	Neuffer, D. V.	3171
Morton, D. C.	2374,2489,2490	Neveu, B.	1657,1946
Moser, C. M.	3026	Ney, J.	1037,1038,1102, 1474,1865,1871, 1901,2601
Moskowitz, P. A.	2375,2499	Nguyen, T. D.	1690,1878
Mossberg, T.	2484	Nicholls, R. W.	398,721
Motschmann, H.	410	Nichols, L. L.	1375
Mowat, J. R.	2376,2390,2585, 2724,2784,3027	Nicolaides, C.	1770,1970,2145, 2146,2378,2379, 2380,2382,2479, 2480,2787,2788, 2789,2873,2874, 2875,2923,3107, 3172
Mrozowski, S.	232,239,271	Nicolet, W. E.	1260
Mühlenbruch, W.	105	Nielsen, A. K.	2053,2216
Mühlethaler, H. P.	3028	Nielsen, S. E.	2769
Müller, D.	1371,2377,2434	Niemax, K.	3013,3173,3174
Müller, E. A.	573	Niewodniczanski, H.	499,649,773,1546
Müller, F.	177,178,195	Nikiforova, G. P.	1742
Mukherjee, P. K.	2144	Nikitin, A. A.	887,964,1579, 2383,2790
Murphy, E. J.	175	Nikolaich, A. Ya.	2795,3030,3033, 3035
Murphy, P. W.	1372,1373	Nikonova, E. I.	440,894,905
Muryn, A.	1351	Nip, W. S.	3128
Musielok, J.	2438,2439		
Muto, T.	106		
Nagaeva, M. L.	2226		
Nagel, D. J.	2674		
Nagel, H. H.	615		

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Niziol, E.	1351,2384	Ogura, I.	2611,2739,2829, 3075
Nodwell, R. A.	1376,1773	Oiringel, I. M.	2121
Nolte, G.	2717	Okamoto, K.	466
Norcross, D. W.	1971,2385,2544	Oldenberg, O.	1079
Nordling, C.	2867	Olsen, H. N.	1769
Noreland, T.	2654,2867,3105	Olsen, K. H.	404,539,956
Norman, G. E.	974	Omholt, A.	540,584
Norton, M.	1972	Omidvar, K.	1210
Norton, T. G.	1449	Omont, A.	522,1893
Nosach, O. Yu.	2186	O'Neil, S. V.	2830
Nosach, V. Yu.	2186	Oneill, J. A.	2820
Novick, R.	762,830,831,872, 877,888,1312,1535, 1580,2082,2125, 2209,2967	Onello, J. S.	2583,2792,2793
Novik, A. E.	2126	Oona, H.	1754,1962
Novikov, L. N.	2582	Opechowski, W.	224
Nubbemeyer, H.	2791,3031	Oppen, G. von	681,1035,1584, 1585,2314,3065
Nussbaum, G. H.	1231	Oran, E. S.	2547
Nussbaumer, H.	1499,1581,1582, 1774,1775,1917, 1974,2147,2148, 2149,2526,2704, 2705,2706,2774, 3028,3032,3166, 3175	Ornstein, L. S.	107,179,225,241
Nysten, K.-E.	2150,3076	Orrall, F. Q.	707
O'Brien, D. E.	1583	Osberghaus, O.	443,613
Odabasi, H.	1377,1911	Osherovich, A. L.	508,1114,1232, 1233,1379,1407, 1605,1975,2386, 2496,2584,2794, 2795,3030,3033, 3034,3035
Odintsov, A. I.	1547,2126	Osipov, Yu. I.	1538
Odintsov, V. I.	869,958	Oss, J. P.	1715
Oed, A.	2754	Osterbrock, D. E.	340,477,975
Oelme, A.	1763	Ostroumenko, P. P.	976,2387,2796
Oertel, G. K.	1296	Ostrovskii, Yu. I.	444,474,509,510, 511,512,586,654, 655,656,726
Oginets, O. V.	2342	Ott, W. R.	1976
		Otten, E. W.	1607

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Ottinger, Ch.	658	Pegg, D. J. (cont.)	2161,2376,2388, 2389,2390,2585, 2724,2784,3040, 3176,3177
Ovchinnikov, V. G.	2226		
Ovechkin, G. V.	1234,3036	Peierls, R. F.	2010
Pace, P. W.	2797	Pekeris, C. L.	192,897,1993
Paisner, J. A.	2902,2903,3059, 3123	Pendlebury, J. R.	2344
Palenius, H. P.	1670,3037	Pendleton, W. R., Jr.	979
Pang, P. H.-L.	2743,2744,2981	Pendrill, L. R.	3135
Panke, H.	2798	Penkin, N. P.	390,413,414,444, 474,509,510,511, 512,586,589,654, 655,656,726,727, 787,788,789,790, 890,980,981, 1236,1344,1544, 1742,1978,2391, 2392,2393,2394, 2496,2586,2890, 3042,3081,3114
Papakin, V. F.	2737		
Paquette, D. R.	1024	Penner, S. S.	375,2531
Parchevskii, G. F.	390,413,414,444	Penz, J.	1922
Pardies, J.	1380	Pepperl, R.	1526,1780
Parkes, D. A.	1235,1752	Peresse, J.	2152,2155,2396
Parkinson, E. M.	1170,1303	Perez, J. D.	2906
Parkinson, W. H.	1513,2114,2228, 2333,3038,3039	Perret, L.	2675
Parnes, B. R.	404	Perry, B. W.	831,888
Parsons, N. R.	1998	Persson, W.	1781,3144
Pascu, M. L.	2398	Pery, A. (also Pery-Thorne, A.)	570,590,791
Pasternack, S.	233	Petersen, P.	2863,3104
Paul, E.	859	Petersen, R.	475
Paul, W.	859	Peterson, R. S.	2376,2390,2585, 2784,3040,3176, 3177
Paulson, K. V.	977	Petford, A. D.	2669,2888,2889
Peach, J. V.	1381,1586	Petkov, A. P.	2648,2649,2650
Peacock, N. J.	1311	Petrie, W.	290,327
Pearce, W.	587	Petrini, D.	1664,2088,2431
Pearl, A. S.	1776		
Pebay-Peyroula, J. C.	488,522,542,852, 1158		
Pecker, C.	588		
Pegg, D. J.	1294,1706,1777, 1895,1999,2151,		

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Petrova, G. P.	591	Polushkina, I. A.	1968
Petrucchi, F.	3102	Polzik, E. S.	2978
Peytremann, E.	2757	Popenoe, C. H.	985,1242,1600, 2162
Pfennig, H.	983	Popescu, D.	2398,2803
Phaneuf, R. A.	2680	Popescu, I.	2398,2803
Phelps, A. V.	416,2262	Popescu, I. M.	750,751,815
Pichler, G.	2049,2153,2154, 2377,2434,3043	Popp, M.	1784
Pickett, R. C.	1587	Poquerusse, A.	2492
Pietruszka, J.	2800	Pottasch, S. R.	891,2490
Pike, C. T.	2971	Pottier, L.	2893
Pilz, W.	2801	Potyomkin, V. G.	2136
Pinard, J.	2679	Poulizac, M.-C. (also Buchet-Poulizac, M.-C.)	1307,1590,1688, 1709,1710, 1711,1897,1898, 1983,1984,1985, 2071,2072,2236, 2251,2252,2253, 2254,2255,2493, 2897
Pineau des Forets, G.	2293	Poulsen, O.	2250,2650,2804, 2864
Pinnington, E. H.	1588,1589,1738, 1782,1980,2064, 2130,2132,2355, 2395,2553,2587, 2588,2589,2590, 2746,2771,2802, 2969,2982,3003, 3044,3045,3152, 3178,3179	Prag, A. B.	893,986
Pionteck, S.	2909	Preston, R. C.	3180,3181
Piosczyk, B.	1584	Prior, M. H.	1986,2156
Piper, L. G.	2907	Priou, M.	522
Pipkin, F. M.	1231,2542	Privalov, V.	3035
Platz, P.	1982	Prokof'ev, V. K.	67,68,76,87,88, 150,155,181, 440,591,894, 1062
Plöhn, H.-J.	2652,2709,2949	Puell, H.	3046
Ploquin, J.	267	Pul'kin, S. A.	3034
Pochat, A.	2152,2155,2396	Purdum, K. L.	1016
Podbiralina, V. P.	2397	Putlitz, G. zu	1287,1346,1362, 1382,1559,1592, 2247,2290
Podlubny, L. I.	2655	Pyle, R. V.	927
Podmoshenskii, I. V.	2211		
Podobedova, L. I.	2559		
Poluektov, I. A.	735		

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Raassen, A. J. J.	3047	Richards, L. M.	3068
Rabold, R.	1287	Richards, S.	2916
Radloff, H.-H.	2306,2307	Richter, E. F.	109
Radojevic, V.	2861,2862	Richter, J.	513,660,988, 1343,1475,1658, 1724,1788,1867, 2360,2367,2578, 2592
Radziemski, L. J., Jr.	2509	Richter-Ditten, H.-J.	2891
Ragone, D. V.	987	Riemann, M.	895
Rahimullah, K.	2498,2904	Risch, L.	2304
Ramanujam, P. S.	2650,2864	Robb, W. D.	2075
Rambow, F. H. K.	3048,3049	Roberts, J. R.	1239,1844,2402, 2403,2805,3131
Randall, R. H.	108,2267,2504, 2506,2507	Roberts, W. A.	2404
Randall, R. R.	2662,3070	Robinson, A. M.	1376
Rang, L. Q.	1786	Robinson, P. D.	2658
Ranson, P.	2591,3195	Roder, O.	729
Rapoport, L. P.	1430	Rohrlich, D.	3120
Rascon, L.	1192	Rohrlich, F.	545,546
Rautian, S. G.	1156	Roig, R. A.	1966,2141,2369, 2370,2580,2593
Read, F. H.	1929,2985,3024, 3149,3169	Rompe, R.	261
Rebolledo, M. A.	2399	Rosa, R.	2429
Red'ko, T. P.	589,1978	Rosen, A.	2569
Reeves, E. M.	3038,3039	Rosenberger, D.	1104
Regemorter, H. van	544	Rosenthal, D.	2085,2594
Reich, H. J.	931	Ross, J.	1350,2405
Reiche, F.	28	Ross, K. J.	1332,1531,1532
Reinke, M.	2727,3121	Rossikhin, V. S.	976
Reinke, P.	1238	Rostovikova, G. S.	2406
Rensbergen, W. van	1787	Roszkowska, K.	2989
Reuscher, H.	1526	Rotenberg, M.	998
Rhoderick, E. H.	434	Rouille, C.	2492
Rice, P. A.	987		
Richard, P.	2400,2401		

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<u>Author</u>	<u>Reference No.*</u>	<u>Author</u>	<u>Reference No.*</u>
Routly, P. M.	482,525,539, 1994	Salamo, G. L.	2303
Rozelot, J.-P.	1593	Salimov, V. M.	1547
Rubin, D.	2226	Saloman, E. B.	831,888,1105, 1106,1107,2225
Rubin, P. L.	1538	Salpeter, E. E.	453
Rubinowicz, A.	110,143	Samoilov, V. P.	2406,2810,2811
Rudge, M. R. H.	1542,1703,2140	Sanchez Del Rio, C.	2090,2444,2545
Rudko, R. I.	1240	Sandeman, R. J.	2732
Rudzikas, Z.	896,989,1384, 1408,1553,1594, 1747,2068,2595, 3186	Sanders, F. C.	1596
Rumble, J. R., Jr.	3054	Sandle, W. J.	1705
Rumpf, K.	2891	Sandlin, G. D.	2023
Rundel, R. D.	2806	Sandrigailo, L. E.	1234,3036
Rush, P. P.	462	Saraph, H. E.	3051
Russell, H. N.	156,209	Sassi, M.	1987
Rustgi, M. L.	466	Sauter, H.	2556
Rutkowski, J.	2756	Savage, B. D.	1078,1108
Ruzov, V. P.	2393	Savich, I. G.	508
Rydberg, S.	1603,1907,1908, 2157,2482	Savukynas, A.	2068
Ryskalok, M.	2407	Sawada, T.	2408
Sabbagh, J.	3182	Saxena, K. M. S.	2702
Sachs, R. G.	342	Sayer, B.	1987
Sadeghi, N.	3182	Scalo, J. M.	2765,3199
Sadoine, M.	638	Schaad, L. J.	1441,1442,1443
Safronova, A. S.	3183,3184	Schaefer, A. R.	1988,1989,1990
Safronova, U. I.	1595,1790,1854, 1940,2171,2596, 2597,2721,2722, 2749,2807,2808, 2809,3050,3184, 3185,3186,3196, 3197	Schäfer, G.	1784
St. John, R. M.	1796	Schäfer, J.	1991,1992
Salajczyk, H.	2964	Schawlow, A. L.	2723
		Scheerer, L. D.	2598,3048,3049
		Schectman, R. M.	1462,1670,1671, 1699,1859,1948, 2409,2410
		Schenck, P.	2411
		Scherr, C. W.	1596

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Schiff, B.	897,1993	Seaman, G.	3071
Schimborski, B.	1923	Seaton, M. J.	477,514
Schlagheck, W.	1996,2256,2412, 2413,2812	Seehawer, J.	2801
Schlüter, A.	478	Seelbach, H. E.	1598
Schmid, G.	1347	Sek, G.	2384
Schmieder, R. W.	1385,1791,1994, 2139,2308	Seka, W.	1389
Schnapauff, R.	1386	Sellin, I. A.	1390,1794,1895, 1999,2151,2161, 2376,2388,2389, 2390,2414,2585, 2724,2784,3040, 3052,3176,3177
Schnur, P.	2883		
Schönberner, D.	1387	Semenov, R. I.	1391,2474
Schofield, D. G.	1444	Semenova, O. P.	1512,1599,1804
Scholz, P. D.	1388	Semyonov, R. I.	1795
Schouten, J. W.	262,263	Senashenko, V. S.	1392
Schramm, J.	1072,1208,1338	Sengupta, S.	2814,2922
Schrijver, J.	3187	Sepman, V. Yu.	2557
Schürmann, D.	1996,2158,2159, 2256,2412,2413, 2813	Serapinas, P. D.	1565
Schüssler, H. A.	991,1036	Sergeev, V. M.	1543
Schütte, G.	1362	Series, G. W.	898,947,2685, 3135
Schütz, W.	111,157	Setser, D. W.	2009
Schulz, H. H.	2306,2307,2949	Shabanova, L. N.	511,512,727, 787,788,793, 980,981,1236, 1344,2393,2394, 3081
Schulze-Hagenest, D.	3188		
Schulz-Gulde, E.	1597,1997,2160, 2660	Shadmi, Y.	2261
Schumann, S.	2717	Shamey, L. J.	1185,2000
Schuttevaer, J. W.	264,265	Shapiro, J.	547
Schweighofer, M. G.	2223	Sharpton, F. A.	1796
Scoarnec, L.	3132	Shaw, D. A.	2815
Scofield, J. H.	3068	Shaw, J.	822
Scourfield, M. W. J.	1998	She, C. Y.	1393
Scribner, B. F.	777	Shepherd, G. G.	977
Sealer, D. A.	1847		

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Sherstyuk, A.	2958	Siomos, K.	2522,2699,2728, 2818
Shevelko, V. P.	1661,2599	Sironas, J.	563
Shimazu, M.	2826	Sjödin, R.	2483
Shimoda, K.	3192	Skerbele, A.	2165
Shimon, L. L.	2937,2938,3189	Skinner, H. W. B.	42
Shipp, J. I.	1241	Skouboe, N. J.	2804
Shoffstall, D. R.	1699,1798,2410	Skulska, E.	825,1027
Shore, B. W.	994,995	Slater, J. C.	593
Shorer, P.	3190	Slavenas, J.-J.	789,790,901, 1109,1243
Shortley, G. H.	198,236,247,529	Slepchenko, N. S.	713
Shreider, E. Ya.	1041,1157,1292	Small-Warren, N. E.	2502,2819
Shrivastava, S.	2415	Smirnov, V. B.	2342,2870
Shtandel', G.	181	Smirnov, V. V.	2586
Shtoff, A. V.	1606	Smirnov, Yu. M.	2397,2406,2810, 2811
Shugart, H. A.	1986,2017,2172	Smit, J. A.	263,265,270, 433,516
Shumaker, J. B., Jr.	665,900,985, 1164,1242,1600, 2162,2600	Smith, A.	527
Sibincic, Z.	2163	Smith, E. R.	3057
Sichart, F.	1598	Smith, G.	2820
Siefert, E.	2601,2753	Smith, M. W.	1115,1619,2004, 2422,2423
Sigfridsson, B.	2286	Smith, P. L.	1800,2424,2425, 3058
Sijde, B. van der	2164,2416,3053	Smith, W. H.	1659,1801,1802, 2005,2006,2057, 2374,2510,2518, 2895,3120
Sills, R. M.	2352	Smith, W. W.	1110,1794,1895, 1999,2151,2161, 2388,2389,2390
Simons, G.	2602,3016	Smith-Saville, R. J.	1677
Simpson, J. R.	2879,2880	Snir, J.	1681
Sims, J. S.	2417,2565,3054	Sobolev, N. N.	266,1538
Sinanoglu, O.	1077,1615,1970, 2002,2061,2146, 2380,2382,2418, 2420,2421,2603, 2604,2684,2816, 2817,3006,3007, 3008,3009,3055, 3056		

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Sokolov, A. A.	1814	Stehling, W.	2798
Solarski, J. E.	903	Steinert, G.	2304
Solarz, R. W.	2902,2903,3059, 3123	Stephenson, G.	347
Soleillet, P.	71,144,158,218, 267,2007	Sternheimer, R. M.	2010
Solovev, V. N.	68	Steudel, A.	1076,1467,1468, 1524,1550
Sørensen, G.	1276,1445,1446, 1447,1648,1649, 1650,1651,1842, 1844,1845,1967, 2050,2051,2052, 2053,2054,2214, 2215,2216,2217, 2402,2403,2426, 2467,2468,2649, 3060	Stevenson, A. F.	112
Sorokina, E. S.	1130,1131	Stewart, A. L.	565,721,1395, 2092
Sosnowski, T. P.	1704	Stewart, J. C.	998
Specht, J. von	1394,1602,2605	Stewart, R. F.	2822,2823,2824, 3072,3073
Spector, N.	2952,3191	Stockbarger, D. C.	231
Spindler, E.	2798	Stoffregen, W.	595
Spitzer, L., Jr.	627	Stokes, A. D.	2011
Spitzer, M. (also Spitzer-Aronson, M.)	393,594,996, 2007	Stone, E. J.	2428
Stacey, D. N.	1557	Stone, P. M.	732
Starace, A. F.	2008,2427,2716	Stoner, J. O., Jr.	2364,2652,2709, 2869,2936,3061, 3062
Starikova, G. S.	2810,2811	Stredele, B.	1753
Stark, A.	2268	Strijland, J. C.	515
Startsev, G. P.	394,574,720,882, 905,906,970, 1099,1743,2337	Stroke, H. H.	1112
Statz, H.	795,997	Strugach, B. A.	1391
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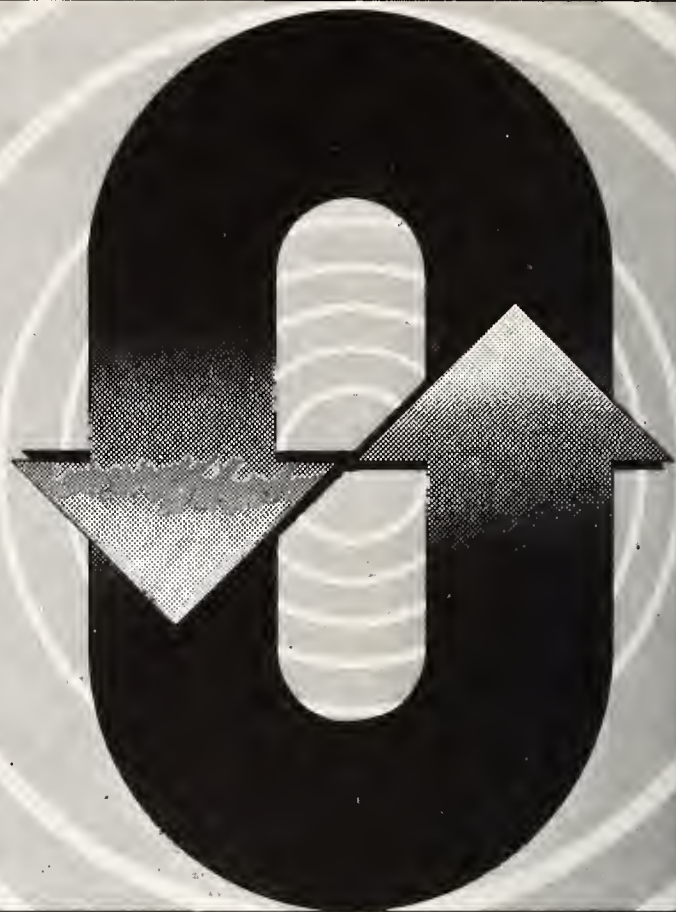
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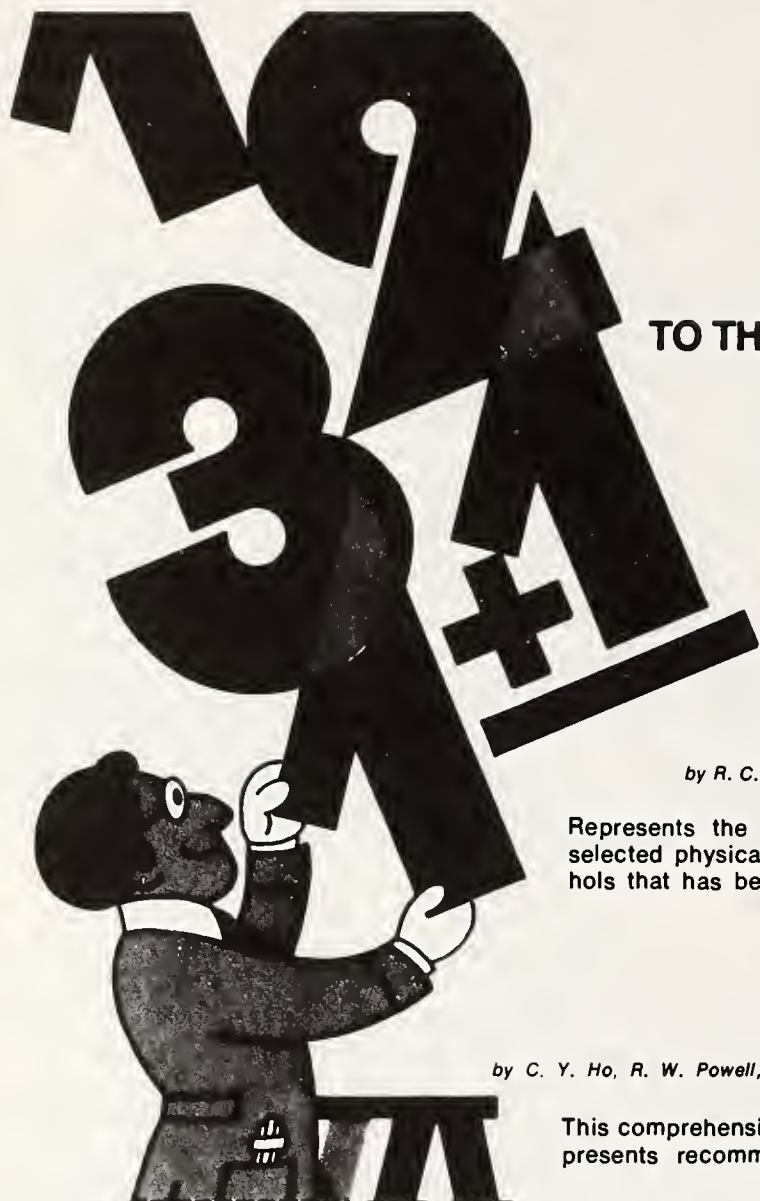
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