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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.

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

Contents

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):

$$a_o^2 e^2 = 7.188_4 \times 10^{-59} m^2 C^2;$$

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

$$a_o^4 e^2 = 2.012_9 \times 10^{-79} m^4 C^2;$$

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

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

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:

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

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.

A.3 References

[1] Fuhr, J. R. and Wiese, W. L., Bibliography on Atomic Transition Probabilities (July 1971 through June 1973), Nat. Bur. Stand. (U.S.) Spec. Publ. 320, Suppl. 2 (U.S. Government Printing Office, Washington, D.C., 1973).

[2] Miles, B. M. and Wiese, W. L., Bibliography on Atomic Transition Probabilities (January 1916 through June 1969), Nat. Bur. Stand. (U.S.) Spec. Publ. 320 (U.S. Government Printing Office, Washington, D.C., 1970).

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

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

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

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

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}=	———	$\frac{6.670_2\times10^{15}}{\lambda^2}\frac{g_i}{g_k}f_{ik}$	E_d $\frac{2.096_1\times10^{18}}{g_k\lambda^3}S$
			E_q $\frac{1.679_9\times10^{18}}{g_k\lambda^5}S$
			M_d $\frac{2.697_3\times10^{13}}{g_k\lambda^3}S$
Oscillator Strength f_{ik}=	$1.4992\times10^{-16}\lambda^2\frac{g_k}{g_i}A_{ki}$	———	E_d $\frac{303.7_6}{g_i\lambda}S$
			E_q $\frac{251.9}{g_i\lambda^3}S$
			M_d $\frac{4.043_8\times10^{-3}}{g_i\lambda}S$
Line Strength S=	E_d $4.935_5\times10^{-19}g_k\lambda^3A_{ki}$	E_d $3.292_1\times10^{-3}g_i\lambda f_{ik}$	———
	E_q $5.953\times10^{-19}g_k\lambda^5A_{ki}$	E_q $3.971\times10^{-3}g_i\lambda^3f_{ik}$	
	M_d $3.707_3\times10^{-14}g_k\lambda^5A_{ki}$	M_d $247.2_9g_i\lambda f_{ik}$	

C. BIBLIOGRAPHICAL MATERIAL

1. LITERATURE REFERENCES OF GENERAL INTEREST

1.1 TABLES OF NUMERICAL VALUES

Reference No.*	Author(s) and Title
160	H. E. White & A. Y. Eliason, Relative Intensity Tables for Spectrum Lines
187	L. Goldberg, Relative Multiplet Strengths in LS Coupling
209	H. N. Russell, Tables for Intensities of Lines in Multiplets
314	L. Biermann, Oscillator Strengths and Lifetimes of Excited States of Atoms, Atomic Ions, and Molecules
573	L. Goldberg, E. A. Müller, & L. H. Aller, The Abundances of the Elements in the Solar Atmosphere
587	W. Pearce, Plasma-Jet Temperature Measurement
686	C. H. Corliss & W. R. Bozman, Experimental Transition Probabilities for Spectral Lines of Seventy Elements
752	C. W. Allen, Astrophysical Quantities
890	N. P. Penkin, The Determination of Oscillator Strengths in Atomic Spectra
995	B. W. Shore & D. H. Menzel, Generalized Tables for the Calculation of Dipole Transition Probabilities
1115	W. L. Wiese, M. W. Smith, & B. M. Glennon, Atomic Transition Probabilities (Hydrogen through Neon--A Critical Data Compilation)
1575	B. M. Miles & W. L. Wiese, Critically Evaluated Transition Probabilities for Ba I and II

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

1619 W. L. Wiese, M. W. Smith, & B. M. Miles, Atomic Transition Probabilities (Sodium through Calcium--A Critical Data Compilation)

2179 W. L. Wiese & B. M. Glennon, Atomic Transition Probabilities

2324 G. A. Kasabov & V. V. Elissev, Oscillator Strengths of Spectral Lines

2374 D. C. Morton & W. H. Smith, A Summary of Transition Probabilities for Atomic Absorption Lines Formed in Low-Density Clouds

2423 M. W. Smith & W. L. Wiese, Atomic Transition Probabilities for Forbidden Lines of the Iron Group Elements (A Critical Data Compilation for Selected Lines)

2757 R. L. Kurucz & E. Peytremann, A Table of Semi-Empirical gf-Values

2832 W. L. Wiese & J. R. Fuhr, Atomic Transition Probabilities for Scandium and Titanium (A Critical Data Compilation of Allowed Lines)

1.2 LITERATURE COMPILATIONS

--No entries in this category--

1.3 REVIEW ARTICLES

Reference No.*	Author(s) and Title
84	R. Ladenburg, Experimental Test of the Quantum Theoretical Dispersion Formula
141	S. A. Korff & G. Breit, Optical Dispersion
176	A. C. G. Mitchell & M. W. Zemansky, Absorption Lines and Measurements of the Lifetime of the Resonance State
271	S. Mrozowski, Forbidden Lines in the Laboratory
367	L. H. Aller, The Emission and Absorption of Radiation

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

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

2146 C. Nicolaides & O. Sinanoglu, Atomic Transition Probabilities. New Experimental and Theoretical Results and Their Comparison

2178 W. L. Wiese, Regularities in Atomic Oscillator Strengths

2299 R. H. Garstang, Transition Probabilities

2435 A. W. Weiss, Correlation in Excited States of Atoms

2521 S. Feneuille, Theory of Atomic Structure and Transition Probabilities

2576 I. Martinson & A. Gaupp, Atomic Physics with Ion Accelerators--Beam-Foil Spectroscopy

2592 J. Richter, On the Present State of Oscillator Strengths Measurement

2730 A. Hibbert, Developments in Atomic Structure Calculations

2908 C. L. Cocke, Recent Developments (beam-foil spectroscopy)

2917 L. J. Curtis, Lifetime Measurements

2965 A. Hibbert, Recent Configuration Interaction Studies in Atomic Lifetimes

3052 I. A. Sellin, Highly Ionized Ions

3077 A. W. Weiss, Transition Probabilities for Ionized Atoms

3078 W. Wiese, Regularities of Atomic Oscillator Strengths in Isoelectronic Sequences

3109 H. G. Berry, Beam-Foil Spectroscopy

3149 R. E. Imhof & F. H. Read, The Measurement of Lifetimes in Atoms, Molecules, and Ions

1.4 FUNDAMENTAL RELATIONSHIPS AND BASIC CONCEPTS

Reference No.*	Author(s) and Title
2	A. Einstein, Radiative Emission and Absorption According to the Quantum Theory

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

3	A. Einstein, On the Quantum Theory of Radiation
5	R. Ladenburg, The Quantum Theoretical Interpretation of the Number of Dispersion Electrons
13	H. A. Kramers, The Law of Dispersion and Bohr's Theory of Spectra
25	W. Kuhn, On the Total Strength of the Absorption Lines Starting from the Same State
28	F. Reiche & W. Thomas, On the Number of Dispersion Electrons Which Are Related to a Stationary State
127	E. Wigner, On a Further Specification of the Sum Rule
139	J. G. Kirkwood, Extension of Sum Rules for Alkalis with an Application to the Stark Effect
342	R. G. Sachs & N. Austern, Consequences of Gauge Invariance for Radiative Transitions
466	J. S. Levinger, M. L. Rustgi, & K. Okamoto, Relativistic Corrections to the Dipole Sum Rule
1423	W. L. Wiese & A. W. Weiss, Regularities in Atomic Oscillator Strengths

1.5 DETAILED DESCRIPTIONS OF EXPERIMENTAL OR THEORETICAL METHODS

Reference No.*	Author(s) and Title
176	A. C. G. Mitchell & M. W. Zemansky, Absorption Lines and Measurements of the Lifetime of the Resonance State
303	D. R. Bates & A. Damgaard, The Calculation of the Absolute Strengths of Spectral Lines
453	H. A. Bethe & E. E. Salpeter, Quantum Mechanics of One- and Two-Electron Atoms
460	R. H. Garstang, The Computation of Quadrupole Line Strengths
464	D. R. Hartree, The Calculation of Atomic Structures

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

491 R. H. Garstang, Further Computations of Quadrupole Line Strengths

529 E. U. Condon & G. H. Shortley, Theory of Atomic Spectra

593 J. C. Slater, Quantum Theory of Atomic Structure

842 E. W. Foster, The Measurement of Oscillator Strengths in Atomic Spectra

890 N. P. Penkin, The Determination of Oscillator Strengths in Atomic Spectra

964 J. B. Levinsonas & A. A. Nikitin, Handbook for Theoretical Computation of Line Intensities in Atomic Spectra

1112 H. H. Stroke, Atomic Lifetimes and Electron Excitation

1171 R. L. DeZafra & W. Kirk, Measurement of Atomic Lifetimes by the Hanle Effect

1225 W. C. Marlow, Hakenmethode

1263 K. Ziock, Lifetime of Excited States

1282 W. S. Bickel, Mean Life Measurements Using the Beam-Foil Light Source

1357 D. Layzer & R. H. Garstang, Theoretical Atomic Transition Probabilities

1361 W. Lochte-Holtgreven, Plasma Diagnostics

1420 W. L. Wiese, Transition Probabilities for Allowed and Forbidden Lines; Lifetimes of Excited States

1484 R. J. S. Crossley, The Calculation of Atomic Transition Probabilities

1926 M. C. E. Huber, Interferometric Gas Diagnostics by the Hook Method

1929 R. E. Imhof & F. H. Read, A New Electron-Photon Coincidence Method for the Measurement of Lifetimes in Atoms and Molecules

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

2220 H. J. Andrä, A. Gaupp, & W. Wittmann, New Method for Precision Lifetime Measurements by Laser Excitation of Fast-Moving Atoms

2228 F. P. Banfield, M. C. E. Huber, W. H. Parkinson, & E. F. Tubbs, Instrumentation for Combined Dispersion and Absorption Measurements in the VUV

2269 A. Corney, Measurements of Transition Probabilities for Forbidden Lines of Neutral Atoms and Molecules

2284 G. W. F. Drake, Radiative Decay of the Metastable States of the H and He Sequences--Theory

2361 R. Marrus, Radiative Decay of the Metastable States of the H and He Sequences--Experiment

2362 R. Marrus, Forbidden Decay Modes of One- and Two-Electron Ions

2389 D. J. Pegg, P. M. Griffin, I. A. Sellin, W. W. Smith, & B. Donnally, Metastable States of Highly Excited Heavy Ions

2538 H. Harde & G. Guthöhrlein, New Method for Cascade-Free Lifetime Measurements

2696 P. Erman, High Resolution Measurements of Atomic and Molecular Lifetimes Using the High Frequency Deflection Technique

2826 Y. Takubo, D. Fujie, & M. Shimazu, The Hook Method with a Tunable Dye Laser

2986 J. Z. Klose, Measurement of Atomic Uranium Lifetimes for Isotope Separation

3014 G. A. Martin & W. L. Wiese, Atomic Oscillator-Strength Distributions in Spectral Series of the Lithium Isoelectronic Sequence

1.6 GENERAL COMMENTS

Reference No.*	Author(s) and Title
36	R. Ladenburg, The Dispersion Formula of Quantum Theory and Its Experimental Test

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

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

974 G. E. Norman, On the Application of the Coulomb Approximation to the Calculation of Transition Probabilities

1050 C. H. Dugan, Magnetic Quadrupole Transitions in Optical Radiation

1077 S. R. La Paglia & O. Sinanoglu, Theoretical Transition Probabilities

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

1413 B. Warner, Line Strengths in Two-Electron Spectra

1421 W. L. Wiese, Dependence of Atomic f-Values on Nuclear Charge

1422 W. L. Wiese, Systematic Trends of Atomic Oscillator Strengths in Isoelectronic Sequences

1486 E. Dekker, Calculation of the Multiplet Factor for more Complicated Transitions in LS-Coupling

1592 G. zu Putlitz, On Fermi's Paper Concerning Spin-Orbit Perturbation and the Intensity Ratios of Doublet Lines in Heavy Alkalis

1687 M. Carre, M. L. Gaillard, & J. L. Subtil, Cascade Corrections--Applications to Na II 3s-3p Transitions

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

1699 L. J. Curtis, R. M. Schectman, J. L. Kohl, D. A. Chojnacki, & D. R. Shoffstall, New Cascade Analysis Techniques for Determining Spontaneous Atomic Transition Probabilities

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

1719 H. Friedrich, K. Katterbach, & E. Trefftz, On the Accuracy of Machine Programs for Calculating Oscillator Strengths by Coulomb Approximation

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

1909 R. H. Garstang, Magnetic Multipole Transition Probabilities

1910 R. H. Garstang, Relativistic Radiative Transitions

2008 A. F. Starace, Length and Velocity Formulas in Approximate Oscillator-Strength Calculations

2019 R. K. Wangsness, Cascade Effects in Certain Atomic Lifetime Measurements

2020 F. Weinhold, Calculation of Upper and Lower Bounds to Oscillator Strengths

2062 H. G. Berry, L. J. Curtis, & J. L. Subtil, Cascade-Induced Alignment Changes of Intensity-Decay Curves

2069 R. A. Bonham, Determination of Optical Oscillator Strengths by Electron Impact Spectroscopy

2095 G. W. F. Drake, Relativistic Corrections to Radiative Transition Probabilities

2122 L. Kay, An Upper Bound on Mean Lives from Decay Curve Analysis

2302 P. T. Gee & K. T. Tang, Error Bounds on Dynamic Polarizability and Oscillator Strength

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

2422 M. W. Smith, G. A. Martin, & W. L. Wiese, Systematic Trends and Atomic Oscillator Strengths

2424 P. L. Smith, Oscillator Strengths of Astrophysical Interest from Lifetime Data

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

2686 E. O. Degenkolb & J. E. Griffiths, Temperature of the Meggers-Corliss-Scribner Copper Arc

2716 I. P. Grant & A. F. Starace, Gauge Invariance and Radiative Transition Probabilities

2789 C. A. Nicolaides & D. R. Beck, On the Length, Velocity, and Acceleration Expressions for the Calculation of Accurate Oscillator Strengths in Many-Electron Systems

2916 R. Crossley & S. Richards, Coulomb Methods in Atomic Transition Probability Calculations

3079 W. L. Wiese & S. M. Younger, Atomic Oscillator Strengths in Fusion Plasma Research

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

3148	J. D. Hey, The Role of the Oscillator Strength in the Determination of Plasma Densities

1.7 ENVIRONMENTAL INFLUENCES ON TRANSITION PROBABILITIES

Reference No.*	Author(s) and Title
44	B. Trumpy, On the Intensity and Width of Spectral Lines
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)

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

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

Description	Reference No.*
Al VI	
T: quant. forb.	969
(see also references on O sequence)	
Al VII	
T: quant. forb.	233
(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
(see also references on Be sequence)	
Al XI	
E: life forb.	2724,3027
(see also references on Li sequence)	
Al XII	
T: quant.	1185,2980,3129
(see also references on He sequence)	

Ar (Argon) Sequence

T: interp.	3160
quant.	1357

Ar (Argon)

Description	Reference No.*
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
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
life forb.	2172
T: CA	1372,2181,2623,2647, 2691,2997
quant.	946,1062,1203,1300, 1571,1654,1696,1786, 1877,2058,2223,2351, 2466,2474,2568,2616, 2718,2892,3160
quant. rel.	1372,1373
quant. forb.	2009,2102,2502,2819
Comment:	1222,1258,1492,1912, 2345,2791
(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
emiss. rel.	1478,2134,2608
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
misc.	2739
T: CA	380
quant.	997,1062,1240,1538, 1545,1911,1931,2133, 2673,3143,3157
quant. rel.	380
quant. forb.	1093
Comment:	1241,1769,1914,2416, 2665
Compilation:	2164
(see also references on Cl sequence)	

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

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

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

Description	Reference No.*

As (Arsenic)

	As I	
E:	life	2467
T:	quant.	2731
	quant. rel.	1220
	quant. forb.	848
	As II	
T:	quant.	1326,1611
	As III	
E:	life	2214,3103
T:	quant.	3018
	quant. forb.	848,1416
	As IV	
E:	life	2426
T:	quant.	1429,2620
	As V	
E:	life	2426
T:	quant.	2944

(see also references on Cu sequence)

Au (Gold)

	Au I	
E:	absorpt.	963,1097
	emiss.	520
	emiss. rel.	1722
	hook	790
	life	1037,1901
T:	quant.	1243,2056,2687,3021
	Au III	
T:	quant. rel.	1227
	Au XXXV	
T:	quant. forb.	3130
	Au XXXVI	
T:	quant. forb.	3130
	Au XLII	
T:	quant. forb.	3130

Description	Reference No.*
Au XLIII	
T: quant.	3130
quant. forb.	3130
Au XLIV	
T: quant.	3130
quant. forb.	3130
Au XLV	
T: quant.	3130
quant. forb.	3130
Au XLVI	
T: quant.	3130

(see also references on Se sequence)

Au XLVII	
T: quant.	3130
Au XLVIII	
T: quant.	3130
quant. forb.	3130
Au XLIX	
T: quant.	3130
quant. forb.	3130
Au L	
T: quant.	3130
quant. forb.	3130
Au LI	
T: quant.	3130

(see also references on Cu sequence)

Au LII	
T: quant.	3130
Au LIII	
T: quant. forb.	3130
Au LIV	
T: quant. forb.	3130
Au LX	
T: quant. forb.	3130
Au LXI	
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)

Description	Reference No.*
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)	
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)

Description	Reference No.*
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.

Description	Reference No.*
quant. forb.	2579
Comment:	1396
Ba II	
E: emiss.	1394
emiss. rel.	713
life	1035,1181,1482,1990, 2219,2220,2537,2538, 2654,2865,2949,3048, 3145,3200
T: CA	713
quant.	1412,2599
quant. forb.	1412
Ba IV	
T: quant. forb.	1416

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)

Be I	
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)	
Be II	
E: life	1446,1447,1760,1861, 1869,2112,2250
T: CA	2241,2769
quant.	801,1162,1441,1569, 1664,2144,2602,2775
quant. forb.	2500,2814
(see also references on Li sequence)	
Be III	
E: life	1446,2250
T: quant.	1053,1071,1161,1170, 1173,1180,1255,1293, 1392,1596,1993,2083, 2084,2759,2767,2922, 2954,3026
quant. forb.	1093,2117
(see also references on He sequence)	

Bi (Bismuth)

Bi I	
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
Bi II	
E: emiss. forb. rel.	2989
T: quant.	1326
quant. forb.	848
Bi III	
T: quant.	3018
quant. forb.	848,1416
Bi IV	
E: life	2053
Bi V	
E: life	2053
T: quant.	3021

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

Description	Reference No.*

Br (Bromine)

Br I

E:	absorpt.	2503
	emiss.	1857
T:	quant.	3143
	quant. rel.	1220
	quant. forb.	848,1416
Comment:		3064

Br II

E:	emiss.	2878
T:	quant.	1521
	quant. forb.	652,848

(see also references on Se sequence)

Br IV

E:	life	3044
T:	quant.	1611

Br V

E:	life	3178
T:	quant. forb.	1416

Br VI

E:	life	3154,3178
T:	interp.	2216,2426
	quant.	1429,2620,3130

Br VII

E:	life	3154,3178
T:	interp.	2216,2426
	quant.	3130

(see also references on Cu sequence)

Br VIII

T:	quant.	3130

Br XXXI

T:	quant.	2420,2421,3056

(see also references on B sequence)

C (Carbon) Sequence

T:	estim.	3168
	interp.	2004

Description	Reference No.*

	quant.	833,1062,1377,1595, 1611,2418,2566,2809
	quant. rel.	1377
	quant. forb.	969,1052,1093

C (Carbon)

C I

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)

C II

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)

C III

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.

Description	Reference No.*
quant. (cont.)	2075,2147,2148,2347, 2380,2477,2540,2544, 2563,2823,2824,2830, 2966,3016,3026,3055, 3183

(see also references on Be sequence)

C IV

E:	life	927,1760,1761,1946, 1983,1985,2236,2255, 2987
T:	quant.	801,1162,1415,1441, 2128,2775
	quant. forb.	1415,2500

(see also references on Li sequence)

C V

E:	life	1712,1761,1983,1985, 2254,2255,2987
T:	quant.	1161,1170,1173,1255, 1392,1596,1993,2083, 2084,2759,2767,2922, 3026
	quant. forb.	1093,1485,1507,2117

(see also references on He sequence)

Ca (Calcium)

Ca I

E:	absorpt.	2135,2820
	absorpt. rel.	539
	emiss.	866
	hook	793,3039
	hook rel.	67,134,654
	life	859,876,1110,1158, 1338,1467,1468,1649, 1801,1842,2006,2306, 2556,2618,2694,2707, 2714,2953,3147
T:	CA	1510,2241
	quant.	1130,1191,1205,1352, 1502,1568,2109,2124, 2292,2466,2575,2620, 3036,3072,3170
Comment:		1466

Ca II

E:	life	1181,1649,1801,2006, 2694,3048
T:	CA	1510,2241
	quant.	689,1256,1412,1569, 1787,2026,2065,2184, 2431,3036
	quant. forb.	340,1412,1554,1839

(see also references on K sequence)

Ca III

E:	life	2649,2694
T:	quant.	1062,1300,1696,2223, 2534,3160
	quant. rel.	1373

(see also references on Ar sequence)

Ca IV

T:	quant. forb.	1093

(see also references on Cl sequence)

Ca V

E:	life	2215,2649
T:	quant.	2221

(see also references on S sequence)

Ca VI

T:	CA	2548
	quant.	1645
	quant. forb.	233

Ca VII

T:	quant.	1062,2476,2479,2603, 3055
	quant. forb.	1073

(see also references on Si sequence)

Ca VIII

T:	quant.	1062

(see also references on Al sequence)

Ca IX

T:	quant.	1261

(see also references on Mg sequence)

Ca X

T:	quant.	998,2704,2946

(see also references on Na sequence)

Ca XII

T:	quant.	2779

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

Description	Reference No.*
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
	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

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
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.

Description	Reference No.*
life	2590
T: CA	1250
quant.	1384,1408,1747,2341, 2993
quant. rel.	704
quant. forb.	1747
Comment:	3058

Co III

T: quant.	2885
quant. forb.	1594

Co VIII

T: quant.	1610
quant. forb.	1610

Co X

T: quant. forb.	1608

(see also references on Ar sequence)

Co XII

T: quant. forb.	891,1073

(see also references on S sequence)

Co XV

T: quant. forb.	891,2511

(see also references on Al sequence)

Co XVII

T: quant.	1766,2016
quant. forb.	2170

(see also references on Na sequence)

Co XIX

T: quant.	1295

(see also references on F sequence)

Co XX

T: quant.	1921

(see also references on O sequence)

Cr (Chromium)

Cr I

E: absorpt.	1336,2887
emiss.	1426,1621,2268
hook	2732
life	1880,2360,2395,2778, 2964,3060,3108,3167
T: quant.	2948

Cr II

E: absorpt.	1336
emiss.	1426
life	2395,2695
T: quant.	2993
quant. forb.	848,1775
Comment:	3058

Cr III

E: life	3104
T: quant.	1553,2885

Cr IV

T: quant. forb.	233,848,1594

Cr V

T: quant.	1610
quant. forb.	1610

Cr VI

T: quant.	1166

(see also references on K sequence)

Cr VII

T: quant.	1300,1696
quant. rel.	1373
quant. forb.	1608

(see also references on Ar sequence)

Cr IX

T: quant. forb.	233,1073,2511

(see also references on S sequence)

Cr X

T: CA	2548
quant.	1645

Cr XI

T: interp.	2479
quant. forb.	891,1073,3130

(see also references on Si sequence)

Cr XII

T: quant. forb.	3130

(see also references on Al sequence)

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

Description	Reference No.*
Cr XIII	
T: quant. forb.	3130
(see also references on Mg sequence)	
Cr XV	
T: quant. forb.	3130
(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
(see also references on Be sequence)	
Cr XXII	
T: quant. forb.	2500
(see also references on Li sequence)	

Description	Reference No.*
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
Cs IV	
T: quant.	1521
(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

Cu IV

T:	quant.	3017
	quant. rel.	3017

Cu XII

T:	quant. forb.	1608

(see also references on Ar sequence)

Cu XIX

T:	quant.	998

(see also references on Na sequence)

Cu XXI

T:	quant.	1295,2261

(see also references on F sequence)

Description		Reference No.*

Cu XXII

T:	quant.	1921

(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

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,
	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.

Description	Reference No.*
quant.	994,998,1384,1408, 1937,2405,2564
quant. rel.	296
estim. forb.	1516
quant. forb.	1917
Comment:	208,290,414,502,559, 611,650,651,718,776, 835,894,1043,1167, 1856,2889,2913,3058
Compilation:	835

Fe II

E:	absorpt.	1513
	emiss.	729,1658,2025,2248, 2425
	emiss. rel.	74,266,316,373,970, 1250
	hook	2543
	life	1800,2057,2895
	misc.	564,629,756,1144, 2490
T:	CA	1250
	estim.	156
	quant.	1552,1745,1951,2341, 2993
	quant. rel.	110
	quant. forb.	698,1594,1774
Comment:		3058

Fe III

E:	emiss. rel.	1848
	life	3104
T:	CA	1000
	estim.	627
	quant.	2885
	quant. forb.	461

Fe IV

T:	quant. forb.	492

Fe V

T:	quant. forb.	461

Fe VI

T:	quant. forb.	233,848

Fe VII

T:	quant.	1610
	quant. forb.	233,848,1610

Fe VIII

T:	quant.	1044,1166,2683,3130
	quant. forb.	1044

(see also references on K sequence)

Fe IX

T:	quant.	1179,1300,1311,1696, 2099,3136,3160
	quant. rel.	1373
	quant. forb.	1507,1608,2018,3136

(see also references on Ar sequence)

Fe X

E:	misc.	588
	misc. forb.	276
T:	quant.	1179,1311,2023,2099, 2779,3032,3115
	quant. forb.	251,959,2511,2779, 3166
Comment:		702

(see also references on Cl sequence)

Fe XI

E:	misc. forb.	276
T:	quant.	1179,1311,2023,2099, 2779,3115
	quant. forb.	233,251,959,2779, 3166

(see also references on S sequence)

Fe XII

T:	CA	2548
	quant.	1311,1593,1645,2023, 2099
	quant. rel.	3137
	estim. forb.	959
	quant. forb.	1073,2102,3137

Fe XIII

E:	misc. forb.	276
T:	quant.	1196,1311,2023,2099, 2235,2479,2526,2603, 3055
	quant. forb.	251,775,959,1073, 2293,3130

(see also references on Si sequence)

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

Description		Reference No.*
	Fe XIV	
E:	misc. forb.	276
T:	CA	702
	quant.	307,458,1111,1311, 1866,2023,2099,2779, 2945
	quant. forb.	251,702,959,1111, 2511,2779,3130
(see also references on Al sequence)		
	Fe XV	
T:	quant.	693,846,959,1111, 2099,2271,3106,3130
	quant. forb.	251,340,455,959, 1507,3130
(see also references on Mg sequence)		
	Fe XVI	
T:	CA	2548
	quant.	846,959,998,1111, 1357,1766,2016,2704, 2946,3130
	quant. forb.	959,2170
Comment:		1172
(see also references on Na sequence)		
	Fe XVII	
T:	CA	2906
	quant.	1056,1179,1956,2774, 3183
	quant. rel.	1457
	quant. forb.	1507,3130
(see also references on Ne sequence)		
	Fe XVIII	
T:	CA	2906,2977
	quant.	2261,2926,3119
	quant. forb.	2926,3130
(see also references on F sequence)		
	Fe XIX	
T:	CA	2548,2906
	quant.	2520,2689,2722,3117, 3119
	CA forb.	2548
	quant. forb.	3130
(see also references on O sequence)		

Description		Reference No.*
	Fe XX	
T:	CA	2548
	quant.	2520,2689,2722,3116
	CA forb.	2548
	quant. forb.	3130
(see also references on N sequence)		
	Fe XXI	
T:	CA	2548
	quant.	2000,2520,2689,2698, 2722,3118
	CA forb.	2548
	quant. forb.	3130
(see also references on C sequence)		
	Fe XXII	
T:	quant.	1480,2520,2689,2698, 2722
	quant. forb.	3130
(see also references on B sequence)		
	Fe XXIII	
T:	quant.	1480,2093,2147,2698, 2722,3077,3130
	quant. forb.	1507,2760
(see also references on Be sequence)		
	Fe XXIV	
T:	quant.	1480,2093,2101,2171, 3130
	quant. forb.	2500
(see also references on Li sequence)		
	Fe XXV	
E:	life	3142
	life forb.	2532
T:	quant.	1480,2171,2722
	quant. forb.	1507,2974
(see also references on He sequence)		

Ga (Gallium)

	Ga I	
E:	absorpt.	963,1236
	absorpt. rel.	1757

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

Description	Reference No.*
emiss.	448
emiss. rel.	874
hook	510,512,787,788,980, 1236
hook rel.	980
life	613,658,687,1169, 1842,1972,2054,2213, 2937,3146
T: quant.	1061,2056,2238,3019
quant. rel.	2368
quant. forb.	848,1416
Comment:	447,575,981

Ga II

E: life	2054,2426
T: quant.	857,1429,2620

Ga III

E: life	2054,2426
T: quant.	2944,3020

(see also references on Cu sequence)

Ga V

T: quant.	1337

Gd (Gadolinium)

Gd I

E: hook rel.	2391,3042
life	2795

Ge (Germanium)

Ge I

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

Description	Reference No.*

Ge II

E: emiss.	2369
life	3103
T: quant.	2339,3022
quant. rel.	2339
quant. forb.	848,1416

Ge III

E: life	2426
T: quant.	1429,2620

Ge IV

E: life	2426

(see also references on Cu sequence)

Ge VI

T: quant.	1337

Ge XXIII

T: quant.	2674

(see also references on Ne sequence)

Ge XXIV

T: quant.	3122

(see also references on F sequence)

H (Hydrogen) Sequence

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

H (Hydrogen)

H I

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.*
	quant. (cont.)	642,880,1323,1476, 1574,2123,2658,2837
	quant. forb.	1814,2121

(see also references on H 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)

He I

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
	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.	881,1093,1183,1310, 1933,2085,2117,2898, 2956
Comment:		938,961,1222,2927

(see also references on He sequence)

He II

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)

Hf II

E:	life	2863

Hg (Mercury)

Hg I

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.

Description	Reference No.*
life (cont.)	1226,1231,1358,1380, 1685,1705,1784,1842, 1888,1893,2217,2542, 2555,2582,2584,2748, 2794,2835,2905
misc.	463,820,1982,2165, 2713
absorpt. forb.	1143
life forb.	2234
T: quant.	325,358,362,479,701, 734,857,998,1069, 1132,1191,1284,2575, 2687
quant. rel.	228,406,735,1206
quant. forb.	1143,1183
Comment:	17,44,103,153,224,515
Comment (forb.):	77

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

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

Description	Reference No.*

I II

T: quant.	1521
quant. forb.	580,848

(see also references on Te sequence)

In (Indium)

In I

E: absorpt.	527,963,1236,2407
emiss. rel.	498
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

K (Potassium) Sequence

T: quant.	2886,3110

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.

Description	Reference No.*
quant.	363,817,1256,1328, 1412,1569,1661,2010, 2021,2026,2175,2516, 2602,2655
quant. forb. rel.	1262
quant. forb.	1318,1412,1839

(see also references on K sequence)

K II

E:	life	1651,1668,1678,1984, 2338
T:	quant.	1062,1300,1696,2223, 2356,3160
	quant. rel.	1373

(see also references on Ar sequence)

K III

E:	life	1651,1984
T:	quant.	3157
	quant. forb.	1093

(see also references on Cl sequence)

K IV

E:	life	2215,2649
T:	quant.	2221

(see also references on S sequence)

K V

E:	life	2215,2649
T:	quant.	1645,2221

K VI

T:	interp.	2479
	quant.	1062,2476

(see also references on Si sequence)

K VII

T:	quant.	1062,2945

(see also references on Al sequence)

K IX

T:	quant.	2026

(see also references on Na sequence)

K XI

T:	quant. forb.	891,1073,2511

(see also references on F sequence)

Description	Reference No.*

K XII

T:	quant. forb.	969

(see also references on O sequence)

K XIII

T:	quant.	3116

(see also references on N sequence)

K XIV

T:	quant. forb.	1073

(see also references on C sequence)

Kr (Krypton)

Kr I

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

Kr II

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

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

Description	Reference No.*
Kr III	
E: life	1717,2969
T: quant.	1521
quant. forb.	340,848
(see also references on Se sequence)	
Kr IV	
E: life	2969,2998
Kr V	
E: life	2969,2998,3044
Kr VI	
E: life	2969,2998,3044
Kr VII	
E: life	2928,2969,2998,3044, 3154
T: interp.	2216,2426
quant.	3130
Kr VIII	
E: life	2928,2969,3044,3154
T: interp.	2216,2426
quant.	2944,3130
(see also references on Cu sequence)	
Kr IX	
T: quant.	3130
Kr XVIII	
T: quant.	3130
quant. forb.	3130
(see also references on K sequence)	
Kr XIX	
T: quant. forb.	3130
(see also references on Ar sequence)	
Kr XX	
T: quant. forb.	3130
(see also references on Cl sequence)	
Kr XXI	
T: quant. forb.	3130
(see also references on S sequence)	
Kr XXII	
T: quant. forb.	3130

Description	Reference No.*
Kr XXIII	
T: quant. forb.	3130
(see also references on Si sequence)	
Kr XXIV	
T: quant. forb.	3130
(see also references on Al sequence)	
Kr XXV	
T: quant.	3130
quant. forb.	3130
(see also references on Mg sequence)	
Kr XXVI	
T: quant.	3130
(see also references on Na sequence)	
Kr XXVIII	
T: quant. forb.	3130
(see also references on F sequence)	
Kr XXIX	
T: quant. forb.	3130
(see also references on O sequence)	
Kr XXX	
T: quant. forb.	3130
(see also references on N sequence)	
Kr XXXI	
T: quant. forb.	3130
(see also references on C sequence)	
Kr XXXII	
T: quant. forb.	3130
(see also references on B sequence)	
Kr XXXIII	
T: quant.	3077,3130
(see also references on Be sequence)	
Kr XXXIV	
T: quant.	3130
(see also references on Li sequence)	
Kr XXXV	
E: life	2956,3142
life forb.	2956

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

Description	Reference No.*
T: quant.	2956
quant. forb.	2956,2974

(see also references on He sequence)

La (Lanthanum)

La I

E: life	1730,1731,1732

La II

E: life	2650,3105
misc. rel.	564

La III

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)

Li I

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)

Li II

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)

Li III

E: life	2158,2159,2256

(see also references on H sequence)

Lu (Lutetium)

Lu I

E: life	1726,1727,1913,2304
Compilation:	2891

Lu II

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)

Mg I

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,

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

Description	Reference No.*
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
CA forb.	2548

(see also references on C sequence)

Mg VIII

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

(see also references on B sequence)

Mg IX

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

Mn VI

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

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

Description	Reference No.*
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
Mo IX	
T: quant.	2904
(see also references on Se sequence)	
Mo XIII	
T: quant.	3130
Mo XIV	
T: quant.	2944,3130
(see also references on Cu sequence)	
Mo XV	
T: quant.	3130,3160
Mo XVI	
T: quant. forb.	3130
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

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

Description	Reference No.*
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

Description	Reference No.*

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.

Description		Reference No.*
	N III	
E:	emiss.	1500
	life	1223,1307,1589,1688, 1782,1859,1890,1927, 2072,2097,2514,2553, 2929,2982,3125
T:	interp.	1612
	quant.	368,863,864,998,1100, 1543,1615,1964,1974, 2347,2378,2563,3055, 3156
	quant. forb. rel.	1527
	quant. forb.	887,975
Compilation:		2514
(see also references on B sequence)		
	N IV	
E:	life	1223,1283,1307,1497, 1589,1688,1859,1890, 2072,2097,2493,2514, 2553,2929,2982,3000, 3125
T:	quant.	437,863,864,983,1062, 1077,1100,1111,1499, 1581,1770,2075,2147, 2277,2347,2380,2477, 2540,2544,2823,2830, 2966,3016,3026,3055, 3183
Compilation:		2514
(see also references on Be sequence)		
	N V	
E:	life	927,1223,1461,1657, 1712,1859,1890,2072, 2097,2254,2493,2553, 2661,2929,2982,2987, 2988
	life forb.	2717
T:	CA	2661
	quant.	801,864,1415,1441, 1664,2775
	quant. forb.	1415
(see also references on Li sequence)		
	N VI	
E:	life	1390,1712,1890,2254, 2493,2929
T:	quant.	1170,1173,1255,1392, 1596,1993,2083,2084, 2759,3026
	quant. forb.	1093,2117
(see also references on He sequence)		
	N VII	
E:	life	1712,1890
(see also references on H sequence)		

Na (Sodium) Sequence

T:	CA	1950
	estim.	3168
	interp.	2004,2946
	quant.	1168,1838,1940,2667, 2761,2915,2943,2947, 2950,3110

Na (Sodium)

	Na I	
E:	hook	285,1316
	hook rel.	76,1968
	life	347,1072,1169,1212, 1327,1387,1425,1452, 1456,1651,1667,1678, 1764,1765,1791,1806, 1842,1894,2050,2098, 2307,2483,2518,2710, 2736,2951,2961
	misc.	2723,3041
	misc. forb.	1532
T:	CA	632,1207,1510,2241, 2958
	estim.	1363
	quant.	88,294,817,1040,1322, 1328,1357,1412,1567, 1569,1971,2010,2014, 2021,2026,2107,2175, 2335,2516,2602,2655, 2711,2894,2946
	quant. forb. rel.	1262
	quant. forb.	1412,1839,2169
Comment (forb.):		2365
(see also references on Na sequence)		
	Na II	
E:	life	1650,1651,1687,1899, 2259,2812

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

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

Na III

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

Na IV

E: life	1899,2251
T: quant.	563,3055
quant. forb.	969
(see also references on O sequence)	

Na V

E: life	2251
T: quant.	2923
quant. forb.	233
(see also references on N sequence)	

Na VII

T: interp.	1612
quant.	2705
quant. forb. rel.	1527
quant. forb.	2705
(see also references on B sequence)	

Na VIII

T: quant.	2147,2830
(see also references on Be sequence)	

Na X

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

Nb (Niobium)

Nb VII

T: quant.	2498
quant. forb.	1416

Nb VIII

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

Description	Reference No.*

Nd (Neodymium)

Nd I

E: hook rel.	2392,3042

Nd II

E: life	2650
Comment:	2015

Nd LIX

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)

Ne I

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.

Description		Reference No.*
	misc.	157,869,1389,1561, 1725,2129,2766,2910, 3198
	life forb.	2172
T:	CA	1348,1372,2107,2310, 2645,2646,2768,2996, 2997
	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
	quant. rel.	198,219,839,1372, 1393,1798,2410,2768
	quant. forb.	2009,2502,2819
Comment:		198,867,1259

(see also references on Ne sequence)

Ne II

E:	emiss.	867,1064,1733
	emiss. rel.	2134
	life	1108,1232,1334,1488, 1674,1700,1717,1729, 1938,2320,2350,2510, 2512,2558,2584,3152, 3165
T:	CA	380
	quant.	884,941,1545,1615, 1931,1957,2187,2378, 2563,2673,2875,3055
	quant. rel.	380
	quant. forb.	975,1093
Comment:		1781

(see also references on F sequence)

Ne III

E:	emiss.	1064
	life	1334,1700,1717,1938, 2320,2558,3152
T:	quant.	563,2378,2563,3055
	quant. forb.	333,975,1093

(see also references on O sequence)

Ne IV

E:	emiss.	1064
	life	822,1021,1700,1938, 2320,2672,3152
T:	quant.	2347,2875,2923,3055
	quant. forb.	333,569

(see also references on N sequence)

Ne V

E:	emiss.	1064
	life	1700,1938,2320,2672, 3152
T:	CA	2548
	quant.	425
	CA forb.	2548
	quant. forb.	975

(see also references on C sequence)

Ne VI

E:	emiss.	1064
	life	822,1021,1688,1700, 1938,2320,2672,3044, 3152
T:	quant.	1100,1612,2000,2347
	quant. forb.	887

(see also references on B sequence)

Ne VII

E:	emiss.	1064
	life	2060,2230,2320,2478, 2672
T:	quant.	1100,1499,2075,2147, 2347,2380,2540,2544, 2823,2830,2966,2983, 3016,3026,3055,3130

(see also references on Be sequence)

Ne VIII

E:	emiss.	1064
	life	927,1712,1946,2230, 2254,2478,2659
	life forb.	2717
T:	quant.	801,1664,2096,2983, 3130
	quant. forb.	2500

(see also references on Li sequence)

Ne IX

E:	life	1712,2254
T:	quant.	1170,1173,1255,1392, 1596,1993,2722,2759, 2956,3026
	quant. forb.	1485,1507,2117,2956, 2974

(see also references on He sequence)

*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)

Description	Reference No.*
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
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.

Description		Reference No.*
	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
(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,
	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)		
	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,

*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,
	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

(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

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

Description	Reference No.*
T: quant.	1357,2599
(see also references on Na sequence)	
P VII	
T: quant. forb.	1093
(see also references on F sequence)	
P VIII	
T: quant. forb.	969
(see also references on O sequence)	
P XI	
T: interp.	1612
quant.	2420,2421,3056
(see also references on B sequence)	

Pb (Lead)

Pb I	
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
Pb II	
E: emiss.	1032
emiss. rel.	1247
emiss. forb.	1067
T: quant.	2562,3022
quant. rel.	2562
quant. forb.	848,1067,1416

Description	Reference No.*
Pb III	
E: emiss. rel.	1247
life	2053
T: quant. rel.	1206
Pb IV	
E: emiss. rel.	1247
life	2053
T: quant.	3121
Pb LIII	
T: quant.	3130
Pb LIV	
T: quant.	3130
(see also references on Cu sequence)	
Pb LV	
T: quant.	3130
Pb LXIV	
T: quant.	3130
(see also references on K sequence)	

Pd (Palladium)

Pd I	
E: absorpt.	963,2091
life	1288,1851,1924,2571

Po (Polonium)

Po I	
T: quant. forb.	848

Pr (Praseodymium)

Pr II	
E: emiss.	2994
life	2468,2650

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

Description	Reference No.*

Rb (Rubidium)

Rb I

E:	absorpt.	2831
	absorpt. rel.	2557
	emiss.	2290
	emiss. rel.	951,2557
	hook	87
	hook rel.	181,430
	life	347,408,762,991, 1036,1084,1174,1182, 1382,1647,1791,1855, 2309,2528,2570,2825, 2899,2957,2975,3010, 3030
	misc.	1287,3046
	absorpt. forb.	3173
	misc. forb.	1531
T:	CA	632,1207
	estim.	1363
	quant.	112,754,1328,1412, 1569,2010,2026,2175
	quant. rel.	420,1529
	quant. forb. rel.	1262
	quant. forb.	1412
Comment (rel.):		179

Rb II

E:	life	2338,2709,2920
T:	quant.	1190
	quant. rel.	475

Rb III

T:	quant. forb.	848,1416

Rb IV

T:	quant.	1521

(see also references on Se sequence)

Rb VIII

T:	interp.	2216,2426

Rb IX

T:	interp.	2216,2426

(see also references on Cu sequence)

Description	Reference No.*

Rh (Rhodium)

Rh XLI

T:	quant.	2420,2421,3056

(see also references on B sequence)

Rn (Radon)

Rn II

T:	quant. forb.	269,848,1416

Ru (Ruthenium)

Ru I

T:	CA	573

S (Sulfur) Sequence

T:	quant.	1062,1523,1920
	quant. forb.	969

S (Sulfur)

S I

E:	emiss.	1146,1175,1371,1997, 2580
	emiss. rel.	1347
	life	1108
	emiss. forb. rel.	1365
	emiss. forb.	2744
T:	CA	2241
	quant.	2221,2222,3157
	quant. rel.	1220
	quant. forb.	761

(see also references on S sequence)

S II

E:	emiss.	1146,1371,1718,1997, 2580
	life	1108,1555,1671,1693, 2776
T:	CA	380

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

Description	Reference No.*
quant.	1062,2061,2221,2222, 2418,3157
quant. rel.	380
quant. forb.	761

S III

E:	life	1671,2322,2930,2970, 3001,3002
T:	quant.	1062,1325,1611,2061, 2418,2476,2479,3055, 3157
	quant. forb.	761

(see also references on Si Sequence)

S IV

E:	life	1671,2322,2930,2970
T:	quant.	1062,2026,2945

(see also references on Al sequence)

S V

E:	life	1671,2322,2355,2871, 2930,2970,2999
T:	quant.	3073

(see also references on Mg sequence)

S VI

E:	life	1671,2322,2871,2930, 2970,2999
T:	quant.	1357,2704,2946

(see also references on Na sequence)

S VIII

T:	quant.	1209
	quant. forb.	1093

(see also references on F sequence)

S IX

T:	CA	2548
	quant.	1209
	CA forb.	2548
	quant. forb.	969

(see also references on O sequence)

S X

E:	life	3040
T:	CA	2548
	quant.	1209,1536
	CA forb.	2548

(see also references on N sequence)

Description	Reference No.*

S XI

E:	life	3040
T:	CA	2548
	quant.	1209
	CA forb.	2548

(see also references on C sequence)

S XII

E:	life	3040
T:	quant.	1209,2000,2705
	quant. forb.	891,1073,2511,2705

(see also references on B sequence)

S XIII

E:	life	3040,3177
T:	quant.	2147

(see also references on Be sequence)

S XIV

E:	life	2798,3176,3177
	life forb.	2507,2585,2724
T:	quant. forb.	2500

(see also references on Li sequence)

S XV

E:	life	2798,3069,3070
	life forb.	2504,2507,2662
T:	quant.	2722,2974
	quant. forb.	2974

(see also references on He sequence)

S XVI

E:	life	1994,2798

(see also references on H sequence)

Sb (Antimony)

Sb I

E:	absorpt.	967
	life	2298,2467,2482
T:	quant.	1326,2731
	quant. forb.	848

Sb II

T:	quant.	1611

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

Description	Reference No.*
Sb III	
E: life	2214,3103
T: quant.	3018
quant. forb.	848,1416
Sb IV	
E: life	2053
Sb V	
E: life	2053

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
(see also references on Ar sequence)	
Sc VII	
T: quant.	1645
Sc VIII	
T: interp.	2479
(see also references on Si sequence)	
Sc IX	
T: quant. forb.	887
(see also references on Al sequence)	
Sc XIII	
T: quant.	1295,2261
(see also references on F sequence)	

Se (Selenium) Sequence

T: quant.	1920

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
Se III	
T: quant.	1611
Se IV	
E: life	3103
T: quant. forb.	1416
Se V	
E: life	2426
T: quant.	1429,2620
Se VI	
E: life	2426
(see also references on Cu sequence)	
Se XXV	
T: quant.	2674
(see also references on Ne sequence)	
Se XXVI	
T: quant.	3122
(see also references on F sequence)	

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

Description	Reference No.*

Si (Silicon) Sequence

T:	quant. forb.	969

Si (Silicon)

Si I

E:	absorpt. rel.	1757
	emiss.	535,1597,1885,2160, 2301
	emiss. rel.	1347,1577,1817
	hook rel.	901
	life	1108,1220,2360,2510
T:	CA	1510,2241
	quant.	703,1062,1325,1411, 1451,1611,1696,1787, 2476,2541,3157
	quant. rel.	1220,1413
	quant. forb.	1411

(see also references on Si sequence)

Si II

E:	emiss.	535,1597
	emiss. rel.	1655,1817
	life	1108,1860,1882,2319, 2322,2510,3001,3002, 3003
T:	CA	1510,2241
	quant.	1054,1062,1172,1315, 2061,2184,2339,2418, 2788,2945,3022,3157, 3175
	quant. rel.	1349,2339
	quant. forb.	1093,3175
Comment:		1399

(see also references on Al sequence)

Si III

E:	emiss. rel.	1655
	life	1678,1860,2319,2322, 2355,2510,2999,3001, 3002,3003
T:	quant.	1254,1261,1604,2061, 2184,2418,3073,3157

(see also references on Mg sequence)

Description	Reference No.*

Si IV

E:	life	1678,1860,2319,2322, 2999,3003
T:	quant.	689,1040,1357,1415, 2026,2599,2704,2946, 3055
	quant. rel.	1349
	quant. forb.	1415

(see also references on Na sequence)

Si V

E:	life	3001,3003,3140
T:	quant.	2822,3055,3140

(see also references on Ne sequence)

Si VI

E:	life	3140
T:	quant.	1209,2379,2875,3055
	quant. forb.	1093

(see also references on F sequence)

Si VII

T:	CA	2548
	quant.	1209,2379,3055,3117
	CA forb.	2548
	quant. forb.	969,2705

(see also references on O sequence)

Si VIII

E:	life	3194
T:	CA	2548
	quant.	1179,1209,2379,2875, 2923,3055,3116
	CA forb.	2548
	quant. forb.	233,2102

(see also references on N sequence)

Si IX

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.

Description	Reference No.*
Si X	
E: life	3194
T: CA	702
interp.	1612
quant.	1209,1713,2000,2379, 2705,2789,2921
quant. forb. rel.	1527
quant. forb.	702,2102
(see also references on B sequence)	
Si XI	
E: life	3194
T: quant.	2147,2379,2380,2830, 3016
quant. forb.	1183,2760
(see also references on Be sequence)	
Si XII	
E: life	3194
life forb.	2724
T: quant.	2101
quant. forb.	2500
(see also references on Li sequence)	
Si XIII	
E: life	3069,3071
T: quant.	1185
quant. forb.	1507
(see also references on He sequence)	

Sm (Samarium)

Sm I	
E: hook rel.	1742,3042,3113
life	1524,3114
Sm II	
E: life	2650

Sn (Tin)

Sn I	
E: absorpt.	963,2091
absorpt. rel.	644,711,770,1757, 2796
emiss.	448,591,1234,3005, 3080
emiss. rel.	644,770
hook	789
life	1148,1220,1309,2051, 2111
misc. rel.	1958
T: quant.	643,1326,1611,2541
quant. rel.	1220
quant. forb.	848
Comment:	447,770
Sn II	
E: emiss.	3080
life	3103
T: quant.	2562,3022
quant. rel.	2562
quant. forb.	848,1416
Sn III	
E: life	2053
Sn IV	
E: life	2053
Sn XXI	
T: quant.	3130
Sn XXII	
T: quant.	2495,2944,3130
(see also references on Cu sequence)	
Sn XXIII	
T: quant.	2495,3130
Sn XXIV	
T: quant.	2495
Sn XLVI	
T: quant.	3056
(see also references on B sequence)	
Sn L	
T: quant.	2837
(see also references on H sequence)	

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

Description	Reference No.*

Sr (Strontium)

Sr I

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

Sr II

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

Sr IV

T:	quant. forb.	1416

Sr IX

T:	interp.	2216,2426

Sr X

T:	interp.	2216,2426

(see also references on Cu sequence)

Tb (Terbium)

Tb I

E:	emiss. rel.	1297
Compilation:		2891

Te (Tellurium) Sequence

T:	quant.	1920

Te (Tellurium)

Te I

E:	absorpt.	967
	life	1908,2690
	emiss. forb. rel.	1546
T:	quant.	1521,2529
	quant. forb.	848

(see also references on Te sequence)

Te IV

E:	life	3103
T:	quant. forb.	1416

Te V

E:	life	2053

Te VI

E:	life	2053

Th (Thorium)

Th II

E:	life	2648
T:	quant.	618,683

Th XC

T:	quant.	2837

(see also references on H sequence)

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

Description	Reference No.*

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

(see also references on K sequence)

Ti V

T:	quant.	1696

(see also references on Ar sequence)

Ti VII

T:	quant. forb.	233

(see also references on S sequence)

Ti VIII

T:	CA	2548
	quant.	1645

Ti IX

T:	interp.	2479

(see also references on Si sequence)

Ti XV

T:	CA	2548
	quant.	2722
	CA forb.	2548

(see also references on O sequence)

Ti XVI

T:	CA	2548
	quant.	2722
	CA forb.	2548

(see also references on N sequence)

Ti XVII

T:	CA	2548
	quant.	2722
	CA forb.	2548

(see also references on C sequence)

Ti XVIII

T:	quant.	2722

(see also references on B sequence)

Ti XIX

T:	quant.	2722

(see also references on Be sequence)

Ti XX

T:	quant. forb.	2500

(see also references on Li sequence)

Ti XXI

E:	life	3142
	life forb.	2308
T:	quant.	2597

(see also references on He sequence)

Tl (Thallium)

Tl I

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

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

Description	Reference No.*
misc.	34
T: CA	2958
quant.	518,575,1061,1088, 1129,1672,2218,3019, 3171
quant. forb.	848,1416,3171
Comment:	254,494,518,981

Tl II

E: life	2053,2054,3189
T: estim. rel.	436
quant.	857

Tl III

E: life	2053,3189
T: quant.	3020

Tm (Thulium)

Tm I

E: hook	2890,3042
hook rel.	1544,2890,3042
life	1524,2173
T: quant.	1686

Tm II

E: life	2274,2468

U (Uranium)

U I

E: emiss.	2828,3074
emiss. rel.	3201
life	2750,2902,2903,2971, 3059,3123
Compilation:	2912

U II

E: emiss.	2828
misc.	3123
Compilation:	2911

U LXXV

T: quant.	3160

(see also references on Ar sequence)

Description	Reference No.*

V (Vanadium)

V I

E: absorpt.	2367
absorpt. rel.	284
emiss. rel.	2402
hook rel.	509
life	2402
T: quant.	2948

V II

E: emiss.	2402
emiss. rel.	2402
life	2402
T: quant.	2993
Comment:	3058

V III

E: life	2402,3104
T: quant.	2885
quant. rel.	779
quant. forb.	1594

V IV

T: quant.	1610
quant. forb.	1610

V V

E: life	2881,2882

(see also references on K sequence)

V VI

T: quant.	1300,3160
quant. rel.	1373

(see also references on Ar sequence)

V VIII

T: quant. forb.	233

(see also references on S sequence)

V IX

T: quant.	1645

V X

T: interp.	2479
quant. forb.	891,1073

(see also references on Si sequence)

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

Description	Reference No.*
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
W XXVIII	
T: quant. forb.	3130
W XXX	
T: quant. forb.	3130
W XXXI	
T: quant. forb.	3130
W XXXVII	
T: quant. forb.	3130
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)	

Description	Reference No.*
W XLII	
T: quant.	3130
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
W XLVIII, W XLIX	
T: quant. forb.	3130
W LV	
T: quant. forb.	3130
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

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

Description	Reference No.*
W LXI	
T: quant.	3130
quant. forb.	3130
(see also references on Si sequence)	
W LXII	
T: quant.	3130
quant. forb.	3130
(see also references on Al sequence)	
W LXIII	
T: quant.	3130
(see also references on Mg sequence)	
W LXIV	
T: quant.	3130
(see also references on Na sequence)	
W LXXI	
T: quant.	2983,3130
(see also references on Be sequence)	
W LXXII	
T: quant.	2983,3130
(see also references on Li sequence)	

Xe (Xenon)

Xe I	
E: absorpt.	1041,1116,1519,3182
emiss.	2108,2370
life	921,1444,1481,1605, 1690,1878,1935,2116, 2280,2283,2436,2499, 2545,2821,2972,3192
misc.	1725,2530,2766,2806, 2924
T: CA	2545,2691,2972
quant.	1049,1190,1654,1689, 2058,2671,3004
quant. rel.	475,795,796,839
quant. forb.	269,2009,2502,2819
Comment:	1222,1259,2802
Xe II	
E: emiss.	1953,2108,2370
emiss. rel.	2397
life	1444,1717,1935,2050, 2545,3169
T: CA	2545
quant.	2693,2933,2952,3143
quant. forb.	269,848,1416
Comment:	2802
Compilation:	2811
Xe III	
E: life	2050
T: quant.	1521
quant. forb.	340,848
(see also references on Te sequence)	
Xe VI	
E: life	3044
Xe VII	
E: life	3044
Xe VIII	
E: life	3044
Xe XVIII	
T: quant. forb.	3130
Xe XIX	
T: quant. forb.	3130
Xe XX	
T: quant. forb.	3130
Xe XXI	
T: quant. forb.	3130
(see also references on Se sequence)	
Xe XXII	
T: quant. forb.	3130
Xe XXIII	
T: quant. forb.	3130
Xe XXIV	
T: quant. forb.	3130
Xe XXV	
T: quant.	3130
quant. forb.	3130
Xe XXVI	
T: quant.	2944,3130
(see also references on Cu sequence)	

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

Description	Reference No.*
Xe XXVII	
T: quant.	3130
Xe XXVIII	
T: quant. forb.	3130
Xe XXIX	
T: quant. forb.	3130
Xe XXXV	
T: quant. forb.	3130
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
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)	

Y (Yttrium)

Description	Reference No.*
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
Y V	
T: quant. forb.	1416
Y VI	
T: quant.	2904
(see also references on Se sequence)	

Yb (Ytterbium)

Description	Reference No.*
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)

Description	Reference No.*
Zn I	
E: absorpt.	165,218,220,967, 1095,1284,1562,2135, 2208,2644,2735

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

Description	Reference No.*
emiss. rel.	223,264,265,369, 589,649,773
hook rel.	131,589
life	144,226,249,393, 571,581,582,594, 831,872,876,1020, 1659,1842,1975,1978, 2007,2087,2217,2960, 2990
misc.	1096
misc. rel.	120
T: estim.	67,156
quant.	701,857,1069,1191, 1284,1429,1450,2466, 2525,2575,2620
quant. rel.	228,735,1206
quant. forb.	1183
Comment:	164

Zn II

E: life	226,571,1659,2217, 2598,2864,3048
T: estim.	156
quant.	1027,1569,1928,2055, 2944

(see also references on Cu sequence)

Zn III

E: life	3104
T: quant.	2885

Zn IV

T: quant.	1337

Zn XXII

T: quant.	3122

(see also references on F sequence)

Zn XXIII

T: quant.	2722

(see also references on O sequence)

Zn XXIV

T: quant.	2722

(see also references on N sequence)

Zn XXV

T: quant.	2722

(see also references on C sequence)

Description	Reference No.*

Zn XXVI

T: quant.	2722,3056

(see also references on B sequence)

Zn XXVII

T: quant.	2722

(see also references on Be sequence)

Zn XXIX

T: quant.	2974

(see also references on He sequence)

Zn XXX

T: quant.	2837

(see also references on H sequence)

Zr (Zirconium)

Zr I

T: CA	573,638

Zr II

E: misc. rel.	564
Comment:	2860

Zr VI

T: quant.	2498
quant. forb.	1416

Zr VII

T: quant.	2904

(see also references on Se sequence)

Zr XXXI

T: quant.	2674

(see also references on Ne sequence)

Zr XXXVI

T: quant.	3056

(see also references on B sequence)

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

3. CHRONOLOGICAL LISTING OF REFERENCES WITH FULL TITLES

1914

1. Chr. Füchtbauer & W. Hofmann, The Maximum Intensity, Vapor, and the True Intensity Distribution of Series Lines in Absorption, Ann. Phys. (Leipzig) 43, 96. (Ger.)

1916

2. A. Einstein, Radiative Emission and Absorption According to the Quantum Theory, Verh. Dtsch. Phys. Ges. 18, 318. (Ger.)

1917

3. A. Einstein, On the Quantum Theory of Radiation, Phys. Z. 18, 121. (Ger.)

1920

4. Chr. Füchtbauer, The Absorption of Spectral Lines from the Viewpoint of Quantum Theory, Phys. Z. 21, 322. (Ger.)

1921

5. R. Ladenburg, The Quantum Theoretical Interpretation of the Number of Dispersion Electrons, Z. Phys. 4, 451. (Ger.)

1922

9. Chr. Füchtbauer & G. Joos, On the Intensity and Width of Spectral Lines, Phys. Z. 23, 73. (Ger.)

1923

10. Chr. Füchtbauer, G. Joos, & O. Dinkelacker, On the Intensity, Broadening, and Pressure Shift of Spectral Lines, Especially the Absorption Line 2537 Å of Mercury, Ann. Phys. (Leipzig) 71, 204. (Ger.)

1924

13. H. A. Kramers, The Law of Dispersion and Bohr's Theory of Spectra, Nature (London) 113, 673.

17. R. C. Tolman, Duration of Molecules in Upper Quantum States, Phys. Rev. 23, 693.

18. W. Wien, On the Measurements of the Emission Time of Atoms and Damping of Spectral Lines. III., Ann. Phys. (Leipzig) 73, 483. (Ger.)

1925

25. W. Kuhn, On the Total Strength of the Absorption Lines Starting from the Same State, Z. Phys. 33, 408. (Ger.)

26. W. Kuhn, Intensities of Thallium Absorption Lines, Naturwissenschaften 13, 724. (Ger.)

27. J. B. van Milaan, Intensity Measurements in the Iron Spectrum. I., Z. Phys. 34, 921. (Ger.)

28. F. Reiche & W. Thomas, On the Number of Dispersion Electrons Which Are Related to a Stationary State, Z. Phys. 34, 510. (Ger.)

1926

31. R. Frerichs, Intensity Measurements in Multiplets, Ann. Phys. (Leipzig) 81, 807. (Ger.)

34. W. Kuhn, The Strength of Anomalous Dispersion in Non-Emitting Vapor of Thallium and Cadmium, K. Dan. Vidensk. Selsk., Mat.-Fys. Medd. 7, 1. (Ger.)

35. W. Kuhn, The Intensity of Absorption Lines in Cadmium Vapor, Naturwissenschaften 14, 48. (Ger.)

36. R. Ladenburg, The Dispersion Formula of Quantum Theory and Its Experimental Test, Naturwissenschaften 14, 1208. (Ger.)

39. J. B. van Milaan, Intensity Measurements in the Iron Spectrum. II., Z. Phys. 38, 427. (Ger.)

42. H. W. B. Skinner, On the Excitation of Polarized Light by Electron Impact, Proc. R. Soc. London, Ser. A 112, 642.

44. B. Trumpy, On the Intensity and Width of Spectral Lines, Z. Phys. 40, 594. (Ger.)

1927

47. A. Ll. Hughes & A. R. Thomas, Absorption of Resonance Radiation in Mercury Vapor, Phys. Rev. 30, 466.

49. H. Kerschbaum, On the Measurement of the Emission Times of Atoms, Ann. Phys. (Leipzig) 83, 287. (Ger.)

54. B. Trumpy, On the Intensity and Width of Spectral Lines, K. Nor. Vidensk. Selsk. Skr. 1, 1. (Ger.)

1928

62. P. Kunze, Absolute Intensity of the Hg-Line 2537 Å, Ann. Phys. (Leipzig) 85, 1013. (Ger.)

67. V. K. Prokof'ev, Study of Anomalous Dispersion in Ca, Sr, and Ba Vapor, Z. Phys. 50, 701. (Ger.)

68. V. K. Prokof'ev & V. N. Solov'ev, The Anomalous Dispersion in Thallium Vapor, Z. Phys. 48, 276. (Ger.)

71. P. Soleillet, Polarization of Resonance Radiation of Cadmium, C. R. Acad. Sci. 187, 212. (Fr.)

74. W. Clarkson, On the Intensities of Some Fe^{+} Multiplets in the Arc and Chromosphere Spectra, Philos. Mag. 7, 98.

75. A. Ellett, Polarization of Cadmium Resonance Radiation 1 $^{1}S_{0}$ - 2 $^{3}P_{1}$ 3261 A, Phys. Rev. 33, 124.

76. A. Filippov & V. K. Prokof'ev, Anomalous Dispersion in Sodium Vapor in the Visible and Ultraviolet, Z. Phys. 56, 458. (Ger.)

77. E. Gaviola, The Transition Probability of the Forbidden Line 2656 of Mercury, Contrib. Estud. Cienc. Fis. Mat., Ser. Mat. Fis. 5, 65. (Ital.)

82. H. Kopfermann & W. Tietze, The Line Absorption of Mercury Vapor for the 2537 Å Line, Z. Phys. 56, 604. (Ger.)

83. R. Ladenburg, On the Dispersion of Mercury Vapor in the Ultraviolet and on a Quantitative Connection between Dispersion and Absorption, Nachr. Akad. Wiss. Goettingen, Math.-Phys. Kl 2, 1. (Ger.)

84. R. Ladenburg, Experimental Test of the Quantum Theoretical Dispersion Formula, Naturwissenschaften 17, 296. (Ger.)

87. V. Prokof'ev, On the Probabilities of the Forbidden s-d Transitions of the Alkali Metals, Z. Phys. 57, 387. (Ger.)

88. V. K. Prokof'ev, Calculation of the Numbers of Dispersion Centers of Sodium, Z. Phys. 58, 255. (Ger.)

91. F. Waibel, Absorption Measurements in the Cesium High Series, Pressure Broadening by Self Vapor Pressure, Z. Phys. 53, 459. (Ger.)

92. H. W. Webb & H. A. Messenger, Persistence of λ 2537 in Mercury at Low Pressures, Phys. Rev. 33, 319.

1930

102. R. Ladenburg & G. Wolfsohn, Investigations on the Dispersion of Gases and Vapors and Its Description by the Dispersion Theory. I. On the Dispersion of Mercury Vapor in the Ultraviolet, Z. Phys. 63, 616. (Ger.)

103. R. Ladenburg & G. Wolfsohn, Two Remarks on the Dispersion of Hg-Vapor, Z. Phys. 65, 207. (Ger.)

105. R. Minkowski & W. Mühlenbruch, Transition Probabilities in Both of the First Doublets of the High Series of Cesium, Z. Phys. 63, 198. (Ger.)

106. T. Muto, The Number of Dispersion Electrons in the Cesium Atom, Proc. Phys.-Math. Soc. Jpn. 12, 93.

107. L. S. Ornstein & T. Bouma, Intensity Measurements in the Spectrum of Nickel and Cobalt, Phys. Rev. 36, 679.

108. R. H. Randall, Mean Lives of Lines of Mercury Triplet $2\ ^3P_{012} - 2\ ^3S_1$, Phys. Rev. 35, 1161.

109. E.-F. Richter, Polarization Effects in the Stepwise Excitation of Mercury Fluorescence, Ann. Phys. (Leipzig) 7, 293. (Ger.)

110. A. Rubinowicz, On Intensities and Sum Rules in Normal Quadrupole Multiplets, Z. Phys. 65, 662. (Ger.)

111. W. Schütz, Intensity and Natural Width of the Blue Cesium Doublets. I., Z. Phys. 64, 682. (Ger.)

112. A. F. Stevenson, The Intensity of Quadrupole Radiation in the Alkalis and the Occurrence of Forbidden Lines, Proc. R. Soc. London, Ser. A 128, 591.

113. A. R. Thomas, Absorption of Resonance Radiation in Mercury Vapor, Phys. Rev. 35, 1253.

1931

117. A. Filippov, Anomalous Dispersion of Lithium Vapor, Z. Phys. 69, 526. (Ger.)

118. P. H. Garrett & H. W. Webb, Mean Life of the Mercury Line λ 2537, Phys. Rev. 37, 1686.

120. K. Larche, The Radiation Yield, As a Function of the Electron Velocity, and the Relative Intensities of Cadmium and Zinc Lines Generated by Electron Excitation, Z. Phys. 67, 440. (Ger.)

127. E. Wigner, On a Further Specification of the Sum Rule, Phys. Z. 32, 450. (Ger.)

129. M. W. Zemansky, Absorption of Cadmium Resonance Radiation λ = 2288 Å and the Lifetime of the Cd 2 $^1P_1$ State, Z. Phys. 72, 587. (Ger.)

1932

131. A. Filippov, Anomalous Dispersion of Zinc and Cadmium Vapor, Phys. Z. Sowjetunion 1, 289. (Ger.)

134. A. Filippov & N. Kremenewsky, Anomalous Dispersion of Calcium Vapor, Phys. Z. Sowjetunion 1, 299. (Ger.)

135. P. H. Garrett, Mean Lives of Mercury Lines λ 2537 and λ 1849, Phys. Rev. 40, 779.

138. W. Kast, Deviations from the Sum Rule in the Spectrum of Strontium, Z. Phys. 79, 731. (Ger.)

139. J. G. Kirkwood, Extension of Sum-Rules for Alkalis with an Application to the Stark Effect, Phys. Z. 33, 521. (Ger.)

140. H. D. Koenig & A. Ellett, Direct Measurement of Mean Lives of Atomic States, Phys. Rev. 39, 576.

141. S. A. Korff & G. Breit, Optical Dispersion, Rev. Mod. Phys. 4, 471.

142. D. H. Menzel & L. Goldberg, Multiplet Strengths for Transitions Involving Equivalent Electrons, Astrophys. J. 84, 1.

143. A. Rubinowicz & J. Blaton, The Quadrupole Radiation, Ergeb. Exakten Naturwiss. 11, 176. (Ger.)

144. P. Soleillet, Fluorescence of a Jet of Zinc Atoms, C. R. Acad. Sci. 195, 372. (Fr.)

1933

149. A. Filippov & I. Islamov, On the Ratio of Oscillator Strengths between the Resonance Lines of Silver, Z. Phys. 85, 409. (Ger.)

150. A. N. Filippov & V. K. Prokof'ev, Transition Probabilities in the Near Series of Thallium, Z. Phys. 85, 647. (Ger.)

151. I. I. Islamov & A. N. Filippov, Ratio of the Oscillator Strengths of the Components of the Resonance Doublet of Silver, Zh. Eksp. Teor. Fiz. 3, 524. (Russ.)

153. A. C. G. Mitchell, Hyperfine Structure and the Polarization of Resonance Radiation. II. Magnetic Depolarization and the Determination of Mean Lives, Phys. Rev. 43, 887.

155. V. K. Prokof'ev & A. N. Filippov, Transition Probabilities for the Subsidiary Series of Thallium, Zh. Eksp. Teor. Fiz. 4, 31. (Russ.)

156. H. N. Russell, Opacity Formulae and Stellar Line Intensities, Astrophys. J. 78, 239.

157. W. Schütz, On the Natural Widths of Neon Lines in the Visible Spectrum. I., Ann. Phys. (Leipzig) 18, 705. (Ger.)

158. P. Soleillet, Fluorescence Photometry of a Jet of Cadmium Atoms: Mean Lifetime of the $2\ ^3P_1$ State, C. R. Acad. Sci. 196, 1991. (Fr.)

160. H. E. White & A. Y. Eliason, Relative Intensity Tables for Spectrum Lines, Phys. Rev. 44, 753.

161. G. Wolfsohn, Investigations on the Dispersion of Gases and Vapors and Its Interpretation by the Dispersion Theory. IV. Dispersion of Mercury Vapor between 2800 and 1890 Å and Lifetime of the Hg $7p\ ^1P_1$ State, Z. Phys. 83, 234. (Ger.)

162. G. Wolfsohn, Investigations on the Dispersion of Gases and Vapor and Its Interpretation by the Dispersion Theory. V. An Interferometer for Measurements of Dispersion in the Schumann Region, Z. Phys. 85, 366. (Ger.)

1934

164. W. Billeter, On the Absolute Intensity of the Zinc Resonance Line at 2129 Å and the Lifetime of the $2\ ^1P_1$ Level of Zinc, Helv. Phys. Acta 7, 841. (Ger.)

165. W. Billeter, On the Absolute Intensity of the Zinc Resonance Line at 3076 Å and the Lifetime of the $2\ ^3P_1$ Level of Zinc, Helv. Phys. Acta 7, 505. (Ger.)

168. V. Fock, On the Applicability of the Quantum Mechanical f-Sum Rule, Z. Phys. 89, 744. (Ger.)

171. H. Körwien, The Dispersion of Helium in the Ground State According to Wave Mechanics, Z. Phys. 91, 1. (Ger.)

172. R. Ladenburg, Investigations on the Anomalous Dispersion of Excited Gases. Part VIII. The Transition Probabilities of the Red-Yellow (s-p) Neon Lines and the Lifetimes of the p-States, Z. Phys. 88, 461. (Ger.)

175. A. C. G. Mitchell & E. J. Murphy, The Mean Life of the 7 $^3S_1$ State of Mercury from Polarization Measurements on the Visible Triplet, Phys. Rev. 46, 53.

176. A. C. G. Mitchell & M. W. Zemansky, Absorption Lines and Measurements of the Lifetime of the Resonance State, "Resonance Radiation and Excited Atoms," Ch. 3, 92-153 (University Press, Cambridge).

177. F. Müller, The Line Absorption of the Thallium-Doublet λ = 3519/29 Å due to Thermal Excitation of the Metastable Level 6 $^2P_{3/2}$, Helv. Phys. Acta 7, 813. (Ger.)

178. F. Müller, Absorption Experiments on Metastable Thallium Atoms, Helv. Phys. Acta 7, 488. (Ger.)

179. L. S. Ornstein & J. Key, Transition Probabilities in the Sharp and Diffuse Series of the Alkalis, Physica (Utrecht) 1, 945. (Ger.)

181. V. K. Prokof'ev & G. Shtandel', Anomalous Dispersion Near the Two Doublets of the Principal Series of Rubidium and Cesium, Zh. Eksp. Teor. Fiz. 4, 359. (Russ.)

1935

183. C. W. Allen, Multiplet Intensities in the Sun and Iron Arc, Mon. Not. R. Astron. Soc. 96, 145.

187. L. Goldberg, Relative Multiplet Strengths in LS Coupling, Astrophys. J. 82, 1.

189. R. B. King & A. S. King, Relative f-Values for Lines of Fe I from Electric-Furnace Absorption Spectra, Astrophys. J. 82, 377.

191. G. S. Kvater, Anomalous Dispersion in Thallium Vapor, Phys. Z. Sowjetunion 7, 226. (Ger.)

192. D. H. Menzel & C. L. Pekeris, Absorption Coefficients and Hydrogen Line Intensities, Mon. Not. R. Astron. Soc. 96, 77.

195. F. Müller, The Vapor Pressure Curve of Thallium at Very Low Vapor Densities, Helv. Phys. Acta 8, 152. (Ger.)

198. G. H. Shortley, Line Strengths in Intermediate Coupling, Phys. Rev. 47, 295; 47, 419.

1936

203. L. Goldberg, Note on Absolute Multiplet Strengths, Astrophys. J. 84, 11.

204. E. F. M. van der Held & J. H. Heierman, Absolute Transition Probabilities of Potassium, Physica (Utrecht) 3, 31. (Ger.)

205. K. Krebs, Application of the Intermittent Light Method to the Study of Excited Atomic States, Z. Phys. 101, 604. (Ger.)

207. D. van Lingen, Determination of Transition Probabilities in the Copper Spectrum and a Study of Metallic Arcs, Physica (Utrecht) 3, 977. (Ger.)

208. D. H. Menzel & L. Goldberg, Note on Relative f-Values for Lines of Fe I, Astrophys. J. 85, 40.

209. H. N. Russell, Tables for Intensities of Lines in Multiplets, Astrophys. J. 83, 129.

1937

212. M. Garbuny, Relative Intensities and Transition Probabilities of the Red-Yellow Neon Lines, Z. Phys. 107, 362. (Ger.)

214. E. A. Hylleraas, Theoretical Calculation of Transition Probabilities of Helium, Z. Phys. 106, 395. (Ger.)

218. P. Soleillet, The Mean Lifetime of the $2\ ^3P_1$ State of the Zinc Atom and the Method of Total Absorption, C. R. Acad. Sci. 204, 253. (Fr.)

219. C. W. Ufford, Line Strengths in Neon I, Astrophys. J. 85, 249.

1938

220. J. Ausländer, Measurement of the Zinc Resonance Line 2138.6 Å. Line Shape, Absolute Intensity, and Vapor Pressure, Helv. Phys. Acta 11, 562. (Ger.)

222. R. B. King & A. S. King, Relative f-Values for Lines of Fe I and Ti I, Astrophys. J. 87, 24.

223. R. C. Mason, Gas Temperature and Population of Atomic Levels in a Carbon Arc at Low Pressure, Physica (Utrecht) 5, 777.

224. W. Opechowski, The Theory of the Forbidden Mercury Line 2655.8 Å ($6\ ^3P_0 - 6\ ^1S_0$), Z. Phys. 109, 485. (Ger.)

225. L. S. Ornstein, J. P. A. van Hengstum, & H. Brinkman, Determination of the Relative Transition Probabilities in the Spectrum of Cadmium, Physica (Utrecht) 5, 145.

1939

226. H. Bruck, Measurement of Optical Lifetimes in an Atomic Jet Excited by Electronic Impact, C. R. Acad. Sci. 208, 1805. (Fr.)

227. L. Goldberg, Transition Probabilities for He I, Astrophys. J. 90, 414.

228. G. W. King & J. H. Van Vleck, Relative Intensities of Singlet-Singlet and Singlet-Triplet Transitions, Phys. Rev. 56, 464.

1940

231. R. B. King & D. C. Stockbarger, Absolute f-Values by the Method of Total Absorption, Astrophys. J. 91, 488.

232. S. Mrozowski, Hyperfine Structure and Intensities of the Forbidden Lines of Pb I, Phys. Rev. 58, 1086.

233. S. Pasternack, Transition Probabilities of Forbidden Lines, Astrophys. J. 92, 129.

236. G. H. Shortley, The Computation of Quadrupole and Magnetic-Dipole Transition Probabilities, Phys. Rev. 57, 225.

1941

237. E. Gerjuoy, Interference in the Zeeman Effect of Forbidden Lines, Phys. Rev. 60, 233.

239. F. A. Jenkins & S. Mrozowski, Zeeman Effect of the Forbidden Lines of Pb I, Phys. Rev. 60, 225.

241. J. A. H. Kersten & L. S. Ornstein, The Relative Transition Probabilities in the Spectrum of Magnesium, Physica (Utrecht) 8, 1124.

247. G. H. Shortley, L. H. Aller, J. G. Baker, & D. H. Menzel, Physical Processes in Gaseous Nebulae. XI. Strengths of Forbidden Lines in p^2, p^3, and p^4 as a Function of Coupling, Astrophys. J. 93, 178.

248. T. Yamanouchi, Line Strengths for Transitions $p^n \rightarrow p^{n-1}d$, Proc. Phys.-Math. Soc. Jpn. 23, 1059.

1942

249. H. Bruck, Lifetime of the λ 3076 Å ($4\ ^1S_0 - 4\ ^3P_1$) Line of Zinc, C. R. Acad. Sci. 214, 307. (Fr.)

251. B. Edlen, The Interpretation of Emission Lines in the Spectrum of the Solar Corona, Z. Astrophys. 22, 30. (Ger.)

252. R. B. King, Absolute f-Values for Lines of Fe I, Astrophys. J. 95, 78.

253. G. S. Kvater, Transition Probabilities in the Subordinate Series of Thallium, J. Phys. (Moscow) 6, 145.

254. G. S. Kvater, Methods of Determination of Absolute Intensities of Spectral Lines, J. Phys. (Moscow) 6, 210.

1943

261. F. Möglich & R. Rompe, Radiation Properties and Energy Divergence for Densely Packed Atoms of the Same Kind, Z. Phys. 120 741. (Ger.)

262. J. W. Schouten, Intensity Ratios of the Lines of Mercury Triplets λ = 5461, 4358, and 4047 Å, Physica (Utrecht) 10, 672. (Ger.)

263. J. W. Schouten & J. A. Smit, Measurement of Transition Probabilities of Mercury Lines, Physica (Utrecht) 10, 661. (Ger.)

264. J. W. Schuttevaer, M. J. de Bont, & Th. H. van den Broek, Determination of the Relative Transition Probabilities of Some Triplet Lines in the Atomic Spectra of Calcium & Strontium, Physica (Utrecht) 10, 544.

265. J. W. Schuttevaer & J. A. Smit, The Relative Probabilities of Transitions in the Zinc Atom, Physica (Utrecht) 10, 502.

266. N. N. Sobolev, Measurement of the Relative Transition Probabilities for Some Lines of Bi I, Fe I, and Fe II, Zh. Eksp. Teor. Fiz. 13, 131. (Russ.)

267. P. Soleillet & J. Ploquin, A Very Short Lifetime of the Cadmium Atom for the State Excited by the 2288 Å Line, C. R. Acad. Sci. 217, 368. (Fr.)

1944

269. B. Edlen, Magnetic-Dipole Transitions in the Configurations $5p^5$, $5p^4$, and $6p^5$ of Xenon and Radon, Phys. Rev. 65, 248.

270. A. M. Kruithof & J. A. Smit, The Applicability of the Saha Equation for the Electric Arc, Physica (Utrecht) 11, 129. (Dut.)

271. S. Mrozowski, Forbidden Lines in the Laboratory, Rev. Mod. Phys. 16, 153.

273. H. W. Webb & H. A. Messenger, Lifetimes of Resonance Lines of Cadmium, Phys. Rev. 66, 77.

1945

276. K. Huang, On the Excitation of the Coronal Lines, Astrophys. J. 101, 187.

1947

284. R. B. King, Relative gf-Values for Lines of V I, Astrophys. J. 105, 376.

285. G. S. Kvater, Anomalous Dispersion in the Vapors of Sodium and Thallium, Vestn. Leningr. Univ., Fiz., Khim. No. 2, 135. (Russ.)

286. G. Kvifte & L. Vegard, On the Emission of the Forbidden Lines from the Metastable Ground States $^1S_0$ and $^1D_2$ of the Neutral Oxygen Atom, Geofys. Publ. 17, No. 1, 1.

290. W. Petrie, The Calculation of Line Strengths from Laboratory Data, Can. J. Res., Sect. A 25, 42.

294. L. Biermann & K. Lübeck, Transition Probabilities of a Number of Spectral Lines of Different Atoms and Ions and Normalized Wavefunctions of Discrete Atomic States, Z. Astrophys. 25, 325. (Ger.)

296. W. M. Gottschalk, Line Strengths in the Iron Spectrum in Intermediate Coupling with Application to the Solar Curve of Growth, Astrophys. J. 108, 326.

298. R. B. King, Relative gf-Values for Lines of Ni I, Astrophys. J. 108, 87.

301. O. C. Wilson, The Structure of the Atmosphere of the K-Type Component of Zeta Aurigae, Astrophys. J. 107, 126.

1949

303. D. R. Bates & A. Damgaard, The Calculation of the Absolute Strengths of Spectral Lines, Philos. Trans. R. Soc. London, Ser. A 242, 101.

306. W. W. Carter, Measurement of f-Values in the Iron Spectrum with Applications to Solar and Stellar Atmospheres, Phys. Rev. 76, 962.

307. M. T. Gold, Wave Functions for Fe XIV, Mon. Not. R. Astron. Soc. 109, 471.

1950

314. L. Biermann, Oscillator Strengths and Lifetimes of Excited States of Atoms, Atomic Ions, and Molecules, "Zahlenwerte und Funktionen," 260-275 (Ed., Landolt-Börnstein, Springer-Verlag, Berlin). (Ger.)

316. H. M. Crosswhite, Photoelectric Intensity Measurements in the Iron Arc, Spectrochim. Acta 4, 122.

319. S. E. Frish, Reabsorption of Light in Gas Discharge and Some of its Applications, Izv. Akad. Nauk SSSR, Ser. Fiz. 14, No. 6, 711. (Russ.)

323. R. Lennuier & J.-L. Cojan, Measurement of the Mean Lifetime of the 6 $^3P_1$ Resonance Level of Different Isotopes of Mercury, C. R. Acad. Sci. 231, 1450. (Fr.)

325. B. Mishra, Lifetimes of Mercury and Potassium Atoms in Excited States, Phys. Rev. 77, 153.

327. W. Petrie, The Near-Infrared Spectrum of the Polar Aurora, J. Geophys. Res. 55, 143.

328. E. Trefftz, Wave Functions and Transition Probabilities for the Mg I Atom. Part III. The Influence of Polarization, Z. Astrophys. 28, 67. (Ger.)

329. C. W. Ufford & R. M. Gilmour, Multiplet Intensities for the Lines ^4S - ^2D of N I, Astrophys. J. 111, 580.

1951

332. F. B. Estabrook, Absolute Oscillator Strengths of Chromium and Nickel, Astrophys. J. 113, 684.

333. R. H. Garstang, Energy Levels and Transition Probabilities in p^2 and p^4 Configurations, Mon. Not. R. Astron. Soc. 111, 115.

338. H. Kopfermann & G. Wessel, The Absolute f-Values of the Fe I Resonance Lines λ = 3720 Å and λ = 3737 Å, Z. Phys. 130, 100. (Ger.)

340. D. E. Osterbrock, Transition Probabilities of Forbidden Lines, Astrophys. J. 114, 469.

342. R. G. Sachs & N. Austern, Consequences of Gauge Invariance for Radiative Transitions, Phys. Rev. 81, 705.

347. G. Stephenson, On the Experimental Determination of the Lifetimes of Atomic Energy States, Proc. Phys. Soc., London, Sect. A 64, 458.

1952

349. J. Brossel, Detection of the Magnetic Resonance of Excited Atomic Levels. Structure of the 6 $^3P_1$ Level of Atomic Mercury, Ann. Phys. (Paris) 7, 622. (Fr.)

350. J. Brossel & F. Bitter, A New "Double Resonance" Method for Investigating Atomic Energy Levels. Application to Hg $^3P_1$, Phys. Rev. 86, 308.

352. R. H. Garstang, Multiplet Intensities for the Lines ^4S - ^2D of S II, O II, and N I, Astrophys. J. 115, 506.

354. H. Horie, Line Strengths for Transitions $d^n \rightarrow d^{n-1}p$ and $d^n \rightarrow d^{n-1}f$, and Probabilities of Photo-Ionization and Recombination $d^{n\rightarrow} \leftarrow d^{n-1}$, J. Phys. Soc. Jpn. 7, 58.

357. G. S. Kvater & T. G. Meister, Absolute Transition Probabilities for the Members of the Principal Series of Cesium, Vestn. Leningr. Univ., Fiz., Khim. 9, 137. (Russ.)

358. B. Mishra, Wave Functions for Excited States of Mercury and Potassium, Proc. Cambridge Philos. Soc. 48, 511.

362. L. A. Vainshtein & B. M. Yavorskii, Approximate Methods for the Calculation of Optical Transition Probabilities, Dokl. Akad. Nauk SSSR 87, 919. (Russ.)

363. D. S. Villars, Transition Probabilities in Sharp and Diffuse Series of Potassium, J. Opt. Soc. Am. 42, 552.

365. J. P. Wild, The Radio-Frequency Line Spectrum of Atomic Hydrogen and Its Applications in Astronomy, Astrophys. J. 115, 206.

366. T. Yamanouchi & H. Horie, Intensities of Forbidden Lines of Atoms in p^n Configuration, J. Phys. Soc. Jpn. 7, 52.

1953

367. L. H. Aller, The Emission and Absorption of Radiation, "Astrophysics: The Atmosphere of the Sun and the Stars," 101-156 (Ronald Press Co., New York).

368. A. B. Bolotinas & A. P. Jucys, Application of the Multiconfiguration Approximation in the Determination of Dipole Strengths for Beryllium- and Boron-Like Atoms, Zh. Eksp. Teor. Fiz. 24, 537. (Russ.)

369. M. D. Kunisz, Determination of the Relative Intensities in the Triplet 4d ^3D - 4p $^3P^o$ in Zn I Spectrum, Bull. Acad. Pol. Sci., Cl. 3, 1, 52.

370. H. Maecker, The Transition Probabilities of Some C I and C II Lines, Measured in an Alcohol Stabilized Arc, Z. Phys. 135, 13. (Ger.)

372. C. G. Matland, Natural Lifetime of the Cadmium 5 $^3P_1$ State, Phys. Rev. 91, 436.

373. L. A. Mitrofanova, Determination of Relative gf-Values for Fe II, Pulk. Astron. Obs. Izv. 19, No. 151, 45. (Russ.)

375. S. S. Penner, Determination of Absolute f-Values from Relative Intensity Measurements for Spectral Lines with Doppler Contour, J. Opt. Soc. Am. 43, 218.

377. J. Aarts, D. Harting, & C. J. Bakker, Relative Oscillator Strengths for Lines of Fe I, Physica (Utrecht) 20, 1250.

380. R. H. Garstang, Intermediate Coupling Line Strengths, Mon. Not. R. Astron. Soc. 114, 118.

384. G. Jürgens, Measurement of the Oscillator Strengths of Some O I Lines in a Water Stabilized Arc, Z. Phys. 138, 613. (Ger.)

386. G. V. Marr, The Absorption of Light by Thallium Vapour on the Short Wavelength Side of the Series Limit, Proc. R. Soc. London, Ser. A 224, 83.

390. G. F. Parchevskii & N. P. Penkin, Determination of Oscillator Strengths in the Spectra of Iron and Nickel, Vestn. Leningr. Univ., Fiz., Khim. 9, No. 11, 113. (Russ.)

393. M. Spitzer, Influence of the Magnetic Field on the Polarization of the 2139 Å Radiation Emitted in Optical Resonance By a Zinc Atom, C. R. Acad. Sci. 239, 696. (Fr.)

394. G. P. Startsev, Three-Ray Interferometer for the Investigation of Anomalous Dispersion, Dokl. Akad. Nauk SSSR 95, 1181. (Russ.)

395. L. A. Vainshtein & B. M. Yavorskii, An Approximate Calculation of Oscillator Strengths and Effective Photoionization Cross Sections, Zh. Eksp. Teor. Fiz. 27, 712. (Russ.)

1955

396. C. W. Allen & A. S. Asaad, Atomic Oscillator Strengths and Excitation Potentials, Mon. Not. R. Astron. Soc. 115, 571.

397. K. Althoff, High-Frequency Transitions in the (Excited) 7 $^2P_{3/2}$ State of the Cesium Atom and Determination of the Quadrupole Moment of the Cs^{133} Nucleus, Z. Phys. 141, 33. (Ger.)

398. E. Brannen, F. R. Hunt, R. H. Adlington, & R. W. Nicholls, Application of Nuclear Coincidence Methods to Atomic Transitions in the Wavelength Range λλ 2000-6000 A, Nature 175, 810.

399. A. Eberhagen, A Method for the Experimental Determination of Transition Probabilities, Z. Phys. 143, 392. (Ger.)

404. R. B. King, B. R. Parnes, M. H. Davis, & K. H. Olsen, Relative gf-Values for Lines of Co I, J. Opt. Soc. Am. 45, 350.

406. V. V. Lebedeva & V. A. Fabrikant, Ratio of Line Intensities in the Visible Triplet of Mercury, Bull. Acad. Sci. USSR, Phys. Ser. 19, 2.

407. R. Mannkopff, Spectroscopic Determination of Transition Probabilities, Exp. Tech. Phys. 3, 44. (Ger.)

408. U. Meyer-Berkhout, Determination of the Electric Quadrupole Moments of the Rb^{85} and Rb^{87} Nuclei by Measurement of the High Frequency Transitions in the Excited 6 $^2P_{3/2}$ Term of the Rb Atom, Z. Phys. 141, 185. (Ger.)

410. H. Motschmann, Measurement of Oscillator Strengths of Some N I Lines in Water and Air Stabilized Arcs, Z. Phys. 143, 77. (Ger.)

413. G. F. Parchevskii & N. P. Penkin, The Relation of the Oscillator Strengths for the Components of the Resonance-Doublet of Aluminum and Copper, Sov. Phys.--JETP 1, 382.

414. G. F. Parchevskii & N. P. Penkin, Determining the Oscillator Strengths (f-Numbers) in the Spectra of Iron and Nickel, Bull. Acad. Sci. USSR, Phys. Ser. 19, 4.

416. A. V. Phelps, Lifetime of Imprisoned Resonance Radiation in Neon, Phys. Rev. 100, 1230.

418. G. K. Tsiunaitis & A. P. Jucys, The Double Configuration Approximation to the Two Lowest Configurations of the Boron Atom, Sov. Phys.--JETP 1, 358.

419. A. Unsöld, Experimental Determination of Oscillator Strengths. The Laboratory Examination of Radiation Damping, Together with Pressure Broadening and Shift of Spectral Lines, "Physik der Sternatmosphären," 2nd Edition, Ch. XIII, 351-370 (Springer-Verlag, Berlin). (Ger.)

420. F. Yanoukh, Semi-empirical Method of Calculating Oscillator Strengths of Doublet Components, Vestn. Leningr. Univ., Fiz. Khim. 10, 135. (Russ.)

1956

422. L. H. Aller, The Forbidden Lines, "Gaseous Nebulae," Vol. III, Ch. V, 164-200 (John Wiley & Sons, Inc., New York).

425. A. B. Bolotinas, J. B. Levinsonas, & L. I. Levinas, The Double-Configurational Approximation in the Case of Carbon-Like Atoms, Sov. Phys.--JETP 2, 391.

427. H. D. Engler, Measurement of the f-Value of the Pb I Resonance Line λ = 2833 Å, Z. Phys. 144, 343. (Ger.)

429. R. H. Garstang, Transition Probabilities of Auroral Lines, "The Airglow and the Aurorae," 324-327 (Pergamon Press, London).

430. G. I. Gol'dberg, Transition Probabilities for the Principal Series of Rubidium, Izv. Gl. Astron. Obs. Pulkove 20, 126. (Russ.)

432. J. M. Harriman, Numerical Values for Hydrogen Fine Structure, Phys. Rev. 101, 594.

433. J. P. A. van Hengstum & J. A. Smit, Measurement of "Optical" Transition Probabilities of Cd, Physica (Utrecht) 22, 86.

434. S. Heron, R. W. P. McWhirter, & E. H. Rhoderick, Measurements of Lifetimes of Excited States of Helium Atoms, Proc. R. Soc. London, Ser. A 234, 565.

436. R. S. Knox & D. L. Dexter, Solid State Luminescence Theory and Oscillator Strengths in KCl:Tl, Phys. Rev. 104, 1245.

437. J. B. Levinsonas, A. B. Bolotinas, & L. I. Levinas, Two Configuration Approximation for Nitrogen-Like Atoms, Vilniaus Valstybinis Univ., Mokslo Darb. 5, 49. (Russ.)

440. E. I. Nikonova & V. K. Prokof'ev, The Ratio of Oscillator Strengths of Components of Resonance Multiplets of Al, Tl, Cr, Mn, Mo, and Ions of Ba, Ca, and Sr, Opt. Spektrosk. 1, 290. (Russ.)

443. O. Osberghaus & K. Ziock, Measurement of the Oscillator Strength of the Iron Resonance Line 3720 Å by Time of Decrease of the Intensity, Z. Naturforsch., Teil A 11, 762. (Ger.)

444. Yu. I. Ostrovskii, G. F. Parchevskii, & N. P. Penkin, Relative Values of Oscillator Strengths in the Spectra of Titanium and Manganese, Opt. Spektrosk. 1, 821. (Russ.)

1957

447. C. W. Allen, Absolute Oscillator Strength Measurements in Mg, Ca and Other Atoms, Mon. Not. R. Astron. Soc. 117, 622.

448. C. W. Allen & A. S. Asaad, Oscillator Strengths from Arc Spectra of Diluted Copper Alloys, Mon. Not. R. Astron. Soc. 117, 36.

1956-1957

450. J.-P. Barrat, The Identity of the Duration of Coherence Measured by Magnetic Resonance and Magnetic Depolarization on the ^{202}Hg Isotope, C. R. Acad. Sci. 244, 2785. (Fr.)

452. I. B. Bersuker, On the Total Summation Rule for Oscillator Strengths of Alkali Metals, Sov. Phys.--Dokl. 2, 167.

453. H. A. Bethe & E. E. Salpeter, "Quantum Mechanics of One- and Two-Electron Atoms," (Academic Press, New York).

455. M. Blaha, The Abundance of Fe XV in the Solar Corona. I. Transition Probabilities of Fe XV, Bull. Astron. Inst. Czech. 8, 34.

456. F. Boutron, J.-P. Barrat, & J. Brossel, Measurement, by Magnetic Resonance, of "Coherence Times" of the ^{119}Hg and ^{201}Hg Isotopes, C. R. Acad. Sci. 245, 2250. (Fr.)

457. A. Dalgarno & N. Lynn, Properties of the Helium Atom, Proc. Phys. Soc., London, Sect. A 70, 802.

458. C. Froese, The Self-Consistent Field with Exchange for the Ground State and First Excited State of Fe^{+13}, Mon. Not. R. Astron. Soc. 117, 615.

459. J. A. Galt & H. L. Welsh, Influence of Foreign Gases at High Pressures on the Selective Reflection from Mercury Vapor, Can. J. Phys. 35, 114.

460. R. H. Garstang, The Computation of Quadrupole Line Strengths, Proc. Cambridge Philos. Soc. 53, 214.

461. R. H. Garstang, Transition Probabilities for Forbidden Lines of Fe III and Fe V, Mon. Not. R. Astron. Soc. 117, 393.

462. L. C. Green, P. P. Rush, & C. D. Chandler, Oscillator Strengths and Matrix Elements for the Electric Dipole Moment for Hydrogen, Astrophys. J., Suppl. Ser. 3, 37.

463. M.-A. Guiochon, J. E. Blamont, & J. Brossel, On the Coherence of the Phenomenon of Multiple Diffusion of Light in Optical Resonance, J. Phys. Radium 18, 99. (Fr.)

464. D. R. Hartree, "The Calculation of Atomic Structures," (John Wiley & Sons, New York).

465. E. Hinnov & H. Kohn, Optical Cross Sections from Intensity-Density Measurements, J. Opt. Soc. Am. 47, 156.

466. J. S. Levinger, M. L. Rustgi, & K. Okamoto, Relativistic Corrections to the Dipole Sum Rule, Phys. Rev. 106, 1191.

467. A. Michels, H. de Kluiver, & B. Castle, The Influences of Argon and Neon on the 2536.52 Å Line of Mercury, Physica (Utrecht) 23, 1131.

474. Yu. I. Ostrovskii & N. P. Penkin, Absolute Oscillator Strengths for the Lines of Chromium, Manganese, and Copper, Opt. Spektrosk. 3, 193. (Russ.)

475. R. Petersen, Exciton Doublet Splitting in Ionic Crystals, Phys. Chem. Solids 1, 284.

477. M. J. Seaton & D. E. Osterbrock, Relative [O II] Intensities in Gaseous Nebulae, Astrophys. J. 125, 66.

478. E. Trefftz, A. Schlüter, K.-H. Dettmar, & K. Jörgens, Oscillator Strengths for Neutral Helium, Z. Astrophys. 44, 1. (Ger.)

479. L. A. Vainshtein, Calculation of Atomic Wave Functions and Oscillator Strengths by an Electronic Computer, Opt. Spektrosk. 3, 313. (Russ.)

480. K. Ziock, Determination of the Oscillator Strength of the Iron Line 3720 Å from the Decay Time of Resonance Light, Z. Phys. 147, 99. (Ger.)

1958

482. G. D. Bell, M. H. Davis, R. B. King, & P. M. Routly, The Absolute f-Values of λ 3247 of Cu I and λ 3720 of Fe I, Astrophys. J. 127, 775.

484. G. Boldt, Measurement of Absorption Oscillator Strength of the Magnesium Intercombination Line 4571 Å, Z. Phys. 150, 205. (Ger.)

487. A. Dalgarno & A. E. Kingston, Properties of the Metastable Helium Atoms, Proc. Phys. Soc., London, Sect. A 72, 1053.

488. J.-P. Descoubes & J.-C. Pebay-Peyroula, On the Magnetic Resonance of the Atomic Levels of Mercury Excited by Electronic Bombardment, C. R. Acad. Sci. 247, 2330. (Fr.)

490. I. V. Dvornikova & I. M. Nagibina, Determination of the Degree of Inhomogeneity in D-C and A-C Arc Discharges, Opt. Spektrosk. 4, 421. (Russ.)

491. R. H. Garstang, Further Computations of Quadrupole Line Strengths, Proc. Cambridge Philos. Soc. 54, 383.

492. R. H. Garstang, Energy Levels and Transition Probabilities of Fe IV, Mon. Not. R. Astron. Soc. 118, 572.

493. R. H. Garstang, Transition Probabilities for Forbidden Lines of Ni II and Ni III, Mon. Not. R. Astron. Soc. 118, 234.

494. L. V. Gurvich, On the Absolute Transition Probabilities of the Tl Atom, Opt. Spektrosk. 5, 205. (Russ.)

498. M. D. Kunisz, Ratios of the Intensities of Spectral Lines in Certain Doublets of the Secondary Series II and I of the Arc Spectra of Aluminum and Indium, Acta Phys. Pol. 17, 455. (Fr.)

499. Z. Les & H. Niewodniczanski, Intensity Ratios of Spectral Lines in Cd I Triplets at Different Conditions of Excitation, Acta Phys. Pol. 17, 365.

501. F. Mastrup & W. Wiese, Experimental Determination of Oscillator Strengths of Some N II and O II Lines, Z. Astrophys. 44, 259. (Ger.)

502. O. A. Mel'nikov, Comparison of Measured and Calculated Intensities of Iron Multiplets, Izv. Gl. Astron. Obs. Pulkove 20, No. 6, 28. (Russ.)

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, Physica (Utrecht) 24, 543.

505. L. A. Mitrofanova, Determination of Relative gf-Values for Sr I and Sr II, Izv. Gl. Astron. Obs. Pulkove 20, No. 6, 52. (Russ.)

506. I. M. Nagibina, Determination of the Relative Oscillator Strengths in an Arc Discharge from the Width of the Spectrum Lines, Bull. Acad. Sci. USSR, Phys. Ser. 22, 678.

507. I. M. Nagibina, Determination of the Concentration of Atoms in the Plasma of an A-C Arc from Line Widths, Opt. Spektrosk. 4, 430. (Russ.)

508. A. L. Osherovich & I. G. Savich, Measurement of Lifetimes of the $3\ ^3P$ and $3\ ^1P$ Levels of the Helium Atom by the Method of Delayed Coincidence, Opt. Spektrosk. 4, 715. (Russ.)

509. Yu. I. Ostrovskii & N. P. Penkin, Relative f-Values for Spectral Lines of Vanadium and Cobalt, Opt. Spektrosk. 5, 345. (Russ.)

510. Yu. I. Ostrovskii & N. P. Penkin, Measurements of Absolute Oscillator Strengths for Ga I and In I Lines, Opt. Spektrosk. 4, 719. (Russ.)

511. Yu. I. Ostrovskii, N. P. Penkin, & L. N. Shabanova, Absolute Oscillator Strengths of the Resonance Lines of Mg I, Ca I, Sr I, and Ba I, Sov. Phys.--Dokl. 3, 538.

512. Yu. I. Ostrovskii, N. P. Penkin, & L. N. Shabanova, Measurement of Oscillator Strengths in Atomic Spectra, Bull. Acad. Sci. USSR, Phys. Ser. 22, 720.

513. J. Richter, Measurement of Transition Probabilities of Neutral Carbon Lines, Z. Phys. 151, 114. (Ger.)

514. M. J. Seaton, The Quantum Defect Method, Mon. Not. R. Astron. Soc. 118, 504.

515. J. C. Strijland & A. J. Nanassy, The Influence of Compressed Gases on the Vapour Density of Mercury and on the Oscillator Strength of the 2537 Å Line, Physica (Utrecht) 24, 935.

516. J. Terpstra & J. A. Smit, Measurement of "Optical" Transition Probabilities in the Silver Atom, Physica (Utrecht) 24, 937.

518. L. A. Vainshtein, Calculation of One-Electron Wave Functions and Oscillator Strengths by Means of an Electronic Computer, Bull. Acad. Sci. USSR, Phys. Ser. 22, 668.

1959

520. N. W. H. Addink, Determination of the Transition Probability (Reciprocal of Lifetime) of Excited Atoms and Ions from Spectroanalytical Data and the Importance of Lifetime Values in Spectrochemistry, Spectrochim. Acta 15, 349.

522. Y. Archambault, J.-P. Descoubes, M. Priou, A. Omont, & J.-C. Pebay-Peyroula, Study of the Lifetime and Hyperfine Structure of the D Levels of Sodium and Cesium by Electronic Bombardment, J. Phys. Radium 21, 677. (Fr.)

523. J.-P. Barrat, Study of Multiple Coherent Diffusion of Light of Optical Resonance. Application to the 6 $^3P_1$ Level of Mercury. III. Experimental Results, J. Phys. Radium 20, 657. (Fr.)

525. G. D. Bell, M. H. Davis, R. B. King, & P. M. Routly, The Absolute f-Value of the Mn I Line λ 4031, Astrophys. J. 129, 437.

526. R. G. Bennett & F. W. Dalby, Experimental Determination of the Oscillator Strength of the First Negative Bands of N_2^+, J. Chem. Phys. 31, 434.

527. S.-Y. Ch'en & A. Smith, The Oscillator Strengths and the Transition Probabilities of the First Sharp Series Doublet Lines of Indium, Physica (Utrecht) 25, 1289.

528. J.-L. Cojan & M. Thibeau, Lifetime of the 6 $^3P_1$ Excited State of Mercury Vapor for Isotopes of Equal and Unequal Masses, C. R. Acad. Sci. 249, 1489. (Fr.)

529. E. U. Condon & G. H. Shortley, "Theory of Atomic Spectra," (University Press, Cambridge).

533. R. Hefferlin, Behavior of the dc Iron Arc and Its Usefulness in the Determination of f-Values, J. Opt. Soc. Am. 49, 680.

534. R. Hefferlin, Forty-Five Relative f-Values for High Excitation Iron Lines from the dc Arc Spectrum, J. Opt. Soc. Am. 49, 948.

535. P. Hey, Measurement of the Absolute Transition Probabilities of Some Si I, Si II, as Well as Some Cl I and Cl II Lines, Z. Phys. 157, 79. (Ger.)

537. N. S. Kardashev, On the Possibility of Detection of Allowed Lines of Atomic Hydrogen in the Radio-Frequency Spectrum, Sov. Astron.--AJ 3, 813.

538. M. Z. Khokhlov, Experimental Determination of the Oscillator Strengths for the Pb I Lines 4057 and 3683 Å, and of the Lead Abundance in the Solar Atmosphere, Izv. Krym. Astrofiz. Obs. 21, 84. (Russ.)

539. K. H. Olsen, P. M. Routly, & R. B. King, Relative gf-Values for Lines of Ca I, Astrophys. J. 130, 688.

540. A. Omholt, Studies on the Excitation of Aurora Borealis. II. The Forbidden Oxygen Lines, Geofys. Publ. 21, No. 1, 1.

542. J.-C. Pebay-Peyroula, Magnetic Resonance of Excited Atomic Levels by Electronic Bombardment, J. Phys. Radium 20, 721. (Fr.)

544. H. van Regemorter, Modern Methods of Measuring Oscillator Strengths, J. Phys. Radium 20, 907. (Fr.)

545. F. Rohrlich, Sum Rules for Multiplet Strengths, Astrophys. J. 129, 449.

546. F. Rohrlich, Theoretical Multiplet Strengths, Astrophys. J. 129, 441.

547. J. Shapiro & G. Breit, Metastability of 2s States of Hydrogenic Atoms, Phys. Rev. 113, 179.

548. C. Zwaan, Curves of Growth for a Large Sunspot, Bull. Astron. Inst. Neth. 14, No. 490, 288.

1960

559. C. W. Allen, Oscillator Strengths of Neutral Atoms of the Iron Group, Mon. Not. R. Astron. Soc. 121, 299.

563. A. Bolotinas, J. Sironas, & M. Braimanas, Double Configuration Approximation for Oxygen-Like Atoms, Vilniaus Valstybinis Univ. Mokslo Darb. 33, No. 9, 107. (Russ.)

564. M. E. Boyarchuk & A. A. Boyarchuk, Oscillator Strengths Determined from Stellar Spectra, Izv. Krym. Astrofiz. Obs. 22, 234. (Russ.)

565. A. Dalgarno & A. L. Stewart, The Lamb Shift of Helium, Proc. Phys. Soc., London, Sect. A 76, 49.

569. R. H. Garstang, Transition Probabilities for Forbidden Lines of Ne IV, Mon. Not. R. Astron. Soc. 120, 201.

570. W. R. S. Garton, A. Pery, & K. Codling, Spectroscopic Investigations Relating to Autoionization and Dielectronic Recombination, "Proceedings of the Fourth International Conference on Ionization Phenomena in Gases," 206-209 (Ed., N. R. Nilsson, North-Holland Publishing Co., Amsterdam).

571. E. Geneux & B. Wanders-Vincenz, Magnetic Resonance Study in Atomic Jets of Excited States of Cadmium and Zinc Atoms and Cd II and Zn II Ions, Helv. Phys. Acta 33, 185. (Fr.)

573. L. Goldberg, E. A. Müller, & L. H. Aller, The Abundances of the Elements in the Solar Atmosphere, Astrophys. J., Suppl. Ser. No. 45, 5, 1.

574. P. F. Gruzdev & G. P. Startsev, Some Criteria for the Applicability of Theoretical Intensities to the Spectra of Complex Atoms in the Presence of LS-Coupling, Opt. Spectrosc. (USSR) 8, 461.

575. W. Hanus, On Line Strength Relations in the Doublet Arc Spectra of Aluminum, Gallium, Indium, and Thallium, Bull. Acad. Pol. Sci., Ser. Sci., Math., Astron. Phys. 8, 629.

577. M. Z. Khokhlov, An Estimate of the Upper Limit of the Lead Content in the Solar Atmosphere from the Infrared Lead Line λ 7229, Izv. Krym. Astrofiz. Obs. 22, 128. (Russ.)

578. M. Z. Khokhlov, Experimental Determination of Oscillator Strengths of Lead Lines by the Absorption Method, Izv. Krym. Astrofiz. Obs. 22, 118. (Russ.)

580. W. C. Martin & C. H. Corliss, The Spectrum of Singly Ionized Atomic Iodine (I II), J. Res. Nat. Bur. Stand., Sect. A 64, 443.

581. A.-D. May, Magnetic Resonance of the Atomic Levels of Zinc Excited by Electronic Bombardment, C. R. Acad. Sci. 250, 3616. (Fr.)

582. A.-D. May, Width of the Magnetic Resonance of the 4 $^3P_1$ Level of Zinc, Excited by Electron Bombardment, C. R. Acad. Sci. 251, 1371. (Fr.)

583. L. A. Mitrofanova, The Determination of the Relative gf-Values for Nickel by the Emission Method, Pulk. Astron. Obs. Izv. 21, 185. (Russ.)

584. A. Omholt, The Time Delay of the Red [O I] Lines in the Aurora, Planet. Space Sci. 2, 246.

586. Yu. I. Ostrovskii & N. P. Penkin, f-Number Measurements for the Spectral Lines of Barium, Opt. Spectrosc. (USSR) 9, 371.

587. W. Pearce, Plasma-Jet Temperature Measurement, "Symposium on Optical Spectrometric Measurements of High Temperature," 142-169 (Ed., P. J. Dickerman, University Chicago Press).

588. C. Pecker, Research on the Fe X Resonance Line in the Solar Ultraviolet Spectrum, C. R. Acad. Sci. 250, 3779. (Fr.)

589. N. P. Penkin & T. P. Red'ko, The Relative Oscillator Strengths of Certain Lines of Zn I and Cd I, Opt. Spectrosc. (USSR) 9, 360.

590. A. Pery-Thorne & W. R. S. Garton, Absorption of Krypton in the Extreme Ultraviolet, Proc. Phys. Soc., London, Sect. A 76, 833.

591. V. K. Prokof'ev, I. M. Nagibina, & G. P. Petrova, Determination of Absolute Oscillator Strengths from Spectral Line Widths, Opt. Spectrosc. (USSR) 8, 195.

593. J. C. Slater, "Quantum Theory of Atomic Structure," Vol. II (McGraw-Hill, New York).

594. M. Spitzer, Optical Resonance and Selective Reflection with Cadmium and Zinc Vapors, Ann. Phys. (Paris) 5, 707. (Fr.)

595. W. Stoffregen & H. Derblom, Lifetime of the Atomic Oxygen 6300 A Line in the Auroral Spectrum, Nature (London) 185, 28.

1961

608. L. H. Aller, "The Abundance of the Elements," 87-96 (Interscience Publisher, Inc., New York).

609. J.-P. Barrat & J. Butaux, Measurement of the Lifetime of the 5 $^3P_1$ Level of Cadmium by the Magnetic Resonance Method, C. R. Acad. Sci. 253, 2668. (Fr.)

610. G. D. Bell & R. B. King, The Absolute f-Value of the Pb I Line λ 2833, Astrophys. J. 133, 718.

611. I. M. Belousova & D. B. Gurevich, The Distribution of Atoms Among the Excited Levels in a Low Pressure Arc, Opt. Spectrosc. (USSR) 10, 206.

613. B. Brehm, W. Demtröder, & O. Osberghaus, Determination of Oscillator Strengths by Lifetime Measurements of the First Excited Levels for the Elements Ga, Al, Tl, Mg, and Na, Z. Naturforsch., Teil A 16, 843. (Ger.)

615. H. Bucka & H. H. Nagel, On the Lifetime of the 6 $^3P_1$ Term in the Ba I Spectrum, Ann. Phys. (Leipzig) 8, 329. (Ger.)

618. J. Ciplys & K. Uspalis, Treatment of Two-Electron Transitions in Th^+, Liet. TSR Mokslu Akad. Darb., Ser. B 2, No. 25, 31. (Russ.)

626. R. H. Garstang, Mutual Magnetic Interactions and Oscillator Strengths in the First Spectrum of Oxygen, Proc. Cambridge Philos. Soc. 57, 115.

627. J. E. Gaustad & L. Spitzer, Jr., The Far Ultraviolet Line Spectrum of a B2 Star, Astrophys. J. 134, 771.

629. H.-G. Groth, The Atmosphere of the A-2 Supergiant α Cygni, Z. Astrophys. 51, 231. (Ger.)

630. W. Hanus, On Relative Doublet Line Strengths in the Principal Series of Cesium, Bull. Acad. Pol. Sci., Ser. Sci., Math., Astron. Phys. 9, 287.

631. W. B. Hawkins, Cesium Transition Probabilities for Optical Pumping, Phys. Rev. 123, 544.

632. O. S. Heavens, Radiative Transition Probabilities of the Lower Excited States of the Alkali Metals, J. Opt. Soc. Am. 51, 1058.

633. R. Hefferlin, Semi-Empirical Investigations on the Nature of the f-Value, J. Tenn. Acad. Sci. 36, 76.

634. T. M. Helliwell, Oscillator Strengths of Lead and the Lead Abundance in the Sun, Astrophys. J. 133, 566.

635. R. Herdan & T. P. Hughes, New Values of the Square of the Radial Integral Associated with the Dipole Matrix Elements for Transitions in Hydrogen-Like Atoms, Astrophys. J. 133, 294.

638. L. Houziaux & M.-P. Sadoine, Transition Probabilities and Oscillator Strengths for Elements of Astrophysical Interest, Bull. Soc. R. Sci. Liege 30, 287. (Fr.)

642. W. J. Karzas & R. Latter, Electron Radiative Transitions in a Coulomb Field, Astrophys. J., Suppl. Ser. No. 55, 6, 167.

643. M. Z. Khokhlov, Oscillator Strengths of the p^2 - ps Transition Array in the Spectra of C I, Si I, Ge I, Sn I, Pb I. II. Quantum-Mechanical Computation of Line Strengths, Assuming an Intermediate Type of Coupling, Izv. Krym. Astrofiz. Obs. 26, 52. (Russ.)

644. M. Z. Khokhlov, Oscillator Strengths of the p^2 - ps Transition Array in Lead, Tin, Germanium, Silicon, and Carbon Spectra. I. Lead, Tin, Izv. Krym. Astrofiz. Obs. 25, 249. (Russ.)

645. F. A. Korolev & Yu. K. Kvaratskheli, The Plasmatron (Plasma Jet) as a Light Source for Spectroscopy, Opt. Spectrosc. (USSR) 10, 200.

649. Z. Les & H. Niewodniczanski, Intensity Ratios of Spectral Lines in the Sharp Series Triplets of Atoms of the Second Column of the Periodic Table, Acta Phys. Pol. 20, 701.

650. V. Letfus, Note on the Temperature Determination of the Iron Arc and the Derivation of the f-Values, J. Opt. Soc. Am. 51, 1151.

651. V. Letfus, Revision of the Experimental f-Values for Fe I from Emission Lines. I. Analysis of the Values Derived by Hefferlin, Bull. Astron. Inst. Czech. 12, 161.

652. W. C. Martin & J. L. Tech, Energy Levels and Magnetic Dipole Transitions in the $4p^4$ Ground Configuration of Singly Ionized Atomic Bromine (Br II), J. Opt. Soc. Am. 51, 591.

654. Yu. I. Ostrovskii & N. P. Penkin, Oscillator Strengths of the Spectral Lines of Calcium, Opt. Spectrosc. (USSR) 10, 219.

655. Yu. I. Ostrovskii & N. P. Penkin, Measurement of the Absolute Values of the Oscillator Strengths for the Resonance Lines of Calcium, Strontium, and Barium Ions, Opt. Spectrosc. (USSR) 10, 3.

656. Yu. I. Ostrovskii & N. P. Penkin, Measurement of the Absolute Values of Oscillator Strengths in Atomic Spectra. II. Resonance Lines of Atoms of Group II, Opt. Spectrosc. (USSR) 11, 307.

658. Ch. Ottinger & K. Ziock, Measurement of Oscillator Strengths of the 4033 Å and 4172 Å Lines of Gallium as Well as the 3720 Å Line of Iron, Z. Naturforsch., Teil A 16, 720. (Ger.)

660. J. Richter, On the Oscillator Strengths of Multiplets of Neutral Nitrogen, Z. Astrophys. 51, 177. (Ger.)

664. E. L. Tolans & A. Lurio, Lifetime of the $^2S_{1/2}$ State of Thallium by Optical Double Resonance, Bull. Am. Phys. Soc. 6, 75.

665. W. L. Wiese & J. B. Shumaker, Jr., Measurement of the Transition Probability of the O I Multiplet at 6157 A, J. Opt. Soc. Am. 51, 937.

1962

681. H. Bucka & G. von Oppen, Hyperfine Structure and Lifetime of the 8 $^2P_{3/2}$ Term in the Cs I Spectrum, Ann. Phys. (Leipzig) 10, 119. (Ger.)

683. J. Ciplys & K. Uspalis, Theoretical Investigation of Simultaneous Two-Electron Transitions, "Fizicheskie Problemy Spektroskopii," Tom 1, 21-23 (Akad. Nauk SSR, Moskva). (Russ.)

684. J. W. Cooper, Photoionization from Outer Atomic Subshells. A Model Study, Phys. Rev. 128, 681.

686. C. H. Corliss & W. R. Bozman, "Experimental Transition Probabilities for Spectral Lines of Seventy Elements," Nat. Bur. Stand. (U.S.), Monogr. 53.

687. W. Demtröder, Determination of Oscillator Strengths by Lifetime Measurements of the First Excited States of the Elements Ga, Al, Mg, Tl, and Na, Z. Phys. 166, 42. (Ger.)

689. A. S. Douglas & R. H. Garstang, Transition Integrals for Si IV and Ca II, Proc. Cambridge Philos. Soc. 58, 377.

690. H. F. Eicke, Improvement of a Method for the Experimental Determination of Transition Probabilities and Its Application to the Spectrum of Barium, Z. Phys. 168, 227. (Ger.)

693. J. Firor & H. Zirin, Observations of Five Ionization Stages of Iron in the Solar Corona, Astrophys. J. 135, 122.

694. E. W. Foster, Measurement of Transition Probabilities in the Cl I, II and C I Spectra, Proc. Phys. Soc., London, Sect. A 80, 882.

695. E. W. Foster, Measurement of Transition Probabilities in the Visible Spectra of O I and C I and Estimation of Vacuum Ultraviolet Radiation Standards, Proc. Phys. Soc., London 79, 94.

697. R. H. Garstang, Two Solar Ultraviolet Lines of Neutral Carbon, Observatory 82, 50.

698. R. H. Garstang, Transition Probabilities for Forbidden Lines of Fe II, Mon. Not. R. Astron. Soc. 124, 321.

700. R. H. Garstang, Forbidden Transitions, "Atomic and Molecular Processes," 1-46 (Ed., D. R. Bates, Academic Press, New York).

701. R. H. Garstang, Hyperfine Structure and Intercombination Line Intensities in the Spectra of Magnesium, Zinc, Cadmium, and Mercury, J. Opt. Soc. Am. 52, 845.

702. R. H. Garstang, Transition Probabilities for Permitted and Forbidden Lines of Si X, Fe XIV, and Fe X, Ann. Astrophys. 25, 109.

703. R. H. Garstang & J. A. Dawe, Two Lines of Neutral Silicon in the Solar Ultraviolet Spectrum, Observatory 82, 210.

704. P. F. Gruzdev, Relative Oscillator Strengths in the Spectrum of the Cobalt Ion Co II, Opt. Spectrosc. (USSR) 13, 169.

705. P. F. Gruzdev, Relative Oscillator Strengths in the Nickel Ion Spectrum Ni II, Opt. Spectrosc. (USSR) 13, 249.

707. J. T. Jefferies & F. Q. Orrall, On the Interpretation of Prominence Spectra. V. The Emission Lines in Quiescent Prominences, Astrophys. J. 135, 109.

711. M. Z. Khokhlov, A Device with a King's Furnace for the Measurement of Oscillator Strengths by the Absorption Method. The f-Values of Be I, Sn I, and Ge I Lines, Izv. Krym. Astrofiz. Obs. 28, 277. (Russ.)

712. M. Koedam & A. A. Kruithof, Transmission of the Visible Mercury Triplet by the Low Pressure Mercury-Argon Discharge; Concentration of the 6 ^{3}P States, Physica (Utrecht) 28, 80.

713. V. N. Kolesnikov & N. S. Slepchenko, Measurement of Relative Transition Probabilities for the Lines of Ba I and Ba II, "Fizicheskie Problemy Spektroskopii," Tom 1, 41-43 (Akad. Nauk SSR, Moskva). (Russ.)

715. M. D. Kunisz, Some Remarks on the Applicability of the Coulomb Approximation in Calculating Atomic Transition Probabilities in Atoms and Oscillator Strengths of Spectral Lines, Acta Phys. Pol. 22, 99. (Fr.)

718. V. Letfus, Revision of the Experimental f-Values for Fe I from Emission Lines. II. Analysis of the Values Derived by Mitrofanova, Bull. Astron. Inst. Czech. 13, 98.

720. N. G. Morozova & G. P. Startsev, Iron Arc Lines for Determining Arc Temperatures by the Emission Method, Bull. Acad. Sci. USSR, Phys. Ser. 26, 933.

721. R. W. Nicholls & A. L. Stewart, Allowed Transitions, "Atomic and Molecular Processes," Ch. 2 (Ed., D. R. Bates, Academic Press, New York).

726. Yu. I. Ostrovskii & N. P. Penkin, The Measurement of Absolute Oscillator Strengths in Atomic Spectra. III. Potassium, Opt. Spectrosc. (USSR) 12, 379.

727. N. P. Penkin & L. N. Shabanova, Oscillator Strengths of Spectral Lines of Magnesium, Strontium, and Barium, Opt. Spectrosc. (USSR) 12, 1.

729. O. Roder, Measurement of Absolute Oscillator Strengths of Some Fe I and Fe II Lines, Z. Astrophys. 55, 38. (Ger.)

732. P. M. Stone, Cesium Oscillator Strengths, Phys. Rev. 127, 1151; 135, AB2 (1964).

734. L. A. Vainshtein, Calculation of Wave Functions and Oscillator Strengths of Complex Atoms, Trans. P. N. Lebedev Phys. Inst. 15, Part 1, 1. (Russ.)

735. L. A. Vainshtein & I. A. Poluektov, A Semi-Empirical Method for Calculating the Oscillator Strengths of Intercombination Transitions, Opt. Spectrosc. (USSR) 12, 254.

1962

750. I. I. Agarbiceanu, I. M. Popescu, I. Cucurezeanu, & V. Vasiliu, The Study of the $7\ ^3S_1$ Level of Mercury by the Magneto-Optical Resonance Method, C. R. Acad. Sci. 257, 2264. (Fr.)

751. I. Agarbiceanu, I. Cucurezeanu, I. Popescu, & V. Vasiliu, Determination of the Mean Lifetime of Excited States by a Polarimetric Method, Opt. Spectrosc. (USSR) 14, 8.

752. C. W. Allen, "Astrophysical Quantities," Second Ed., 53-76 (The Athlone Press, London).

754. E. M. Anderson & V. A. Zilitis, Semi-Empirical Calculation of Oscillator Strengths for Lithium, Rubidium, and Cesium Atoms, Opt. Spectrosc. (USSR) 16, 211.

755. M. Barrat & J.-P. Barrat, Measurement of Lande Factors and Lifetimes of Atomic Levels of Cadmium Excited by Electronic Bombardment, C. R. Acad. Sci. 257, 1463. (Fr.)

756. B. Baschek, W. H. Kegel, & G. Traving, Solar and Stellar Oscillator Strengths of Fe II, Z. Astrophys. 56, 282. (Ger.)

758. G. Boldt, Measurement of the Absorption Oscillator Strengths of C I Multiplets in the Range between 1100 and 1800 Å, Z. Naturforsch., Teil A 18, 1107. (Ger.)

761. S. J. Czyzak & T. K. Krueger, Forbidden Transition Probabilities for Some P, S, Cl, and Ar Ions, Mon. Not. R. Astron. Soc. 126, 177.

762. P. Feldman & R. Novick, Autoionizing States in the Alkali Atoms with Microsecond Lifetimes, Phys. Rev. Lett. 11, 278.

768. R. E. Huffman, Y. Tanaka, & J. C. Larrabee, Absorption Coefficients of Krypton in the 600 to 886 Å Wavelength Region, Appl. Opt. 2, 947.

770. M. Z. Khokhlov, Oscillator Strengths of the p^2 - ps Transition Arrays of Lead, Tin, Germanium, Silicon, and Carbon Spectra. Germanium, Silicon. A Comparison of Theoretical and Experimental Data (Pb I, Sn I, Ge I, Si I), Izv. Krym. Astrofiz. Obs. 29, 131. (Russ.)

771. R. B. King, The Measurement of Absolute Oscillator Strengths for Lines of Neutral Atoms, J. Quant. Spectrosc. Radiat. Transfer 3, 299.

772. A. Kisiel, Intensity Ratios in Doublets of the Fine Structure in the Al III and Si IV Spectra, Acta Phys. Pol. 23, 167.

773. T. Kornalewski & H. Niewodniczanski, Intensity Ratios of Spectral Lines in the Visible Triplet of Zn I in the Temperature of Liquid Nitrogen, Acta Phys. Pol. 24, 601.

775. V. G. Kurt, On the Relative Intensities of the Coronal Lines Fe XIII λ 10747 and λ 10798, Sov. Astron.--AJ 6, 620.

776. V. Letfus, Model Abundance of Iron in the Solar Atmosphere, Bull. Astron. Inst. Czech. 14, 155.

777. M. Margoshes & B. F. Scribner, A Study of the Gas-Stabilized Arc as an Emission Source for the Measurement of Oscillator Strengths. Determination of Some Relative gf-Values for Fe I, J. Res. Nat. Bur. Stand., Sect. A 67, 561.

779. H. Mendlowitz, Transition Array for $d^3 \rightarrow d^2p$: Vanadium III, Astrophys. J. 138, 1277.

787. N. P. Penkin & L. N. Shabanova, The Oscillator Strengths of the Tl I Spectral Lines, Opt. Spectrosc. (USSR) 14, 87.

788. N. P. Penkin & L. N. Shabanova, Oscillator Strengths of Spectral Lines of the Aluminum, Gallium, and Indium Atoms, Opt. Spectrosc. (USSR) 14, 5.

789. N. P. Penkin & J. J. Slavenas, Oscillator Strengths of the Spectral Lines Sn I and Pb I, Opt. Spectrosc. (USSR) 15, 83.

790. N. P. Penkin & J. J. Slavenas, Absolute Oscillator Strengths of the Resonance Doublets of Ag I and Au I, Opt. Spectrosc. (USSR) 15, 3.

791. A. Pery-Thorne & J. E. Chamberlain, Transition Probabilities in the Spectra of Neutral Neon, Argon, and Krypton, Proc. Phys. Soc., London, Sect. A 82, 133.

793. L. N. Shabanova, Oscillator Strengths of the Spectral Lines of Ca I, Opt. Spectrosc. (USSR) 15, 450.

795. H. Statz, C. L. Tang, & G. F. Koster, Approximate Electromagnetic Transition Probabilities and Relative Electron Excitation Cross Sections for Rare-Gas Masers, J. Appl. Phys. 34, 2625.

796. C. L. Tang, Relative Probabilities for the Xenon Laser Transitions, Proc. IEEE 51, 219.

801. A. W. Weiss, Wave Functions and Oscillator Strengths for the Lithium Isoelectronic Sequence, Astrophys. J. 138, 1262.

1963

802. W. L. Wiese, Present Status of our Knowledge of Atomic Transition Probabilities, "Proceedings of the Xth Colloquium Spectroscopicum Internationale," 37-56 (Eds., E. R. Lippincott & M. Margoshes, Spartan Books, Washington, D.C.).

1964

813. J. Aarts & G. Bosch, Oscillator Strengths for Lines of Fe I, Mg I, and Cs I, Physica (Utrecht) 30, 1673.

815. I. I. Agarbiceanu, I. M. Popescu, I. Cucurezeanu, & V. Vasiliu, Magnetic Resonance of the 7 $^3S_1$ Hg I Level, Opt. Spectrosc. (USSR) 17, 258.

816. P. L. Altick & A. E. Glassgold, Correlation Effects in Atomic Structure Using the Random-Phase Approximation, Phys. Rev. 133, A632.

817. E. M. Anderson & V. A. Zilitis, Oscillator Strengths for Sodium and Potassium Atoms Calculated by a Semi-Empirical Method, Opt. Spectrosc. (USSR) 16, 99.

819. J. Bakos & J. Szigeti, Lifetimes of Excited Levels of He Atoms, Kosp. Fiz. Kut. Int. Kozlemenyek 12, 125. (Hung.)

820. J.-P. Barrat, B. Cheron, & J.-L. Cojan, Alignment by Optical Pumping of Mercury Atoms in the 6 $^3P_2$ Metastable Level, C. R. Acad. Sci. 259, 3475. (Fr.)

821. M. Barrat, Study of the 5 $^3P_2$ Metastable Level of Cadmium Excited by Electronic Bombardment, C. R. Acad. Sci. 259, 1063. (Fr.)

822. S. Bashkin, L. Heroux, & J. Shaw, Extreme Ultraviolet Spectra from Multiply-Ionized Neon Beams, Phys. Lett. 13, 229.

824. H. F. Berg, K. L. Eckerle, R. W. Burris, & W. L. Wiese, Relative Oscillator Strengths of Some O II and O III Lines from Measurements on Shock-Heated Plasmas, Astrophys. J. 139, 751.

825. A. Bialas-Zabawa, E. Skulska, & Z. Walach, Relative Line Strengths in the Doublets of the Spark Spectra of Mg II, Ca II, Sr II, and Ba II, Acta. Phys. Pol. 26, 175.

826. T. Bieniewski, Absolute Oscillator Strengths for Cd I λ 3261 and Ag I $\lambda\lambda$ 3281 and 3383, Mon. Not. R. Astron. Soc. 127, 359.

827. T. M. Bieniewski, Collision Broadening of Spectral Lines by Identical Atoms, "Atomic Collision Processes," 1055-1064 (Ed., M. R. C. McDowell, John Wiley & Sons, Inc., New York).

830. F. W. Byron, Jr., M. N. McDermott, & R. Novick, Self-Broadening of Optical Double Resonance Lines in Cadmium, Phys. Rev. 134, A615.

831. F. W. Byron, Jr., M. N. McDermott, R. Novick, B. W. Perry, & E. B. Saloman, Spin and Nuclear Moments of 245-Day Zn^{65}; Redetermination of the hfs of Zn^{67} and $\tau(^3P_1)$ of Zinc, Phys. Rev. 134, A47.

832. K. C. Clark & C. E. Fairchild, Resonance Absorption by Nitrogen Atoms in Afterglows, "Atomic Collision Processes," 581-585 (Ed., M. R. C. McDowell, John Wiley & Sons, Inc., New York).

833. M. Cohen & A. Dalgarno, An Expansion Method for Calculating Atomic Properties. IV. Transition Probabilities, Proc. R. Soc. London, Ser. A 280, 258.

834. R. H. Cordover, A. Szöke, & A. Javan, Resonance Experiments on the Excited States of Neon, Bull. Am. Phys. Soc., Ser. II, 9, 490.

835. C. H. Corliss & B. Warner, Absolute Oscillator Strengths for Fe I, Astrophys. J., Suppl. Ser. No. 83, 8, 395.

836. S. J. Czyzak, Theoretical Calculations of Atomic Transition Probabilities and Collision Cross Sections, Publ. Astron. Soc. Pac. 76, 413.

838. P. J. Dickerman & R. W. Deuel, Measurement of Relative Transition Probabilities for Some Lines of the Cu I, Al I, and Mo I Spectra, J. Quant. Spectrosc. Radiat. Transfer 4, 807.

839. W. L. Faust & R. A. McFarlane, Line Strengths for Noble-Gas Maser Transitions; Calculations of Gain/Inversion at Various Wavelengths, J. Appl. Phys. 35, 2010.

842. E. W. Foster, The Measurement of Oscillator Strengths in Atomic Spectra, Rep. Prog. Phys. 27, 469.

843. R. G. Fowler, T. M. Holzberlein, C. H. Jacobson, & S. J. B. Corrigan, Direct Measurements of the Lifetimes of Excited States of Neutral Helium, Proc. Phys. Soc., London 84, 539.

844. H. Friedrichs, Measurement of Transition Probabilities of Ne I and Kr I Lines in Thermal Plasmas, Z. Astrophys. 60, 176. (Ger.)

846. C. Froese, Some Multiplet Strengths for Transitions in Fe XVI and Fe XV, Astrophys. J. 140, 361.

847. A. Gallagher & A. Lurio, Thallium Oscillator Strengths and 6d $^2D_{3/2}$ State hfs, Phys. Rev. 136, A87.

848. R. H. Garstang, Transition Probabilities of Forbidden Lines, J. Res. Nat. Bur. Stand., Sect. A 68, 61.

850. J. Geiger, Scattering of 25 keV Electrons in Gases. II. Scattering in Neon, Argon, Krypton, and Xenon, Z. Phys. 177, 138. (Ger.)

852. G. Goullet & J.-C. Pebay-Peyroula, Study of Several Levels of the $5d^9 6s^2 6p$ Configuration of the Mercury Atom, C. R. Acad. Sci. 259, 93. (Fr.)

857. T. M. Helliwell, Nodal Boundary Condition Method for Atomic Wave Functions and Transition Probabilities, Phys. Rev. 135, A325.

858. T. M. Holzberlein, Direct Measurement of Atomic Lifetimes: Helium, Rev. Sci. Instrum. 35, 1041.

859. E. Hulpke, E. Paul, & W. Paul, Determination of Oscillator Strengths by Lifetime Measurements of the First Excited Levels of the Elements Ba, Sr, Ca, In, and Na, Z. Phys. 177, 257. (Ger.)

860. A. V. Ivanova & A. N. Ivanova, Calculation of the Lithium Atom by the Hartree-Fock Method with Complete Self-Consistency, Opt. Spectrosc. (USSR) 16, 499.

862. H. P. Kelly, Many-Body Perturbation Theory Applied to Atoms, Phys. Rev. 136, B896.

863. P. S. Kelly, Some Analytical Self-Consistent Field Functions and Dipole Transition Matrix Elements for Nitrogen and Oxygen and Their Ions, Astrophys. J. 140, 1247.

864. P. S. Kelly, Transition Probabilities in Nitrogen and Oxygen from Hartree-Fock-Slater Wave Functions, J. Quant. Spectrosc. Radiat. Transfer 4, 117.

865. P. S. Kelly & B. H. Armstrong, Analytic SCF Oscillator Strength for the O I $2p^4(^3P)$ - $2p^3 3s(^3S)$ Transition, Phys. Rev. Lett. 12, 35.

866. H. Köstlin, A Contribution to the Experimental Determination of Atomic Transition Probabilities and Their Measurement in the Spectrum of Calcium, Z. Phys. 178, 200. (Ger.)

867. D. W. Koopman, Line Strengths for Neutral and Singly Ionized Neon, J. Opt. Soc. Am. 54, 1354.

869. F. A. Korolev, V. I. Odintsov, & E. V. Fursova, Determination of the Transition Probability for the Neon Resonance Line at 736 Å, Opt. Spectrosc. (USSR) 16, 304.

870. H. G. Kuhn, High Resolution Spectroscopy--A Survey of Methods and Applications, Acta Phys. Pol. 26, 315.

871. H. G. Kuhn & J. M. Vaughan, Radiation Width and Resonance Broadening in Helium, Proc. R. Soc. London, Ser. A 277, 297.

872. A. Landman & R. Novick, Level Crossing Determination of $\tau(^1P_1)$ and $g_J(^3P_1)$ in Zinc and the hfs of Zn^{65} and Zn^{67}, Phys. Rev. 134, A56.

874. T. Lubowiecka, Ratios of Oscillator Strengths of Spectral Lines for the Doublets of the Sharp Series of the Arc Spectrum of Ga I, Acta Phys. Pol. 25, 849.

875. A. Lurio, Lifetime of the First Excited $^1P_1$ State of Mg and Ba; hfs of Ba^{137}, Phys. Rev. 136, A376.

876. A. Lurio, R. L. DeZafra, & R. J. Goshen, Lifetime of the First $^1P_1$ State of Zinc, Calcium, and Strontium, Phys. Rev. 134, A1198.

877. A. Lurio & R. Novick, Lifetime and hfs of the $(5s5p)^1P_1$ State of Cadmium, Phys. Rev. 134, A608.

879. G. V. Markova & M. P. Chaika, Observation of the Intersection of Magnetic Sublevels of the Excited States of Cesium and Sodium, Opt. Spectrosc. (USSR) 17, 170.

880. R. M. May, Spontaneous Transition Probabilities in Highly Excited Hydrogen Atoms, Nucl. Fusion 4, 244.

881. M. R. C. McDowell & A. D. Stauffer, Quadrupole Strengths for the 1'S - n'D Transitions in He, Phys. Lett. 12, 207.

882. N. G. Morozova & G. P. Startsev, Absolute Oscillator Strengths of Arc Lines of Elements in the Iron Group, Opt. Spectrosc. (USSR) 17, 174.

884. A. M. Naqvi, Calculations and Applications of Screened Hydrogenic Wave Functions, J. Quant. Spectrosc. Radiat. Transfer 4, 597.

887. A. A. Nikitin & O. A. Yakubovskii, Forbidden Transition Lines from the First Excited sp^2 Configurations in Isoelectron Coronal Sequences. Quadrupole Transitions in sp^2 Configurations, Sov. Phys.--Dokl. 9, 409.

1964

888. R. Novick, B. W. Perry, & E. B. Saloman, Level-Crossing Studies of the $(6p7s)^3P_1^o$ State of Pb, Bull. Am. Phys. Soc., Ser. II 9, 625.

890. N. P. Penkin, The Determination of Oscillator Strengths in Atomic Spectra, J. Quant. Spectrosc. Radiat. Transfer 4, 41. (Russ.)

891. S. R. Pottasch, On the Chemical Composition of the Solar Corona, Mon. Not. R. Astron. Soc. 128, 73.

893. A. B. Prag & K. C. Clark, Measured Oscillator Strengths for the $2p^4\ ^3P - 2p^3 3s\ ^3S^o$ Transition in Atomic Oxygen, Phys. Rev. Lett. 12, 34.

894. V. K. Prokof'ev, E. I. Nikonova, P. F. Gruzdev, & M. S. Frish, Fe I Oscillator Strengths, Izv. Krym. Astrofiz. Obs. 31, 281. (Russ.)

895. M. Riemann, Measurement of Relative and Absolute Optical Transition Probabilities of Cu I with a Wall-Stabilized Arc, Z. Phys. 179, 38. (Ger.)

896. Z. Rudzikas, J. Vizbaraite, & A. Jucys, On the Theoretical Investigation of Some Transitions in the Nitrogen Atom in the Case of Different Vector Coupling Schemes, Liet. Fiz. Rinkinys 4, 51. (Russ.)

897. B. Schiff & C. L. Pekeris, f-Values for Transitions between the $1\ ^1S$, $2\ ^1S$, and $2\ ^3S$, and the $2\ ^1P$, $2\ ^3P$, $3\ ^1P$, and $3\ ^3P$ States in Helium, Phys. Rev. 134, A638.

898. G. W. Series & W. Gough, A Determination of Lifetime and Hyperfine Structure in Thallium by Resonance Fluorescence, Acta Phys. Pol. 26, 345.

900. J. B. Shumaker, Jr. & C. R. Yokley, The Use of an Analog Computer in Side-On Arc Spectroscopy, Appl. Opt. 3, 83.

901. J. J. Slavenas, Oscillator Strengths of Si I and Ge I Lines, Opt. Spectrosc. (USSR) 16, 214.

903. J. E. Solarski & W. L. Wiese, Experimental Transition Probabilities for Six Oxygen Multiplets, Phys. Rev. 135, A1236.

905. A. K. Valters, E. I. Nikonova, & G. P. Startsev, Measurement of Relative Oscillator Strengths in the Atomic Spectrum of Iron by the Total Absorption Method, Opt. Spectrosc. (USSR) 16, 393.

906. A. K. Valters & G. P. Startsev, Measurement of the Relative Values of Oscillator Strengths in the Spectrum of the Iron Atom by the Anomalous Dispersion Method, Opt. Spectrosc. (USSR) 17, 262.

1964

907. C.-R. Vidal, Relative Oscillator Strengths for Some Lines of the Sharp and Diffuse Series of Helium, Z. Naturforsch., Teil A 19, 1018 (Ger.)

1965

919. P. L. Altick & E. N. Moore, Structure and Oscillator Strengths of Autoionizing Levels in Helium, Phys. Rev. Lett. 15, 100.

920. E. L. Altman & M. P. Chaika, Determination of the Lifetime of the Excited 7 $^2P_{3/2}$ State of Cesium from Double Resonance Experiments, Opt. Spectrosc. (USSR) 19, 538.

921. D. K. Anderson, Lifetimes of the $(5p^5 6s)^1P_1$ and $^3P_1$ States of Xenon, Phys. Rev. 137, A21.

922. V. A. Ankudinov, S. V. Bobashev, & E. P. Andreev, Measurement of Lifetimes of Excited States of the Hydrogen Atom, Sov. Phys.--JETP 21, 26.

924. J.-P. Barrat, J.-L. Cojan, & Y. Lecluse, Measurement of the Lifetime of the 7 $^3S_1$ Level of Mercury, C. R. Acad. Sci. 260, 1893. (Fr.)

926. W. R. Bennett, Jr., P. J. Kindlmann, & G. N. Mercer, Measurement of Excited State Relaxation Rates, Appl. Opt., Supplement 2 of Chemical Lasers, 34.

927. K. Berkner, W. S. Cooper III, S. N. Kaplan, & R. V. Pyle, Measurements of Transition Probabilities of ^2S - $^2P^o$ Transitions in Lithium-Like Ions, Phys. Lett. 16, 35.

929. M.-C. Bigeon & J.-L. Cojan, Radiative Lifetime of the 6 $^3P_0$ State of the ^{199}Hg and ^{201}Hg Isotopes, C. R. Acad. Sci. 261, 913. (Fr.)

931. H. Boersch & H. J. Reich, Oscillator Strengths from Radiative Emission Generated by Fast Electrons. I. Measurements for Helium, Optik (Stuttgart) 22, 289. (Ger.)

936. C. H. Corliss, Oscillator Strengths for Lines of Ni I, J. Res. Nat. Bur. Stand., Sect. A 69, 87.

937. W. F. J. Evans & A. V. Jones, Some Observations of Type-B Red Aurora with a Multi-Channel Photometer, Can. J. Phys. 43, 697.

938. R. G. Fowler, T. M. Holzberlein, & C. H. Jacobson, Lifetime of the 3 ^1P State of Helium, Phys. Rev. 140, A1050.

941. C. Froese, Hartree-Fock Results for Some Excited States of O^{+2}, O^{+}, and Ne^{+}, Phys. Rev. 137, A1644.

945. C. Galleron-Julienne & J.-P. Descoubes, Structure of the Levels of the Helium Atom Excited By Electronic Impact, C. R. Acad. Sci. 261, 916. (Fr.)

946. R. H. Garstang & J. Van Blerkom, Transition Probabilities in the Ar I Spectrum, J. Opt. Soc. Am. 55, 1054.

947. W. Gough & G. W. Series, Lifetime and Hyperfine Structure of the Level $(6s^2 6d)^2 D_{3/2}$ of Thallium I, Proc. Phys. Soc., London, Sect. A 85, 469.

950. H. Henning, The Continuous Radiation of Thermal Carbon Plasmas, Z. Astrophys. 62, 109. (Ger.)

951. M. Hertzberg & R. Holland, Transition Coefficient Ratios for Alakali Atoms, J. Quant. Spectrosc. Radiat. Transfer 5, 313.

956. R. B. King, K. H. Olsen, & C. H. Corliss, Oscillator Strengths for Lines of Fe I between 2500 and 3200 Å, Astrophys. J. 141, 354.

957. J. Z. Klose, Atomic Lifetimes in Neon I, Astrophys. J. 141, 814.

958. F. A. Korolev & V. I. Odintsov, Investigation of the Width of Helium Spectral Lines with Electron Excitation in an Atomic Beam, Opt. Spectrosc. (USSR) 18, 547.

959. T. K. Krueger & S. J. Czyzak, Atomic Wave Functions, Collision Cross Sections, and Transition Probabilities of Fe Ions, Mem. R. Astron. Soc. 69, 145.

960. K. H. Krysmanski, On the Problem of Thermal Equilibrium in the Low Current Arc. II. Experimental Investigations and Results, Ann. Phys. (Leipzig) 15, 207. (Ger.)

961. H. G. Kuhn, E. L. Lewis, & J. M. Vaughan, Enhancement of Radiation Damping by Resonance Coupling, Phys. Rev. Lett. 15, 687.

962. F. Labuhn, Measurement of the Absorption-Oscillator Strengths of N I Multiplets in the Wavelength Range from 1000 to 1800 Å with a Cascade Arc, Z. Naturforsch., Teil A 20, 998. (Ger.)

963. G. M. Lawrence, J. K. Link, & R. B. King, The Absolute Oscillator Strengths of Lines in the Spectra of Ten Elements, Astrophys. J. 141, 293.

964. J. B. Levinsonas & A. A. Nikitin, "Handbook for Theoretical Computation of Line Intensities in Atomic Spectra," (Tr., Z. Lerman, Ed., C. Roth, Israel Program for Scientific Translations Ltd., Daniel Davey & Co., Inc., New York).

966. A. Lurio, Lifetime of the 6s6p $^1P_1$ State of Mercury, Phys. Rev. 140, A1505.

967. B. V. L'vov, Determination of the Absolute Values of Oscillator Strengths by Combined Measurement of the Total and Linear Absorption of Vapor Layers in a Graphite Cell, Opt. Spectrosc. (USSR) 19, 282.

969. J. M. Malville & R. A. Berger, Transition Probabilities in Highly Ionized p^2 and p^4 Configurations, Planet. Space Sci. 13, 1131.

970. N. G. Morozova & G. P. Startsev, Measurement of the Relative Values of the Oscillator Strengths in the Spectrum of the Iron Ion, Opt. Spectrosc. (USSR) 18, 505.

971. F. A. Morse & F. Kaufman, Determination of Ground-State O, N, and H by Light Absorption and Measurement of Oscillator Strengths, J. Chem. Phys. 42, 1785.

974. G. E. Norman, On the Application of the Coulomb Approximation to the Calculation of Transition Probabilities, Opt. Spectrosc. (USSR) 19, 369.

975. D. E. Osterbrock, Temperatures in H II Regions and Planetary Nebulae, Astrophys. J. 142, 1423.

976. P. P. Ostroumenko & V. S. Rossikhin, Measurement of Relative Oscillator Strengths in the Copper Atom Spectrum by the Linear Absorption Method, Opt. Spectrosc. (USSR) 19, 365.

977. K. V. Paulson & G. G. Shepherd, A Cross-Spectral Method for Determining the Mean Lifetime of Metastable Oxygen Atoms from Photometric Observations of Quiet Aurorae, J. Atmos. Terr. Phys. 27, 831.

979. W. R. Pendleton, Jr. & R. H. Hughes, Radiative Lifetimes and Excitation Mechanisms in Helium, Phys. Rev. 138, A683.

980. N. P. Penkin & L. N. Shabanova, Oscillator Strengths of the Al I and Ga I Spectral Lines, Opt. Spectrosc. (USSR) 18, 504.

981. N. P. Penkin & L. N. Shabanova, Serial Regularities in the Spectra of Certain Atoms, Opt. Spectrosc. (USSR) 18, 535.

1965

983. H. Pfennig, R. Steele, & E. Trefftz, Wave Functions and Oscillator Strengths of Be-Like Ions (Be I, C III, N IV, O V), J. Quant. Spectrosc. Radiat. Transfer 5, 335.

985. C. H. Popenoe & J. B. Shumaker, Jr., Arc Measurement of Some Argon Transition Probabilities, J. Res. Nat. Bur. Stand., Sect. A 69, 495.

986. A. B. Prag, C. E. Fairchild, & K. C. Clark, Measured Oscillator Strengths in the Allowed 2p-3s Transitions from the Ground State in Oxygen and Nitrogen, Phys. Rev. 137, A1358.

987. Simultaneous Determination of f-Values and Vapor Pressures from Optical Absorption Measurements, J. Chem. Phys. 42, 701.

988. J. Richter, Temperature Measurements in Thermal Plasmas of Known Composition, Z. Astrophys. 61, 57. (Ger.)

989. Z. Rudzikas, J. Vizbaraite, & A. Jucys, The Calculation of the Strengths of Spectral Lines of the Neon Atom, Liet. Fiz. Rinkinys 5, 63. (Russ.)

991. H. A. Schüssler, Precision Measurement of the Hyperfine Structure of the 5 $^2P_{3/2}$ and 6 $^2P_{3/2}$ Terms of Rb^{85} and Rb^{87}, Z. Phys. 182, 289. (Ger.)

994. B. W. Shore, Comparison of Atomic LS-Coupling Line and Multiplet Strengths with Observations of Fe I, Astrophys. J. 142, 94.

995. B. W. Shore & D. H. Menzel, Generalized Tables for the Calculation of Dipole Transition Probabilities, Astrophys. J., Suppl. Ser. No. 106, 12, 187.

996. M. Spitzer, Lifetime of the Cadmium State Excited by the 2288 Å Resonance Line, C. R. Acad. Sci. 260, 3907. (Fr.)

997. H. Statz, F. A. Horrigan, S. H. Koozekanani, C. L. Tang, & G. F. Koster, Transition Probabilities for Some Ar II Laser Lines, J. Appl. Phys. 36, 2278; 39, 4045 (1968).

998. J. C. Stewart & M. Rotenberg, Wave Functions and Transition Probabilities in Scaled Thomas-Fermi Ion Potentials, Phys. Rev. 140, A1508.

999. R. Turner, Decay of Resonance Radiation in a Pulsed Discharge in Krypton, Phys. Rev. 140, A426.

1000. B. Warner, Absolute Oscillator Strengths for Doubly Ionized Iron, Communications from the University of London Observatory, Report No. 66.

1965

1001. P. G. Wilkinson, Oscillator Strengths of the Resonance Lines of the Rare Gases--I. Krypton, J. Quant. Spectrosc. Radiat. Transfer 5, 503.

1966

1012. F. Ackermann, M. Baumann, & J. Gayler, Measurement of the Lifetime of the 5s5p $^3P_1$ State of Strontium, Z. Naturforsch., Teil A 21, 664. (Ger.)

1014. L. Agnew, Absolute Oscillator Strengths for Members of the Principal Series of Cesium, Bull. Am. Phys. Soc. 11, 327.

1015. E. M. Anderson, E. K. Anderson, & V. F. Trusov, Treatment of the Spin Orbit Interaction in the Calculation of the Oscillator Strengths of Alkali-Metal Atoms, Opt. Spectrosc. (USSR) 21, 63.

1016. B. H. Armstrong & K. L. Purdum, Extended Use of the Coulomb Approximation: Mean Powers of r, a Sum Rule, and Improved Transition Integrals, Phys. Rev. 150, 51.

1017. J. Bakos & J. Szigeti, Lifetimes of Helium Levels, Acta Phys. Acad. Sci. Hung. 21, 149. (Ger.)

1018. J. Bakos, J. Szigeti, & L. Varga, The Lifetimes of Ionized Argon States, Phys. Lett. 20, 503.

1019. J.-P. Barrat, J.-L. Cojan, & Y. Lecluse, Study of the 7 $^3S_1$ and 8 $^3S_1$ Levels of Mercury by Stepwise Excitation, C. R. Acad. Sci. 262, 609. (Fr.)

1020. M. Barrat & J. Duclos, Study of the 4 $^3P_2$ Metastable Level of Zinc Excited by Electronic Bombardment, C. R. Acad. Sci., Ser. B 263, 1170. (Fr.)

1021. S. Bashkin, R. K. Wangsness, & L. Heroux, Collisional Excitation of Neon Spectra, Phys. Rev. 151, 87.

1022. M. Baumann & G. Wandel, Lifetimes of the Excited States $(6s6p)^1P_1$ and $(6s6p)^3P_1$ of Ytterbium, Phys. Lett. 22, 283.

1024. G. D. Bell, D. R. Paquette, & W. L. Wiese, Relative Transition Probabilities for Prominent Ni I and Ni II Lines in the Near Ultraviolet, Astrophys. J. 143, 559.

1025. W. R. Bennett, Jr. & P. J. Kindlmann, Radiative and Collision-Induced Relaxation of Atomic States in the $2p^53p$ Configuration of Neon, Phys. Rev. 149, 38.

1027. A. Bialas-Zabawa, M. Kucharski, E. Skulska, J. Urbaczka, & Z. Walach, Relative Strengths of Spectral Lines for Zn II and Cd II Doublets, Acta Phys. Pol. 30, 897.

1028. W. S. Bickel & S. Bashkin, Mean Life of the $2p^2\ ^1D_2$ Level in O V, Phys. Lett. 20, 488.

1029. W. S. Bickel & A. S. Goodman, Mean Lives of the 2p and 3p Levels in Atomic Hydrogen, Phys. Rev. 148, 1.

1030. J. F. Bott, Spectroscopic Measurement of Temperatures in an Argon Plasma Arc, Phys. Fluids 9, 1540.

1032. W. A. Brown, Shock Tube Measurement of Pb I Lines, Phys. Fluids 9, 1273.

1033. M. Brule, J. Lagrue, J.-P. Barrat, & J.-L. Cojan, Measurement of Ratios of Oscillator Strengths of Various Lines in the Spectrum of the Mercury Atom, C. R. Acad. Sci. 263, 1312. (Fr.)

1035. H. Bucka, J. Eichler, & G. v. Oppen, Resonance Scattering of Light on Ba^+ Ions, Z. Naturforsch., Teil A 21, 654. (Ger.)

1036. H. Bucka, B. Grosswendt, & H. A. Schüssler, Level Crossing Experiment for the $6\ ^3P_{3/2}$ Term of the Rb I Spectrum, Z. Phys. 194, 193. (Ger.)

1037. H. Bucka & J. Ney, Level Crossing Experiment for the Investigation of the Hyperfine Structure in the $5d^{10}6p\ ^2P_{3/2}$ Term of Au^{197}, Z. Phys. 194, 208. (Ger.)

1038. H. Bucka, J. Ney, & G. Heppke, Atomic Beam Experiments on Resonance Scattering of Light on Cu and Ag Atoms in an External Magnetic Field, Z. Angew. Phys. 20, 354. (Ger.)

1040. R. D. Chapman, W. H. Clarke, & L. H. Aller, Theoretical Oscillator Strengths for Some Transitions of Astrophysical Interest, Astrophys. J. 144, 376.

1041. G. I. Chashchina & E. Ya. Shreider, Determination of Oscillator Strengths of the Resonance Lines of Xenon, Opt. Spectrosc. (USSR) 20, 283.

1042. P. B. Coates & A. G. Gaydon, Temperature Measurements in Shock Tubes; Transition Probabilities for Argon Lines, Proc. R. Soc. London, Ser. A 293, 452.

1043. C. H. Corliss & B. Warner, Oscillator Strengths for Ultraviolet Lines of Fe I, J. Res. Nat. Bur. Stand., Sect. A 70, 325.

1044. S. J. Czyzak & T. K. Krueger, On the Excited Levels of Fe VIII, Astrophys. J. 144, 381.

1047. V. I. Donin & V. P. Chebotaev, Determination of the $2s_2$ Level Population and the Probability of the $2s_2$ - $2p_4$ Transition in Neon, Opt. Spectrosc. (USSR) 20, 414.

1048. R. J. Donovan & D. Husain, Deactivation of Excited Iodine Atoms I ($5\ ^2P_{1/2}$), Trans. Faraday Soc. 62, 11.

1049. J. D. Dow & R. S. Knox, Excited-State Wave Functions, Excitation Energies, and Oscillator Strengths for Krypton and Xenon, Phys. Rev. 152, 50.

1050. C. H. Dugan, Magnetic Quadrupole Transitions in Optical Radiation, J. Quant. Spectrosc. Radiat. Transfer 5, 761.

1052. C. Froese, Hartree-Fock Parameters for the $2p^2$ C I Sequence, Astrophys. J. 145, 932.

1053. C. Froese, Hartree-Fock Procedure for Some nsn's ^1S Configurations, Phys. Rev. 150, 1.

1054. C. Froese & A. B. Underhill, gf-Values for Lines of the Si II Spectrum, Astrophys. J. 146, 301.

1056. R. H. Garstang, The Fe XVII Spectrum, Publ. Astron. Soc. Pac. 78, 399.

1058. A. S. Goodman & D. J. Donahue, Mean Lives of Some States in Atomic Hydrogen, Phys. Rev. 141, 1.

1059. L. C. Green, N. C. Johnson, & E. K. Kolchin, Oscillator Strengths for Singlet and Triplet Series in Neutral Helium, Astrophys. J. 144, 369.

1060. S. M. Gridneva & G. A. Kasabov, Oscillator Strengths and Cesium Spectral Line Profiles in a Plasma," Proceedings VIIth International Conference on Ionization Phenomena in Gases," Vol. II, 581-585 (Gradevinska Knjiga Publishing House, Beograd, Yugoslavia). (Russ.)

1061. P. F. Gruzdev, Calculation of the Oscillator Strengths of Multiplets of the Sharp and Diffuse Series in the Spectra of the Aluminum, Gallium, Indium, and Thallium Atoms, Opt. Spectrosc. (USSR) 20, 209.

1062. P. F. Gruzdev & V. K. Prokof'ev, Oscillator Strengths of Resonance Multiplets in the Spectra of Atoms and Ions of Isoelectronic Series of the First, Second, and Third Periods, Opt. Spectrosc. (USSR) 21, 151.

1966

1063. Th. Hänsch & P. Toschek, Measurement of Neon Atomic Level Parameters by Laser Differential Spectrometry, Phys. Lett. 20, 273.

1064. E. Hinnov, Excitation and Ionization Rates of Neon Ions in a Stellarator Discharge, J. Opt. Soc. Am. 56, 1179.

1066. R. H. Hughes, H. R. Dawson, & B. M. Doughty, Measurement of the Lifetimes of the n = 3 States of H by Electron Capture During Fast H^+ Impact on Gases, J. Opt. Soc. Am. 56, 830.

1067. M. E. Hults, Interference Effect Between Magnetic-Dipole and Electric-Quadrupole Radiation in the Atomic Spectra of Lead, J. Opt. Soc. Am. 56, 1298.

1069. N. J. Ionescu-Pallas, Explicit Formulas for Atomic Lifetimes, Rev. Roum. Phys. 11, 643.

1070. J. C. Irwin & R. A. Nodwell, Relative Transition Probabilities in Neon, Can. J. Phys. 44, 1781.

1071. A. Kancerevicius, Using Hypervirial Relations to Calculate Oscillator Forces, Liet. Fiz. Rinkinys 6, 215. (Russ.)

1072. F. Karstensen & J. Schramm, Measurement of the Lifetimes of Electrons in the 3P and 4D States of Sodium, Z. Phys. 195, 370. (Ger.)

1073. T. K. Krueger & S. J. Czyzak, On the Theoretical Transition Probabilities of Certain Emission Lines of the Solar Corona, Astrophys. J. 144, 1194; 149, 237 (1967).

1074. J. Z. Klose, Atomic Lifetimes in Neon I, Phys. Rev. 141, 181.

1075. T. Krupenikova & M. Chaika, Determination of the Lifetime of the $2p^5 3p(2p_4)$ State of Neon, Opt. Spectrosc. (USSR) 20, 604.

1076. W. Lange, J. Luther, A. Steudel, & H. Walther, Lifetime of the $4f^7 6s6p\ z\ {}^6P_{5/2}$ State of Europium, Phys. Lett. 20, 166.

1077. S. R. La Paglia & O. Sinanoglu, Theoretical Transition Probabilities, J. Chem. Phys. 44, 1888.

1078. G. M. Lawrence & B. D. Savage, Radiative Lifetimes of UV Multiplets in Boron, Carbon, and Nitrogen, Phys. Rev. 141, 67.

1079. F. J. LeBlanc, O. Oldenberg, & N. P. Carleton, Transition Probabilities of Forbidden Oxygen Lines in a Discharge Tube, J. Chem. Phys. 45, 2200.

1966

1080. V. Letfus, Measurement of the Absolute Values of Oscillator Strengths in Atomic Spectra. The Effects of Partial Pressure and Doppler Broadening, Opt. Spectrosc. (USSR) 21, 371.

1082. R. Lincke & H. R. Griem, Method for the Determination of Atomic-Resonance Line-Oscillator Strengths from Widths of Optically Thick Emission Lines in T-Tube Plasmas, Phys. Rev. 143, 66.

1083. J. K. Link, Corrected Compilation of Data on the Lifetime of the 7 $^2P_{3/2}$ State of Cesium, J. Opt. Soc. Am. 56, 1262.

1084. J. K. Link, Measurement of the Radiative Lifetimes of the First Excited States of Na, K, Rb, and Cs by Means of the Phase-Shift Method, J. Opt. Soc. Am. 56, 1195.

1086. B. S. Malone & W. H. Corcoran, Transition Probability Measurements in the Blue Near UV Spectrum of Ar I, J. Quant. Spectrosc. Radiat. Transfer 6, 443.

1088. G. V. Marr & R. Heppinstall, On the Autoionization Transitions in Thallium Atoms, Proc. Phys. Soc., London, Sect. A 87, 293.

1090. J. W. McConkey, D. J. Burns, K. A. Moran, & K. G. Emeleus, Measurement of Relative Multipole Transition Probabilities in Atomic Oxygen, Phys. Lett. 22, 416.

1091. H. Mendlowitz, Calculated Line Strengths for the Transition Array for $d^2s - d^2p$: Application to Ni II, Astrophys. J. 143, 573.

1092. J. V. Michael & R. E. Weston, Jr., Determination of Hydrogen-Atom Concentration by Lyman-α Photometry. I. Oscillator Strength of the Hydrogen-Atom $^2P_{3/2,1/2} \leftarrow {}^2S_{1/2}$ Transition. II. Kinetics of the Reaction of Hydrogen Atoms with Acetylene and Ethylene, J. Chem. Phys. 45, 3632.

1093. M. Mizushima, $\Delta S = \pm 1$ Magnetic Quadrupole Radiative Transitions in Atoms and Molecules, J. Phys. Soc. Jpn. 21, 2335.

1094. N. H. Möller, Theoretical Investigation of Three Forbidden Lines in Mg I, Ark. Fys. 29, 353.

1095. N. L. Moise, An Absorption Technique for the Measurement of Absolute Rates of Atomic Transitions, Astrophys. J. 144, 763.

1096. N. L. Moise, The Ratio of Transition Rates of Copper and Zinc by a Radioactive Isotope Technique, Astrophys. J. 144, 782.

1097. N. L. Moise, Absolute Transition Rates of Atomic Transitions of Copper, Silver, and Gold, Astrophys. J. 144, 774.

1099. N. G. Morozova, G. P. Startsev, & M. S. Frish, Measurement of Relative Oscillator Strengths in the Arc Spectrum of Iron by the Emission Method, Smithsonian Astrophysical Observatory, No. 8, 1-11 (Cambridge, Mass.).

1100. A. M. Naqvi, Transition Probabilities in Multiply Ionized Atoms of Lithium, Beryllium, Boron, and Carbon Isoelectronic Sequences, "Proceedings of the Seventh International Conference on Ionization Phenomena in Gases," Vol. III, 558-561 (Gradevinska Knyiga Publishing House, Belgrade, Yugoslavia).

1102. J. Ney, Level Crossing Investigation of the Hyperfine Structure of the $3d^{10}4p\ ^2P_{3/2}$ Term of Cu^{63} and Cu^{65}, Z. Phys. 196, 53. (Ger.)

1104. D. Rosenberger & I. Thumb, Lifetime of the Neon $2p_6$ Level, Z. Naturforsch., Teil A 21, 175. (Ger.)

1105. E. B. Saloman, Lifetime of the $(6s^26p8s)^3P_1^o$ State in Lead, Phys. Rev. 144, 23.

1106. E. B. Saloman, Lifetime of the $(6s^26p7s)^1P_1^o$ State in Lead, Phys. Rev. 152, 79.

1107. E. B. Saloman & W. Happer, Lifetime, Coherence Narrowing, and Hyperfine Structure of the $(6s^26p7s)^3P_1^o$ State in Lead, Phys. Rev. 144, 7.

1108. B. D. Savage & G. M. Lawrence, Radiative Lifetimes of Ultraviolet Multiplets in Si, P, S, O, Ne II, and Ar II, Astrophys. J. 146, 940.

1109. J. J. Slavenas, Oscillator Strengths of Some Cu I and Ag I Spectral Lines, Opt. Spectrosc. (USSR) 20, 264.

1110. W. W. Smith & A. Gallagher, Radiative Lifetime of the First $^2P_{3/2}$ State of Ionized Calcium and Magnesium by the Hanle Effect, Phys. Rev. 145, 26.

1111. R. Steele & E. Trefftz, Wave Functions and Oscillator Strengths of Some Iron and Be-Like Ions with Configuration Mixing, J. Quant. Spectrosc. Radiat. Transfer 6, 833.

1112. H. H. Stroke, Atomic LIfetimes and Electron Excitation, Phys. Today 19, 55.

1114. Ya. F. Verolainen & A. L. Osherovich, The Lifetimes of Certain Levels of Mercury and Cadmium, Opt. Spectrosc. (USSR) 20, 517.

1115. W. L. Wiese, M. W. Smith, & B. M. Glennon, "Atomic Transition Probabilities (Hydrogen Through Neon--A Critical Data Compilation)," Vol. I, Nat. Stand. Ref. Data Ser.-Nat. Bur. Stand. 4 (U.S. Government Printing Office, Washington, D.C.).

1116. P. G. Wilkinson, Oscillator Strengths of the Resonance Lines of the Rare Gases--II. Xenon, J. Quant. Spectrosc. Radiat. Transfer 6, 823.

1117. B. Woodgate, Transition Probabilities from Solid Vortex Arcs, Mon. Not. R. Astron. Soc. 134, 287.

1967

1129. E. M. Anderson, E. K. Anderson, & V. F. Trusov, A Semi-Empirical Calculation of Oscillator Strengths for the Thallium Atom, Opt. Spectrosc. (USSR) 22, 471.

1130. E. M. Anderson, V. A. Zilitis, & E. S. Sorokina, A Semi-Empirical Calculation of the Oscillator Strengths of the Calcium Atom, Opt. Spectrosc. (USSR) 23, 279.

1131. E. M. Anderson, V. A. Zilitis, & E. S. Sorokina, Semi-Empirical Calculation of the Oscillator Strengths of the Magnesium Atom, Opt. Spectrosc. (USSR) 23, 102.

1132. R. J. Anderson, E. T. P. Lee, & C. C. Lin, Electron Excitation Functions of Mercury, Phys. Rev. 157, 31.

1133. J. Bakos & J. Szigeti, Average Lifetime of 2p Levels of Neon, Opt.Spectrosc. (USSR) 23, 255.

1134. J. Bakos & J. Szigeti, Measurement of the Lifetime of Atomic Excited Levels by Time Analyzer, Acta Phys. Acad. Sci. Hung. 23, 341.

1135. S. Bashkin & K. S. Burton, Decay of Some Levels in O IV, J. Opt. Soc. Am. 57, 282.

1136. U. Bauder, Temperature Measurements for the Ar High Power Arc, Z. Phys. 205, 303. (Ger.)

1138. H. F. Berg, Absolute Transition Probabilities of Higher Ions, Z. Phys. 199, 445. (Ger.)

1139. H. F. Berg, On the Equilibrium Population of the States of O II, Z. Phys. 207, 404. (Ger.)

1140. H. F. Berg & W. Ervens, Absolute Measurements of Some Ar II Transition Probabilities, Z. Phys. 206, 184. (Ger.)

1143. M. C. Bigeon, Transition Probability of the 6 $^1S_0$ - 6 $^3P_0$ Line of Mercury, J. Phys. (Paris) 28, 51. (Fr.)

1144. A. M. Bogudlov, A Determination of the Oscillator Strengths from the Spectrum of Procyon, Izv. Krym. Astrofiz. Obs. 37, 267. (Russ.)

1145. G. Boldt & F. Labuhn, Measurement of the Absorption-Oscillator Strengths of O I Lines in the Vacuum UV Spectral Range, Z. Naturforsch., Teil A 22, 1613. (Ger.)

1146. J. M. Bridges & W. L. Wiese, Experimental Determination of Transition Probabilities and Stark Widths of S I and S II Lines, Phys. Rev. 159, 31.

1147. K. A. Bridgett & T. A. King, Direct Determination of Excited-State Lifetimes by Electron Impact Excitation and Single-Photon Counting Techniques, Proc. Phys. Soc., London, Sect. A 92, 75.

1148. M. Brieger & P. Zimmermann, Level Crossing Investigation of the Hyperfine Structure of Sn^{117} and Sn^{119} for the $(5p6s)^3P_1^o$ Term of the Sn I Spectrum, Z. Naturforsch., Teil A 22, 2001. (Ger.)

1149. K. C. Brog, T. G. Eck, & H. Wieder, Fine and Hyperfine Structure of the 2 ^2P Term of Li^6 and Li^7, Phys. Rev. 153, 91.

1150. J.-P. Buchet, A. Denis, J. Desesquelles, & M. Dufay, Measurement of the Lifetimes of the First Levels of Li I, C. R. Acad. Sci., Ser. B 265, 471. (Fr.)

1151. K. Buchhaupt & W. Drtil, Lifetime Determination of the He 3 $^1P_1$ Level Via the Hanle Effect, Utilizing Ion Impact Excitation, Z. Naturforsch., Teil A 22, 2126. (Ger.)

1155. P. L. Byard, Absolute gf-Values for Fe I, J. Quant. Spectrosc. Radiat. Transfer 7, 559.

1156. T. V. Bychkova, V. G. Kirpilenko, S. G. Rautian, & A. S. Khaikin, Measurements of Probabilities of the Spontaneous $3s_2$ - 2p Transitions in Neon, Opt. Spectrosc. (USSR) 22, 371.

1157. G. I. Chashchina & E. Ya. Shreider, Determination of the Oscillator Strengths of the Resonance Lines of Krypton, Opt. Spectrosc. (USSR) 22, 284.

1158. M. Chenevier, J. Dufayard, & J.-C. Pebay-Peyroula, Lifetimes of the 4 $^1P_1$, 4 $^1D_2$, 5 $^1D_2$, 4 $^3F_4$ Levels of Calcium Excited by Electron Impacts, Phys. Lett. A 25, 283.

1159. K. Codling, R. P. Madden, & D. L. Ederer, Resonances in the Photo-Ionization Continuum of Ne I (20-150 eV), Phys. Rev. 155, 26.

1160. M. Cohen, Asymptotic Large-Z Atomic Oscillator Strengths, Can. J. Phys. 45, 2009.

1161. M. Cohen & P. S. Kelly, Hartree-Fock Wave Functions for Excited States. IV. Oscillator Strengths in the Helium Isoelectronic Sequence, Can. J. Phys. 45, 2079.

1162. M. Cohen & P. S. Kelly, Hartree-Fock Wave Functions for Excited States. III. Dipole Transitions in Three-Electron Systems, Can. J. Phys. 45, 1661.

1164. C. H. Corliss & J. B. Shumaker, Jr., Transition Probabilities in Argon I, J. Res. Nat. Bur. Stand., Sect. A 71, 575.

1166. R. D. Cowan, Classification of Observed $3p^6 3d$ - $3p^5 3d4s$ Lines of Fe VIII, Mn VII, and Cr VI, Astrophys. J. 147, 377.

1167. C. R. Cowley & B. Warner, The Influence of Systematic Errors in Laboratory Oscillator Strengths on the Interpretation of Stellar Spectra, Observatory 87, 117.

1168. R. J. S. Crossley & A. Dalgarno, An Expansion Method for Calculating Atomic Properties. V. Transition Probabilities of M Shell Electrons, Proc. R. Soc. London, Ser. A 286, 510.

1169. P. T. Cunningham & J. K. Link, Measurement of Lifetimes of Excited States of Na, Tl, In, Ga, Cu, Ag, Pb, and Bi by the Phase-Shift Method, J. Opt. Soc. Am. 57, 1000.

1170. A. Dalgarno & E. M. Parkinson, An Expansion Method for Calculating Atomic Properties. X. $1s^2\ ^1S$ - $1snp\ ^1P$ Transitions of the Helium Sequence, Proc. R. Soc. London, Ser. A 301, 253.

1171. R. L. DeZafra & W. Kirk, Measurement of Atomic Lifetimes by the Hanle Effect, Am. J. Phys. 35, 573.

1172. A. K. Dupree & L. Goldberg, Solar Abundance Determination from Ultraviolet Emission Lines, Sol. Phys. 1, 229.

1173. R. C. Elton, Intercombination Line Oscillator Strengths in the Helium Isoelectronic Sequence, Astrophys. J. 148, 573.

1174. J. D. Feichtner, J. H. Gallagher, & M. Mizushima, Lifetime of the First Excited Atomic States of Rb^{87}, Phys. Rev. 164, 44.

1175. E. W. Foster, Measurement of Transition Probabilities for Three S I Multiplets and Some Observations of Arc-Column Wobble, Proc. Phys. Soc., London 90, 275.

1967

1178. S. E. Frish & A. N. Klyucharev, The Role of Cascade Transitions in the Excitation of the 6s7s $^3S_1$ Level of Mercury, Opt. Spectrosc. (USSR) 22, 92.

1179. C. Froese, Some Hartree-Fock Oscillator Strengths for Highly Ionized Fe and Si, Bull. Astron. Inst. Neth. 19, 86.

1180. C. Froese, Some Hartree-Fock Results for Two- and Four-Electron Atomic Systems, J. Chem. Phys. 47, 4010.

1181. A. Gallagher, Oscillator Strengths of Ca II, Sr II, and Ba II, Phys. Rev. 157, 24.

1182. A. Gallagher, Collisional Depolarization of the Rb 5p and Cs 6p Doublets, Phys. Rev. 157, 68.

1183. R. H. Garstang, Magnetic Quadrupole Line Intensities, Astrophys. J. 148, 579.

1185. R. H. Garstang & L. J. Shamey, Intercombination Line Oscillator Strengths in the Helium and Beryllium Isoelectronic Sequences, Astrophys. J. 148, 665.

1187. R. Gebauer & H. Jäger, Mean Lifetimes of Excited States of Hydrogen and Their Influence on the Intensity Distribution of the Hydrogen Stark Effect. Application of Wien's Intensity Decay Experiment to the Stark-Effect Components, Acta Phys. Austriaca 26, 123. (Ger.)

1188. H. C. Goldwire, Jr. & W. M. Goss, Microwave Radiation of Singly Charged Helium 3 from H II Regions, Astrophys. J. 149, 15.

1189. A. Goly & T. Wujec, Determination of the Temperature and Composition of Argon Plasma, Zesz. Nauk. Wyzsz. Szk. Pedagog. Opolu: Fiz., No. 7, 43. (Pol.)

1190. P. F. Gruzdev, Oscillator Strengths of Resonance Lines in the Spectra of Ne I, Ar I, Kr I, Xe I Atoms and Na II and Rb II Ions, Opt. Spectrosc. (USSR) 22, 170.

1191. P. F. Gruzdev, Oscillator Strengths of Lines of the Sharp Series in the Atomic Spectra of Elements of Group II, Opt. Spectrosc. (USSR) 22, 89.

1192. R. Hefferlin & L. Rascon, Oscillator Strengths in Isoelectronic Sequences, J. Opt. Soc. Am. 57, 964.

1193. L. Heroux, Mean Lifetimes of the 2p and 3p Levels in He II, Phys. Rev. 161, 47.

1194. L. Heroux, Radiative Lifetimes for UV Multiplets of N II through N V, Phys. Rev. 153, 156.

1195. W. Hofmann, Measurement of Absorption Oscillator Strengths of Cl I Lines in the Vacuum UV Region, Z. Naturforsch., Teil A 22, 2097. (Ger.)

1196. L. L. House, Some Intermediate Coupling Transition Probabilities in Ca XV and Fe XIII, Astrophys. J. 149, 211.

1199. D. Husain & J. R. Wiesenfeld, Time-Resolved Emission Studies of Electronically Excited Iodine Atoms I ($5\ ^2P_{1/2}$), Trans. Faraday Soc. 63, 1349.

1201. P. Jean, M. Martin, P.-P. Barrat, & J.-L. Cojan, Measurement of Oscillator Strengths of Lines of the Spectrum of the Mercury Atom, C. R. Acad. Sci., Ser. B 264, 1709. (Fr.)

1202. P. Jean, M. Martin, & D. Lecler, Lifetime of the $6\ ^1P_1$ Level of Mercury and Cross Sections of Various Gases for the Destruction of the Alignment in this Level, C. R. Acad. Sci., Ser. B 264, 1791. (Fr.)

1203. P. D. Johnston, Calculation of Argon I Transition Probabilities in Intermediate Coupling, Proc. Phys. Soc., London, Sect. A 92, 896.

1204. J. A. Jordan, Jr., G. S. Bakken, & R. E. Yager, Radiative Lifetimes of Some n = 4 and n = 5 States in He II, J. Opt. Soc. Am. 57, 530.

1205. A. Kancerevicius, Two-Electron Transitions in Ca and Ba Atoms, Liet. Fiz. Rinkinys 7, 611. (Russ.)

1206. A. Kancerevicius, Intercombination Transition Probabilities in Series of the Atoms Zn I, Cd I, and Pb III, Liet. Fiz. Rinkinys 7, 321. (Russ.)

1207. A. Kancerevicius & S. Zilionyte, Theoretical Investigations of the Oscillator Strengths in the ns - mp Series of the Alkalis, Liet. Fiz. Rinkinys 7, 73. (Russ.)

1208. F. Karstensen & J. Schramm, Experimental Determination of Lifetimes for the 3 D and 4 D Terms of Lithium, J. Opt. Soc. Am. 57, 654.

1209. S. O. Kastner, Oscillator Strengths for Resonance Lines of Some Silicon and Sulfur Ions, Sol. Phys. 2, 196.

1210. S. O. Kastner, K. Omidvar, & J. H. Underwood, Oscillator Strengths for Resonance Lines of Ions in the Neon Isoelectronic Sequence, Astrophys. J. 148, 269.

1211. R. B. Kay & R. H. Hughes, Excitation Transfer in Helium, Phys. Rev. 154, 61.

1212. B. P. Kibble, G. Copley, & L. Krause, Effect of Imprisonment of Radiation in Sodium Vapor on the Measured Lifetime of the $3\ ^2P$ States, Phys. Rev. 153, 9.

1967

1213. J. Z. Klose, Lifetimes of Some 4p Levels in Argon I, J. Opt. Soc. Am. 57, 1242.

1215. J. L. Kohl, A New Experimental Technique for Measuring Atomic Transition Probabilities, Phys. Lett. A 24, 125.

1217. H. G. Kuhn & E. L. Lewis, Self-Broadening and f-Values in the Spectrum of Neon, Proc. R. Soc. London, Ser. A 299, 423.

1219. G. M. Lawrence, Dipole Transition Integrals for Non-Metal Resonance Transitions, Astrophys. J. 147, 293.

1220. G. M. Lawrence, Resonance Transition Probabilities in Intermediate Coupling for Some Neutral Non-Metals, Astrophys. J. 148, 261.

1221. Y. Lecluse, Magnetic Depolarization of Levels of the 6s6d Configuration of the Mercury Atom By Optical Stepwise Excitation, J. Phys. (Paris) 28, 671. (Fr.)

1222. E. L. Lewis, Self-Broadening and Oscillator Strengths in the Rare Gases, Proc. Phys. Soc., London 92, 817.

1223. M. R. Lewis, T. Marshall, E. H. Carnevale, F. S. Zimnoch, & G. W. Wares, Radiative Lifetimes of Excited Electronic States in Ionic Species of Nitrogen, Phys. Rev. 164, 94.

1224. G. Markova, G. Khvostenko, & M. Chaika, Lifetime of the 6 $^2P_{3/2}$ and 7 $^2P_{3/2}$ States of Cesium, Opt. Spectrosc. (USSR) 23, 456.

1225. W. C. Marlow, Hakenmethode, Appl. Opt. 6, 1715.

1226. A. D. May & C. Y. Leung, Magnetic Resonance in a Mercury Discharge, "Excitation Electronique d'Une Vapeur Atomique--Application a la Spectroscopie," No. 162, 167-170 (Centre National de la Recherche Scientifique, Paris).

1227. H. Mendlowitz, Calculated Transition Strengths Between the Configurations $5d^8 6s$ and $5d^8 6p$ in Au III, J. Res. Nat. Bur. Stand., Sect. A 71, 149.

1231. G. H. Nussbaum & F. M. Pipkin, Correlation of Photons in Cascade and the Coherence Time of the 6 $^3P_1$ State of Mercury, Phys. Rev. Lett. 19, 1089.

1232. A. L. Osherovich & Ya. F. Verolainen, Radiative Lifetimes and the Mechanism of Population and Depopulation of Neon Levels, Opt. Spectrosc. (USSR) 22, 181.

1233. A. L. Osherovich & Ya. F. Verolainen, Lifetimes of He I, He II, Kr I, and Ar I Levels, Vestn. Leningr. Univ., Fiz., Khim. No. 1, 140. (Russ.)

1234. G. V. Ovechkin, Sh. Bakhtovarshoev, & L. E. Sandrigailo, Determination of Transition Probabilities for Weak Lines of Magnesium and Tin, J. Appl. Spectrosc. (USSR) 7, 309.

1235. D. A. Parkes, L. F. Keyser, & F. Kaufman, Oscillator Strength of the Resonance Triplet of Atomic Oxygen, Astrophys. J. 149, 217.

1236. N. P. Penkin & L. N. Shabanova, Oscillator Strengths and Effective Cross Sections of the Resonance Lines of Gallium and Indium Atoms for Line Broadening Collisions, Opt. Spectrosc. (USSR) 23, 11.

1238. P. Reinke, Determination of the Absolute Oscillator Strengths of Three Resonance Lines of Titanium, Z. Astrophys. 66, 234. (Ger.)

1239. J. R. Roberts & K. L. Eckerle, Measurements of Relative Oscillator Strengths of Some C II Multiplets, Phys. Rev. 153, 87.

1240. R. I. Rudko & C. L. Tang, Spectroscopic Studies of the Ar^+ Laser, J. Appl. Phys. 38, 4731; 39, 4046 (1968).

1241. J. I. Shipp & E. D. Tidwell, Spectroscopic Temperature Measurements in a Low-Pressure Magnetically Confined Argon Plasma, J. Opt. Soc. Am. 57, 1061.

1242. J. B. Shumaker, Jr. & C. H. Popenoe, Experimental Transition Probabilities for the Ar I 4s-4p Array, J. Opt. Soc. Am. 57, 8.

1243. J.-J. Slavenas, Quantum Mechanical Computation of the Absolute Line Strengths of the Au I Resonance Doublet, Liet. Fiz. Rinkinys 7, 619. (Russ.)

1246. E. P. Trukhan & L. I. Kiselevskii, Experimental Determination of the Oscillator Strengths of the Lines of Highly Ionized Oxygen, Opt. Spectrosc. (USSR) 23, 377.

1247. E. P. Trukhan & L. I. Kiselevskii, Measurement of Oscillator Strengths of Lead Ion Lines of One-, Two-, and Three-Fold Ionization, Dokl. Akad. Nauk BSSR 11, 122. (Russ.)

1248. L. S. Vasilenko & V. P. Chebotaev, Lifetime of the Ne $3s_2$ Level and the $3s_2 - 2p_4$ Transition Probability, J. Appl. Spectrosc. (USSR) 6, 353.

1249. G. A. Victor, Two-Quantum Processes in the Coupled Hartree-Fock Approximation, Proc. Phys. Soc., London 91, 825.

1250. B. Warner, Absolute Oscillator Strengths for Once-Ionized Elements of the Iron Group, Mem. R. Astron. Soc. 70, 165.

1251. B. Warner & C. R. Cowley, On Systematic Errors in Oscillator Strengths Measured in a Free-Burning Arc, J. Quant. Spectrosc. Radiat. Transfer 7, 751.

1253. A. W. Weiss, Superposition of Configurations and Atomic Oscillator Strengths--Carbon I and II, Phys. Rev. 162, 71.

1254. A. W. Weiss, Theoretical Multiplet Strengths for Mg I, Al II, and Si III, J. Chem. Phys. 47, 3573.

1255. A. W. Weiss, Oscillator Strengths for the Helium Isoelectronic Sequence, J. Res. Nat. Bur. Stand., Sect. A 71, 163.

1256. A. W. Weiss, Hartree-Fock Multiplet Strengths for K I, Ca II, and Sc III, J. Res. Nat. Bur. Stand., Sect. A 71, 157.

1258. W. L. Wiese, Transition Probabilities for Prominent Ar I Lines, "Proceedings of VIIIth International Conference on Pheonomena in Ionized Gases," 447 (Springer-Verlag, Vienna).

1259. P. G. Wilkinson, Lifetimes and g-Factors of Rare Gas Resonance States, Can. J. Phys. 45, 1709.

1260. K. H. Wilson & W. E. Nicolet, Spectral Absorption Coefficients of Carbon, Nitrogen, and Oxygen Atoms, J. Quant. Spectrosc. Radiat. Transfer 7, 891.

1261. R. N. Zare, Correlation Effects in Complex Spectra. II. Transition Probabilities for the Magnesium Isoelectronic Sequence, J. Chem. Phys. 47, 3561-3572.

1262. Yu. K. Zemtsov, Calculation of Radial Integrals for Multipole Transitions in Atomic Spectra, Dokl. Akad. Nauk SSSR 12, 470.

1263. K. Ziock, Lifetime of Excited States, "Methods of Experimental Physics," Vol. 4, Ch. 4.2, 214-225 (Eds., V. W. Hughes & H. L. Schultz, Academic Press, New York).

1968

1276. T. Andersen, K. A. Jessen, & G. Sørensen, Mean Life of the $2p^2\ ^1D$ Level in B II, Phys. Lett. A 28, 459.

1278. J. R. Barker & J. V. Michael, Experimental Estimate of the Oscillator Strength of the $^2P_{3/2,1/2} \leftarrow {}^2S_{1/2}$ Transition of the Hydrogen Atom, J. Opt. Soc. Am. 58, 1615.

1281. J. Berkowitz & C. Lifshitz, The Photoionization of Cadmium and Mercury Vapours, J. Phys. B 1, 438.

1282. W. S. Bickel, Mean Life Measurements Using the Beam Foil Light Source, Appl. Opt. 7, 2367.

1283. W. S. Bickel, R. Girardeau, & S. Bashkin, Mean Life of the $2p^2\ {}^1D$ Level in N IV, Phys. Lett. A 28, 154.

1284. T. M. Bieniewski, T. K. Krueger, & S. J. Czyzak, Atomic Intensities: A Comparison of Theoretical and Experimental f-Values for Zn I, Cd I, and Hg I, Adv. Quantum Chem. 4, 141.

1287. H. Bucka, G. zu Putlitz, & R. Rabold, Hyperfine Structure and Lifetime of the $7\ {}^2P_{3/2}$ State of Rb^{85} and Rb^{87}, Z. Phys. 213, 101. (Ger.)

1288. B. Budick, Lifetime and Hyperfine Structure of the First Excited $^3P_1$ State of Palladium, Phys. Rev. 168, 89.

1290. C. Camhy-Val & A.-M. Dumont, Absolute Measurement of the Lifetime of the $4p\ {}^4S^o_{3/2}$ Level of Ar II by the Correlation of Photons Emitted During Cascade, C. R. Acad. Sci., Ser. B 267, 689. (Fr.)

1291. J. Chapelle, A. Sy, F. Cabannes, & J. Blandin, Study of Widths and Transition Probabilities of Argon Lines with the Aid of a Plasma Jet, J. Quant. Spectrosc. Radiat. Transfer 8, 1201. (Fr.)

1292. G. I. Chashchina, V. I. Gladushchak, & E. Ya. Shreider, Determination of the Refractive Index of Argon and the Oscillator Strength of its Resonance Lines, Opt. Spectrosc. (USSR) 24, 542.

1293. D. P. Chong, Transition Probabilities from Eckart-Type Wave Functions for Excited States of Two-Electron Atoms, J. Chem. Phys. 48, 1413.

1294. E. L. Chupp, L. W. Dotchin, & D. J. Pegg, Radiative Mean Life Measurements of Some Atomic-Hydrogen Excited States Using Beam-Foil Excitation, Phys. Rev. 175, 44.

1295. L. Cohen, U. Feldman, & S. O. Kastner, Spectra of Ions in the Fluorine I Isoelectronic Sequence from Sc XIII to Cu XXI, J. Opt. Soc. Am. 58, 331.

1968

1296. H. Conrads & G. K. Oertel, Laboratory Observation of a Visible Emission Line of Highly Ionized Argon at 4412 Å, Astrophys. J. 153, 975.

1297. C. H. Corliss, Relative Oscillator Strengths for Lines of Tb I, J. Quant. Spectrosc. Radiat. Transfer 8, 1185.

1298. C. H. Corliss & J. L. Tech, "Oscillator Strengths and Transition Probabilities for 3288 Lines of Fe I," Nat. Bur. Stand. (U.S.) Monogr. 108 (U.S. Government Printing Office, Washington, D.C.).

1300. R. D. Cowan, Theoretical Study of $p^m - p^{m-1}\ell$ Spectra, J. Opt. Soc. Am. 58, 924.

1301. P. T. Cunningham, Lifetime Measurements of the 4s $^2S_{1/2}$ and 3d ^2D States of Aluminum by the Phase-Shift Method, J. Opt. Soc. Am. 58, 1507.

1302. B. Curnutte, W. S. Bickel, R. Girardeau, & S. Bashkin, Mean Life of the $2p^2\ ^1D$ Level in C III, Phys. Lett. A 27, 680.

1303. A. Dalgarno & E. M. Parkinson, Properties of the Lithium Sequence, Phys. Rev. 176, 73.

1304. B. Decomps & M. Dumont, Polarization of the Fluorescent Light of Ne Atoms Interacting with a Laser Beam Measurement of Several Relaxation Times, IEEE J. Quantum Electron. QE-4, 916.

1305. A. Denis, J. Desesquelles, & M. Dufay, Measurement of Lifetimes of 3p Levels of Ne I by Means of a Beam of Ne^+ Ions, C. R. Acad. Sci., Ser. B 266, 1016. (Fr.)

1307. A. Denis, J. Desesquelles, M. Dufay, & M.-C. Poulizac, The Spectra of Nitrogen Emitted by a Beam of Highly Accelerated Ions, Excited by Passing Through a Solid Foil, C. R. Acad. Sci., Ser. B 266, 64. (Fr.)

1308. S. V. Desai & W. H. Corcoran, Some New Transition Probabilities of Argon I in the Range of 5000-6500 Å and the Role of a Nonuniform Source Temperature, J. Quant. Spectrosc. Radiat. Transfer 8, 1721.

1309. R. L. DeZafra & A. Marshall, Lifetimes and Oscillator Strengths for the $^3P_1^o$ Atomic States of Pb and Sn, Phys. Rev. 170, 28.

1310. G. W. F. Drake & A. Dalgarno, The Two-Photon Decay of Metastable Triplet Helium, Astrophys. J. 152, L121.

1311. B. C. Fawcett, N. J. Peacock, & R. D. Cowan, Classification and Oscillator Strengths of Lines in the Far Vacuum Ultraviolet Spectrum of the Iron Period Elements, J. Phys. B 1, 295.

1312. P. Feldman, M. Levitt, & R. Novick, Energies and Lifetimes of the Metastable Autoionizing $(1s2s2p)^4P_J$ States of Li^6 and Li^7; Assignment of Li-I[b] Quartet Lines, Phys. Rev. Lett. 21, 331.

1314. C. F. Fischer, Configuration Mixing in the Al Sequence, J. Quant. Spectrosc. Radiat. Transfer 8, 755.

1315. C. F. Fischer, Superposition of Configuration Results for Si II, Astrophys. J. 151, 759.

1316. C. A. Forbrich, Jr., W. C. Marlow, & D. Bershader, Measurement of the Sodium D-Line Absolute Oscillator Strengths by the Roschdestvenskii Hook Method, Phys. Rev. 173, 150.

1317. M. Gaillard & J. E. Hesser, Experimental Oscillator Strengths for the O I Lines λλ 1302-1306 and 1152 Å, Astrophys. J. 152, 695.

1318. R. H. Garstang, Octupole Transitions in Excitation by Electron Impact, J. Phys. B 1, 847.

1319. R. H. Garstang, Predicted Forbidden Line Spectrum of Ni IV, Astrophys. Space Sci. 2, 336.

1321. R. H. Garstang, Atomic Transition Probabilities, "Beam-Foil Spectroscopy," 407-423 (Gordon and Breach, New York).

1322. Kh. V. Gezalov & A. V. Ivanova, Calculation of Sodium and Potassium Atoms by the Hartree-Fock Method with Complete Self-Consistency, Opt. Spectrosc. (USSR) 25, 355.

1323. H. C. Goldwire, Jr., Oscillator Strengths for Electric Dipole Transitions of Hydrogen, Astrophys. J., Suppl. Ser. No. 152, 17, 445.

1325. P. F. Gruzdev, Oscillator Strengths of Lines in the Spectra of Atoms and Ions of the Carbon and Silicon Isoelectronic Sequences, Opt. Spectrosc. (USSR) 24, 462.

1326. P. F. Gruzdev, Oscillator Strengths of the Resonance Lines of Ge I, As II, Sn I, Sb II, Pb I, and Bi II, Opt. Spectrosc. (USSR) 25, 1.

1327. E. E. Habib, B. P. Kibble, & G. Copley, An Apparatus for the Precise Determination of Lifetimes of Atomic States, Appl. Opt. 7, 673.

1328. S. Hameed, A. Herzenberg, & M. G. James, Core Polarization Corrections to Oscillator Strengths in the Alkali Atoms, J. Phys. B 1, 822.

1330. J. Heldt, Hyperfine Structure of the Multipole Lines of Bismuth (Bi I), J. Opt. Soc. Am. 58, 1516.

1331. L. Heroux, Measurements of Radiative Lifetimes in the Extreme Ultraviolet, "Beam-Foil Spectroscopy," 205-231 (Ed., S. Bashkin, Gordon and Breach Science Publishers).

1332. I. V. Hertel & K. J. Ross, Electron Collision Cross Sections and Generalized Oscillator Strengths for Potassium, J. Phys. B 1, 697.

1333. A. Hese & H.-P. Weise, Lifetime of the $2s2p^2\ ^2D_{3/2,5/2}$ States in the Boron I Spectrum Determined from Zero Field Level Crossing, Z. Phys. 215, 95. (Ger.)

1334. J. E. Hesser, Radiative Lifetimes from Ultraviolet Lines of Ne I, Ne II, and Ne III, Phys. Rev. 174, 68.

1336. M. Huber & F. L. Tobey, Jr., gf-Values of Ultraviolet Fe I, Cr I, and Cr II Lines from Shock-Tube Measurements, Astrophys. J. 152, 609.

1337. A. Jucys, J. Vizbaraite, & R. Karazija, The Theoretical Investigation of Electric Dipole Transition Configurations d^8p and d^9 of the Atoms and Ions Zinc, Gallium, Germanium, Liet. Fiz. Rinkinys 8, 551. (Russ.)

1338. F. Karstensen & J. Schramm, Experimentally Determined Lifetimes of Magnesium and Calcium Atoms, Z. Astrophys. 68, 214. (Ger.)

1340. L. I. Kiselevskii & E. P. Trukhan, Oscillator Strengths of the Lines of F II, F III, F IV, and F V, J. Appl. Spectrosc. (USSR) 9, 1299.

1341. J. Z. Klose, Experimental Lifetimes of the 5p Levels in Argon I, J. Opt. Soc. Am. 58, 1509.

1342. J. Z. Klose, Atomic Lifetime Measurements with Pulsed Electron Beams, "Beam-Foil Spectroscopy," 285-304 (Gordon and Breach, New York).

1343. M. Kock & J. Richter, Experimental Transition Probabilities and the Solar Abundance of Copper, Z. Astrophys. 69, 180. (Ger.)

1344. V. A. Komarovskii, N. P. Penkin, & L. N. Shabanova, Oscillator Strengths of Eu I Spectral Lines, Opt. Spectrosc. (USSR) 25, 81.

1346. J. Kowalski & G. zu Putlitz, Lifetime Measurement of the $3d^94s4p\ ^4P_{3/2}$ State of Cu with Optical Double Resonance, Z. Phys. 208, 459. (Ger.)

1347. H. Krempl & G. Schmid, Temperature Measurements on an Ar Low Current Arc for the Determination of the Transition Probabilities of Si I, Se I, and S I Lines in the Near Vacuum UV, Spectrochim. Acta, Part B 23, 819. (Ger.)

1348. V. S. Krivchenkova, Absolute Spontaneous Transition Probabilities in the Ne Atom, Opt. Spectrosc. (USSR) 25, 536.

1349. I. Krolas & M. Malarz, Determination of Oscillator Strength Ratios for Doublets of the Si II and Si IV Spectrum, Acta Phys. Pol. 33, 343.

1350. T. K. Krueger, L. H. Aller, J. Ross, & S. J. Czyzak, Yttrium Abundance in the Sun, Astrophys. J. 152, 765.

1351. M. D. Kunisz, T. Lubowiecka, A. Muryn, E. Niziol, & M. Szynarowska, Determination of Relative Values of Transition Probabilities in Doublets of the Principal Series of Sc III, Y III, and La III Spectra, Acta Phys. Pol. 33, 665.

1352. D. L. Lambert & B. Warner, The Abundances of the Elements in the Solar Photosphere--V. The Alkaline Earths Mg, Ca, Sr, Ba, Mon. Not. R. Astron. Soc. 140, 197.

1353. D. A. Landman, Lifetimes and Alignment Depolarization Cross Sections of the $(3p^5 4p)$ $^3D_3$ and $^1D_2'$ Levels in Argon and the $(1s2p)^3P$ Term in Helium, Phys. Rev. 173, 33.

1354. B. Laniepce, Measurement of the Lifetime of the 6 $^3S_1$ Level of Cadmium and the Collision Cross Sections of Varous Gases for this Level, J. Phys. (Paris) 29, 427. (Fr.)

1355. G. M. Lawrence, Radiance Lifetimes in the Resonance Series of Ar I, Phys. Rev. 175, 40.

1357. D. Layzer & R. H. Garstang, Theoretical Atomic Transition Probabilities, "Annual Review of Astronomy and Astrophysics," 6, 449-494 (Eds., L. Goldberg, D. Layzer, & J. G. Phillips, Annual Reviews, Inc., Palo Alto, Calif.).

1358. D. Lecler, Lifetime of the 6 $^1P_1$ Level of Mercury. Study of Coherence Narrowing of Optical Resonance Radiation at 1850 Å, J. Phys. (Paris) 29, 611. (Fr.)

1359. R. A. Lilly & J. R. Holmes, Neon Transition Probabilities, J. Opt. Soc. Am. 58, 1406.

1361. W. Lochte-Holtgreven, "Plasma Diagnostics," (John Wiley & Sons, Inc., New York).

1362. I.-J. Ma, G. zu Putlitz, & G. Schütte, Lifetime of the 5s5p $^3P_1$ State of Strontium, Z. Phys. 208, 276. (Ger.)

1968

1363. G. V. Marr & D. M. Creek, The Absorption Oscillator Strengths in Alkali Metal Vapours, Proc. R. Soc. London, Ser. A 304, 245.

1364. J. W. McConkey, D. J. Burns, & J. A. Kernahan, New Emissions of Atomic Nitrogen in the 10,000-11,000 Å Region, J. Quant. Spectrosc. Radiat. Transfer 8, 823.

1365. J. W. McConkey, D. J. Burns, K. A. Moran, & J. A. Kernahan, Wavelengths and Relative A-Coefficients for the Forbidden Lines of Atomic Sulfur, Nature 217, 538.

1370. J. C. Morris, R. U. Krey, & R. L. Garrison, Radiation Studies of Arc Heated Nitrogen, Oxygen, and Argon Plasmas, Aerospace Research Laboratories Report No. ARL 68-0103.

1371. D. Müller, Measurement of the Absorption Oscillator Strengths of S I and S II Lines in the Range 1100-2000 Å, Z. Naturforsch., Teil A 23, 1707. (Ger.)

1372. P. W. Murphy, Transition Probabilities in the Spectra of Ne I, Ar I, and Kr I, J. Opt. Soc. Am. 58, 1200.

1373. P. W. Murphy, Relative Strengths of Resonance Lines in the Ne I and Ar I Isoelectronic Sequences, Astrophys. J. 153, 301.

1375. L. L. Nichols & W. E. Wilson, Optical Lifetime Measurements Using a Positive Ion Van de Graaff Accelerator, Appl. Opt. 7, 167.

1376. R. A. Nodwell, H. W. H. van Andel, & A. M. Robinson, Radiative Transition Probabilities between the $2p^5 3p$ and $2p^5 3s$ Configurations of Neon, J. Quant. Spectrosc. Radiat. Transfer 8, 859.

1377. H. Odabasi, Selected Topics in the Theory of Atomic Spectra, JILA Report #97, AD680470.

1379. A. L. Osherovich & Ya. F. Verolainen, Lifetimes of the Levels of He I and He II, Opt. Spectrosc. (USSR) 24, 81.

1380. J. Pardies, Measurement of the Lifetime of the $7\ ^3S_1$ State of Mercury, Excited by Electron Impact and Simultaneously the Repopulation of the Level by the $9p\ ^1P_1^o \rightarrow 7s\ ^3S_1$ Transition, C. R. Acad. Sci., Ser. B 267, 1144. (Fr.)

1381. J. V. Peach, Low Noise Solar and Laboratory Spectroscopy--III. The Pb I 7229 Å Line and the Solar Lead Abundance, Mon. Not. R. Astron. Soc. 140, 43.

1382. G. zu Putlitz & K. V. Venkataramu, Hyperfine Structure and Lifetime of the $8\ ^2P_{3/2}$ State of Rubidium, Z. Phys. 209, 470. (Ger.)

1384. Z. Rudzikas, J. Vizbaraite, G. Dosinas, & A. Jucys, The Theoretical Investigation of Forbidden Electric Dipole Transitions between Configurations d^7p and d^8 of Iron Group Atoms and Ions, Liet. Fiz. Rinkinys 8, 331. (Russ.)

1385. R. W. Schmieder, A. Lurio, & W. Happer, Hyperfine Structure and Lifetimes of the $4\ ^2P_{3/2}$ and $5\ ^2P_{3/2}$ States of K^{39}, Phys. Rev. 173, 76.

1386. R. Schnapauff, Measurements of Ar II Transition Probabilities and the Continuous Spectra of Ar and Ne, Z. Astrophys. 68, 431. (Ger.)

1387. D. Schönberner & D. Zimmermann, Level-Crossing-Investigation of the Hyperfine Structure of the Excited $3\ ^2P_{3/2}$ and $4\ ^2P_{3/2}$ State of Na^{23}, Z. Phys. 216, 172. (Ger.)

1388. P. D. Scholz & T. P. Anderson, Local Thermodynamic Equilibrium in an RF Argon Plasma, J. Quant. Spectrosc. Radiat. Transfer 8, 1411.

1389. W. Seka & F. L. Curzon, Measurement of Relative Transition Probabilities Using the Faraday Effect, J. Quant. Spectrosc. Radiat. Transfer 8, 1147.

1390. I. A. Sellin, B. L. Donnally, & C. Y. Fan, Experimental Transition Probabilities for Triplet-Singlet Transitions in Helium-Like Heavy Ions, Phys. Rev. Lett. 21, 717.

1391. R. I. Semenov & B. A. Strugach, Determination of Coupling Coefficients for the np^5n's and $np^5n'p$ Configurations from Experimental Data, Opt. Spectrosc. (USSR) 24, 258.

1392. V. S. Senashenko & B. Teku, Lifetimes of Metastable States of Helium-Like Ions, Vestn. Mosk. Univ. Fiz. Astron. No. 3, 120. (Russ.)

1393. C. Y. She, Eigenvectors of Configuration $(2p)^5(3p)$ and Relative Probabilities of 2s-2p Transitions for Ne I, J. Appl. Phys. 39, 1964.

1394. J. von Specht, Measurement of the Absorption Oscillator Strengths of Ba II Lines in the Spectral Ranges 1400-2000 Å and 4100-4600 Å, Z. Naturforsch., Teil A 23, 1499. (Ger.)

1395. A. L. Stewart, Optical Dipole Transitions between Adjacent States, J. Phys. B. 1, 844.

1396. M. W. Swagel & A. Lurio, g_J-Factor of the Lowest $^1P_1$ and $^3P_1$ States of Ba; Level-Crossing Determination of $A(^1P_1)/\mu_0 g_J(^1P_1)$ of Hg^{199}, Phys. Rev. 169, 114.

1397. J. B. Tatum, Intermediate Coupling Line Strengths in the $2p^2$-2p3s Arrays of C I, N II, O III, Mon. Not. R. Astron. Soc. 140, 87.

1968

1399. A. B. Underhill, Observational Evidence Concerning the gf-Values of Si II λ 4128 and λ 4130 Å, Astrophys. J. 151, 765.

1400. L. A. Vainshtein & L. A. Minaeva, States $2p^6$, $2p^5 3s$, $2p^5 3p$, and $2p^5 4s$ of the Ne Atom. II. Oscillator Strengths and Electron Collision Excitation Cross Sections, J. Appl. Spectrosc. (USSR) 9, 684.

1406. J. M. Vaughan, Self-Broadening and the Resonance Oscillator Strengths in Krypton, Phys. Rev. 166, 13.

1407. Ya. F. Verolainen & A. L. Osherovich, Experimental Determination of Radiation Lifetimes and Transition Probabilities in Ar I, Opt. Spectrosc. (USSR) 25, 258.

1408. J. Vizbaraite, Z. Rudzikas, G. Dosinas, & A. Jucys, The Theoretical Investigation of Electric Dipole Transitions Between Configuration $d^7 p$ and d^8 of the Iron Group Atoms and Ions, Liet. Fiz. Rinkinys 8, 319. (Russ.)

1409. V. Vujnovic, T. Ivezic, & A. Tonejc-Mejaski, Relative and Absolute Oscillator Strengths of Copper Lines in the Visible, "Fourth Yugoslavian Symposium on Physics of Ionized Gases."

1410. B. Warner, Atomic Oscillator Strengths--IV. Transitions of the Type s^2-sp and ss-sp, Mon. Not. R. Astron. Soc. 140, 53.

1411. B. Warner, Atomic Oscillator Strengths--I. Neutral Silicon, Mon. Not. R. Astron. Soc. 139, 1.

1412. B. Warner, Atomic Oscillator Strengths--III. Alkali-Like Spectra, Mon. Not. R. Astron. Soc. 139, 115.

1413. B. Warner, Line Strengths in Two-Electron Spectra, Mon. Not. R. Astron. Soc. 139, 273.

1414. B. Warner, Atomic Oscillator Strengths--II. Neutral Magnesium, Mon. Not. R. Astron. Soc. 139, 103.

1415. B. Warner, Atomic Oscillator Strengths--V. C IV, N V, O VI, and Si IV, Mon. Not. R. Astron. Soc. 141, 273.

1416. B. Warner, Transition Probabilities in np and np^5 Configurations, Z. Astrophys. 69, 399.

1417. C. E. Webb, R. C. Miller, & C. L. Tang, New Radiative Lifetime Values for the 4s Levels of Ar II, IEEE J. Quantum Electron. QE-4, 357.

1419. B. Wende, Optical Transition Probabilities of the Configurations $3p^5 4s$ - $3p^5 5p$ of Argon I, Z. Phys. 213, 341. (Ger.)

1420. W. L. Wiese, Transition Probabilities for Allowed and Forbidden Lines; Lifetimes of Excited States, "Methods of Experimental Physics," Vol. 7A, Ch. 2.1, 117-140 (Eds., B. Bederson & W. L. Fite, Academic Press, New York).

1421. W. L. Wiese, Dependence of Atomic f-Values on Nuclear Charge, "Beam-Foil Spectroscopy," 385-406 (Gordon and Breach Publ., New York).

1422. W. L. Wiese, Systematic Trends of Atomic Oscillator Strengths in Isoelectronic Sequences, Appl. Opt. 7, 2361.

1423. W. L. Wiese & A. W. Weiss, Regularities in Atomic Oscillator Strengths, Phys. Rev. 175, 50.

1424. W. L. Williams & E. S. Fry, Lifetime of the $2\ ^1P$ State of He, Phys. Rev. Lett. 20, 1335.

1425. R. J. Wolff & S. P. Davis, Direct Measurement of Atomic Lifetimes of Cesium and Sodium, J. Opt. Soc. Am. 58, 490.

1426. S. J. Wolnik, R. O. Berthel, G. S. Larson, & E. H. Carnevale, Shock-Tube Measurements of Cr I and Cr II gf-Values, Phys. Fluids 11, 1002.

1428. M. S. Yurev, Variational Calculation of the Probabilities of Singlet-Triplet Transitions in the Helium Atom, Opt. Spectrosc. (USSR) 25, 157.

1429. V. A. Zilitis, Oscillator Strengths of the Isoelectronic Series of Zinc, Opt. Spectrosc. (USSR) 25, 361.

1430. B. A. Zon & L. P. Rapoport, Two-Photon Decay of 2s Level of Hydrogen, JETP Lett. 7, 52.

1969

1441. M. A. Ali & L. J. Schaad, Hartree-Fock Multiplet Strengths of $1s^2 4\ell\ ^2L$ - $1s^2 4\ell'\ ^2L'$ Transitions of the Lithium Isoelectronic Sequence, J. Phys. B 2, 1304.

1968-1969

1442. M. A. Ali & L. J. Schaad, Hartree-Fock gf-Values for Some Transitions of the Be Sequence, J. Phys. B 2, 1018.

1443. M. A. Ali & L. J. Schaad, Absolute Multiplet Strengths for 4L-4L' Transitions of the Helium Sequence, Mol. Phys. 17, 441.

1444. L. Allen, D. G. C. Jones, & D. G. Schofield, Radiative Lifetimes and Collisional Cross Sections for Xe I and II, J. Opt. Soc. Am. 59, 842.

1445. T. Andersen, K. A. Jessen, & G. Sørensen, Beam-Foil Excitation Studies of Aluminum with a Heavy-Ion Accelerator, J. Opt. Soc. Am. 59, 1197.

1446. T. Andersen, K. A. Jessen, & G. Sørensen, Mean Life Measurements of Excited Electronic States in Neutral and Ionic Species of Beryllium and Boron, Phys. Rev. 188, 76.

1447. T. Andersen, K. A. Jessen, & G. Sørensen, Mean Life Measurements of 2p $^2p^o$ Levels in the Lithium Sequence, Phys. Lett. A 29, 384.

1448. E. M. Anderson, E. K. Anderson, & M. O. Eglais, Calculation of Relativistic Wave Functions and Oscillator Strengths for the Indium Atom, Sb. Nauch. Statei, Latv. Ordena Tr. Kras. Zram. Gos. Univ. im. Petra Stuchki No. 2, 122. (Russ.)

1449. R. J. Anderson, R. H. Hughes, & T. G. Norton, Excitation of the 3 $^{1,3}D$ and 4 $^{1,3}F$ Levels of Helium by Direct Electron Impact, and 4 $^1P \rightarrow 4\ ^{1,3}F$ Collisional Transfer, Phys. Rev. 181, 198.

1450. A. A. Antena & V. A. Zilitis, Semi-Empirical Calculation of the Oscillator Strengths for the Zinc Atom, Opt. Spectrosc. (USSR) 26, 79.

1451. L. Armstrong, Jr. & R. Liebermann, Intermediate Coupling Oscillator Strengths in Silicon I, J. Quant. Spectrosc. Radiat. Transfer 9, 123.

1452. Chr. Bästlein, G. Baumgartner, & B. Brosa, Determination of Collision Cross Sections for Quenching by Lifetime Measurements of the Sodium 3 ^2P State, Z. Phys. 218, 319. (Ger.)

1454. S. Bashkin, H. G. Berry, W. S. Bickel, & J. Desesquelles, Measurement of Transition Probabilities of Some Ultraviolet Multiplets of N I, C. R. Acad. Sci., Ser. B 268, 234. (Fr.)

1456. M. Baumann, A Level Crossing Experiment to Investigate the Hyperfine Structure of the 3 $^3P_{3/2}$ Level of ^{23}Na, Z. Naturforsch., Teil A 24, 1049. (Ger.)

1457. I. L. Beigman & A. M. Urnov, The Intensities of the 2p-3d and 2p-3s Lines of the Fe XVII Ion in a Rarefied Plasma, Opt. Spectrosc. (USSR) 27, 203.

1460. W. S. Bickel, I. Bergström, R. Buchta, L. Lundin, & I. Martinson, Mean Lives of Some Doubly Excited Levels in Lithium I, Phys. Rev. 178, 118.

1461. W. S. Bickel, H. G. Berry, J. Desesquelles, & S. Bashkin, Relative Intensities and Exponential Decay of a Doublet in N V, J. Quant. Spectrosc. Radiat. Transfer 9, 1145.

1462. W. S. Bickel, H. G. Berry, I. Martinson, R. M. Schectman, & S. Bashkin, Mean Lives of the $2p^2\ ^1D$ Level in F VI and O V, Phys. Lett. A 29, 4.

1463. W. S. Bickel, I. Martinson, L. Lundin, R. Buchta, J. Bromander, & I. Bergström, Mean Lives of Some Excited Levels of Li I and Li II, J. Opt. Soc. Am. 59, 830.

1464. L. Bober & R. S. Tankin, Emission and Absorption Measurements on a Strongly Self-Absorbed Argon Atom Line, J. Quant. Spectrosc. Radiat. Transfer 9, 855.

1465. K. A. Bridgett & T. A. King, The Pressure Dependence of Excited State Lifetimes in Neutral Helium, "Optical Pumping and Atomic Line Shape," 359-368 (Ed., T. Skalinski, Panstwowe Wydawnictwo Naukowe, Warsaw).

1466. U. Brinkmann, Lifetimes and Oscillator Strengths in the Sr I and Ca I Spectra, Z. Phys. 228, 440. (Ger.)

1467. U. Brinkmann, J. Goschler, A. Steudel, & H. Walther, Experiments with Alkaline Earth Atoms Excited in Metastable States. Radiative Lifetimes of Some Highly Excited Ca I Levels, Z. Phys. 228, 427. (Ger.)

1468. U. Brinkmann, J. Goschler, A. Steudel, & H. Walther, Radiative Lifetimes of Some Levels in Ca and Sr, Measured by Zero-Field Level Crossing Technique Using Optical Excitation from Metastable Levels, "Optical Pumping and Atomic Line Shape," 433-439 (Ed., T. Skalinski, Panstwowe Wydawnictwo Naukowe, Warsaw).

1471. J. P. Buchet, A. Denis, J. Desesquelles, & M. Dufay, Doubly Excited States of Lithium, Phys. Lett. A 28, 529.

1472. K. Buchhaupt, Level Crossing Experiments on the Helium Levels $3\ ^3D$ and $4\ ^3D$ for Excitation Due to Ion Impacts, Z. Naturforsch., Teil A 24, 1058. (Ger.)

1474. H. Bucka, W. Krätschmer, V. Metag, & J. Ney, Stark Effect Investigation of the Hyperfine Structure in the $4p\ ^2P_{3/2}$-State of the Cu I Spectrum Using Level Crossing Technique, Z. Phys. 218, 83. (Ger.)

1475. I. Bues, T. Haag, & J. Richter, Spectroscopic Investigation of an Argon Arc Plasma, Astron. Astrophys. 2, 249.

1476. L. A. Bureeva, The Quasi-Classical Approximation for the Oscillator Strength and Effective Cross Sections of Radiative Transitions, Sov. Astron.--AJ 12, 962.

1477. C. Camhy-Val, A.-M. Dumont, M. Dreux, & R. Vitry, Absolute Measurement of the Lifetime of the 4p' $^2D^o_{5/2}$ Level of Ar II by Correlation of Cascade-Emitted Photons, C. R. Acad. Sci., Ser. B 268, 1017. (Fr.)

1478. H. D. Campbell & A. J. Barnard, Measurement of Relative Transition Probabilities in Ar II, J. Quant. Spectrosc. Radiat. Transfer 9, 461.

1479. C. G. Carrington & A. Corney, Lifetimes and Pressure Broadening of Excited Levels of Neon by the Hanle Effect, "Premiere Reunion de l'Association Europeene de Spectroscopie Atomique," No. 76 (Faculte des Sciences, Paris-Orsay).

1480. R. D. Chapman, Oscillator Strengths and Wavelengths of Some X-Ray and Extreme-Ultraviolet Spectrum Lines of Highly Ionized Iron, Astrophys. J. 156, 87.

1481. M. Chenevier, Magnetic Resonance Measurement of the Lifetimes and Lande Factors of Xenon Levels $7p[3/2]_2$ and $7p[5/2]_3$, C. R. Acad. Sci., Ser. B 268, 1179. (Fr.)

1482. M. Chenevier & G. Goullet, Spectroscopic Study, By Electronic Bombardment, of Excited Levels of "Involatile" Elements and Rare Gases, J. Phys. (Paris), Colloq. C1, 30, 84. (Fr.)

1484. R. J. S. Crossley, The Calculation of Atomic Transition Probabilities, "Advances in Atomic and Molecular Physics," Vol. 5, 237-296 (Academic Press, Inc., New York).

1485. A. Dalgarno & G. W. F. Drake, Two-Photon and Forbidden Single-Photon Transition Probabilities in Helium-Like Ions, Mem. Soc. R. Sci. Liege, Collect. 8°, 17, 69.

1486. E. Dekker, Calculation of the Multiplet Factor for more Complicated Transitions in L.S.-Coupling, Astron. Astrophys. 1, 72.

1488. A. Denis, Determination of the Lifetimes of the 3p and 3d Levels of Ne II, C. R. Acad. Sci., Ser. B 268, 383. (Fr.)

1491. A. Denis & M. Dufay, Lifetime Measurement of Argon III Levels, Phys. Lett. A 29, 170.

1492. S. V. Desai & W. H. Corcoran, Improved and Corrected Transition Probabilities of Argon I in the Range of 5000-6000 Å, J. Quant. Spectrosc. Radiat. Transfer 9, 1489.

1494. G. W. F. Drake, The n $^3P_2$ - 1 $^1S_0$ Magnetic-Quadrupole Transitions of the Helium Sequence, Astrophys. J. 158, 1199; 163, 439 (1971).

1496. S. W. Drapatz, Calculation of Photoionization Cross Sections of Ba I, J. Quant. Spectrosc. Radiat. Transfer 9, 733.

1497. M. Druetta, Lifetime Measurements of Some Levels of the Be I Isoelectronic Sequence, C. R. Acad. Sci., Ser. B 269, 1154. (Fr.)

1499. W. Eissner & H. Nussbaumer, Configuration Interaction in Atomic Structure, Oscillator Strengths, and Collision Cross Sections, "Premiere Reunion de l'Association Europeene de Spectroscopie Atomique," No. 42 (Faculte des Sciences, Paris-Orsay).

1500. W. Ervens & H. F. Berg, Absolute Transition Probabilities of Some N III Lines, Z. Phys. 222, 180. (Ger.)

1501. A. R. Fairbairn, A Shock Tube Study of Atomic Carbon Radiation, J. Quant. Spectrosc. Radiat. Transfer 9, 943.

1502. H. Friedrich & E. Trefftz, Configuration Mixing and Oscillator Strengths for Some Two-Electron Spectra (Ca I, Ba I, and Others), J. Quant. Spectrosc. Radiat. Transfer 9, 333.

1504. E. S. Fry & W. L. Williams, Hanle Effect in 2 ^1P Helium, Phys. Rev. 183, 81.

1505. F. Gaillard, M. Gaillard, J. Desesquelles, & M. Dufay, Excitation of a Beam of Li^+ Ions Passing Through a Thin Carbon Foil; Application to the Measurement of Radiative Lifetimes of Li I and Li II, C. R. Acad. Sci., Ser. B 269, 420. (Fr.)

1507. R. H. Garstang, Magnetic Quadrupole Radiation and Solar Coronal De-Excitation, Publ. Astron. Soc. Pac. 81, 488.

1508. R. H. Garstang, Theoretical and Experimental Forbidden Atomic Transition Probabilities, Mem. Soc. R. Sci. Liege, Collect. 8°, 17, 35.

1509. T. Garz & M. Kock, Experimental Oscillator Strengths for Fe I Lines, Astron. Astrophys. 2, 274. (Ger.)

1510. A. Goldman, Infrared Atomic Transition Probabilities, Scientific Report No. 5, AFCRL-69-0447 (Univ. of Denver, Colorado).

1511. A. Goly, Determination of Transition Probabilities for Some O I Lines, Acta Phys. Pol. 36, 33.

1512. T. M. Gorbunova & O. P. Semenova, Determination of the Relative Values of Oscillator Strengths of a Group of Iron Lines Considering the Heterogeneity of the Arc Discharge, "Spektroskopiya Metody i Prilozheniya: Spektrosk. Tr. Sib. Soveshch., 4th, 1965," 429-431 (Ed., N. A. Prilezhaeva, "Nauka," Moscow). (Russ.)

1513. G. L. Grasdalen, M. Huber, & W. H. Parkinson, Absolute gf-Values for Fe I and Fe II Lines, Astrophys. J. 156, 1153.

1514. N. Grevesse, Abundances of Heavy Elements in the Sun, Sol. Phys. 6, 381.

1516. N. Grevesse & J. P. Swings, Forbidden Lines of Fe II in the Solar Photospheric Spectrum, Astron. Astrophys. 2, 28.

1518. H. R. Griem, Spontaneous Single-Photon Decay of 2 $^3S_1$ in Helium-Like Ions, Astrophys. J. 156, L103; 161, L155 (1970).

1519. P. M. Griffin & J. W. Hutcherson, Oscillator Strengths of the Resonance Lines of Krypton and Xenon, J. Opt. Soc. Am. 59, 1607; 61, 136 (1971).

1520. R. Griffith, L. Bober, & R. S. Tankin, Measurement of Emission and Absorption Coefficients of the Balmer Line H_α, Plasma Phys. 11, 529.

1521. P. F. Gruzdev, Oscillator Strengths of the Resonance Lines of Se I, Br II, Kr III, Rb IV, and Te I, III, Xe III, Cs IV, Opt. Spectrosc. (USSR) 27, 479.

1522. P. F. Gruzdev, Isoelectronic Series of Oxygen O I...Fe XIX. II. Wavelengths and Oscillator Strengths of Lines of the $2p^4$-$2p^3$3s Transition, Opt. Spectrosc. (USSR) 27, 391.

1523. P. F. Gruzdev, Isoelectronic Series of Sulfur S I...Cu XIV. The $3p^4$-$3p^3$4s Transition, Energy Levels, Wavelengths, and Oscillator Strengths, Opt. Spectrosc. (USSR) 28, 334.

1524. E. Handrich, H. Kretzen, W. Lange, A. Steudel, R. Wallenstein, & H. Walther, Level Crossing and Optical Double Resonance Experiments in the Mn I, Eu I, Sm I, and Tm I Spectra, "Optical Pumping and Atomic Line Shape," 417-432 (Ed., T. Skalinski, Panstwowe Wydawnictwo Naukowe, Warsaw).

1526. W. Hanle, R. Pepperl, & H. Reuscher, Zero Field Level-Crossing in Stepwise Excitation of Cadmium, "Physics of the One- and Two- Electron Atoms," 375-379 (Eds., F. Bopp & H. Kleinpoppen, North-Holland Publishing Co., Amsterdam).

1527. J. E. Hansen, Relative Line Strengths of the Forbidden $2s^2 2p\ ^2P$ - $2s2p^2\ ^4P$ Transitions in the B I Isoelectronic Sequence, J. Opt. Soc. Am. 59, 722.

1528. M. V. Hartrott, Lifetimes of the Excited States z $^4F_{9/2}$, z $^4F_{7/2}$, z $^4G_{11/2}$, z $^4G_{9/2}$, and y $^4G_{11/2}$ in the Co I Spectrum, Z. Naturforsch., Teil A 24, 1202. (Ger.)

1529. W. B. Hawkins, Rubidium Transition Probabilities for Optical Pumping, Phys. Rev. 182, 39.

1530. L. Heroux, Radiative Lifetimes for UV Multiplets of C II and C III, Phys. Rev. 180, 1.

1531. I. V. Hertel & K. J. Ross, Generalized Oscillator Strengths in the Electron Impact Spectra of Rubidium and Cesium, J. Phys. B 2, 484.

1532. I. V. Hertel & K. J. Ross, Generalized Oscillator Strengths in the Electron Impact Spectra of Potassium and Sodium, J. Phys. B 2, 285.

1535. R. C. Isler, S. Marcus, & R. Novick, Hyperfine Structure of the 3 ^2P and 4 ^2P States of Lithium and Lifetime of the 3 ^2P State, Phys. Rev. 187, 76.

1536. L. N. Ivanov, E. P. Ivanova, & V. V. Tolmachev, Perturbation-Theory Calculation of Line Intensities for Transitions in Multiply Ionized Atoms, Sov. Phys. J. 12, 1578.

1537. N. N. Kirsanova, Absolute Transition Probabilities for Lines of Tungsten, J. Appl. Spectrosc. (USSR) 10, 444.

1538. V. F. Kitaeva, Yu. I. Osipov, P. L. Rubin, & N. N. Sobolev, On the Inversion Mechanism in the CW Argon-Ion Laser, IEEE J. Quantum Electron. QE-5, 72.

1539. S. Klarsfeld, Radiative Decay of Metastable Hydrogenic Atoms, Phys. Lett. A 30, 382.

1540. J. Z. Klose, Transition Probabilities and Mean Lives of the $3s_2$ Laser Level in Neon I, Phys. Rev. 188, 45.

1541. J. Z. Klose, Transition Probabilities and Mean Lives of the $2s_2$ Laser Level in Neon I, J. Quant. Spectrosc. Radiat. Transfer 9, 881.

1542. H. O. Knox & M. R. H. Rudge, Calculation of Line Strengths for Transitions Between Doubly Excited States and the 2 ^3S State of Helium, J. Phys. B 2, 521.

1543. G. A. Kobzev & V. M. Sergeev, Calculation of Oscillator Strengths of Upper Terms of Spectral Series, High Temp. (USSR) 7, 941.

1544. V. A. Komarovskii & N. P. Penkin, Oscillator Strengths of the Spectral Lines of Tm I and Yb I, Opt. Spectrosc. (USSR) 26, 483.

1545. S. H. Koozekanani & G. L. Trusty, Lifetime and Transition Probabilities of $np^4(n+1)p$ States of Ne II, Ar II, and Kr II, J. Opt. Soc. Am. 59, 1281.

1546. T. Kornalewski & H. Niewodniczanski, Multipole Lines in the Spectrum of Te I, Acta Phys. Pol. 35, 989.

1547. F. A. Korolev, V. V. Lebedeva, A. I. Odintsov, & V. M. Salimov, Experimental Determination of Lower Level Lifetimes in an Argon Laser, Radio Eng. Electron. Phys. (USSR) 14, 1318.

1549. E. Kotlikov & M. Chaika, Radiation Lifetime of the $3p_4$ State of Ne, Opt. Spectrosc. (USSR) 27, 281.

1550. H. Kretzen, W. Lange, J. Luther, A. Steudel, & H. Walther, Lifetime Measurements in the Eu I Spectrum by Hanle Effect, "Premiere Reunion de l'Association Europeene de Spectroscopie Atomique," No. 31 (Faculte des Sciences, Paris-Orsay).

1551. L. Kuzmickyte & K. Uspalis, The Theoretical Investigation of Ti II and Ni II Spectra, Liet. Fiz. Rinkinys 9, 867. (Russ.)

1552. L. Kuzmickyte & K. Uspalis, The Theoretical Investigation of the Dipole Transitions $3d^64p \rightarrow 3d^64s$ in Fe^+ Ion, Liet. Fiz. Rinkinys 9, 1009. (Russ.)

1553. I. Kyckinas, Z. Rudzikas, & J. Vizbaraite, The Theoretical Investigation of the Forbidden Electric Dipole Transitions between the Configurations d^3p and d^4 of the Vanadium and Chromium Ions, Liet. Fiz. Rinkinys 9, 277. (Russ.)

1554. D. L. Lambert, E. A. Mallia, & B. Warner, Forbidden Lines of Ca II in the Photospheric Spectrum, Sol. Phys. 7, 11.

1555. G. M. Lawrence, Lifetimes of Cascade-Free Transitions in Ions of Ar, Cl, and S, Phys. Rev. 179, 134.

1556. G. M. Lawrence & H. S. Liszt, Radiative Lifetimes in the Resonance Series of Ne, Phys. Rev. 178, 122.

1557. E. L. Lewis & D. N. Stacey, Self-Broadening in Argon, "Optical Pumping and Atomic Line Shape," 123-129 (Ed., T. Skalinski, Panstwowe Wydawnictwo Naukowe, Warsaw).

1558. M. R. Lewis & F. S. Zimnoch, Radiative Lifetimes of Excited Electronic States in Ionic Species of Oxygen, Phys. Rev. 178, 49.

1559. G. Lidö, I.-J. Ma, & G. zu Putlitz, Double Resonance and Level Crossing Experiments in Excited Levels of Barium, "Premiere Reunion de l'Association Europeene de Spectroscopie Atomique," No. 34 (Faculte des Sciences, Paris-Orsay).

1560. J. Linderberg, Calculation of the $^1D - {}^1P^o$ Transition Probability in the Be Sequence, Phys. Lett. A 29, 467.

1561. A. P. Makarov, Variation in the Broadening of the Absorption Spectral Lines of Neon Caused by Helium, Opt. Spectrosc. (USSR) 26, 189.

1562. G. V. Marr & J. M. Austin, Absorption Cross Section Measurements on the Vacuum Ultraviolet Spectrum of Zinc Vapour, J. Phys. B 2, 107.

1563. I. Martinson & W. S. Bickel, Mean Lives of the $2p\ ^1P$, $3p\ ^1P$, $4p\ ^1P$, and $5p\ ^1P$ Levels in He I, Phys. Lett. A 30, 524.

1564. T. A. Matilsky & J. E. Hesser, Radiative Lifetimes of Ultraviolet Transitions of Argon II, J. Opt. Soc. Am. 59, 579.

1565. M. A. Mazing & P. D. Serapinas, The Oscillator Strengths of High Terms of the Principal Series of Potassium, Opt. Spectrosc. (USSR) 27, 482.

1566. J. W. McConkey & J. A. Kernahan, Absolute Transition Probability Measurement for the Electric Quadrupole 5577 Å Auroral Green Line, Planet. Space Sci. 17, 1297.

1567. R. P. McEachran, C. E. Tull, & M. Cohen, Theoretical Ionization Energies and Oscillator Strengths for the Sodium Isoelectronic Sequence, Can. J. Phys. 47, 835.

1568. G. McGinn, Atomic and Molecular Calculations with the Pseudopotential Method. V. Two-Valence-Electron Energy Values and Oscillator Strengths for Some $(ns)^2$ Ground States and (nsml) Singly Excited States, J. Chem. Phys. 51, 5090.

1569. G. McGinn, Atomic and Molecular Calculations with Pseudopotential Method. IV. Excited Atomic Valence-Electron Energy Values, Wavefunctions, and Oscillator Strengths, J. Chem. Phys. 50, 1404.

1570. R. Mehlhorn, Transition Probabilities and g-Values for Neon I, J. Opt. Soc. Am. 59, 1453.

1571. H. M. Meiners, On the Calculation of Transition Probabilities in the Argon I Spectrum, J. Quant. Spectrosc. Radiat. Transfer 9, 1493.

1574. D. H. Menzel, Oscillator Strengths, f, for High-Level Transitions in Hydrogen, Astrophys. J., Suppl. Ser. 18, No. 161, 221.

1575. B. M. Miles & W. L. Wiese, "Critically Evaluated Transition Probabilities for Ba I and II," Natl. Bur. Stand. (U.S.), Tech. Note 474 (U.S. Government Printing Office, Washington, D.C.); At. Data 1, 1.

1577. M. H. Miller & R. D. Bengtson, Relative Transition Probabilities for Silicon, Astrophys. J. 156, 393.

1578. J. C. Morris & R. L. Garrison, Measurement of the Radiation Emitted f-Values and Stark Halfwidths for the Strong Vacuum Ultraviolet Lines of O I and N I, Phys. Rev. 188, 112.

1579. A. A. Nikitin, Approximate Determination of the Transition Probabilities of the $2s^2\ ^1S$ - $2s2p\ ^{1,3}P$ and the $3s^2\ ^1S$ - $3s3p\ ^{1,3}P$ Transitions in Isoelectronic Coronal Sequences, Uch. Zap. Leningr. Gos. Univ., Ser. Mat. Nauk, No. 44, 20. (Russ.)

1580. R. Novick, The Two-Photon Decay of the Metastable Helium Ion, "Physics of the One- and Two-Electron Atoms," 296-325 (Eds., F. Bopp & H. Kleinpoppen, North-Holland Publ. Co., Amsterdam).

1581. H. Nussbaumer, Oscillator Strengths in Complex Atoms: Application to N IV, Mon. Not. R. Astron. Soc. 145, 141.

1582. H. Nussbaumer, Relative Intensities of Bowen Lines, Astrophys. Lett. 4, 183.

1583. D. E. O'Brien & J. R. Bowen, Kinetic Model for the Iodine Photodissociation Laser, J. Appl. Phys. 40, 4767.

1584. G. von Oppen & B. Piosczyk, Investigations on the Stark Effect of Metastable Levels in the Ba I Spectrum, Z. Phys. 229, 163. (Ger.)

1585. G. von Oppen, Double Resonance Measurement on the Stark Effect of the $5s5p\ ^3P_1$ Level in Sr I Spectrum, Z. Phys. 227, 207. (Ger.)

1586. J. V. Peach, Low Noise Solar and Laboratory Spectroscopy--IV. A Technique for Relative Oscillator Strength Measurement with Applications to Fe I, Mon. Not. R. Astron. Soc. 144, 171.

1587. R. C. Pickett & R. Anderson, The Lifetime and Effective Quenching Cross Section of the $6\ ^2P_{3/2}$ State of Thallium, J. Quant. Spectrosc. Radiat. Transfer 9, 697.

1588. E. H. Pinnington & C.-C. Lin, Radiative Lifetimes for Some Carbon and Oxygen Energy Levels, J. Opt. Soc. Am. 59, 780.

1589. E. H. Pinnington & C.-C. Lin, Radiative Lifetime Measurements for Nitrogen Ions, J. Opt. Soc. Am. 59, 717.

1590. M. C. Poulizac, M. Druetta, & P. Ceyzeriat, Radiative Lifetimes of Some Excited Electronic States in Carbon, Phys. Lett. A 30, 87.

1592. G. zu Putlitz, On Fermi's Paper Concerning Spin-Orbit Perturbation and the Intensity Ratios of Doublet Lines in Heavy Alkalies, Comments At. Mol. Phys. 1, 51.

1593. J.-P. Rozelot, Calculation of Transition Probabilities for Several Excited States of Fe XII, Sol. Phys. 6, 49. (Fr.)

1594. Z. Rudzikas & A. Jucys, Magnetic Dipole and Electric Quadrupole Transition Probabilities between Levels of the Same Configuration of Iron Group Elements, Liet. Fiz. Rinkinys 9, 433. (Russ.)

1595. U. I. Safronova, A. N. Ivanova, & V. N. Kharitonova, Perturbation Calculation of Oscillator Strengths for the Isoelectronic Series of Light Atoms, Theor. Exp. Chem. (USSR) 5, 209.

1596. F. C. Sanders & C. W. Scherr, Perturbation Study of Some Excited States of Two-Electron Atoms, Phys. Rev. 181, 84.

1597. E. Schulz-Gulde, Oscillator Strengths of Spectral Lines of Neutral and Singly Ionized Silicon, J. Quant. Spectrosc. Radiat. Transfer 9, 13.

1598. H. E. Seelbach & F. v. Sichart, The Lifetime of the Tl 7 $^2S_{1/2}$ Atomic State in Dependence of the Exciting Conditions, Z. Phys. 222, 128. (Ger.)

1599. O. P. Semenova, T. M. Gorbunova, & A. E. Kirilov, Use of Copper Spectral Lines to Determine Arc Discharge Temperature, Sov. Phys. J. 12, 927.

1600. J. B. Shumaker, Jr. & C. H. Popenoe, Arc Measurement of Some Ar II Optical Transition Probabilities, J. Opt. Soc. Am. 59, 980.

1602. J. v. Specht, Measurement of the Absorption Oscillator Strengths of Sr II Lines in the Spectral Ranges 1400 to 1900 Å and 4000 to 4400 Å, Z. Naturforsch., Teil A 24, 457. (Ger.)

1603. S. Svanberg & S. Rydberg, Level Crossing Investigation of the 6p $^2P_{3/2}$ and 7p $^2P_{3/2}$ Levels of Cs^{133}, Cs^{135}, and Cs^{137}, Z. Phys. 227, 216.

1604. E. Trefftz & R. N. Zare, Comparison of Calculated Oscillator Strengths for Si III, J. Quant. Spectrosc. Radiat. Transfer 9, 643.

1605. Ya. F. Verolainen & A. L. Osherovich, Lifetimes of Certain Xenon Levels, Opt. Spectrosc. (USSR) 27, 14.

1606. M. G. Veselov & A. V. Shtoff, Calculation of the Oscillator Strengths of the Principal Series of Lithium in the Adiabatic Approximation, Opt. Spectrosc. (USSR) 26, 177.

1969

1607. R. Wagner & E. W. Otten, Redetermination of the Absolute Oscillator Strength of the Fe I Resonance Line λ = 3720 Å by Optical Double Resonance, Z. Phys. 220, 349. (Ger.)

1608. W. J. Wagner & L. L. House, Hartree-Fock Calculations of Coronal Forbidden Lines in the Argon I Isoelectronic Sequence, Astrophys. J. 155, 677.

1609. C. H. Wang, W. J. Tomlinson, & R. T. George, Jr., Collision-Induced Anisotropic Relaxation in a Gas Laser, Phys. Rev. 181, 125.

1610. B. Warner & R. C. Kirkpatrick, Energy Levels, Oscillator Strengths, and Forbidden Transition Probabilities in the Sc II Isoelectronic Sequence, Mon. Not. R. Astron. Soc. 144, 397.

1611. B. Warner & R. C. Kirkpatrick, Atomic Oscillator Strengths--VI. Transitions of the Type p^2-ps, Mon. Not. R. Astron. Soc. 142, 265.

1612. A. W. Weiss, Superposition of Configurations and Atomic Oscillator Strengths--Boron Isoelectronic Sequence, Phys. Rev. 188, 119.

1614. A. W. Weiss, Series Perturbations and Atomic Oscillator Strengths: The ^{2}D Series of Al I, Phys. Rev. 178, 82.

1615. P. Westhaus & O. Sinanoglu, Theory of Atomic Structure Including Electron Correlation. III. Calculations of Multiplet Oscillator Strengths and Comparisons with Experiments for C II, N I, N II, N III, O II, O III, O IV, F II, Ne II, and Na III, Phys. Rev. 183, 56.

1617. W. Whaling, R. B. King, & M. Martinez-Garcia, Lifetimes of Some Fe I States by Beam-Foil Spectroscopy, Astrophys. J. 158, 389.

1618. W. L. Wiese, J. M. Bridges, R. L. Kornblith, & D. E. Kelleher, Transition Probabilities for Prominent Ar I Lines in the Near Infrared, J. Opt. Soc. Am. 59, 1206.

1619. W. L. Wiese, M. W. Smith, & B. M. Miles, "Atomic Transition Probabilities (Sodium through Calcium--A Critical Data Compilation)," Vol. II, NSRDS-Nat. Bur. Stand. 22 (U.S. Government Printing Office, Washington, D.C.).

1621. S. J. Wolnik, R. O. Berthel, E. H. Carnevale, & G. W. Wares, Additional Shock-Tube Measurements of Absolute Cr I gf-Values, Astrophys. J. 157, 983.

1622. T. Wujec, Measurement of the Absolute Transition of Ar I Lines, Acta Phys. Pol. 36, 269.

1623. Yu. A. Zavenyagin & Yu. P. Dontsov, Oscillator Strengths for Certain Spectral Lines of the Nitrogen N II Ion, Opt. Spectrosc. (USSR) 26, 82.

1644. M. A. Ali, Theoretical Hartree-Fock Multiplet Strength for Transitions Between Excited Quartet States of Ne^+ Isoelectronic Sequence, Int. J. Quantum Chem., Symp. 3, 359.

1645. M. A. Ali & H. W. Joy, Oscillator Strengths and Wavelengths of $3p^3\ ^4S - 3p^2(^3P)3d\ ^4P$ Transitions in Ions of Ar IV to Fe XII, J. Phys. B 3, 1552.

1646. E. L. Altman, Determination of the Lifetime of the $8\ ^2P_{1/2}$ Level of Cesium from its Intersections in a Zero Magnetic Field Under Excitation by the 388.865 nm Helium Line, Opt. Spectrosc. (USSR) 28, 556.

1647. E. L. Altman & S. A. Kazantsev, Determination of the Lifetime of the $^2P_{1/2}$ Levels of Cesium and Rubidium from Zero Magnetic Field Crossings, Opt. Spectrosc. (USSR) 28, 432.

1648. T. Andersen, J. Desesquelles, K. A. Jessen, & G. Sörensen, Excitation by Carbon Foil of a Beam of P^+ Ions, C. R. Acad. Sci., Ser. B 271, 685. (Fr.)

1649. T. Andersen, J. Desesquelles, K. A. Jessen, & G. Sørensen, Measurements of Atomic Lifetimes for Neutral and Ionized Magnesium and Calcium, J. Quant. Spectrosc. Radiat. Transfer 10, 1143.

1650. T. Andersen, J. Desesquelles, K. A. Jessen, & G. Sørensen, Systematic Trends in the Mean Lives of the Fine Structure States in the $2p^5 3p$ Configuration of Na II and Mg III, Phys. Rev. A 1, 1294.

1651. T. Andersen, J. Desesquelles, K. A. Jessen, & G. Sørensen, Atomic Lifetime Measurements for Neutral and Ionized Sodium and Potassium, J. Opt. Soc. Am. 60, 1199.

1653. G. E. Assousa, L. Brown, & W. K. Ford, Jr., Radiative Lifetime Measurements of Excited Levels in Neon I and Argon II, J. Opt. Soc. Am. 60, 1311.

1654. M. Aymar, S. Feneuille, & M. Klapisch, Theoretical Transition Probabilities and Lifetimes in Noble Gas Spectra, Nucl. Instrum. Methods 90, 137.

1655. J. P. Barach, Measurement of Silicon II Relative f-Values, J. Quant. Spectrosc. Radiat. Transfer 10, 519.

1657. L. Barrette, E. J. Knystautas, B. Neveu, & R. Drouin, Relative Intensities and Decay Times of the $2s\ ^2S_{1/2} - 2p\ ^2P_{3/2,1/2}$ Doublet in N V and F VII, Phys. Lett. A 32, 435.

1658. B. Baschek, T. Garz, H. Holweger, & J. Richter, Experimental Oscillator Strengths of Fe II Lines and the Solar Iron Abundance, Astron. Astrophys. 4, 229. (Ger.)

1659. S. R. Baumann & W. H. Smith, Atomic Transition Probabilities: Ultraviolet Multiplets of Zn I, II, and Cd I, II, J. Opt. Soc. Am. 60, 345.

1660. H. Beer, Hyperfine Structure and Stark Effect Investigations of the States 4d5s5p z $^2F_{5/2}$ and z $^2F_{7/2}$ in the Yttrium I Spectrum, Z. Phys. 239, 351. (Ger.)

1661. I. L. Beigman, L. A. Vainshtein, & V. P. Shevelko, The Effect of Polarization of the Atomic Core on the Oscillator Strengths and Photoionization Cross Sections of Alkali Element Atoms, Opt. Spectrosc. (USSR) 28, 229.

1662. G. D. Bell & E. F. Tubbs, Revised Absolute f-Values for λ 3247 of Neutral Copper and λ 3720 of Neutral Iron, Astrophys. J. 159, 1093.

1663. J. A. Bellisio & P. Davidovits, Collisional De-excitation of the Thallium 6 $^2P_{3/2}$ State, J. Chem. Phys. 53, 3474.

1664. O. Bely & D. Petrini, Excitation of Lithium Like Ions by Electron Impacts, Astron. Astrophys. 6, 318.

1665. R. D. Bengtson & M. H. Miller, Experimental Transition Probabilities for Neon I, J. Opt. Soc. Am. 60, 1093.

1666. H. G. Berry, W. S. Bickel, I. Martinson, R. J. Weymann, & R. E. Williams, Total Transition Probabilities for the Bowen Levels of O III, Astrophys. Lett. 5, 81.

1667. H. G. Berry, J. Bromander, & R. Buchta, Some Mean Life Measurements in the Na I and Mg I Isoelectronic Sequences, Phys. Scr. 1, 181.

1668. H. G. Berry, J. Bromander, & R. Buchta, Mean Lives in Singly Ionized Potassium by the Beam-Foil Technique, Phys. Scr. 1, 179.

1670. H. G. Berry, I. Martinson, R. M. Schectman, W. S. Bickel, & H. P. Palenius, Mean Lives of Excited Levels in Fluorine, J. Opt. Soc. Am. 60, 1461.

1671. H. G. Berry, R. M. Schectman, I. Martinson, W. S. Bickel, & S. Bashkin, Beam-Foil Spectrum of Sulfur 600-4000 Å, J. Opt. Soc. Am. 60, 335.

1672. C. P. Bhalla, Relativistic Hartree-Fock-Slater Oscillator Strengths for Tl, Nucl. Instrum. Methods 90, 149.

1673. V. A. Bondar', L. I. Kiselevskii, & E. P. Trukhan, Use of an Impulse Discharge, Stabilized Capillary, for the Determination of Oscillator Strengths of Lines of Multi-Charged Ions, "Voprosy Fiziki Nizkotemperaturnoi Plazmy," 140-142 ("Nauka i Tekhnika," Minsk). (Russ.)

1674. J. H. Brand, C. L. Cocke, B. Curnutte, & C. Swenson, A Comparison of Ne II Lifetimes Obtained by Several Techniques, Nucl. Instrum. Methods 90, 63.

1675. J. M. Bridges & W. L. Wiese, The Oscillator Strength Scale for Fe I, Astrophys. J. 161, L71.

1676. J. M. Bridges & W. L. Wiese, Transition Probabilities for the Prominent Red Lines of Ne I, Phys. Rev. A 2, 285.

1677. K. A. Bridgett, T. A. King, & R. J. Smith-Saville, Measurement of Excited State Lifetimes of Gases, J. Phys. E 3, 767.

1678. J. Bromander, H. G. Berry, & R. Buchta, Mean Life Measurements in Na, Mg, Al, Si, and K, Nucl. Instrum. Methods 90, 55.

1679. J. Bromander & R. Buchta, Mean Lives of n = 3 Terms in Li II, Phys. Scr. 1, 184.

1681. B. Budick & J. Snir, Hyperfine Structure Anomalies of Stable Ytterbium Isotopes, Phys. Rev. A 1, 545.

1682. R. Burnham & R. C. Isler, Level Crossing Spectroscopy of the $(3p^5 4s)^3P_1$ State of Argon, Bull. Am. Phys. Soc. Ser. II, 15, 213.

1683. S. Cameron, R. P. McEachran, & M. Cohen, Oscillator Strengths for Helium, Can. J. Phys. 48, 211.

1685. C. Camhy-Val, A. M. Dumont, M. Dreux, & R. Vitry, Absolute Measures of Mean Lifetimes of Excited States Using the Method of Correlated Photons in Cascade, Phys. Lett. A 32, 233.

1686. P. Camus, Theoretical Determination of Line Strengths of Tm I, J. Phys. (Paris) 31, 985. (Fr.)

1687. M. Carre, M. L. Gaillard, & J. L. Subtil, Cascade Corrections--Applications to Na II 3s-3p Transitions, Nucl. Instrum. Methods 90, 217.

1688. P. Ceyzeriat, A. Denis, J. Desesquelles, M. Druetta, & M. C. Poulizac, New Results of Lifetime Measurements in C, N, O, Ne, and Ar Ions, Nucl. Instrum. Methods 90, 103.

1689. C. J. Chen & R. H. Garstang, Transition Probabilities for Xe I, J. Quant. Spectrosc. Radiat. Transfer 10, 1347.

1690. M. Chenevier & T. D. Nguyen, Magnetic Resonance Measurement of Lifetimes and Lande Factors of the $7p(3/2)_1$, $7p(3/2)_2$, $7p(5/2)_2$, $7p(5/2)_3$, $6p'(3/2)_2$, $8p(5/2)_3$, and $8p(3/2)_2$ Levels of Isotope 136 of Xenon, "Second Conference on Atomic Spectroscopy," No. 26 (Institut A für Experimentalphysik der Technischen Universität, Hannover, Germany). (Fr.)

1691. S. A. Chin-Bing & C. E. Head, Radiative Lifetimes of the 4 ^3S and 5 ^3D States of He, Bull. Am. Phys. Soc. 15, 1375.

1692. S. A. Chin-Bing, C. E. Head, & A. E. Green, Jr., Radiative Lifetimes of Some Electronic States of Helium, Am. J. Phys. 38, 352.

1693. J. H. Clark & C. E. Head, S II Radiative Lifetimes, Bull. Am. Phys. Soc. 15, 1375.

1694. C. H. Corliss, A Review of Oscillator Strengths for Lines of Cu I, J. Res. Nat. Bur. Stand., Sect. A 74, 781.

1695. A. Corney, The Measurement of Lifetimes of Free Atoms, Molecules, and Ions, "Advances in Electronics and Electron Physics," Vol. 29, 115-231 (Academic Press, Inc., New York).

1696. R. D. Cowan, Cancellation Effects in Computed Atomic Transition Probabilities, J. Phys. (Paris), Colloq. 31, C4-191.

1697. M. Crance, Theoretical Study of Transition Probabilities and Lifetimes of the Na II Spectrum, C. R. Acad. Sci. 271, 1089. (Fr.)

1698. L. J. Curtis, H. G. Berry, & J. Bromander, Analysis of Multi-Exponential Decay Curves, Phys. Scr. 2, 216.

1699. L. J. Curtis, R. M. Schectman, J. L. Kohl, D. A. Chojnacki, & D. R. Shoffstall, New Cascade Analysis Techniques for Determining Spontaneous Atomic Transition Probabilities, Nucl. Instrum. Methods 90, 207.

1700. A. Denis, P. Ceyzeriat, & M. Dufay, Spectra and Mean Lives of Multiply Ionized Neon, J. Opt. Soc. Am. 60, 1186.

1701. A. Denis & M. Gaillard, Further Lifetime Measurements in the Rare Gas Ions, Phys. Lett. A 31, 9.

1702. L. O. Dickie & F. M. Kelly, Lifetime of the 6s6p $^1P_1$ Level of Barium, Can. J. Phys. 48, 879.

1703. H. O. Dickinson & M. R. H. Rudge, On Line Strengths for Transitions Between Doubly Excited States and the 2 ^{1}S State of Helium, J. Phys. B 3, 1284.

1704. A. Dienes & T. P. Sosnowski, Magnetic Field Dip Measurements on the He-Cd Laser, Appl. Phys. Lett. 16, 512.

1705. J. N. Dodd, W. J. Sandle, & O. M. Williams, A Study of the Transients in Resonance Fluorescence Following a Step or a Pulse of Magnetic Field, J. Phys. B 3, 256.

1706. L. W. Dotchin, D. J. Pegg, & E. L. Chupp, Mean Lives and Relative Initial State Populations of Some States in He II Using Beam-Foil Excitation, Phys. Lett. A 31, 85.

1707. G. W. F. Drake, Tensor Polarizability of the Helium 2 $^3S_1$ State, Phys. Rev. Lett. 24, 765.

1709. M. Druetta, P. Ceyzeriat, & M.-C. Poulizac, The Spectrum of O VI Excited by the "Beam-Foil" Method, C. R. Acad. Sci., Ser. B 271, 846. (Fr.)

1710. M. Druetta & M. C. Poulizac, Oscillator Strength of the O I $2p^4\ ^3P - 2p^3 3s\ ^3S^o$ Transition, Phys. Lett. A 33, 115.

1711. M. Druetta, M. C. Poulizac, & J. Desesquelles, Lifetime Measurements in O IV Ions, J. Opt. Soc. Am. 60, 1463.

1712. M. Dufay, A. Denis, & J. Desesquelles, Beam-Foil Spectroscopy at 1 MeV/Nucleon Energy: Preliminary Results, Nucl. Instrum. Methods 90, 85.

1713. W. Eissner & M. Jones, Energy Levels and gf-Values of Ions in Independent Particle Model Calculations, J. Phys. (Paris), Colloq. 31, C4-149.

1714. R. C. Etherton, L. M. Beyer, W. E. Maddox, & L. B. Bridwell, Lifetimes of 3p, 4p, and 5p States in Atomic Hydrogen, Phys. Rev. A 2, 2177.

1715. D. L. Evans, J. M. Marchand, W. G. Braun, & J. P. Oss, Radiation Property Measurements on an Arc Heated Argon Plasma, AIAA 8th Aerospace Sciences Meeting, Paper No. 70-42 (New York).

1716. S. Feneuille, M. Klapisch, E. Koenig, & S. Liberman, Theoretical Determination of Transition Probabilities $2p^5 3p \rightarrow 2p^5 3s$ of the Ne I Spectrum, Physica (Utrecht) 48, 571. (Fr.)

1717. U. Fink, S. Bashkin, & W. S. Bickel, Transitions and Level Lifetimes in Ne II, III, Ar II, III, Kr II, III, and Xe II, J. Quant. Spectrosc. Radiat. Transfer 10, 1241.

1718. E. W. Foster, On the Use of Liquid Vortex Arcs for Transition Probability Measurements Including Some C I and S II Transition Probability Measurements and an Electron Density Determination, J. Phys. B 3, L145.

1719. H. Friedrich, K. Katterbach, & E. Trefftz, On the Accuracy of Machine Programs for Calculating Oscillator Strengths by Coulomb Approximation, J. Quant. Spectrosc. Radiat. Transfer 10, 11.

1722. K. Gabla & M. Kunisz, Relative Line Strengths in Arc Spectra of Copper, Silver, and Gold, Acta Phys. Pol. A 37, 391.

1723. A. H. Gabriel & C. Jordan, Helium-Like Ion Forbidden Line Emission from the Sun, Phys. Lett. A 32, 166.

1724. T. Garz, H. Heise, & J. Richter, Experimental Oscillator Strengths for Ni I Lines, Astron. Astrophys. 9, 296. (Ger.)

1725. J. Geiger, Oscillator Strengths of the Low-Lying Resonance Lines s_4 and s_2 of the Rare Gas Atoms, Phys. Lett. A 33, 351.

1726. L. H. Göbel, Double Resonance Investigation in Excited States of Lu I, Z. Naturforsch., Teil A 25, 1401. (Ger.)

1727. L. H. Göbel, Hyperfine Structure Investigations of Excited States of Lu I by Means of the Level Crossing Method, Z. Naturforsch., Teil A 26, 611. (Ger.)

1728. M. Hashmi, A. J. van der Houven van Oordt, & J.-G. Wegrowe, On the Oscillator Strength of the Resonance Transitions of Sr^+, J. Quant. Spectrosc. Radiat. Transfer 10, 297.

1729. C. E. Head & M. E. M. Head, Mean Lives of Some 3p Levels of Neon II, Phys. Rev. A 2, 2244.

1730. A. Hese, Level Crossing Experiments to Investigate the Hyperfine Structure and the Lifetime of the 5d6s6p z $^2F_{5/2,7/2}$ States in the Lanthanum I Spectrum, Z. Phys. 236, 42. (Ger.)

1731. A. Hese & G. Büldt, Hyperfine Structure, Stark Effect and Lifetimes of the Excited 5d6s6p y $^2D_{3/2,5/2}$ States of the Lanthanum I Spectrum, Z. Naturforsch., Teil A 25, 1537. (Ger.)

1732. A. Hese & H.-P. Weise, Investigation of the 5d6s6p z ^2F Terms in the Lanthanum I Spectrum by Optical Double Resonance, Z. Angew. Phys. 30, 170. (Ger.)

1733. D. Hodges, H. Marantz, & C. L. Tang, Line Strengths and Radiative Lifetimes for Ne II, J. Opt. Soc. Am. 60, 192.

1734. R. D. Hudson, V. L. Carter, & P. A. Young, Absorption Spectrum of Ba I in the Region of Autoionization from 2382 to 1700 Å, Phys. Rev. A 2, 643.

1736. E. I. Ivanov & M. P. Chaika, Determination of Lifetimes by Interference Beats, Opt. Spectrosc. (USSR) 29, 335.

1737. A. W. Johnson & R. G. Fowler, Measured Lifetimes of Rotational and Vibrational Levels of Electronic States of N_2, J. Chem. Phys. 53, 65.

1738. J. A. Kernahan, C.-C. Lin, & E. H. Pinnington, Radiative Lifetime Measurements of Some Ar II and Ar III Levels by the Beam-Foil Technique, J. Opt. Soc. Am. 60, 898.

1741. M. B. Klein & D. Maydan, Measurement of the Upper Laser Level Lifetime in the Helium-Cadmium Laser by Fast Cavity Dumping Techniques, Appl. Phys. Lett. 16, 509.

1742. V. A. Komarovskii, N. P. Penkin, & G. P. Nikiforova, The Relative Values of Oscillator Strengths of Spectral Lines, Opt. Spectrosc. (USSR) 29, 116.

1743. M. G. Kozlov & G. P. Startsev, The Absorption Spectrum of Strontium Vapors in the Vacuum Ultraviolet Region of the Spectrum, Opt. Spectrosc. (USSR) 28, 6.

1745. L. Kuzmickyte & K. Uspalis, The Theoretical Investigation of the Dipole Transitions $3d^6 4p \rightarrow 3d^7$ in Fe^+ Ion, Liet. Fiz. Rinkinys 10, 59. (Russ.)

1747. I. Kyckinas, Z. Rudzikas, & J. Vizbaraite, Oscillator Strengths of the Electric Dipole and Quadrupole Transitions for Co II, Liet. Fiz. Rinkinys 10, 47. (Russ.)

1749. B. Laniepce, Measurement of the Lifetime of the Triplet Levels of the (5s,5d) Configuration of the Cadmium Atom and of the Oscillator Strengths of the Lines Originating from the Triplet Levels (5s,5p), J. Phys. (Paris) 31, 439. (Fr.)

1750. J. Laurent & S. Weniger, Study of the Shapes of Absorption Lines of Some Multiplets of the Neutral Nickel Atom in the Near Ultraviolet, J. Quant. Spectrosc. Radiat. Transfer 10, 315. (Fr.)

1751. G. M. Lawrence, Dissociative Excitation of Some Oxygen-Containing Molecules: Lifetimes and Electron Impact Cross Sections, Phys. Rev. A 2, 397.

1752. C.-L. Lin, D. A. Parkes, & F. Kaufman, Oscillator Strength of the Resonance Transitions of Ground State N and O, J. Chem. Phys. 53, 3896.

1753. R. Lincke & B. Stredele, Absorption Cross Section and Oscillator Strength of the Autoionizing Line Hg I 1126.6 Å, Z. Phys. 238, 164. (Ger.)

1970

1754. L. Lundin, H. Oona, W. S. Bickel, & I. Martinson, Mean Lives of the 2p, 3p, 4p, 5p, and 6p ^{2}P Levels in He II, Phys. Scr. 2, 213.

1757. B. V. Lvov, Determination of the Relative Values of Oscillator Strengths from Atomic Absorption Measurements on Flames, Opt. Spectrosc. (USSR) 28, 8.

1760. I. Martinson, Mean Life Studies in Light Atoms, Nucl. Instrum. Methods 90, 81.

1761. I. Martinson & W. S. Bickel, Mean Lives of Some Excited Levels in C II - C V, Phys. Lett. A 31, 25.

1762. I. Martinson, W. S. Bickel, J. Bromander, H. G. Berry, L. Lundin, R. Buchta, & I. Bergström, Mean Lives of Some Excited Levels in He I, J. Opt. Soc. Am. 60, 352.

1763. I. Martinson, W. S. Bickel, & A. Ölme, Beam-Foil Spectra of Boron 450-5000 Å, J. Opt. Soc. Am. 60, 1213.

1764. A. L. Mashinskii, Precise Measurement of Atomic Constants Using Level Crossing Signals of the 3 $^2P_{3/2}$ State of ^{23}Na, Opt. Spectrosc. (USSR) 28, 1.

1765. A. L. Mashinskii & M. P. Chaika, Accuracy of Determination of the Radiative Decay Constant by the Level Intersection Method, Opt. Spectrosc. (USSR) 28, 589.

1766. R. P. McEachran, C. E. Tull, & M. Cohen, Ionization Energies and Oscillator Strengths for Fe XVI, Co XVII, and Ni XVIII, Astron. Astrophys. 4, 152.

1767. D. L. Mickey, Lifetime Measurements in C I, C II, and C III, Nucl. Instrum. Methods 90, 77.

1769. N. M. Nerheim & H. N. Olsen, Experimental Measurements of Some Ar II Transition Probabilities and a Comparison of Published Values, J. Quant. Spectrosc. Radiat. Transfer 10, 755.

1770. C. Nicolaides & O. Sinanoglu, Transition Probabilities from the Non-Closed Shell Many-Electron Theory of Atomic Structure, J. Phys. (Paris), Colloq. C4, Suppl. 11-12, 31, C4-117.

1773. R. A. Nodwell, J. Meyer, & T. Jacobson, Radiative Transition Probabilities between the $3p^5 4p$ and $3p^5 4s$ Configurations of Neutral Argon, J. Quant. Spectrosc. Radiat. Transfer 10, 335.

1774. H. Nussbaumer & J. P. Swings, [Fe II] Magnetic Dipole Transition Probabilities and the Problem of the Solar Iron Abundance, Astron. Astrophys. 7, 455.

1775. H. Nussbaumer & J. P. Swings, Identification of [Cr II] Lines in Astronomical Objects and Transition Probabilities of Forbidden Lines of Singly Ionized Chromium, Astrophys. J. 162, 589.

1776. A. S. Pearl, Lifetime of the 2 ^{1}S State of He, Phys. Rev. Lett. 24, 703.

1777. D. J. Pegg, E. L. Chupp, & L. W. Dotchin, Radiative Mean Lives of Some Electronic States in Beam-Foil Excited Atomic and Ionic Carbon, Nucl. Instrum. Methods 90, 71.

1780. R. Pepperl, Relaxation of the 5 $^1P_1$ State of Cadmium Due to Collisions with Noble Gas Atoms and Hydrogen Molecules, Z. Naturforsch., Teil A 25, 927. (Ger.)

1781. W. Persson, Comments on "Line Strengths and Radiative Lifetimes for Ne II", J. Opt. Soc. Am. 60, 1266.

1782. E. H. Pinnington, Radiative Lifetime Measurements for Ions of Nitrogen and Oxygen, Nucl. Instrum. Methods 90, 93.

1784. M. Popp, G. Schäfer, & E. Bodenstedt, Investigation of Photon-Photon Angular Correlations in Atomic Mercury, Z. Phys. 240, 71.

1786. L. Q. Rang, Stark Constants and Oscillator Strengths of Ar I for a Thomas-Fermi-Dirac Potential, C. R. Acad. Sci., Ser. B 271, 389. (Fr.)

1787. W. van Rensbergen, Some Oscillator Strengths in the Spectra of C I, O I, Si I, Ca II, and Sr II, Sol. Phys. 11, 11.

1788. J. Richter & P. Wulff, Investigation of an Improved Iron Arc, Astron. Astrophys. 9, 37.

1790. U. I. Safronova, A. N. Ivanova, & V. N. Kharitonova, Oscillator Strengths for the Excited States of Helium-Like Systems, Opt. Spectrosc. (USSR) 28, 313.

1791. R. W. Schmieder & A. Lurio, Level Crossing Measurement of Lifetime and hfs Constants of the $^2P_{3/2}$ States of the Stable Alkali Atoms, Phys. Rev. A 2, 1216.

1794. I. A. Sellin, M. Brown, W. W. Smith, & B. Donnally, Mean Life of the Metastable 2 $^3P_1$ State of the Two-Electron Oxygen Ion, Phys. Rev. A 2, 1189.

1795. R. I. Semyonov, Calculation of Line Strengths from Lifetimes of Excited States, Opt. Spectrosc. (USSR) 28, 341.

1796. F. A. Sharpton, R. M. St. John, C.-C. Lin, & F. E. Fajen, Experimental and Theoretical Studies of Electron-Impact Excitation of Neon, Phys. Rev. A 2, 1305.

1798. D. R. Shoffstall & D. G. Ellis, Line Strengths and Transition Probabilities for the $2p^5 3p - 2p^5 3s$ Transitions in Ne I, J. Opt. Soc. Am. 60, 894.

1800. P. L. Smith, W. Whaling, & D. L. Mickey, Lifetimes and Transition Probabilities for Some Fe II Levels by the Beam-Foil Method, Nucl. Instrum. Methods 90, 47.

1801. W. H. Smith, Use of Electron Beam Phase-Shift Techniques in Radiative Lifetime Determinations, Nucl. Instrum. Methods 90, 115.

1802. W. H. Smith, J. Bromander, L. J. Curtis, & R. Buchta, Radiative Lifetimes of Some Ultraviolet Transitions of N I and N II, Phys. Scr. 2, 211.

1803. H. L. Stück & P. Zimmermann, Level Crossing Investigations in the 4d $^2D_{5/2,3/2}$ States of the Al I Spectrum, Z. Phys. 239, 345.

1804. G. B. Sukhanova & O. P. Semenova, Transition Probabilities for Certain Displaced Copper Lines, Sov. Phys. J. 13, 1538.

1805. R. J. Takens, On the Determination of Oscillator Strengths from Free Burning Arcs, Astron. Astrophys. 5, 244.

1806. St. Tudorache, Determination of the Depolarization Cross Section of the 3 $^2P_{3/2}$ Na State by Collision with Ar Atoms, Rev. Roum. Phys. 15, 269.

1807. J. Uhlenbusch, E. Fischer, & J. Hackmann, Non-Equilibrium Effects in Stationary Rare Gas Plasmas Under Normal Pressure, Z. Phys. 239, 120. (Ger.)

1808. A. K. Valters, On the Accuracy of Oscillator Strength Measurements Using the Outer Hooks of Two Closely Located Absorption Lines, Opt. Spectrosc. (USSR) 29, 620.

1811. A. W. Weiss, A Review of Theoretical Developments in Atomic f-Values, Nucl. Instrum. Methods 90, 121.

1812. W. L. Wiese, Atomic Transition Probabilities--A Survey of Our Present Knowledge and Future Needs, Nucl. Instrum. Methods 90, 25.

1813. S. J. Wolnik, R. O. Berthel, & G. W. Wares, Shock-Tube Measurements of Absolute gf-Values for Fe I, Astrophys. J. 162, 1037.

1814. V. Ch. Zhukovskii, M. M. Kolesnikova, A. A. Sokolov, & I. Kherrmann, A One-Proton Transition from the Metastable Level of the Hydrogen Atom Considering Spin States, Opt. Spectrosc. (USSR) 28, 337.

1815. V. A. Zilitis, Semi-Empirical Calculation of Oscillator Strengths for the Strontium Atom, Opt. Spectrosc. (USSR) 29, 438.

1816. V. A. Zilitis, Semi-Empirical Calculation of Oscillator Strengths for Beryllium and Barium Atoms, Uch. Zap., Latv. Ordena Tr. Kras. Znam. Gos. Univ. im. Petra Stuchki 134, 15. (Russ.)

1817. W. Zyrnicki & A. Czernichowski, Determination of Relative Transition Probabilities for the Si I and Si II Lines of Silicon, Acta Phys. Pol. A 38, 177; C. R. Acad. Sci., Ser. B 270, 393. (Fr.)

1971

1838. M. A. Ali, Absolute Multiplet Strengths of $4\ ^2S \rightarrow 4\ ^2P \rightarrow 4\ ^2D$ Transitions of Sodium Sequence, J. Phys. B 4, 748.

1839. M. A. Ali, Electric Quadrupole Transition Probability in Sodium and Potassium Sequences, J. Quant. Spectrosc. Radiat. Transfer 11, 1611.

1840. M. A. Ali, Multiplet Strengths of Excited Transitions of Ne^+ Sequence, J. Quant. Spectrosc. Radiat. Transfer 11, 503.

1841. C. W. Allen, The f-Sum Rule and Fe I f-Values, Mon. Not. R. Astron. Soc. 152, 295.

1842. T. Andersen, K. A. Jessen, & G. Sørensen, Atomic Lifetime Measurements in Elements ($Z > 10$) Belonging to the First, Second, and Third Group of the Periodic System, Nucl. Instrum. Methods 90, 35.

1844. T. Andersen, J. R. Roberts, & G. Sørensen, Mean-Life Measurements of Excited Electronic States in Perturbed Series of Al II and Be I, Phys. Scr. 4, 52.

1845. T. Andersen & G. Sørensen, Lifetimes of Excited States in Fe I Measured by the Beam-Foil Technique, Astrophys. Lett. 8, 39.

1846. R. Arrathoon, Helium $2\ ^1S - n\ ^1P$ Metastable Transition Probabilities, J. Opt. Soc. Am. 61, 332.

1847. R. Arrathoon & D. A. Sealer, Collisional and Radiative Relaxation of Selected States in Neon I and Argon II, Phys. Rev. A 4, 815.

1848. S. C. Baker, Oscillator Strengths for Fe III, J. Opt. Soc. Am. 61, 271.

1849. S. Bashkin & I. Martinson, Energy Levels and Mean Lives of Cl II-Cl VII, J. Opt. Soc. Am. 61, 1686.

1850. M. Baumann & A. Eibofner, Lifetime of the 3P State of Ionized Helium, Phys. Lett. A 35, 173.

1851. M. Baumann & H. Liening, Lifetimes of Some Excited States of the $4d^9 5p$ Configuration in the Pd I Spectrum, Phys. Lett. A 36, 329.

1853. H. Beer, Lifetimes and Hyperfine Structure Splittings of the Terms 4d5s5p y $^2D_{3/2,5/2}$ and 4d5s5p y $^2F_{5/2,7/2}$ in the Spectrum of Yttrium I, Ann. Phys. (Leipzig) 27, 110. (Ger.)

1854. I. L. Beigman & U. I. Safronova, Magnetic Dipole Transition Operator Accurate to α^2 Terms for One- and Two-Electron Atoms, Sov. Phys.--JETP 33, 1102.

1855. G. Belin & S. Svanberg, Electronic g_J Factors, Natural Lifetimes, and Electric Quadrupole Interaction for Rb^{87} in the np $^2P_{3/2}$ Series of the Rb I Spectrum, Phys. Scr. 4, 269.

1856. R. A. Bell & W. L. Upson, II, Errors in Neutral Iron Oscillator Strengths, Astrophys. Lett. 9, 109.

1857. R. D. Bengtson, M. H. Miller, D. W. Koopman, & T. D. Wilkerson, Atomic Transition Probabilities of the Halogens, Phys. Rev. A 3, 16.

1858. H. G. Berry, Multiply Excited States in the He I and Li I Isoelectronic Sequences: Classifications and Lifetime Measurements, "Third Conference on Atomic Spectroscopy," No. 11 (University of Reading, Reading, England).

1859. H. G. Berry, W. S. Bickel, S. Bashkin, J. Desesquelles, & R. M. Schectman, Beam-Foil Studies of Nitrogen, J. Opt. Soc. Am. 61, 947.

1860. H. G. Berry, J. Bromander, L. J. Curtis, & R. Buchta, Lifetime Measurements in Si II, Si III, and Si IV, Phys. Scr. 3, 125.

1861. H. G. Berry, J. Bromander, I. Martinson, & R. Buchta, Doubly-Excited Terms in Lithium and Beryllium, Phys. Scr. 3, 63.

1862. H. G. Berry, J. Desesquelles, & M. Dufay, Lifetime Measurements of Autoionizing Levels by the Beam-Foil Technique, Phys. Lett. A 36, 237.

1863. H. G. Berry, I. Martinson, L. J. Curtis, & L. Lundin, Lifetimes of Some Doubly Excited Levels in Neutral Helium, Phys. Rev. A 3, 1934.

1864. T. M. Bieniewski & T. K. Krueger, Absolute Oscillator Strengths for the Copper Resonance Lines, Aerospace Research Laboratories Report ARL 71-0135, Project No. 7114.

1865. R. Birkhahn, J. Ney, & W. Tuszynski, Level Crossing Investigations of the 3d4s4p y $^2D_{3/2,5/2}$ and y $^2F_{5/2,7/2}$ States in the Sc I Spectrum, "Third Conference on Atomic Spectroscopy," No. 15 (University of Reading, Reading, England).

1866. M. Blaha, Theoretical Intensities of Fe XIV in the Solar EUV Spectrum, Sol. Phys. 17, 99.

1867. J. M. Bridges & J. Richter, Arc Measurements of Fe I Oscillator Strengths with Improved Accuracy, "Proceedings of the Tenth International Conference on Phenomena in Ionized Gases," 384 (Donald Parsons & Co., Ltd., Oxford, England).

1868. J. S. Briggs & Y.-K. Kim, Total Cross Sections for Inelastic Scattering of Charged Particles by Atoms and Molecules. VI. Metastable Helium, Phys. Rev. A 3, 1342.

1869. J. Bromander, Lifetimes and Oscillator Strengths in Spectra of Be, B, and C, Phys. Scr. 4, 61.

1870. R. Buchta, L. J. Curtis, I. Martinson, & J. Brzozowski, Radiative Lifetimes in Sc I-Sc III, Phys. Scr. 4, 55.

1871. H. Bucka, D. Einfeld, J. Ney, & J. Wilken, Hyperfine Structure Investigation of the 5p $^2P_{3/2}$ State in Ag I Spectrum by Resonance Scattering of Light in Electric and Magnetic Fields, Z. Naturforsch., Teil A 26, 1016. (Ger.)

1872. J. M. Burger & A. Lurio, Lifetime of the 2 $^1P_1$ and 3 $^1P_1$ States of Atomic Helium, Phys. Rev. A 3, 64.

1873. J. Campos, System for the Direct Measurement of Mean Lifetimes of Atomic States, An. Fis. 67, 439. (Span.)

1874. M. Carre, J. Desesquelles, M. Dufay, & M. L. Gaillard, Polarization and Magnetic Depolarization with Accelerated Ion Beams, "Proceedings of the Second European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon).

1875. M. Carre, J. Desesquelles, M. Dufay, & M. L. Gaillard, Mean Life Measurements in He I by the Hanle Effect on High Velocity Atoms Excited in a Gaseous Target, Phys. Rev. Lett. 27, 1407.

1971

1876. P. Ceyzeriat, A. Denis, & M. Dufay, Transition Probabilities and Lifetimes in Ar III, J. Opt. Soc. Am. 61, 641.

1877. C. J. Chen, Transition Probabilities for Ar I, J. Opt. Soc. Am. 61, 1267.

1878. M. Chenevier & T. D. Nguyen, Lifetimes and g-Factors of Certain Xenon Levels, Phys. Lett. A 36, 177.

1879. D. A. Church, M. Druetta, & C. H. Liu, Hanle Effect Mean Life Measurements on Aligned Fast Ions, Phys. Rev. Lett. 27, 1763.

1880. C. L. Cocke, B. Curnutte, & J. H. Brand, Beam-Foil Lifetimes in Neutral Chromium, Astron. Astrophys. 15, 299.

1881. G. E. Copeland, Radiation Lifetimes in Molecular and Atomic Oxygen, J. Chem. Phys. 54, 3482.

1882. L. J. Curtis, H. G. Berry, & J. Bromander, A Mean Life Measurement of the 3d ^{2}D Resonance Doublet in Si II by a Technique which Exactly Accounts for Cascading, Phys. Lett. A 34, 169.

1883. L. J. Curtis, I. Martinson, & R. Buchta, Lifetimes of Excited Levels in P I-P V, Phys. Scr. 3, 197.

1884. A. Dalgarno, Radioactive Transitions in the Helium Isoelectronic Sequence, "The Menzel Symposium on Solar Physics, Atomic Spectra, and Gaseous Nebulae," 47-57, Nat. Bur. Stand. (U.S.), Spec. Publ. 353.

1885. F. L. Damm, Absolute Scale for Si I gf-Values, J. Quant. Spectrosc. Radiat. Transfer 11, 323.

1886. J. Davis & S. Morin, Relevant Atomic Parameters for Doubly Ionized Aluminum, J. Quant. Spectrosc. Radiat. Transfer 11, 495.

1887. J. J. Deakin, D. Husain, & J. R. Wiesenfeld, Kinetic Study of Electronically Excited Iodine Atoms, I($5p^5\ ^2P_{1/2}$), by Time-Resolved Atomic Absorption I($5p^4 6s(^2P_{3/2}) \leftarrow 5p^5(^2P^o_{1/2})$) at λ = 206.23 nm, Chem. Phys. Lett. 10, 146.

1888. J. S. Deech & W. E. Baylis, Double Exponential Decay of Imprisoned Resonance Radiation, Can. J. Phys. 49, 90.

1889. R. G. Derwent & B. A. Thrush, The Radiative Lifetime of the Metastable Iodine Atom I($5\ ^2P_{1/2}$), Chem. Phys. Lett. 9, 591.

1890. J. Desesquelles, Excitation of a Beam of Ions by a Carbon Foil. Application to the Measurement of Nitrogen Lifetimes, Ann. Phys. (Paris) 6, 71. (Fr.)

1891. L. O. Dickie & F. M. Kelly, Lifetime of the 6s7p $^1P_1$ Level of Barium, Can. J. Phys. 49, 1098.

1892. L. O. Dickie & F. M. Kelly, Lifetimes and Oscillator Strengths in Atomic Barium, Can. J. Phys. 49, 2630.

1893. B. Dodsworth, J. C. Gay, & A. Omont, Some Results Obtained on Multiple Diffusion and Resonant Collisions Studied by Hanle Effect on Diffuse Backscattered Light (6 $^3P_1$ State of Hg), "Third Conference on Atomic Spectroscopy," No. 29 (University of Reading, Reading, England).

1894. T. Dohnalik, Level Crossing Effect Within a Magnetic Field Modulated With a Radio Frequency (R.F.) Field. Apparatus Design and Construction. Application of Level Crossing Effect for 3 $^2P_{3/2}$ Na Level Lifetime Measurements, Zesz. Nauk. Uniw. Jagiellon., Pr. Fiz. 258, No. 9, 73. (Pol.)

1895. B. Donnally, W. W. Smith, D. J. Pegg, M. Brown, & I. A. Sellin, Lifetimes of the Metastable Autoionizing $(1s2s2p)^4P_{5/2}$ States of Lithium-Like F^{6+} and O^{5+} Ions, Phys. Rev. A 4, 122.

1896. G. W. F. Drake, Theory of Relativistic Magnetic Dipole Transitions: Lifetime of the Metastable 2 ^3S State of the Helium-Like Ions, Phys. Rev. A 3, 908.

1897. M. Druetta, M. C. Poulizac, & P. Ceyzeriat, Radiative Mean Lives of Oxygen V States, J. Phys. B 4, 1070.

1898. M. Druetta, M. C. Poulizac, & M. Dufay, Assignments and Mean Life Measurements for O II and O III Ions, J. Opt. Soc. Am. 61, 515.

1899. M. Dufay, M. Gaillard, & M. Carre, Beam-Foil Spectroscopy of Sodium Between 0.5 and 2 MeV, Phys. Rev. A 3, 1367.

1900. A. Eibofner, Determination of the Lifetime of the 3P-State of Ionized Helium from the Halfwidths of Radio Frequency Signals, Z. Phys. 249, 73. (Ger.)

1901. D. Einfeld, J. Ney, & J. Wilken, Starf Effect Investigation of the 6p $^2P_{3/2}$ State in Au I Spectrum in Order to Determine the Signs of the Hyperfine Structure Constants, Z. Naturforsch., Teil A 26, 668. (Ger.)

1902. G. Feinberg & J. Sucher, Calculation of the Decay Rate for 2 $^3S_1 \rightarrow 1\ ^1S_0$ + One Photon in Helium, Phys. Rev. Lett. 26, 681; 26, 1084.

1903. T. Feklistova, The Calculation of C III Lines of B-Stars for the Vacuum Ultraviolet Region, Izv. Akad. Nauk Est. SSR Fiz. Mat. 20, 289. (Russ.)

1904. S. Feneuille, Relativistic Treatment of Transition Probabilities in Atoms, Physica (Utrecht) 53, 143. (Fr.)

1905. F. F. Freeman, A. H. Gabriel, B. B. Jones, & C. Jordan, Helium-Like Ion Forbidden Line Emission and Solar Active Regions, Philos. Trans. R. Soc. London, Ser. A 270, 127.

1907. S. Garpman, G. Lidö, S. Rydberg, & S. Svanberg, Lifetimes of Some Highly Excited Levels in the Pb I Spectrum Measured by the Hanle Method, Z. Phys. 241, 217.

1908. S. Garpman, G. Lidö, S. Rydberg, & S. Svanberg, Optical Double Resonance and Zero Field Level Crossing Spectroscopy Applied to the $5p^3 6s\ ^5S_2$ Level in the Te I Spectrum, Z. Phys. 247, 238.

1909. R. H. Garstang, Magnetic Multipole Transition Probabilities, "Highlights of Astronomy," 555-560 (Ed., C. DeJager, D. Reidel Publ. Co., Dordrecht, Holland).

1910. R. H. Garstang, Relativistic Radiative Transitions, "Topics in Modern Physics--A Tribute to Edward U. Condon," 153-167 (Eds., W. E. Brittin & H. Odabasi, Colorado Associated Univ. Press, Boulder, Colorado).

1911. R. H. Garstang & H. Odabasi, Intermediate Coupling Line Strengths for the 4s-4p and 4p-3d Transitions in Ar II, "Topics in Modern Physics--A Tribute to Edward U. Condon," 261-286 (Eds., W. E. Brittin & H. Odabasi, Colorado Associated Univ. Press, Boulder, Colorado).

1912. R. J. Giannaris & F. P. Incropera, Nonequilibrium Effects in an Atmospheric Argon Arc Plasma, J. Quant. Spectrosc. Radiat. Transfer 11, 291.

1913. L. H. Göbel, Concerning the Fine and Hyperfine Structure of Lu I, Z. Naturforsch., Teil A 26, 1559. (Ger.)

1914. V. M. Gol'dfarb, E. V. Il'ina, & V. A. Kuznetsova, Level Populations and Transition Probabilities in the Ar^+ Ion Spectrum, Uch. Zap. Leningr. Gos. Pedagog. Inst. im. A. I. Gertsena 466, 57. (Russ.)

1915. J. P. Grandin, Hanle Effect of 2p Levels in Argon I, "Third Conference on Atomic Spectroscopy," No. 43 (University of Reading, Reading, England).

1916. J.-P. Grandin, D. Lecler, & J. Margerie, Hanle Effect of the $2p_4$, $2p_6$, $2p_7$, and $2p_9$ Argon Levels, C. R. Acad. Sci., Ser. B 272, 929. (Fr.)

1917. N. Grevesse, H. Nussbaumer, & J. P. Swings, [Fe I] Lines: Their Transition Probabilities and Occurrence in Sunspots, Mon. Not. R. Astron. Soc. 151, 239.

1919. P. F. Gruzdev, Isoelectronic Series of Fluorine F I....Cu XXI. The $2p^5$ - $2p^4 3s$ Transition. Energy Levels, Wavelengths, and Oscillator Strengths, Opt. Spectrosc. (USSR) 30, 319.

1920. P. F. Gruzdev, Resonance Line Oscillator Strengths of the VI-th Group Elements Atom and Ion Spectra, "Theory of Electronic Shells of Atoms and Molecules," 112-114 (Publishing House "Mintis," Vilnius Lithuanian SSR). (Russ.)

1921. P. F. Gruzdev, The $2p^4$ - $2p^3 3s$ Transition in the Spectra of the Ions Co XX, Ni XXI, and Cu XXII. Energy Levels, Wavelengths, and Oscillator Strengths, J. Appl. Spectrosc. (USSR) 14, 809.

1922. R. Hefferlin, H. Kuhlman, J. Penz, & D. Wheeler, Approximate Relative Log gf for Green Lines of Cu^+, Bull. Am. Phys. Soc. 16, 106.

1923. K. Heilig & B. Schimborski, Hanle Effect Measurements in the 3s3d ^3D Multiplet in Mg I, "Third Conference on Atomic Spectroscopy," No. 48 (University of Reading, Reading, England).

1924. A. Hese & J. Weise, Hyperfine Structure, Lifetimes, and Absolute Oscillator Strengths of Pd I, "Third Conference on Atomic Spectroscopy," No. 87 (University of Reading, Reading, England).

1925. D. van Houwelingen & A. A. Kruithof, Transition Probabilities of Some Ar I and Ar II Spectral Lines, J. Quant. Spectrosc. Radiat. Transfer 11, 1235.

1926. M. C. E. Huber, Interferometric Gas Diagnostics by the Hook Method, "Modern Optical Methods in Gas Dynamic Research," 85-112 (Ed., D. S. Dosanjh, Plenum Press, New York).

1927. R. B. Hutchison, Radiative Lifetimes of UV Multiplets in Atomic Carbon, Nitrogen, and Oxygen, J. Quant. Spectrosc. Radiat. Transfer 11, 81.

1928. H. A. Hyman, Electron Correlation Resulting in Strong Ion Laser Lines, Chem. Phys. Lett. 10, 242.

1929. R. E. Imhof & F. H. Read, A New Electron-Photon Coincidence Method for the Measurement of Lifetimes in Atoms and Molecules, J. Phys. B 4, 450.

1931. K. Ishii, Transition Probabilities for the f-d Transitions of the Singly Ionized Neon and Argon, Sci. Light (Tokyo) 20, 66.

1933. V. Jacobs, Two-Photon Decay Rate of the $2\ ^1S_0$ Metastable State of Helium, Phys. Rev. A 4, 939.

1934. J. P. de Jongh & J. van Eck, Oscillator Strengths of the Resonance Lines of Some Rare Gases, Physica (Utrecht) 51, 104.

1935. R. G. Karimov & V. M. Klimkin, Xe I and Xe II Radiative Lifetimes and Transition Probabilities, Sov. Phys. J. 14, 308.

1936. S. Kazantsev & M. Chaika, Estimate of the Lifetime of the $^3P_1$ Neon Resonance Level Using Interference Phenomena, Opt. Spectrosc. (USSR) 31, 273.

1937. H. P. Kelly, Many-Body Calculations of Energies and Transition Probabilities, "The Menzel Symposium on Solar Physics, Atomic Spectra, and Gaseous Nebulae," 37-46, Nat. Bur. Stand. (U.S.), Spec. Publ. 353.

1938. J. A. Kernahan, A. Denis, & R. Drouin, Beam-Foil Studies of Neon Below 1000 Å, Phys. Scr. 4, 49.

1939. K. G. Kessler, Progress in the Measurement of Atomic Transition Probabilities and Solar Abundances, Comments At. Mol. Phys. 2, 151.

1940. V. N. Kharitonova & U. I. Safronova, Calculation of Transition Probabilities and Oscillator Strengths by Perturbation Theory, "Theory of Electronic Shells of Atoms and Molecules," 85-89 (Publishing House "Mintis," Vilnius, Lithuanian SSR). (Russ.)

1941. S. V. Khristenko & S. I. Vetchinkin, Asymptotic Expansions in 1/Z in Perturbation Theory for Probabilities of Resonance Transitions in Atoms, Opt. Spectrosc. (USSR) 31, 269.

1942. T. T. Kikuchi, Description and Analysis of a Vacuum Ultraviolet Atomic Line Source, Appl. Opt. 10, 1288.

1943. N. N. Kirsanova, The Absolute Transition Probabilities for the Molybdenum Lines, J. Appl. Spectrosc. (USSR) 15, 1242.

1944. J. Z. Klose, Mean Lives and Absolute f-Values in Neutral Iron, Astrophys. J. 165, 637.

1945. A. N. Klyucharev & A. V. Lazarenko, Measurement of Relative Oscillator Strengths for Transitions in the Diffuse Series of Cesium, Opt. Spectrosc. (USSR) 30, 628.

1946. E. J. Knystautas, L. Barrette, B. Neveu, & R. Drouin, Transition Probabilities and Relative Intensities for the $2s\ ^2S_{1/2}$ - $2p\ ^2P_{3/2,1/2}$ Doublet in C IV, O VI, and Ne VIII, J. Quant. Spectrosc. Radiat. Transfer 11, 75.

1947. E. Koenig, Theoretical Study of Second Order Transition Probabilities for $2p^5 3p \rightarrow 2p^5 3s$ of Ne I Spectrum, Phys. Lett. A 34, 284. (Fr.)

1948. J. L. Kohl, L. J. Curtis, R. M. Schectman, & D. A. Chojnacki, Method of Incorporating Cascade Decay Curves into Atomic Transition Probability Measurements, J. Opt. Soc. Am. 61, 1656.

1949. E. Kotlikov, G. Todorov, & M. Chaika, Lifetime and Cross Sections of Depolarizing Collisions for the $3p_4$ Level of Neon, Opt. Spectrosc. (USSR) 30, 99.

1950. H.-J. Kunze & R. U. Datla, On the Oscillator Strengths of the $3s\ ^2S$ - $4p\ ^2P$ and $3d\ ^2D$ - $4p\ ^2P$ Transitions in Sodium-Like Ions, Astrophys. J. 169, 425.

1951. L. Kuzmickyte & K. Uspalis, Theoretical Investigation of the Electron Transitions in the Singly Ionized Atoms of the Iron Group, "Theory of Electronic Shells of Atoms and Molecules," 144-147 (Publishing House "Mintis," Vilnius, Lithuanian SSR). (Russ.)

1952. C. Laughlin & A. Dalgarno, The ^1D - $^1P^o$ Transition Probability in the Beryllium Isoelectronic Sequence, Phys. Lett. A 35, 61.

1953. M. A. Levchenko, Determination of the Transition Probabilities for the Ionic Lines of Xe and Kr by the Method of Radiation, Sov. Phys. J. 14, 1445.

1954. R. Lincke & B. Ziegenbein, Measurement of Oscillator Strengths in the Singlet System of Neutral Magnesium, Z. Phys. 241, 369. (Ger.)

1955. C. H. Liu, S. Bashkin, W. S. Bickel, & T. Hadeishi, Alignment of Atoms and Ions with the Beam-Foil Light Source, Phys. Rev. Lett. 26, 222.

1956. M. Loulergue, Transition Probabilities in Intermediate Coupling and Configuration Mixing for Fe XVII, Astron. Astrophys. 15, 216.

1957. B. F. J. Luyken, Transition Probabilities and Radiative Lifetimes for Ne II, Physica (Utrecht) 51, 445.

1958. B. V. L'vov, D. A. Katskov, & L. P. Kruglikova, Atomic Absorption Determination of Average Temperature of Inhomogeneous Absorbing Layers, J. Appl. Spectrosc. (USSR) 14, 569.

1960. M. Martinez-Garcia, W. Whaling, D. L. Mickey, & G. M. Lawrence, Branching Ratios and Transition Probabilities in Fe I, Astrophys. J. 165, 213.

1961. I. Martinson, Oscillator Strengths in the Mg, Al, Si, and P Sequences, "Proceedings of the Second European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, France).

1962. I. Martinson, H. G. Berry, W. S. Bickel, & H. Oona, Mean Lives of Excited Levels in O I-O VI, J. Opt. Soc. Am. 61, 519.

1963. W. B. McCrocklin, Jr. & C. E. Head, Radiative Lifetimes of N II Using N_2^+ and N^+ Beams Incident on a Helium Gaseous Target, J. Opt. Soc. Am. 61, 619.

1964. R. P. McEachran & M. Cohen, Theoretical Oscillator Strengths for the Boron Isoelectronic Sequence, J. Quant. Spectrosc. Radiat. Transfer 11, 1819.

1965. R. A. Mickish & R. G. Fowler, Hydrogen Balmer Lifetimes, Bull. Am. Phys. Soc. 16, 205.

1966. M. H. Miller, R. A. Roig, & R. D. Bengtson, Absolute Transition Probabilities of Phosphorus, Phys. Rev. A 4, 1709.

1967. L. Mølhave & G. Sørensen, Beam-Foil Studies of Excited States in Phosphorus and Silver, "Proceedings of the Second European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, France).

1968. I. M. Nagibina & I. A. Polushkina, Apparatus for Measuring Oscillator Strengths with Increased Sensitivity by the "Hook" Method, Izv. Fiz. Inst. ANEB, Bulg. Akad. Nauk 21, 201. (Russ.)

1969. E. Naslenas, V. Kaminskas, & A. Jucys, Application of the Extended Calculation Method for the Theoretical Determination of the Oscillator Strengths for Dipole Transitions $1s^2 2s 2p^{N+1} - 1s^2 2s^2 2p^N$, Liet. Fiz. Rinkinys 11, 203. (Russ.)

1970. C. Nicolaides, O. Sinanoglu, & P. Westhaus, Theory of Atomic Structure Including Electron Correlation. IV. Method for Forbidden Transition Probabilities with Results for [O I], [O II], [O III], [N I], [N II], and [C I], Phys. Rev. A 4, 1400.

1971. D. W. Norcross, Low Energy Elastic Scattering of Electrons by Li and Na, J. Phys. B 4, 1458.

1972. M. Norton & A. Gallagher, Measurements of Lowest S-State Lifetimes of Gallium, Indium, and Thallium, Phys. Rev. A 3, 915.

1974. H. Nussbaumer, N III and C III Emission in Of Stars, Astrophys. J. 170, 93.

1975. A. L. Osherovich, G. P. Anisimova, M. L. Burshtein, Ya. F. Verolainen, J. Szigeti, & E. A. Ledovskaya, Lifetime of Zinc Levels, Opt. Spectrosc. (USSR) 30, 429.

1976. W. R. Ott, Measurement of Transition Probabilities for O I in the Vacuum Ultraviolet, Phys. Rev. A 4, 245.

1978. N. P. Penkin & T. P. Redko, Determintion of Cross Sections for Transitions Between the $4\ ^3P_{0,1,2}$ States of Zn I in the Case of Collisions with Atoms and Electrons, Opt. Spectrosc. (USSR) 30, 1.

1980. E. H. Pinnington, B. Curnutte, & M. Dufay, Argon Spectrum between 500 and 1000 Å Produced by Beam-Foil Excitation, J. Opt. Soc. Am. 61, 978.

1982. P. Platz, Experimental Study of the Shift of Levels and the Raman Effect of an Atom Subjected to Non-Resonant Radiation of a High Powered Laser, J. Phys. (Paris) 32, 773. (Fr.)

1983. M.-C. Poulizac & J. P. Buchet, Beam-Foil Spectroscopy of Carbon in the Vacuum Ultraviolet, Phys. Scr. 4, 191.

1984. M.-C. Poulizac & J. P. Buchet, Beam-Foil Spectroscopy of Potassium at 0.5 MeV, "Proceedings of the Second European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, France).

1985. M.-C. Poulizac, M. Druetta, & P. Ceyzeriat, Spectra and Mean Lives of Excited Terms in C I, C II, C III, C IV, and C V, J. Quant. Spectrosc. Radiat. Transfer 11, 1087.

1986. M. H. Prior & H. A. Shugart, Radiative Lifetime of Metastable Li II $2\ ^1S_0$, Phys. Rev. Lett. 27, 902.

1987. B. Sayer, R. Wang, J. C. Jeannet, & M. Sassi, Absorption Measurements of Quadrupole Transition Probabilities 6S-nD in Cesium Vapor, J. Phys. B 4, L20.

1988. A. R. Schaefer, Measured Lifetimes of Excited States of Magnesium, Astrophys. J. 163, 411.

1989. A. R. Schaefer, Measured Lifetimes of Excited States in Cd, J. Quant. Spectrosc. Radiat. Transfer 11, 197.

1990. A. R. Schaefer, Measured Lifetimes of Excited States in Ba, J. Quant. Spectrosc. Radiat. Transfer 11, 499.

1971

1991. J. Schäfer, Calculations of Almost-Orthogonal Wave Functions for Two-Electron Atomic States. II. The Three Lowest ^1P States of He; Oscillator Strengths for the ^1S - ^1P Transitions, Max-Planck-Institut für Physik und Astrophysik, München, MPI-PAE/Astro 48). (Ger.)

1992. J. Schäfer, Calculations of Almost-Orthogonal Wave Functions for Two-Electron Atomic States. III. The Three Lowest ^3S and ^3P States of He; Oscillator Strengths for the Transitions ^3S - ^3P, Max-Planck-Institut für Physik und Astrophysik, München, MPI-PAE/Astro 49). (Ger.)

1993. B. Schiff, C. L. Pekeris, & Y. Accad, f-Values for Transitions Between the Low-Lying S and P States of the Helium Isoelectronic Sequence up to Z = 10, Phys. Rev. A 4, 885.

1994. R. W. Schmieder & R. Marrus, Lifetime of the 2 $^2S_{1/2}$ State of Hydrogen-like Sulfur, Bull. Am. Phys. Soc. 16, 848.

1996. D. Schürmann, W. Schlagheck, P. H. Heckmann, H. H. Bukow, & H. v. Buttlar, Lifetimes and Relative Initial State Populations of Some Hydrogen Atomic States Using Beam-Foil Spectroscopy, Z. Phys. 246, 239. (Ger.)

1997. E. Schulz-Gulde, Transition Probabilities for Sulfur Lines from Wall-Stabilized Arc Measurements, Z. Phys. 245, 308.

1998. M. W. J. Scourfield, N. R. Parsons, L. P. Dennis, & W. F. Innes, Effective Lifetime of O (^1S) in Pulsating Aurora, J. Geophys. Res. 76, 3692.

1999. I. A. Sellin, D. J. Pegg, M. Brown, W. W. Smith, & B. Donnally, Spectra of Autoionization Electrons Emitted by Fast, Metastable Beams of Highly Stripped Oxygen and Fluorine Ions, Phys. Rev. Lett. 27, 1108.

2000. L. J. Shamey, Energy Levels and Transition Probabilities for Highly Ionized Atoms in the B I Isoelectronic Sequence, J. Opt. Soc. Am. 61, 942.

2002. O. Sinanoglu, f-Values for the ^3P - ^3D Transitions of C I, N II, and O III and Comparison with Experiment. An Application of New Theory of Atomic Structure with Electron Correlation, "Topics in Modern Physics--A Tribute to Edward U. Condon," 287-295 (Eds., W. E. Brittin & H. Odabasi, Colorado Associated Univ. Press, Boulder, Colorado).

2004. M. W. Smith & W. L. Wiese, Graphical Presentations of Systematic Trends of Atomic Oscillator Strengths Along Isoelectronic Sequences and New Oscillator Strengths Derived by Interpolation, Astrophys. J., Suppl. Ser. No. 196, 23, 103.

2005. W. H. Smith, J. Bromander, L. J. Curtis, H. G. Berry, & R. Buchta, Lifetime Measurements and Absolute Oscillator Strengths for Some Vacuum Ultraviolet Transitions in O I and O II, Astrophys. J. 165, 217.

2006. W. H. Smith & H. S. Liszt, Absolute Oscillator Strengths for Some Resonance Multiplets of Ca I, II, Mg I, II, B I, and Al I, J. Opt. Soc. Am. 61, 938.

2007. M. Spitzer-Aronson & P. Soleillet, Polarization as a Function of the Magnetic Field of Light Emitted by Optical Resonance Radiation of the 2139 Å Line of Zinc, C. R. Acad. Sci., Ser. B 272, 520. (Fr.)

2008. A. F. Starace, Length and Velocity Formulas in Approximate Oscillator Strength Calculations, Phys. Rev. A 3, 1242; 8, 1141 (1973).

2009. D. H. Stedman & D. W. Setser, Chemical Applications of Metastable Rare Gas Atoms, "Progress in Reaction Kinetics," Vol. 6, Part 4, 193-238 (Eds., K. R. Jennings & R. B. Cundall, Pergamon Press, New York).

2010. R. M. Sternheimer & R. F. Peierls, Quadrupole Antishielding Factors and the Nuclear Quadrupole Moments of Several Alkali Isotopes, Phys. Rev. A 3, 837.

2011. A. D. Stokes, Transition Probabilities in the Neutral Argon Spectrum, J. Phys. D 4, 930.

2012. D. Stuck & B. Wende, Measurement of Transition Probabilities of C I Multiplets Between 170 nm and 250 nm by Means of Arc Plasma Radiation and Synchrotron Calibrated Secondary Standard Lamps, "Third International Conference on Vacuum Ultraviolet Radiation Physics," 2pC2-3 (Ed., T. Nakai, Tokyo, Japan).

2013. S. Svanberg, Natural Lifetimes and Hyperfine Structure for K^{39} in the 5p $^2P_{3/2}$ and 6p $^2P_{3/2}$ Levels of the K I Spectrum by Resonance Scattering of Light, Phys. Scr. 4, 275.

2014. I. M. Taksar, P. E. Kunin, B. P. Zapol', & V. A. Kruglevskii, Relativistic Calculation of Frequencies and Oscillator Strengths in Spectra of Monovalent Atoms by the Effective Potential Method, "Theory of Electronic Shells of Atoms and Molecules," 100-102 (Publishing House "Mintis," Vilnius, Lithuanian SSR). (Russ.)

2015. J. L. Tech, A High-Dispersion Spectral Analysis of the Ba II Star HD 204075 (ζ Capricorni), Nat. Bur. Stand. (U.S.), Monogr. 119 (U.S. Government Printing Office, Washington, D.C.).

2016. C. E. Tull, R. P. McEachran, & M. Cohen, Relativistic Corrections to Ionization Energies and Theoretical Dipole Oscillator Strengths for Fe XVI, Co XVII, and Ni XVIII, At. Data 3, 169.

2017. R. S. Van Dyck, Jr., C. E. Johnson, & H. A. Shugart, Radiative Lifetime of the $2\ ^1S_0$ Metastable State of Helium, Phys. Rev. A 4, 1327.

2018. W. J. Wagner & L. L. House, Empirically Corrected Calculations of Coronal Visible Lines from the $3p^5 3d$ Configuration, Astrophys. J. 166, 683.

2019. R. K. Wangsness, Cascade Effects in Certain Atomic Lifetime Measurements, Phys. Rev. A 3, 1275.

2020. F. Weinhold, Calculation of Upper and Lower Bounds to Oscillator Strengths, J. Chem. Phys. 54, 1874.

2021. J. C. Weisheit & A. Dalgarno, Model Potential Calculations of Sodium and Potassium Oscillator Strengths, Chem. Phys. Lett. 9, 517.

2022. G. Wendin, Collective Effects in Atomic Photoabsorption Spectra I, J. Phys. B 4, 1080.

2023. K. G. Widing, G. D. Sandlin, & R. D. Cowan, On the Classification of Some Highly Ionized Iron and Nickel Lines in the 200-400 Å Region of the Solar Spectrum, Astrophys. J. 169, 405.

2024. F. Witt, A. Hese, & N. Augusta, Lifetimes and gf-Values in the Titanium I Spectrum, "Third Conference on Atomic Spectroscopy," No. 88 (University of Reading, Reading, England).

2025. S. J. Wolnik, R. O. Berthel, & G. W. Wares, Measurements of Oscillator Strengths for Fe I and Fe II, Astrophys. J. 166, L31.

2026. B. P. Zapol', P. E. Kunin, A. V. Lyubimov, I. M. Taksar, & I. I. Fabrikant, Effective Potential Method for Computation of Quantum Systems. I. Calculation of Wave Functions and Oscillator Strengths of Optical Electron Transitions in Alkaline Metal Atoms and Isoelectronic Ions, Izv. Akad. Nauk Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, 14. (Russ.)

2027. V. A. Zilitis, Semi-Empirical Calculation of Oscillator Strengths for the Cadmium Atom, Opt. Spectrosc. (USSR) 31, 86.

2048. E. W. Abrahamson, L. J. Andrews, D. Husain, & J. R. Wiesenfeld, Electronically Excited Iodine Atoms, I($5\ ^2P_{1/2}$), J. Chem. Soc., Faraday Trans. 2, Part 1, 68, 48.

2049. K. Acinger, G. Pichler, V. Vujnovic, & D. Vukicevic, Measurement of Line Oscillator Strengths of Spectral Lines Which Are Not Optically Thin, "Sixth Yugoslav Symposium on the Physics of Ionized Gases," 209-212 (Institute of Physics, Belgrade, Yugoslavia).

2050. T. Andersen, O. H. Madsen, & G. Sørensen, Beam-Foil Spectroscopy at Low Initial Ion Energies, Phys. Scr. 6, 125.

2051. T. Andersen, O. H. Madsen, & G. Sørensen, Radiative Lifetimes in Sn I and Bi I, J. Opt. Soc. Am. 62, 1118.

2052. T. Andersen, L. Mølhave, & G. Sørensen, Lifetimes of Excited States in Mg I, Cd I, and Mg II, Astrophys. J. 178, 577.

2053. T. Andersen, A. K. Nielsen, & G. Sørensen, A Systematic Study of Atomic Lifetimes of Levels Belonging to the Ag I, Cd I, Au I, and Hg I Isoelectronic Sequences, Phys. Scr. 6, 122.

2054. T. Andersen & G. Sørensen, Systematic Study of Atomic Lifetimes in Gallium, Indium, and Thallium Measured by the Beam-Foil Technique, Phys. Rev. A 5, 2447.

2055. E. M. Anderson & E. K. Anderson, Semi-Empirical Calculation of Oscillator Strengths for Zinc (Zn II), Cadmium (Cd II), and Mercury (Hg II) Ions, Uch. Zap. Latv. Gos. Univ. 171, 3. (Russ.)

2056. E. M. Anderson & E. K. Anderson, Calculations of Oscillator Strengths of Copper (Cu I), Silver (Ag I), Gold (Au I), Aluminum (Al I), and Gallium (Ga I), Uch. Zap. Latv. Gos. Univ. 171, 12. (Russ.)

2057. G. E. Assousa & W. H. Smith, Radiative Lifetimes for Some Resonance Transitions of Fe I and Fe II in the Region Between 2300 Å and 3050 Å and the Application to Iron Abundance Determinations in the Sun and in the QSO PHL 938, Astrophys. J. 176, 259.

2058. M. Aymar, Theoretical Study of Transition Probabilities and Near Configuration Interaction in Rare Gas Spectra, Physica (Utrecht) 57, 178. (Fr.)

2060. G. Beauchemin, J. A. Kernahan, E. Knystautas, D. J. G. Irwin, & R. Drouin, Experimental Oscillator Strengths in Ne VII, Phys. Lett. A 40, 194.

2061. D. R. Beck & O. Sinanoglu, Resonance Transition Probabilities for Third-Row Atoms and Ions (Mg I, Si II-III, P II, P IV, S II-III, Cl III) Including the Important Correlation Effects, Phys. Rev. Lett. 28, 945.

2062. H. G. Berry, L. J. Curtis, & J. L. Subtil, Cascade-Induced Alignment Changes of Intensity Decay Curves, J. Opt. Soc. Am. 62, 771.

2063. H. G. Berry, J. Desesquelles, & M. Dufay, Energies and Lifetimes of Doubly Excited States in He I, Phys. Rev. A 6, 600.

2064. H. G. Berry, E. H. Pinnington, & J. L. Subtil, Energies and Mean Lives of Doubly Excited Terms in Lithium, J. Opt. Soc. Am. 62, 767.

2065. J. H. Black, J. C. Weisheit, & E. Laviana, Oscillator Strengths and Ground-State Photoionization Cross Sections for Mg^+ and Ca^+, Astrophys. J. 177, 567.

2066. D. E. Blackwell & B. S. Collins, Precision Measurement of Relative Oscillator Strengths. I. Fundamental Techniques: A First Application to Mn I, Mon. Not. R. Astron. Soc. 157, 255.

2068. P. Bogdanovicius, J. Boruta, J. Vizbaraite, R. Karazija, Z. Rudzikas, A. Savukynas, & A. Jucys, Theoretical Investigation of Two-Electron Transitions in the Cadmium Ion, Liet. Fiz. Rinkinys 12, 931. (Russ.)

2069. R. A. Bonham, Determination of Optical Oscillator Strengths by Electron Impact Spectroscopy, J. Chem. Phys. 56, 762.

2070. R. T. Brown & J.-L. M. Cortez, Oscillator Strengths for Allowed nd-n'f Transitions in the Helium Isoelectronic Sequence, Astrophys. J. 176, 267.

2071. J. P. Buchet, M. Dufay, & M.-C. Poulizac, Lifetime Measurements of Oxygen States in the Far Ultraviolet, Phys. Lett. A 40, 127.

2072. J. P. Buchet, M.-C. Poulizac, & M. Carre, Beam-Foil Study of Nitrogen in the Vacuum Ultraviolet, J. Opt. Soc. Am. 62, 623.

2073. K. Buchhaupt, Level Crossing Experiments on Some He States Excited by Ion Impact, Z. Naturforsch., Teil A 27, 572. (Ger.)

2075. P. G. Burke, A. Hibbert, & W. D. Robb, Wave Functions and Oscillator Strengths for the Beryllium Isoelectronic Sequence, J. Phys. B 5, 37.

2076. D. M. Camm & F. L. Curzon, The Resonant Faraday Effect, Can. J. Phys. 50, 2866.

2077. C. G. Carrington, Cascade Effects in Neon Lifetime Measurements, J. Phys. B 5, 1572.

2078. T. C. Caves & A. Dalgarno, Model Potential Calculations of Lithium Transitions, J. Quant. Spectrosc. Radiat. Transfer 12, 1539.

2079. C. W. T. Chien, R. E. Bardsley, & F. W. Dalby, Zero-Field Level Crossing in the Helium Atom, Can. J. Phys. 50, 116.

2080. K. T. Chung & I.-H. Chen, ^1P Autoionization States of He in the Elastic Scattering Region, Phys. Rev. Lett. 28, 783.

2081. J. H. Clark & C. E. Head, Radiative Lifetimes of Some 3p and 3p' Levels of O II, Phys. Rev. A 6, 1722.

2082. J. E. Clendenin, C. A. Kocher, & R. Novick, Lifetime of the 2S State of Singly Ionized Helium, "Third International Conference on Atomic Physics--Abstracts of Papers," 39-40.

2083. M. Cohen & R. P. McEachran, Systematic Trends in Atomic Oscillator Strengths: The Helium Isoelectronic Sequence, Can. J. Phys. 50, 1363.

2084. M. Cohen & R. P. McEachran, Length and Velocity Formulae in Approximate Oscillator Strength Calculations, Chem. Phys. Lett. 14, 201.

2085. M. Cohen, R. P. McEachran, & D. Rosenthal, Length and Velocity Matrix Elements in Quadrupole Transition Calculations, J. Phys. B 5, 184.

2086. A. Corney & O. M. Williams, Measurement of the Radiative Lifetime of the $^1S_0$ Metastable Level of Atomic Oxygen, J. Phys. B 5, 686.

2087. G. Cremer & B. Laniepce, Hanle Effect Study of the 4s4p $^3P_1$ and 4s5s $^3S_1$ Levels of the Zinc Atom, C. R. Acad. Sci., Ser. B 275, 187. (Fr.)

2088. R. U. Datla, H.-J. Kunze, & D. Petrini, Collisional Rate Coefficients for Sodium-Like Ar VIII Ions, Phys. Rev. A 6, 38.

2090. A. Delgado, J. Campos, & C. Sanchez del Rio, Lifetimes of Excited Levels of Kr I and Kr II, Z. Phys. 257, 9.

2091. M. Delibas & O. Toma, Oscillator Strength Determination for Some Spectral Lines of Cr, Mo, Sn, Bi, and Pd Atoms, An. Stiint. Univ. "Al. I. Cuza" Iasi, Sect. 1b 18, 63.

2092. K. R. Devine & A. L. Stewart, Perturbation Corrections to Hartree-Fock Oscillator Strengths for Helium, J. Phys. B 5, 2182.

2093. G. A. Doschek, J. F. Meekins, & R. D. Cowan, Further Iron-Line Observations During Solar Flares, Astrophys. J. 177, 261.

2094. G. W. F. Drake, Radiative Transition Rates from the 2p3p ^{3}P and 2p3d ^{1,3}D States of the Helium Isoelectronic Sequence, Phys. Rev. A 5, 614.

2095. G. W. F. Drake, Relativistic Corrections to Radiative Transition Probabilities, Phys. Rev. A 5, 1979.

2096. M. Druetta, R. U. Datla, & H.-J. Kunze, Some Transitions of Ne VIII and Ar VIII Between Levels of Principal Quantum Numbers 3, 4, and 5, Astrophys. J. 174, 215.

2097. P. D. Dumont, Beam-Foil Lifetime Measurements of Nitrogen in the Vacuum Ultraviolet Spectral Range, Physica (Utrecht) 62, 104.

2098. T. A. Erdmann, H. Figger, & H. Walther, Lifetime Measurements with a Tunable Flashlamp Pumped Dye Laser, Opt. Commun. 6, 166.

2099. B. C. Fawcett, R. D. Cowan, E. Y. Kononov, & R. W. Hayes, The Classification of Transitions Between Levels of Principal Quantum Numbers 3 and 4 in Fe IX to XVI and Mn VIII to XV, J. Phys. B 5, 1255.

2100. S. Feneuille & E. Koenig, Theoretical Determination of the Lifetimes of the 2 $^3S_1$ and 2 $^3P_2$ Levels of the Ar^{16+} Spectrum, C. R. Acad. Sci., Ser. B 274, 46. (Fr.)

2101. A. H. Gabriel, Dielectronic Satellite Spectra for Highly Charged Helium-Like Ion Lines, Mon. Not. R. Astron. Soc. 160, 99.

2102. R. H. Garstang, Transition Probabilities for Some Forbidden Lines, Opt. Pura Apl. 5, 192.

2103. H. M. Gibbs, Polarization of Pb Vapor. III. Collisional Quenching and Depolarization of Alignment of Pb Metastable and Excited States, Phys. Rev. A 5, 2408.

2104. A. Goly, Determination of Transition Probabilities for Selected C I Lines (Multiplets), Zesz. Nauk. Wyzsz. Szk. Pedagog. Opolu: Fiz. Probl. Spektrosk. No. 13, 87. (Pol.)

2106. P. F. Gruzdev & A. V. Loginov, Isoelectronic Series of Fluorine F I....Cu XXI. $2p^5 \rightarrow 2s2p^6 + 2p^4 3s + 2p^4 3d$ Transition Wavelengths and Oscillator Strengths, Opt. Spectrosc. (USSR) 33, 332.

2107. P. F. Gruzdev & A. V. Loginov, Oscillator Strengths of Resonance Series $2p^6$ - $2p^5ns$ in the Spectra of the Ne I Atoms and Na II and Mg III Ions, Opt. Spectrosc. (USSR) 33, 558.

2108. J. Hackmann, H. Michael, J. Uhlenbusch, Investigation of a Xenon Plasma Produced in Cascaded Arcs, Z. Phys. 250, 207.

2109. S. Hameed, Core Polarization Corrections to Oscillator Strengths and Singlet-Triplet Splittings in Alkaline Earth Atoms, J. Phys. B 5, 746.

2110. A. Hese, Atomic g_J-Values and Lifetimes of the z ^3F States in the Titanium I Spectrum, Z. Naturforsch., Teil A 27, 188. (Ger.)

2111. L. Holmgren & S. Svanberg, Natural Radiative Lifetimes of the 5p6s $^1P_1$, 5p6s $^3P_{1,2}$, and 5p5d $^3D_{1,2,3}$ Levels of the Sn I Spectrum by Zero Field Level Crossing Spectroscopy, Phys. Scr. 5, 135.

2112. S. Hontzeas, I. Martinson, P. Erman, & R. Buchta, Beam-Foil Studies of Energy Levels and Radiative Lifetimes in Be I and Be II, Phys. Scr. 6, 55.

2113. J. C. Hsieh & J. C. Baird, Level Crossing Spectroscopy in 7 ^2S Thallium. I. Studies of Coherence Narrowing, Collision Broadening, and Buffer Gas Effects, Phys. Rev. A 6, 141.

2114. M. C. E. Huber & W. H. Parkinson, Fe I Oscillator Strengths Determined from Anomalous Dispersion of Shock-Heated Gases, Astrophys. J. 172, 229.

2115. M. C. E. Huber & E. F. Tubbs, Oscillator Strengths of Weak Fe I Resonance Lines Measured by Combined Hook and Absorption Techniques, Astrophys. J. 177, 847.

2116. X. Husson & J. Margerie, Hanle Effect of $2p_3$, $2p_6$, $2p_7$, $2p_8$, $2p_9$, and $3p_8$ Levels of Xe I, Opt. Commun. 5, 139.

2117. V. L. Jacobs, Magnetic Quadrupole Decay of the Low-Lying n $^3P_2$ States of Helium-Like Ions, J. Phys. B 5, 213.

2118. C. E. Johnson, Lifetime of the $2p^3 3s$ ^5S Metastable State of Oxygen, Phys. Rev. A 5, 2688.

2119. W. R. Johnson, Radiative Decay Rates of Metastable One-Electron Atoms, Phys. Rev. Lett. 29, 1123.

2120. S. A. Kaplan & E. B. Kleiman, On Photon-Plasmon Transition 2 $S_{1/2}$ - 1 $S_{1/2}$ in Hydrogen-Like Atoms, Izv. Vyssh. Uchebn. Zaved., Radiofiz. 15, 305. (Russ.)

2121. S. A. Kaplan, E. B. Kleiman, & I. M. Oiringel', The Two-Quantum Photon-Plasmon $2\,S_{1/2} - 1\,S_{1/2}$ Transition, Sov. Astron.--AJ 16, 241.

2122. L. Kay, An Upper Bound on Mean Lives from Decay Curve Analysis, Phys. Scr. 5, 138.

2123. G. S. Khandelwal & E. E. Fitchard, The Square of the Radial Integral for Calculating the Dipole Oscillator Strengths for Transitions in Hydrogen Atoms in their 3(s,p, or d) and 4(s,p,d, or f) States, Astrophys. J. 173, 737.

2124. Y.-K. Kim & P. S. Bagus, Oscillator Strengths for the Resonance Transitions in Alkaline Earth Atoms, J. Phys. B 5, L193.

2125. C. A. Kocher, J. E. Clendenin, & R. Novick, Lifetime of the $2\,^2S_{1/2}$ State of Singly Ionized Helium, Phys. Rev. Lett. 29, 615.

2126. F. A. Korolev, V. V. Lebedeva, A. E. Novik, & A. I. Odintsov, Experimental Determination of Radiation Lifetimes for Ar II and Kr II Resonance Levels, Opt. Spectrosc. (USSR) 33, 435.

2127. C. Laughlin & G. A. Victor, Model Potential Calculations for Two-Valence Electron Systems, "Third International Conference on Atomic Physics--Abstracts of Papers," 142-144.

2128. E. M. Leibowitz, Radiative Transition Probabilities and Recombination Coefficients of the Ion C IV, J. Quant. Spectrosc. Radiat. Transfer 12, 299.

2129. R. A. Lilly, Transition Probabilities and Collision-Induced Transitions in Excited Levels of Neon, J. Opt. Soc. Am. 62, 1023.

2130. C.-C. Lin, D. J. G. Irwin, J. A. Kernahan, A. E. Livingston, & E. H. Pinnington, Beam-Foil Studies of Oxygen Below 2000 Å, Can. J. Phys. 50, 2496.

2131. C. H. Liu & D. A. Church, Suppression of Cascade Effects in Beam-Foil Mean Life Measurements, Phys. Rev. Lett. 29, 1208.

2132. A. E. Livingston, D. J. G. Irwin, & E. H. Pinnington, Lifetime Measurements in Ar II-Ar VIII, J. Opt. Soc. Am. 62, 1303.

2133. B. F. J. Luyken, Transition Probabilities and Radiative Lifetimes for Ar II, Physica (Utrecht) 60, 432.

2134. B. F. J. Luyken, F. J. de Heer, R. Ch. Baas, & H. Tawara, Branching Ratios for Transitions in Ne II and Ar II, Physica (Utrecht) 62, 249.

2135. B. V. L'vov, Applications of Atomic Absorption Spectroscopy in Physical Investigations, J. Quant. Spectrosc. Radiat. Transfer 12, 651. (Russ.); Methodes Phys. Anal. 8, 3. (Fr.).

2136. Yu. I. Malakhov & V. G. Potyomkin, Lifetimes of Some Ar I and Ar II Levels, Opt. Spectrosc. (USSR) 32, 129.

2137. J. V. Mallow & J. Burns, Radiative Lifetimes for Ultraviolet Transitions in C, N, and O Ions by the Pulse Decay Method, J. Quant. Spectrosc. Radiat. Transfer 12, 1081.

2138. J. Marek, Lifetime Measurements of Optical Levels of Ni I, Astron. Astrophys. 17, 83. (Ger.)

2139. R. Marrus & R. W. Schmieder, Forbidden Decays of Hydrogen-Like and Helium-Like Argon, Phys. Rev. A 5, 1160.

2140. P. McCavert & M. R. H. Rudge, On the Identification of Some Lines Arising from Doubly Excited States of Helium, J. Phys. B 5, 832.

2141. M. H. Miller, R. A. Roig, & R. D. Bengtson, Relative Transition Probabilities for Krypton, J. Opt. Soc. Am. 62, 1027.

2143. G. W. Moe & M. N. McDermott, Level Crossing Measurements in the 5 $^2P_{3/2}$ State of ^{109}Ag, "Third International Conference on Atomic Physics--Abstracts of Papers," 176-178.

2144. R. K. Moitra & P. K. Mukherjee, Self-Consistent Calculation of Dynamic Multipole Polarizabilities and Excited State Wave Functions of Open Shell Ions: Li Sequence, Int. J. Quantum Chem. 6, 211.

2145. C. A. Nicolaides, Theoretical Lifetimes of the Metastable $^5S^0_2$ States in Atomic Carbon and Oxygen, Chem. Phys. Lett. 17, 436.

2146. C. Nicolaides & O. Sinanoglu, Atomic Transition Probabilities: New Experimental and Theoretical Results and Their Comparison, "New Directions in Atomic Physics," Vol. II: Experiment, Ch. 8, 139-157 (Eds., E. U. Condon & O. Sinanoglu, Yale University Press, New Haven, Connecticut).

2147. H. Nussbaumer, Spectral Lines in the Be I Isoelectronic Sequence, Astron. Astrophys. 16, 77.

2148. H. Nussbaumer, Improved Bound Wave Functions for Complex Atoms, J. Phys. B 5, 1837.

2149. H. Nussbaumer & J. P. Swings, Forbidden Emission Lines of Mn I and Fe II in the Spectra of Long-Period Variables Near Minimum Light, Astrophys. J. 172, 121.

1972

2150. K.-E. Nysten & K. Weckström, Mean Lives of Some Excited Levels in N II, Commentat. Phys.-Math., Soc. Sci. Fenn. 42, 59.

2151. D. J. Pegg, I. A. Sellin, P. M. Griffin, & W. W. Smith, Metastable Autoionizing States in Sodium-Like Chlorine, Phys. Rev. Lett. 28, 1615.

2152. J. Peresse, A. Pochat, & A. Le Nadan, Absolute Measurement of the Lifetime of the 4 ^1D Level of the Helium Atom by the Method of Electron-Photon Coincidence, C. R. Acad. Sci., Ser. B 274, 791. (Fr.)

2153. G. Pichler, Properties of the Oscillator Strengths of Cu I and Ag I Spectral Lines, Fizika (Zagreb) 4, 179.

2154. G. Pichler & V. Vujnovic, Determination of Critical Electron Density for the Establishment of LTE in Argon Plasmas, Phys. Lett. A 40, 397.

2155. A. Pochat, F. Gelebart, M. Doritch, & J. Peresse, Description of an Apparatus Designed for the Study of Excitation by Electron-Atom Collisions Using the Method of Electron-Photon Coincidence, Analusis 1, 368. (Fr.)

2156. M. H. Prior, Lifetime of the 2S State of He, Phys. Rev. Lett. 29, 611.

2157. S. Rydberg & S. Svanberg, Investigation of the np $^2P_{3/2}$ Level Sequence in the Cs I Spectrum by Level Crossing Spectroscopy, Phys. Scr. 5, 209.

2158. D. Schürmann, D. Haas, P. H. Heckmann, & H. v. Buttlar, Lifetimes of Excited States in Li II and Li III by the Beam-Foil Technique, Phys. Lett. A 42, 27.

2159. D. Schürmann, D. Haas, P. H. Heckmann, & H. v. Buttlar, Measurement of UV Radiation from Beam-Foil Excited Li-Ions, Phys. Lett. A 40, 323.

2160. E. Schulz-Gulde, Absolute Scale for Si I gf-Values from Wall-Stabilized Arc Measurements, Astron. Astrophys. 21, 313.

2161. I. A. Sellin, D. J. Pegg, P. M. Griffin, & W. W. Smith, Metastable Autoionizing States of Highly Excited Heavy Ions, Phys. Rev. Lett. 28, 1229.

2162. J. B. Shumaker & C. H. Popenoe, A Study of Equilibrium in Argon Arcs, J. Res. Nat. Bur. Stand., Sect. A 76, 71.

2163. Z. Sibincic, Multiconfiguration Self-Consistent-Field Calculations for Several States of Boron, Phys. Rev. A 5, 1150.

2164. B. van der Sijde, Configuration Temperatures in a Hollow Cathode Argon Arc and Transition Probabilities of the Argon II Spectrum, J. Quant. Spectrosc. Radiat. Transfer 12, 703.

2165. A. Skerbele & E. N. Lassettre, Absolute Generalized Oscillator Strengths for Three Transitions in the Mercury Spectrum, J. Chem. Phys. 56, 845.

2166. S. Svanberg, Natural Radiative Lifetimes of Some Excited Bi I Levels Belonging to the $6p^2 7s$ and the $6p^2 6d$ Configurations Measured by the Hanle Method, Phys. Scr. 5, 73.

2167. R. C. Sze, E. T. Antropov, & W. R. Bennett, Jr., Lorentz Width Measurements on the Argon Ion Laser Transitions, Appl. Opt. 11, 197.

2168. E. D. Tidwell, Transition Probabilities of Argon II, J. Quant. Spectrosc. Radiat. Transfer 12, 431.

2169. C. E. Tull, M. Jackson, R. P. McEachran, & M. Cohen, Electric Quadrupole Transitions in Na I, Mg II, and Al III, Can. J. Phys. 50, 1169.

2170. C. E. Tull, M. Jackson, R. P. McEachran, & M. Cohen, Electric Quadrupole Transitions in Fe XVI, Co XVII, and Ni XVIII, J. Quant. Spectrosc. Radiat. Transfer 12, 893.

2171. L. A. Vainshtein & U. I. Safronova, Wavelength of Some Lines in the X-Ray Region for He- and Li-Like Ions, Kratk. Soobshch. Fiz. No. 3, 40. (Russ.)

2172. R. S. Van Dyck, Jr., C. E. Johnson, H. A. Shugart, Lifetime Lower Limits for the $^3P_0$ and $^3P_2$ Metastable States of Neon, Argon, and Krypton, Phys. Rev. A 5, 991.

2173. R. Wallenstein, Level Crossing Experiments in the Tm I Spectrum, Z. Phys. 251, 57. (Ger.)

2174. B. Warner, Oscillator Strengths for Sc III, Observatory 92, 50.

2175. J. C. Weisheit, Photoabsorption by Ground State Alkali-Metal Atoms, Phys. Rev. A 5, 1621.

2176. A. W. Weiss, Calculations of the 2sns ^1S and 2p3p $^{3,1}P$ Levels of Be I, Phys. Rev. A 6, 1261.

2178. W. L. Wiese, Regularities in Atomic Oscillator Strengths, "Physics of Ionized Gases 1972," 627-649 (Ed., M. V. Kurepa, Institute of Physics, Beograd, Yugoslavia).

2179. W. L. Wiese & B. M. Glennon, Atomic Transition Probabilities, "American Institute of Physics Handbook," 3rd Edition, Ch. 7, 200-263 (McGraw-Hill Book Co., New York).

1972

2180. T. Wujec, Determination of Transition Probabilities for Selected Argon Lines, Zesz. Nauk. Wyzsz. Szk. Pedagog. Opolu: Fiz. Probl. Spektrosk. No. 13, 149. (Pol.)

2181. T. Wujec, Computing of Transition Probabilities for Selected Ar I Lines, Zesz. Nauk. Wyzsz. Szk. Pedagog. Opolu: Fiz. Probl. Spektrosk. No. 13, 189. (Pol.)

2182. I. Yamashita, Optical Absorption Measurement of Relative Transition Probabilities in Ar I, J. Phys. Soc. Jpn. 32, 1447.

2184. E. A. Yukov, Stark Broadening of Si II and Si III Lines, Sov. Astron.--AJ 15, 867.

2185. V. A. Zilitis, Semi-Empirical Values of Oscillator Strengths for Transitions Between Highly Excited Levels of a Cadmium Atom, Uch. Zap., Latv. Gos. Univ. 171, 74. (Russ.)

2186. V. S. Zuev, V. A. Katulin, V. Yu. Nosach, & O. Yu. Nosach, Investigation of the Luminescence Spectrum of Atomic Iodine ($^2P_{1/2}$ - $^2P_{3/2}$ Laser Transition), Sov. Phys.--JETP 35, 870.

2187. P. Zvirblis, E. Naslenas, & A. Jucys, Investigation of the Atomic Electron Configuration $1s^2 2s^2 2p^N 3d$ by the Extended Method of Calculation, Liet. Fiz. Rinkinys 12, 911. (Russ.)

1973

2208. R. Abjean & M. Leriche, Analysis of Fabry-Perot Interferograms in the Ultraviolet, "Fifth Conference on Atomic Spectroscopy," No. 81 (University of Lund, Lund, Sweden). (Fr.)

2209. A. Adler, W. Kahan, R. Novick, & T. Lucatorto, Measurement of the Lifetime and the Electron-Impact Excitation Cross Section and Polarization of the 2 ^3P Term of Singly Ionized Lithium, Phys. Rev. A 7, 967.

2210. T. Ahlenius & S. Larsson, Variational Calculation of the Lowest ^2P State of the Lithium Atom, Phys. Rev. A 8, 1.

2211. V. Ya. Aleksandrov, N. S. Gruzdeva, D. B. Gurevich, & I. V. Podmoshenskii, Diagnostics of a Non-Equilibrium Cd-He Arc Plasma, Opt. Spectrosc. (USSR) 34, 494.

2212. M. A. Ali, Multiplet Strengths of 4 ^2L - 4 $^2L'$ Transitions of Cu I Sequence and 4 ^1L - 4 $^1L'$ Transitions of Zn I Sequence, "Fifth Conference on Atomic Spectroscopy," No. 68 (University of Lund, Lund, Sweden).

2213. T. Andersen, Beam-Foil Spectroscopy with Low-Energy Accelerators, Nucl. Instrum. Methods 110, 35.

2214. T. Andersen, S. W. Jørgensen, & G. Sørensen, Lifetimes and Oscillator Strengths for Neutral and Ionized Arsenic and Antimony Measured by the Beam-Foil Technique, "Fifth Conference on Atomic Spectroscopy," No. 78 (University of Lund, Lund, Sweden).

2215. T. Andersen, O. H. Madsen, & G. Sørensen, Beam-Foil Studies of Excited Levels in K V, K IV, and Ca V, "Fifth Conference on Atomic Spectroscopy," No. 77 (University of Lund, Lund, Sweden).

2216. T. Andersen, A. K. Nielsen, & G. Sørensen, Oscillator Strength Systematics for Low-Lying Transitions in Multiply Charged Ions, Nucl. Instrum. Methods 110, 143.

2217. T. Andersen & G. Sørensen, Systematic Trends in Atomic Transition Probabilities in Neutral and Singly-Ionized Zinc, Cadmium, and Mercury, J. Quant. Spectrosc. Radiat. Transfer 13, 369.

2218. E. K. Anderson & E. M. Anderson, On the Use of Relativistic Wave Functions for the Theoretical Determination of Oscillator Strength Values, "Teor. At. At. Spektrov, Mater. Vses. Semin., 1973" 1, 23-27 (Red.-Izd. Otd. Latv. Gos. Univ., Riga, Latvian SSR). (Russ.)

2219. H. J. Andrä, A. Gaupp, K. Tillmann, & W. Wittmann, Doppler-Tuned Beam-Laser Spectroscopy, Nucl. Instrum. Methods 110, 453.

2220. H. J. Andrä, A. Gaupp, & W. Wittmann, New Method for Precision Lifetime Measurements by Laser Excitation of Fast-Moving Atoms, Phys. Rev. Lett. 31, 501.

2221. M. Aymar, Cancellation Effects in Computed Lifetimes of $3s3p^n$ Levels for Third-Row Atoms and Ions, Nucl. Instrum. Methods 110, 211.

2222. M. Aymar, Theoretical Determination of Transition Probabilities in the Spectra of S I and S II, Physica (Utrecht) 66, 364. (Fr.)

2223. M. Aymar & M. G. Schweighofer, Theoretical Determination of Lifetimes and Lande Factors in the Spectra of Ar I, K II, and Ca III, Physica (Utrecht) 67, 585. (Fr.)

2224. W. Bachmann & W. Janke, Hanle Effect and Degree of Alignment on High Velocity Atoms, Z. Naturforsch., Teil A 28, 1821. (Ger.)

2225. A. Baghdadi, J. B. Halpern, & E. B. Saloman, Lifetimes, Oscillator Strengths, and Coherence Narrowing of the $(6p8s)^3P_1^0$ and $(6p7s)^1P_1^0$ States of Pb^{208}, Phys. Rev. A 7, 403.

1973

2226. I. Bakosh, M. L. Nagaeva, V. G. Ovchinnikov, & D. Rubin, Frequency Dependence of the Multi-Photon Ionization of Helium Atoms Excited to 2S States, Kratk. Soobshch. Fiz. No. 9, 3. (Russ.)

2227. F. P. Banfield & M. C. E. Huber, Oscillator Strengths of Ultraviolet Fe I Lines from Hook-Method Measurements on a Furnace, Astrophys. J. 186, 335.

2228. F. P. Banfield, M. C. E. Huber, W. H. Parkinson, & E. F. Tubbs, Instrumentation for Combined Dispersion and Absorption Measurements in the VUV, Appl. Opt. 12, 1279.

2229. L. Barrette & R. Drouin, Spectroscopic Study of Fluorine, Can. J. Spectrosc. 18, 50. (Fr.)

2230. L. Barrette, E. J. Knystautas, & R. Drouin, Beam-Foil Studies of Neon Below 150 Å, Nucl. Instrum. Methods 110, 29.

2231. S. Bashkin, J. Bromander, J. A. Leavitt, & I. Martinson, Beam-Foil Studies of Radiative Transitions and Lifetimes in Cl IV-Cl X, Phys. Scr. 8, 285.

2232. G. N. Bates & P. L. Altick, The Photoionization Cross Section of Magnesium Near Threshold, J. Phys. B 6, 653.

2234. Z. V. Belova & A. I. Korotkov, New Measurement of the Average Lifetime of Metastable States of Atoms and Molecules, "Spektrosk., Tr. Sib. Soveshch., 6th 1968," 33-35 (Ed., N. A. Prilezhaeva, "Nauka," Moscow). (Russ.)

2235. F. Bely-Dubau, Numerical Calculations of Atomic Structure Constants. II. Radial Parts, Energy Levels, Transition Probabilities for Fe XIII, Astron. Astrophys. 25, 431.

2236. H. G. Berry, M. C. Buchet-Poulizac, & J. P. Buchet, Quartet System of C IV, J. Opt. Soc. Am. 63, 240.

2237. H. G. Berry, J. Desesquelles, & M. Dufay, Doubly-Excited States in Light Atoms, Nucl. Instrum. Methods 110, 43.

2238. C. P. Bhalla, Relativistic HFS Oscillator Strengths for Indium and Gallium, Nucl. Instrum. Methods 110, 227.

2239. E. Biemont, Oscillator Strengths for 2pnd - 2pn'f Transitions of C I and Identifications in the Infrared Solar Photospheric Spectrum ($1 \leq \lambda \leq 3\mu$), Sol. Phys. 32, 117.

2240. E. Biemont, Transition Probabilities in the $3d^{10}(^1S)nl$ Configuration of Cu I and Identifications in the Solar Spectrum, Bull. Soc. R. Sci. Liege 42, No. 5-6, 206. (Fr.)

2241. E. Biemont & N. Grevesse, Infrared Wavelengths and Transition Probabilities for Atoms, $3 \leq Z \leq 20$, At. Data Nucl. Data Tables 12, 217.

2243. N. Björna, Virtual Orbitals, Excitation Energies, and Oscillator Strengths, J. Phys. B 6, 1412.

2244. I. P. Bogdanova & V. D. Marusin, Determination of Effective Cross Sections of Metastable Atom Excitation, "Spektrosk., Tr. Sib. Soveshch., 6th, 1968," 28-30 (Ed., N. A. Prilezhaeva, "Nauka," Moscow). (Russ.)

2245. K. K. Boyarskii & E. N. Kotlikov, Effect of Cascade Transitions on the Crossing Signal from the $6\ ^3S_1$ Cadmium Level, Opt. Spectrosc. (USSR) 34, 592.

2246. J. H. Brand, C. L. Cocke, & B. Curnutte, Beam-Foil Lifetimes of Neutral Nickel, Nucl. Instrum. Methods 110, 127.

2247. J. Brecht, J. Kowalski, G. Lidö, I.-J. Ma, & G. zu Putlitz, Lifetimes and g_J Factors of 6s7p and 5d6p Levels of Ba I, Z. Phys. 264, 273.

2248. J. M. Bridges, Arc Measurements of Fe II Oscillator Strengths, "Contributed Papers--International Conference on the Phenomena in Ionized Gases," 11th, 418 (Ed., I. Stoll, Czech. Acad. Sci., Inst. Phys., Prague, Czech.).

2249. J. Bromander, Beam-Foil Spectra from Highly Ionized Emitters, Nucl. Instrum. Methods 110, 11.

2250. J. Bromander, O. Poulsen, J. L. Subtil, Lifetime Measurements in Be III and Doubly Excited Be II, Phys. Scr. 7, 283.

2251. J. P. Buchet & M. C. Buchet-Poulizac, Spectrum and Lifetimes of Sodium Between 150 Å and 400 Å, Phys. Lett. A 46, 273.

2252. J. P. Buchet & M. C. Buchet-Poulizac, Beam-Foil Study of Boron in the Far Ultraviolet, J. Opt. Soc. Am. 63, 243.

2253. J. P. Buchet, M. C. Buchet-Poulizac, H. G. Berry, & G. W. F. Drake, Classifications of Some Transitions in Doubly Excited Li I and Li II, Phys. Rev. A 7, 922.

2254. J. P. Buchet, M. C. Buchet-Poulizac, G. Do Cao, & J. Desesquelles, Spectroscopy and Lifetime Measurements in the Extreme Ultraviolet at an Energy of 1.15 MeV/Nucleon, Nucl. Instrum. Methods 110, 19.

2255. M. C. Buchet-Poulizac & J. P. Buchet, Lifetime Measurements of Carbon in the Extreme Ultraviolet, Phys. Scr. 8, 40.

2256. H. H. Bukow, H. v. Buttlar, D. Haas, P. H. Heckmann, M. Holl, W. Schlagheck, D. Schürmann, R. Tielert, & R. Woodruff, Lifetimes and Initial Populations of Foil-Excited Hydrogen and Lithium States, Nucl. Instrum. Methods 110, 89.

2257. J. Campos, Measurement of Mean Lives of Excited Levels of Neutral Helium, An. Fis. 69, 291. (Span.)

2258. J. Campos & B. Zurro, The Mean Life of the $5d(7/2)_4$ Level of Neutral Argon, An. Fis. 69, 299. (Span.)

2259. M. Carre, M. Gaillard, & J. Desesquelles, Hanle Experiments with Accelerated Ion Beams in Gaseous Targets, Nucl. Instrum. Methods 110, 295.

2261. R. D. Chapman & Y. Shadmi, Calculated Term Energies and Transition Probabilities for Ions in the Fluorine Isoelectronic Sequence, J. Opt. Soc. Am. 63, 1440.

2262. C.-L. Chen & A. V. Phelps, Absorption Coefficients for the Wings of the First Two Resonance Doublets of Cesium Broadened by Argon, Phys. Rev. A 7, 470.

2263. S. A. Chin-Bing & C. E. Head, Radiative Lifetimes of the $2p^2\ ^2D$ Levels of B I and the $2p^2\ ^1D$ Levels of B II, Phys. Lett. A 45, 203.

2264. D. A. Church & C. H. Liu, Cascade-Effect Suppression in Beam-Foil Mean Life Measurements, Nucl. Instrum. Methods 110, 147.

2265. J. E. Clawson & M. H. Miller, Experimental Transition Probabilities for Neutral and Singly Ionized Tungsten, J. Opt. Soc. Am. 63, 1598.

2266. C. L. Cocke, B. Curnutte, & J. R. MacDonald, Lifetimes of Metastable X-Ray Emitters in Helium- and Lithium-Like Chlorine, Nucl. Instrum. Methods 110, 493.

2267. C. L. Cocke, B. Curnutte, & R. Randall, Decay of the $2\ ^3S_1$ State in Helium-Like Chlorine, Phys. Rev. Lett. 31, 507.

2268. C. L. Cocke, A. Stark, & J. C. Evans, Absolute Oscillator Strengths in Neutral Chromium and the Solar Chromium Abundance, Astrophys. J. 184, 653.

2269. A. Corney, Measurements of Transition Probabilities of Forbidden Lines of Neutral Atoms and Molecules, Nucl. Instrum. Methods 110, 151.

2270. R. D. Cowan, The Theory of Rare Earth Energy Levels and Spectra, Nucl. Instrum. Methods 110, 173.

2271. R. D. Cowan & K. G. Widing, The Extreme Ultraviolet Spectrum of Fe XV in a Solar Flare, Astrophys. J. 180, 285.

2272. M. Crance, Theoretical Transition Probabilities and Energy Levels in Ne I Isoelectronic Sequence, At. Data 5, 185.

2273. M. Crance, Measurement of Oscillator Strengths in the Spectrum of Neon I by the Study of Anomalous Dispersion, Rev. Phys. Appl. 8, 325. (Fr.)

2274. L. J. Curtis, I. Martinson, & R. Buchta, Mean Life Measurements in Manganese I and II and Thulium II, Nucl. Instrum. Methods 110, 391.

2276. A. Dalgarno, The Z-Dependence of Oscillator Strengths, Nucl. Instrum. Methods 110, 183.

2277. A. Dalgarno, E. Constantinides, & G. A. Victor, Calculation of Ionic and Atomic Multipole Transition Moments, Air Force Cambridge Research Laboratories Report No. AFCRL-73-0215.

2278. R. Damaschini & J. Brochard, Determination of Relative Transition Probabilities by Absorption for the 2 ^{1}P → n ^{1}D and 2 ^{1}P → n ^{1}S Lines of He I, Opt. Commun. 9, 89. (Fr.)

2279. R. Darrigo, J.-N. Le Toulouzan, & B. Chappey, Oscillator Strengths of Potassium, C. R. Acad. Sci., Ser. B 276, 119. (Fr.)

2280. C. C. Davis & T. A. King, Decay Rates of Infrared Emitting Laser Levels in Neutral Xenon, J. Quant. Spectrosc. Radiat. Transfer 13, 825.

2281. M. G. Delibas, A New Method for the Determination of Atomic Oscillator Strengths, Stud. Cercet. Fiz. 25, 267. (Rom.)

2282. L. O. Dickie, F. M. Kelly, T. K. Koh, M. S. Mathur, & F. C. Suk, Lifetime of the 5s5p $^1P_1$ Level of Strontium, Can. J. Phys. 51, 1088.

2283. K. E. Donnelly, P. J. Kindlmann, & W. R. Bennett, Jr., Radiative Lifetime Measurements of Levels in the $5p^4$6p Configuration of Singly Ionized Xenon, J. Opt. Soc. Am. 63, 1438.

2284. G. W. F. Drake, Radiative Decay of the Metastable States of the H and He Sequences Theory, "Atomic Physics 3," 269-290 (Eds., S. J. Smith & G. K. Walters, Plenum Press, New York).

2286. P. Erman, J. Brzozowski, & B. Sigfridsson, Gas Excitations Using High Frequency Deflected Electron Beams: A Convenient Method for Determinations of Atomic and Molecular Lifetimes, Nucl. Instrum. Methods 110, 471.

2287. P. Erman & I. Martinson, Lifetimes of the $3p^5 5p$ Levels in Ar I, Phys. Scr. 8, 269.

2288. C. E. Fairchild, H. P. Garg, & C. E. Johnson, Detection of Nitrogen Atoms in the $2s(2p)^3 3s\ ^6S_{5/2}$ Metastable Autoionizing State, Phys. Rev. A 8, 796.

2289. A. S. Farghaly, Calculation of Relative Oscillator Strengths of Spectral Lines from Atomic Self-Absorption Data, J. Phys. B 6, 1288.

2290. D. Feiertag & G. zu Putlitz, Hyperfine Structure, g_J Factors, and Lifetimes of Excited $^2P_{1/2}$ States of Rb, Z. Phys. 261, 1.

2291. A. Ferrario, Measurements of the Upper and Lower Level Lifetime in He-Se Lasers, Opt. Commun. 8, 333.

2292. C. F. Fischer, Oscillator Strengths for $3d^n 4s \rightarrow 3d^n 4p$ Transitions in the Iron Series, J. Quant. Spectrosc. Radiat. Transfer 13, 201.

2293. D. R. Flower & G. Pineau des Forets, Excitation of the Fe XIII Spectrum in the Solar Corona, Astron. Astrophys. 24, 181.

2294. C. A. Forbrich, Jr., Experimental Measurement of Oscillator Strengths in Neutral Neon, Argon, and Krypton Using the Rozhdestvenskii Hook Method, Frank J. Seiler Research Laboratory Report SRL-TR-73-0009 (U.S. Air Force Academy, Colorado).

2295. E. N. Forsman & K. C. Clark, Measurement of the Oscillator Strength of the O I($^1S - {}^1P^o$) Transition at 1217.6 Å, Phys. Rev. A 7, 1203.

2296. J. Galy, H. Brunet, A. Birot, & J.-L. Artigue, Argon Afterglow: Processes of Depletion of the $2p^2$ State, C. R. Acad. Sci., Ser. B 276, 23. (Fr.)

2297. P. S. Ganas & A. E. S. Green, Optical Oscillator Strengths for Atomic Nitrogen Based Upon an Analytic IPM Model, J. Quant. Spectrosc. Radiat. Transfer 13, 1171.

2298. S. Garpman, G. Belin, & L. Holmgren, Lifetimes of Some Excited Levels in Sb I, "Fifth Conference on Atomic Spectroscopy," No. 73 (University of Lund, Lund, Sweden).

2299. R. H. Garstang, Transition Probabilities, "Transactions of the International Astronomical Union--Reports on Astronomy," XVA, 157-159 (Ed., C. de Jager, D. Reidel Publ. Co., Dordrecht, Holland).

2300. D. Garz, Non-LTE Effects in an Argon Cascade Arc in the Pressure Range from 0.2 atm to 5.0 atm, Z. Naturforsch., Teil A 28, 1459. (Ger.)

2301. T. Garz, Absolute Oscillator Strengths of Si I Lines Between 2500 Å and 8000 Å, Astron. Astrophys. 26, 471.

2302. P. T. Gee & K. T. Tang, Error Bounds on Dynamic Polarizability and Oscillator Strength, Phys. Rev. A 7, 1863.

2303. H. M. Gibbs, G. G. Churchill, & G. J. Salamo, Contradictions with the Neoclassical Theory of Radiation in Weakly Excited Multilevel Systems, Phys. Rev. A 7, 1766.

2304. L. H. Göbel, L. Risch, & G. Steinert, The Hyperfine Structure in Odd Configurations of Lu I, "Fifth Conference on Atomic Spectroscopy," No. 51 (University of Lund, Lund, Sweden).

2305. A. Goly, Determination of Transition Probabilities for Some Multiplets of Neutral Carbon in the Infrared, Acta Phys. Pol. A 44, 311.

2306. W. Gornik, D. Kaiser, W. Lange, J. Luther, K. Meier, H.-H. Radloff, & H. H. Schulz, Lifetime Measurement of the 4s5s $^3S_1$ Level of Ca by Use of a Dye Laser and a Penning Discharge, Phys. Lett. A 45, 219.

2307. W. Gornik, D. Kaiser, W. Lange, J. Luther, H.-H. Radloff, & H. H. Schulz, Lifetime Measurements Using Stepwise Excitation by Two Pulsed Dye Lasers, Appl. Phys. 1, 285.

2308. H. Gould, R. Marrus, & R. W. Schmieder, Lifetime of the 2 $^3S_1$ State of Helium-Like Argon (Z = 18) and Helium-Like Titanium (Z = 22), Phys. Rev. Lett. 31, 504.

2309. V. N. Grigor'eva, Atomic Constants of the 6 $^2P_{3/2}$ State of Rb^{85}, Vestn. Leningr. Univ., Fiz., Khim. 16, No. 3, 44. (Russ.)

2310. P. F. Gruzdev & A. V. Loginov, Neon. Radiative Lifetimes for the Levels of the $2p^5ms$, $2p^5np$, $2p^5nd$ (m = 3-6, n = 3-5) and $2p^54f$ Configurations, Opt. Spectrosc. (USSR) 35, 1.

2311. P. F. Gruzdev & A. V. Loginov, Radiation Lifetimes of Levels of the Na II Ion, Opt. Spectrosc. (USSR) 34, 352.

2312. P. F. Gruzdev & A. V. Loginov, Radiation Lifetimes for Levels of the Mg III Ion, Opt. Spectrosc. (USSR) 34, 469.

2313. S. Hattori & S. Chinen, Spectroscopic Study of Microwave Discharge as a Radiation Source for Transition Probability Measurements, J. Quant. Spectrosc. Radiat. Transfer 13, 1309.

2314. W. R. Hentschel, L. H. Göbel, & G. v. Oppen, Magnetic Depolarization of Fluorescence Light Following Excitation of Mg I Atoms by Electron Impact, Astron. Astrophys. 29, 415. (Ger.)

2315. A. Hibbert, Oscillator Strengths in the Beryllium Sequence, J. Phys. B 6, L127.

2316. R. C. Hilborn & R. de Zafra, Experimental Lifetimes and f-Values for Four Levels in Fe I, Astrophys. J. 183, 347.

2318. S. Inatsugu & J. R. Holmes, Transition Probabilities for the $5s'[1/2]_1$-3p Transitions of Ne I, Phys. Rev. A 8, 1678.

2319. D. J. G. Irwin & A. E. Livingston, Lifetime Measurements in Fluorine and Silicon in the Vacuum Ultraviolet, Can. J. Phys. 51, 848.

2320. D. J. G. Irwin, A. E. Livingston, & J. A. Kernahan, Radiative Mean Life Measurements in Neon Below 1000 Å, Can. J. Phys. 51, 1948.

2322. D. J. G. Irwin, A. E. Livingston, & J. A. Kernahan, Beam-Foil Lifetimes in the Third Period Elements Silicon, Sulfur, and Argon in the Vacuum Ultraviolet, Nucl. Instrum. Methods 110, 111.

2324. G. A. Kasabov & V. V. Eliseev, Oscillator Strengths of Spectral Lines, "Spektroskopicheskie Tablitsy Dlya Nizkotemperaturnoi Plazmy," Pt. 1, 18-136 (Moskva Atomizdat). (Russ.)

2325. S. A. Kazantsev, A. Kisling, & M. P. Chaika, Alignment of Excited Helium Atoms in a Direct-Current Discharge, Opt. Spectrosc. (USSR) 34, 714.

2326. S. Kazantsev, V. Markov, & M. Chaika, Some Experiments in the Study of Implicit Alignment, Opt. Spectrosc. (USSR) 34, 492.

2327. F. M. Kelly, T. K. Koh, & M. S. Mathur, Lifetimes of the 5s7p and 5s8p $^1P_1$ Levels of Strontium and Related Oscillator Strengths, Can. J. Phys. 51, 2295.

2328. F. M. Kelly, T. K. Koh, and M. S. Mathur, Lifetime of the 5s6p $^1P_1$ Level of Strontium and Related Oscillator Strengths, Can. J. Phys. 51, 1653.

2329. M. Klemt, Experimental Oscillator Strengths of Ti I Lines, Astron. Astrophys. 29, 419. (Ger.)

2330. E. J. Knystautas, M. Brochu, & R. Drouin, Lifetimes of the $2p^3(^1P^o$ and $^1D^o)$ and 2p3s $^1P^o$ Levels in N II, Can. J. Spectrosc. 18, 153.

2331. E. J. Knystautas, M. Brochu, & R. Drouin, Vacuum Ultraviolet Spectroscopy and Lifetimes of Weakly Autoionizing States in O I, Can. J. Spectrosc. 18, 143.

2332. E. J. Knystautas & R. Drouin, Lifetime Measurements of Doubly-Excited States of Helium, Nucl. Instrum. Methods 110, 95.

2333. J. L. Kohl & W. H. Parkinson, Measurement of the Neutral Aluminum Photoionization Cross Section and Parameters of the $3p\ ^2P^o$ - $3s3p^2\ ^2S_{1/2}$ Autoionization Doublet, Astrophys. J. 184, 641.

2334. V. A. Komarovskii, Oscillator Strengths of Eu I Spectral Lines in the 2950-2370 Å Region, Opt. Spectrosc. (USSR) 34, 462.

2335. D. F. Korff, S. Chung, & C.-C. Lin, Electron-Excitation Cross Sections of Sodium by the Method of Close Coupling, Phys. Rev. A 7, 545.

2336. E. N. Kotlikov, Hanle Effect in the Case of Impulse Excitation of the $6\ ^1D_2$ Cadmium Level, Opt. Spectrosc. (USSR) 34, 114.

2337. M. G. Kozlov, S. A. Mileshina, & G. P. Startsev, Absorption Spectrum of Lead Vapor in Ultraviolet and Schumann Regions, Opt. Spectrosc. (USSR) 35, 89.

2338. C. K. Kumar, G. E. Assousa, L. Brown, & W. K. Ford, Jr., Radiative Mean Lifetimes of Levels in K II and Rb II, Phys. Rev. A 7, 112.

2339. M. D. Kunisz & J. Migdalek, Absolute and Relative Theoretical Values of Oscillator Strengths for Certain Lines in the Si II and Ge II Spectra, Acta Phys. Pol. A 44, 471.

2340. R. L. Kurucz, Semi-Empirical Calculation of gf-Values: Sc II $(3d+4s)^2$ - (3d+4s)4p, A Detailed Example, Smithsonian Astrophysical Observatory Special Report 351.

2341. L. Kuzmickyte & K. Uspalis, On the Theoretical Investigation of the Oscillator Strengths in Fe II and Co II Spectra, Liet. Fiz. Rinkinys 13, 683. (Russ.)

2342. G. S. Kvater, O. V. Oginets, V. B. Smirnov, & S. A. Bagaev, Quenching Collisions in Helium Observed During the Decay of the n $^1S_0$ and n $^3S_1$ States, Opt. Spectrosc. (USSR) 35, 226.

2343. D. A. Landman & R. Dobrin, Lifetimes and Alignment Depolarization Cross Sections of the $(4p^55p)^1D'_2$ and $^3D_3$ Levels in Krypton, Phys. Rev. A 8, 1868.

2344. K. C. Lapworth, L. A. Allnutt, & J. R. Pendlebury, Determination of the Excitation Temperature and Relative Line Strengths of Some Doublet Transitions for a Copper Arc by Photographic Photometry, National Physical Laboratory Report NPL Qu 24.

2345. G. Larcher, P. Maillot, & C. Thenard, Discussion of the Value of the Transition Probability of the 6032 Å Line of Argon (Ar I) Determined by Spectrophotometry in Different Plasmas, C. R. Acad. Sci., Ser. B 276, 463. (Fr.)

2346. C. Laughlin, Nuclear Charge Expansion Method for $1sn\ell\ ^{1,3}L - 1sn'\ell'\ ^{1,3}L'$ Transitions in the Helium Isoelectronic Sequence, J. Phys. B 6, 1942.

2347. C. Laughlin & A. Dalgarno, Nuclear Charge Expansion Method for $(2s^a2p^b - 2s^{a-1}2p^{b+1})$ Transitions, Phys. Rev. A 8, 39.

2349. C. Laughlin, M. N. Lewis, & Z. J. Horak, Transition Probabilities in the Lithium Isoelectronic Sequence, J. Phys. B 6, 1953.

2350. T. N. Lawrence & C. E. Head, Beam-Gas Lifetime Measurements in Ne I-II, Phys. Rev. A 8, 1644.

2351. C.-M. Lee & K. T. Lu, Spectroscopy and Collision Theory. II. The Ar Absorption Spectrum, Phys. Rev. A 8, 1241.

2352. W. N. Lennard, W. Whaling, R. M. Sills, & W. A. Zajc, Absolute Transition Probabilities in Ni I, Nucl. Instrum. Methods 110, 385.

2353. L. Lis, Characteristics of $3s_2 \rightarrow 3p_1$ (λ = 4218 nm) Laser Action in Neon, Acta Phys. Pol. A 43, 453.

2354. C. H. Liu, R. B. Gardiner, & D. A. Church, Improved Hanle Effect Measurement Technique for Fast Ions, Phys. Lett. A 43, 165.

2355. A. E. Livingston, E. H. Pinnington, J. A. Kernahan, & D. J. G. Irwin, Beam-Foil Spectroscopy in the Vacuum Ultraviolet for Elements of the Third Period, "Fifth Conference on Atomic Spectroscopy," No. 76 (University of Lund, Lund, Sweden).

2356. A. V. Loginov & P. F. Gruzdev, Radiation Lifetimes for the Levels of the K II Ion, Opt. Spectrosc. (USSR) 35, 578.

2357. L. Lundin, B. Engman, J. Hilke, & I. Martinson, Lifetime Measurements in Mg I-Mg IV, Phys. Scr. 8, 274.

2358. S. Lunell, Hyperfine Structure of the 2 ^{2}P, 3 ^{2}P, and 4 ^{2}P States of Lithium, Phys. Rev. A 7, 1229.

2359. Yu. I. Malakhov & V. A. Fabrikant, Measurement of Lifetimes of Kr II Levels by Electro-Optical Chronography, Opt. Spectrosc. (USSR) 34, 371.

2360. J. Marek & J. Richter, Lifetime Measurements of Optical Levels for 6 Elements of Astrophysical Interest, Astron. Astrophys. 26, 155.

2361. R. Marrus, Radiative Decay of the Metastable States of the H and He Sequences--Experiment, "Atomic Physics 3," 291-308 (Eds., S. J. Smith & G. K. Walters, Plenum Press, New York).

2362. R. Marrus, Forbidden Decay Modes of One- and Two-Electron Ions, Nucl. Instrum. Methods 110, 333.

2363. I. Martinson, L. J. Curtis, J. Brzozowski, & R. Buchta, Lifetime Measurements in Mn I and Mn II, Phys. Scr. 8, 62.

2364. K. D. Masterson & J. O. Stoner, Jr., A Method for Measuring Cascade-Free Mean Lives, Nucl. Instrum. Methods 110, 441.

2365. R. P. McEachran & M. Cohen, Comments on Electric Quadrupole Transition Probability in Sodium and Potassium Sequences, J. Quant. Spectrosc. Radiat. Transfer 13, 197.

2366. R. T. Menzies, Measurement of Neon 3.39 μm Transition Decay Rates Using Laser Faraday Rotation, Phys. Lett. A 43, 209.

2367. K. Mie & J. Richter, Experimental Oscillator Strengths of V I Lines, Astron. Astrophys. 25, 299.

2368. J. Migdalek, Intensity Ratios of the Spectral Lines in Doublets of the Sharp Series of Al I, Ga I, and In I, Zesz. Nauk. Uniw. Jagiellon., Pr. Fiz. 329, No. 11, 37.

2369. M. H. Miller & R. A. Roig, Transition Probabilities of Neutral and Singly Ionized Germanium, Phys. Rev. A 7, 1208.

2370. M. H. Miller, R. A. Roig, & R. D. Bengtson, Transition Probabilities of Xe I and Xe II, Phys. Rev. A 8, 480.

2371. T. Minemoto & T. Kanda, Magnetic Resonance in Excited 7 $^2P_{3/2}$ State of ^{133}Cs Atom in a Weak Magnetic Field, J. Phys. Soc. Jpn. 35, 1563.

2372. C. F. Moore, W. J. Braithwaite, & D. L. Matthews, Lifetime Measurements of Helium-Like and Lithium-Like Oxygen, Phys. Lett. A 44, 199.

2373. H. W. Moos & J. R. Woodworth, Observation of the Forbidden $2\ ^3S_1 \rightarrow 1\ ^1S_0$ Spontaneous Emission Line from Helium and Measurement of the Transition Rate, Phys. Rev. Lett. 30, 775.

2374. D. C. Morton & W. H. Smith, A Summary of Transition Probabilities for Atomic Absorption Lines Formed in Low-Density Clouds, Astrophys. J., Suppl. Ser. No. 233, 26, 333.

2375. P. A. Moskowitz, Lande g_J Values of 3d and 5s Levels of Argon Excited by Electronic Impact, Phys. Lett. A 44, 351.

2376. J. R. Mowat, I. A. Sellin, R. S. Peterson, D. J. Pegg, M. D. Brown, & J. R. MacDonald, Mean Life of the Metastable $2\ ^3P_1$ State of the Two-Electron Fluorine Ion, Phys. Rev. A 8, 145.

2377. D. Müller, G. Pichler, & C. Vadla, Determination of the Stark Width of the C I 2478 Spectral Line, Phys. Lett. A 46, 247.

2378. C. A. Nicolaides, Oscillator Strengths in First Row Neutral, Singly and Doubly Ionized Atoms: Comparison of Recent Theoretical and Experimental Values, Chem. Phys. Lett. 21, 242.

2379. C. A. Nicolaides & D. R. Beck, Variational Calculations of Correlated Wave Functions and Energies for Ground, Low-Lying as well as Highly Excited Discrete States in Many-Electron Atoms Using a New Atomic Structure Theory Including Electron Correlation, J. Phys. B 6, 535.

2380. C. A. Nicolaides, D. R. Beck, & O. Sinanoglu, Theoretical Oscillator Strengths for the Beryllium $1s^22s^2\ ^1S - 1s^22s2p\ ^1P^o$, $1s^22s2p\ ^1P^o - 1s^22p^2\ ^1D$ and $1s^22s2p\ ^1P^o - 1s^22p^2\ ^1S$ Isoelectronic Sequences, J. Phys. B 6, 62.

2382. C. A. Nicolaides & O. Sinanoglu, A Proposed Correction to the Solar Abundances of Carbon and Oxygen Utilizing New and Accurate Theoretical Forbidden Transition Probabilities, Sol. Phys. 29, 17.

2383. A. Nikitin & T. Feklistova, On the Theoretical Interpretation of Emission Spectra of WR Stars. II. Calculation of the Probabilities of the Forbidden Transitions $2p^2\ ^1SD - 2s2p\ ^3P$ in the Spectra of the Ions Be I, B II, C III, N IV,..., P XII, Eesti NSV Tead. Akad. Toim., Fuus., Mat. 22, 164. (Russ.)

2384. E. Niziol & G. Sek, Measurement of Relative Line Strengths for the Transition Group Between Levels Belonging to the Configuration $2p^5(^2P^o_{1/2,3/2})3d$ and $2p^5(^2P_{1/2,3/2})3p$ in Ne I, Acta Phys. Pol. A 43, 513.

2385. D. W. Norcross, Photoabsorption by Cesium, Phys. Rev. A 7, 606.

2386. A. L. Osherovich & V. N. Ivanov, Measurement of Radiative Lifetimes of $2p^5 3p$ Levels by the Phase Shift Method, Vest. Leningr. Univ., Fiz., Khim. 22, No. 4, 154. (Russ.)

2387. P. P. Ostroumenko & A. M. Eremenko, Measurement of Relative Values of Oscillator Strengths in the Spectra of Nickel and Cobalt Atoms by the Method of Linear Absorption, Opt. Spectrosc. (USSR) 34, 605.

2388. D. J. Pegg, P. M. Griffin, I. A. Sellin, & W. W. Smith, Electron Spectroscopy of Foil-Excited Chlorine Beams, Nucl. Instrum. Methods 110, 489.

2389. D. J. Pegg, P. M. Griffin, I. A. Sellin, W. W. Smith, & B. Donnally, Metastable States of Highly Excited Heavy Ions, "Atomic Physics 3," 327-337 (Eds., S. J. Smith & G. K. Walters, Plenum Press, New York).

2390. D. J. Pegg, I. A. Sellin, R. Peterson, J. R. Mowat, W. W. Smith, M. D. Brown, & J. R. MacDonald, Electron Decay-in-Flight Spectra from Autoionizing States of Highly Stripped Oxygen, Fluorine, Chlorine, and Argon Ions, Phys. Rev. A 8, 1350.

2391. N. P. Penkin & V. A. Komarovskii, Relative Values of Oscillator Strengths for Spectral Lines of Gd I, Opt. Spectrosc. (USSR) 34, 1.

2392. N. P. Penkin & V. A. Komarovskii, Relative Values of Oscillator Strengths of Nd I Spectral Lines, Opt. Spectrosc. (USSR) 35, 4.

2393. N. P. Penkin, V. P. Ruzov, and L. N. Shabanova, Resonance Broadening of the 377.6 nm Thallium Line and Lifetime of the $7\ ^2S_{1/2}$ Level, Opt. Spectrosc. (USSR) 34, 588.

2394. N. P. Penkin & L. N. Shabanova, Resonance Broadening of Europium Lines Due to $a\ ^8S^o_{7/2} - y\ ^8P_{9/2,7/2,5/2}$ Transitions, Opt. Spectrosc. (USSR) 34, 368.

2395. E. H. Pinnington, H. O. Lutz, & G. W. Carriveau, Beam-Foil Spectroscopy of the Transition Elements Chromium, Cobalt, and Manganese, Nucl. Instrum. Methods 110, 55.

2396. A. Pochat, M. Doritch, & J. Peresse, Absolute Measurement of Lifetimes in Helium, Neon, Molecular Nitrogen, and Carbon Monoxide, J. Chim. Phys. Phys.-Chim. Biol. 70, 936. (Fr.)

2397. V. P. Podbiralina, Yu. M. Smirnov, & N. V. Stegnova, Transition Probabilities for Some Kr II and Xe II Lines, Opt. Spectrosc. (USSR) 34, 467.

2398. D. Popescu, M. L. Pascu, C. B. Collins, B. W. Johnson, & I. Popescu, Use of Space-Charge-Amplification Techniques in the Absorption Spectroscopy of Cs and Cs_2, Phys. Rev. A 8, 1666.

2399. M. A. Rebolledo & E. Bernabeu, Determination of the Lifetime of the Thallium 7 $^2S_{1/2}$ State by a Zero-Field Level Crossing Technique, Rev. Acad. Cienc. Exactas, Fis.-Quim. Nat. Zaragoza 28, 467. (Span.)

2400. P. Richard, R. L. Kauffman, F. F. Hopkins, C. W. Woods, & K. A. Jamison, High-Resolution Study of Fluorine Metastable X-Ray Emitters, Phys. Rev. Lett. 30, 888.

2401. P. Richard, R. L. Kauffman, F. Hopkins, C. W. Woods, & K. A. Jamison, Oxygen Metastable X-Ray Emitters, Phys. Rev. A 8, 2187.

2402. J. R. Roberts, T. Andersen, & G. Sørensen, Determination of Atomic Lifetimes and Absolute Oscillator Strengths for Neutral and Ionized Vanadium, Astrophys. J. 181, 587.

2403. J. R. Roberts, T. Andersen, & G. Sørensen, Determination of Atomic Lifetimes and Absolute Oscillator Strengths for Neutral and Ionized Titanium, Astrophys. J. 181, 567.

2404. W. A. Roberts & C. E. Head, Radiative Lifetimes for Singly and Doubly Ionized Boron, Nucl. Instrum. Methods 110, 99.

2405. J. E. Ross, Intermediate-Coupling Line Strengths in the Iron Spectrum and the Solar Abundance of Iron, Astrophys. J. 180, 599.

2406. G. S. Rostovikova, V. P. Samoilov, & Yu. M. Smirnov, Excitation of Ar III by Electron Impact, Opt. Spectrosc. (USSR) 35, 222.

2407. M. Ryskalok & K. Gabla, An Atomic Beam Apparatus with a Magnetoelectric High Sensitivity Microbalance (10^{-7} G) for Measuring Structure Parameters by the Absorption Method, Opt. Appl. 3, No. 4, 51.

2408. T. Sawada & P. S. Ganas, Distorted-Wave Calculation of Electron-Impact Excitation of Atomic Oxygen, Phys. Rev. A 7, 617.

2409. R. M. Schectman, L. J. Curtis, & D. A. Chojnacki, Redetermination of the Mean Life of the $2p_9$ Level in Ne I Using Cascade Analysis, J. Opt. Soc. Am. 63, 99.

2410. R. M. Schectman, D. R. Shoffstall, D. G. Ellis, & D. A. Chojnacki, Absolute Transition Probabilities for the $2p^5 3s$ - $2p^5 3p$ Transition Array in Ne I, J. Opt. Soc. Am. 63, 80.

2411. P. Schenck, R. C. Hilborn, & H. Metcalf, Time-Resolved Fluorescence from Ba and Ca Excited by a Pulsed Tunable Dye Laser, Phys. Rev. Lett. 31, 189.

2412. W. Schlagheck, D. Schürmann, D. Haas, & H. v. Buttlar, Doubly Excited States in the Beam-Foil Li Spectrum, Phys. Lett. A 45, 433.

2413. D. Schürmann, W. Schlagheck, D. Haas, & H. v. Buttlar, Lifetimes of the Levels $3\ ^1P$, $4\ ^1P$, and $5\ ^1P$ in Li II by the Beam-Foil Technique, Phys. Lett. A 46, 167.

2414. I. A. Sellin, Metastable Autoionizing States, Nucl. Instrum. Methods 110, 477.

2415. S. K. Shrivastava & P. A. Westhaus, Electric Dipole Transitions in the Carbon Isoelectronic Sequence Calculated with Symmetric States Obtained from Superposition of Configurations, J. Chem. Phys. 59, 1054.

2416. B. van der Sijde & E. D. Tidwell, Comments on Transition Probabilities of Argon II, J. Quant. Spectrosc. Radiat. Transfer 13, 289.

2417. J. S. Sims & R. C. Whitten, Upper and Lower Bounds to Atomic and Molecular Properties. I. Be Sequence Oscillator Strengths (Dipole Length Formulation) for the $1s^2 2s^2\ ^1S$ - $1s^2 2s2p\ ^1P$ Transition, Phys. Rev. A 8, 2220.

2418. O. Sinanoglu, Beam-Foil Spectroscopy and New Atomic Structure Theory with a Survey of Results Since 1970, Nucl. Instrum. Methods 110, 193.

2420. O. Sinanoglu & W. Luken, Relativistic Effects in Transitions of Highly Ionized Heavy Atoms, Chem. Phys. Lett. 20, 407.

2421. O. Sinanoglu & W. Luken, Heavy-Ion Accelerators and Predicted Lifetimes of Highly Stripped Ions, Comments At. Mol. Phys. 4, 139.

2422. M. W. Smith, G. A. Martin, & W. L. Wiese, Systematic Trends and Atomic Oscillator Strengths, Nucl. Instrum. Methods 110, 219.

2423. M. W. Smith & W. L. Wiese, Atomic Transition Probabilities for Forbidden Lines of the Iron Group Elements, J. Phys. Chem. Ref. Data 2, 85.

2424. P. L. Smith, Oscillator Strengths of Astrophysical Interest from Lifetime Data, Nucl. Instrum. Methods 110, 395.

2425. P. L. Smith & W. Whaling, Absolute Transition Probabilities for Fe II and the Solar Iron Abundance, Astrophys. J. 183, 313.

2426. G. Sørensen, Atomic Lifetimes of Low-Lying Levels in Multiply Charged Ions of Gallium, Germanium, Arsenic, and Selenium, Phys. Rev. A 7, 85.

2427. A. F. Starace, Absolute Line Strengths by Analysis of Lu-Fano Plots with Application to Excited State Transitions in Neon, J. Phys. B 6, 76.

2428. E. J. Stone & E. C. Zipf, Excitation of Atomic Nitrogen by Electron Impact, J. Chem. Phys. 58, 4278.

2429. M. R. Teixeira & R. Rosa, Radiative Lifetime of the 6 $^3D_3$ Level of Hg I Observed in a Low-Pressure Positive Column, "Contributed Papers--International Conference on Phenomena of Ionized Gases," 11th, 401 (Ed., I. Stoll, Czech. Acad. Sci., Inst. Phys., Prague, Czech.).

2430. R. Tielert & H. H. Bukow, A Correlated-Fit Method Including Cascade Corrections in Beam-Foil Experiments on Hydrogen, Z. Phys. 264, 119. (Ger.)

2431. J. A. Tully, D. Petrini, & O. Bely, Anomalous Electron Impact Excitation of Ca^+, Astron. Astrophys. 23, 15.

2432. R. A. Van Tassel, R. E. Huffman, & J. L. Roebber, Atomic Oxygen Oscillator Strengths in the Autoionization Region. I. The Absolute Strength of the 5s' Lines, J. Chem. Phys. 59, 5926.

2433. G. A. Victor & C. Laughlin, Model Potential Calculations of Be I and Mg I Oscillator Strengths, Nucl. Instrum. Methods 110, 189.

2434. V. Vujnovic, G. Pichler, A. M. Tonejc, K. Acinger, & D. Müller, Absolute and Relative Line Intensity Measurements when the Spectral Lines are not Optically Thin, J. Quant. Spectrosc. Radiat. Transfer 13, 1465.

2435. A. W. Weiss, Correlation in Excited States of Atoms, "Advances in Atomic and Molecular Physics," Vol. 9, 1-46 (Eds., D. R. Bates & I. Estermann, Academic Press, New York).

2436. W. Wieme & P. Mortier, Oscillator Strength of the Resonance Lines of Xenon, Physica (Utrecht) 65, 198.

2437. S. J. Wolnik & R. O. Berthel, Shock-Tube Measurements of Absolute gf-Values, Astrophys. J. 179, 665.

2438. T. Wujec & J. Musielok, Measurement of the Transition Probability for Argon I and II Spectral Lines, Zesz. Nauk. Wyzsz. Szk. Pedagog. Powstancow Slaskich Opolu 15, 15. (Pol.)

2439. T. Wujec, J. Musielok, & J. Majewski, Diagnostics of the Argon-Hydrogen Plasma, Zesz. Nauk. Wyzsz. Szk. Pedagog. Powstancow Slaskich Opolu 15, 23. (Pol.)

2441. J. Yellin, T. Hadeishi, & M. C. Michel, Time-Resolved Hanle Effect in the 3 $^3P_{2,1,0}$ State of ^{4}He, Bull. Am. Phys. Soc., Ser. II, 18, 121.

2442. J. Yellin, T. Hadeishi, & M. C. Michel, Lifetime and Alignment of the 5 $^1D_2$ State of ^{4}He by Beam-Foil Level Crossing, Phys. Rev. Lett. 30, 417.

2443. B. P. Zapol', B. Kh. Levush, & I. M. Taksar, Effective Potential Method for Computation of Quantum Systems. IV. Calculation of Wave Functions and Transition Oscillator Strengths of the External Electron in the Boron Atom, Izv. Akad. Nauk Latv. SSR, Ser. Fiz. Tekh. Nauk No. 5, 28. (Russ.)

2444. B. Zurro, J. Campos, & C. Sanchez Del Rio, Lifetimes of Some Excited Levels of Ar I, Phys. Lett. A 43, 527.

1974

2465. R. Albat & N. Gruen, Born Cross Sections for the Excitation of the Lowest Resonance Level of Neon Using Elaborate CI Wave Functions, J. Phys. B 7, L9.

2466. M. Ya. Amus'ya, V. K. Ivanov, N. A. Cherepkov, & L. V. Chernysheva, Intershell and Intersubshell Effects in Photoionization of Atoms, Sov. Phys.--JETP 39, 752.

2467. T. Andersen, S. W. Jørgensen, & G. Sørensen, Radiative Lifetimes in As I and Sb I, J. Opt. Soc. Am. 64, 891.

2468. T. Andersen & G. Sørensen, Determinations of Atomic Lifetimes for the Rare Earth Ions: Pr II, Tm II, Lu II, Ce III, Sol. Phys. 38, 343.

2469. M. T. Anderson & F. Weinhold, Dipole Oscillator Strengths, with Rigorous Limits of Error, for He and Li^+, Phys. Rev. A 9, 118.

2470. M. T. Anderson & F. Weinhold, Relative Accuracy of Length and Velocity Forms in Oscillator Strength Calculations, Phys. Rev. A 10, 1457.

2471. H. J. Andrä, M. L. Gaillard, L. Henke, & W. Wittmann, Fast Beam Spectroscopy with Laser Excitation, "Sixth EGAS Conference--Summaries of Contributions," 104-105 (West Berlin).

2474. G. P. Anisimova & R. I. Semenov, Calculation of Transition Probabilities Between the $3p^5ns$ - $3p^54p$ Configurations of Ar I from Gyromagnetic Ratios, Opt. Spectrosc. (USSR) 36, 130.

2475. G. P. Arrighini & C. Guidotti, Dynamic Polarizabilities of Open-Shell Systems by Coupled Hartree-Fock Perturbation Theory, Mol. Phys. 28, 273.

2476. M. Aymar, Theoretical Determination of the Lifetimes of the $3s3p^3$ Levels in the Si I Isoelectronic Sequence, Physica (Utrecht) 74, 205. (Fr.)

2477. K. E. Banyard & G. K. Taylor, Generalized Oscillator Strengths for the $(1s^22s^2)^1S \rightarrow (1s^22s2p)^1P$ Transition in Some Be-Like Ions, Phys. Rev. A 10, 1019.

2478. L. Barrette & R. Drouin, Lifetime Measurements in Ne VII and Ne VIII, Phys. Scr. 10, 213.

2479. D. R. Beck & C. A. Nicolaides, The Effect of Electron Correlation on Atomic Properties, Int. J. Quantum Chem., Symp. No. 8, 17.

2480. D. R. Beck & C. A. Nicolaides, Excitation of Atomic Oxygen by Fast Electrons: Generalized and Optical Oscillator Strengths, "Fourth International Conference on Atomic Physics, Abstracts of Contributed Papers," 171-174 (Eds., J. Kowalski & H. G. Weber, Heidelberg).

2481. U. Becker, L. H. Göbel, & W. D. Klotz, Lifetime Measurement of Excited Nickel I Levels, Astron. Astrophys. 33, 241. (Ger.)

2482. G. Belin, S. Garpman, L. Holmgren, & S. Rydberg, Lifetimes for the $5p^26s\ ^4P_{3/2}$ and $^4P_{5/2}$ Levels in Sb I Obtained by the Hanle Method, Phys. Scr. 9, 213.

2483. H. G. Berry, R. Hallin, R. Sjödin, & M. Gaillard, Beam-Foil Observations of Na I Doubly-Excited States, Phys. Lett. A 50, 191.

2484. S. N. Bhardwaj, H. G. Berry, & T. Mossberg, Lifetimes of Some Highly-Excited Terms in Cl IV-Cl IX, Phys. Scr. 9, 331.

2485. E. Biemont, Computation of Oscillator Strengths by a Semi-Empirical Method for Some Elements of the Iron Group and Their Solar Photospheric Abundance. I. Results for Ti I, Sol. Phys. 38, 15.

2487. E. Biemont, Computation of Oscillator Strengths by a Semi-Empirical Method for Some Elements of the Iron Group and Their Solar Photospheric Abundance. II. Results for Sc I, Sol. Phys. 39, 305.

2488. E. Biemont, Semi-Empirical Oscillator Strengths for Ti II and Application to the Study of Solar Photospherical Spectra, Bull. Cl. Sci., Acad. R. Belg. 60, 1070. (Fr.)

2489. K. S. de Boer & D. C. Morton, Interstellar Carbon I Lines in ζ Ophiuchi, Astron. Astrophys. 37, 305.

2490. K. S. de Boer, D. C. Morton, S. R. Pottasch, & D. G. York, Oscillator Strengths for Ionized Iron and Manganese, Astron. Astrophys. 31, 405.

2491. J. M. Bridges & R. L. Kornblith, Arc Measurements of Fe I Oscillator Strengths, Astrophys. J. 192, 793.

2492. A. M. Bruneteau, A. M. Icole, C. Rouille, A. Poquerusse, & H. J. Doucet, Measurement of the Ionic Density by Optical Absorption in a Mercury Discharge, Phys. Lett. A 46, 309. (Fr.)

2493. J. P. Buchet & M. C. Buchet-Poulizac, Beam-Foil Study of Nitrogen Between 100 and 400 Å, J. Opt. Soc. Am. 64, 1011.

2495. P. G. Burkhalter, U. Feldman, & R. D. Cowan, Transitions in Highly Ionized Sn Spectra from a Laser-Produced Plasma, J. Opt. Soc. Am. 64, 1058.

2496. M. L. Burshtein, Ya. F. Verolainen, V. A. Komarovskii, A. L. Osherovich, & N. P. Penkin, Lifetimes of the $^3P^o_1$ Level of Yb I and the $^2P^o_{3/2,1/2}$ Level of Yb II, Opt. Spectrosc. (USSR) 37, 351.

2497. J. Campos & B. Zurro, Experimental Mean Lifetimes of Some Excited Levels of Ar II, An. Fis. 70, 244. (Span.)

2498. M. S. Z. Chaghtai, K. Rahimullah, & S. Ahmad, Transitions 4p-5d,6d and 4p-6s,7s in Zr VI and Nb VII, J. Phys. B 7, 2121.

2499. M. Chenevier & P. A. Moskowitz, Magnetic Resonance Measurements of the Lifetimes and Lande Factors of Excited Levels of Argon and Xenon Atoms, J. Phys. (Paris) 35, 401. (Fr.)

2500. K.-t. Cheng, C.-p. Lin & W. R. Johnson, Decay of $^4P^o_{5/2}$ Autoionizing States of Ions in the Li Isoelectronic Sequence, Phys. Lett. A 48, 437.

2501. S. A. Chin-Bing & C. E. Head, Radiative-Lifetime Measurements for F II Using a Doubly Differentially Pumped Gas Target, Phys. Rev. A 10, 209.

2502. L.-y. C. Chiu & N. E. Small-Warren, Lifetime of the Metastable $^3P_2$ State of Rare Gas Atoms, "Fourth International Conference on Atomic Physics, Abstracts of Contributed Papers," 201-202 (Eds., J. Kowalski & H. G. Weber, Heidelberg).

2503. M. A. A. Clyne & L. W. Townsend, Determination of Atomic Oscillator Strengths Using Resonance Absorption with a Doppler Line Source: Transitions of Br and I $(n + 1)s - np^5$, J. Chem. Soc., Faraday Trans. 2, 70, 1863.

2504. C. L. Cocke, J. A. Bednar, B. Curnutte, & R. Randall, Decay of the $2\ ^3S_1$ State in Helium-Like Sulfur and Chlorine, "Fourth International Conference on Atomic Physics, Abstracts of Contributed Papers," 83-86 (Eds., J. Kowalski & H. G. Weber, Heidelberg).

2505. C. L. Cocke, B. Curnutte, J. R. MacDonald, J. A. Bednar, & R. Marrus, Lifetime of the $2s_{1/2}$ State in Hydrogen-like Fluorine and Oxygen, Phys. Rev. A 9, 2242.

2506. C. L. Cocke, B. Curnutte, J. R. MacDonald, & R. Randall, X-Ray Emission from Foil-Excited Chlorine Beams, Phys. Rev. A 9, 57.

2507. C. L. Cocke, B. Curnutte, & R. Randall, X-Ray Emission from Foil-Excited Sulfur Beams, Phys. Rev. A 9, 1823.

2508. G. H. Copley & D. M. Camm, Pressure Broadening and Shift of Argon Emission Lines, J. Quant. Spectrosc. Radiat. Transfer 14, 899.

2509. R. D. Cowan, L. J. Radziemski, Jr., & V. Kaufman, Effect of Continuum Configuration Interaction on the Position of sp^6 in Neutral Chlorine and Other Halogens, J. Opt. Soc. Am. 64, 1474.

2510. L. J. Curtis & W. H. Smith, Radiative-Lifetime and Absolute-Oscillator-Strength Studies for Some Resonance Transitions of Si I, II, and III, Phys. Rev. A 9, 1537.

2511. S. J. Czyzak, L. H. Aller, & R. N. Euwema, Forbidden Line Excitation Data for Certain Coronal Lines, Astrophys. J., Suppl. Ser. No. 272, 28, 465.

2512. K. E. Donnelly, P. J. Kindlmann, & W. R. Bennett, Jr., Radiative Lifetimes of Noble-Gas Ion-Laser States: Collected Results, IEEE J. Quantum Electron. QE-10, 848.

2513. G. W. F. Drake, Leading Radiative Correction to the Magnetic Dipole Transition Probability, Phys. Rev. A 9, 2799.

2514. P. D. Dumont, E. Biemont, & N. Grevesse, Transition Probabilities for Vacuum Ultraviolet Lines of N I Through N IV, J. Quant. Spectrosc. Radiat. Transfer 14, 1127.

2515. H. Ehrich & H. J. Kusch, Determination of the Absolute Transition Probability of the Line C II 2511 Å, Z. Phys. 267, 295. (Ger.)

2516. P. G. Ellis & O. Goscinski, Transition State Calculations of Oscillator Strengths in the X_α Local Exchange Approximation, Phys. Scr. 9, 104.

2517. Th. M. El-Sherbini, Line Strengths for Krypton Laser Transitions, Atomkernenergie 24, 137.

2518. P. Erman, J. Brzozowski, & W. H. Smith, Oscillator Strengths for Neutral Sodium and the Interstellar Sodium Abundance in Zeta Ophiuchi, Astrophys. J. 192, 59.

2519. P. Erman, M. Lyyra, & I. Martinson, High Resolution Measurements of the z $^5F^o$ and y $^5F^o$ Lifetimes in Neutral Iron, Phys. Lett. A 49, 41.

2520. B. C. Fawcett, R. D. Cowan, & R. W. Hayes, A Theoretical and Experimental Study of Fe XIX to Fe XXIV Solar-Flare Spectra and Isoelectronic Spectra in Sulfur, Astrophys. J. 187, 377.

2521. S. Feneuille, Theory of Atomic Structure and Transition Probabilities, "Atoms, Molecules, and Lasers," 3-56 (International Atomic Energy Agency, Vienna).

2522. H. Figger, K. Siomos, & H. Walther, Lifetime Measurements in the Fe I Spectrum Using Tunable Dye Laser Excitation, Z. Phys. 270, 371.

2523. C. F. Fischer, Theoretical Oscillator Strengths for the 3p $^2P^o \rightarrow$ 3d ^2D Transition of the Sequence Al I to Fe XIV, "Fourth International Conference on Atomic Physics, Abstracts of Contributed Papers," 179-182 (Eds., J. Kowalski & H. G. Weber, Heidelberg).

2524. C. F. Fischer, Correlation Effects Important for Accurate Oscillator Strengths, J. Phys. B 7, L91.

2525. A. W. Fliflet & H. P. Kelly, Photoionization Cross Section for the 4s Subshell of Zn I, Phys. Rev. A 10, 508.

2526. D. R. Flower & H. Nussbaumer, On the Extreme Ultraviolet Emission Spectrum of Fe XIII, Astron. Astrophys. 31, 353.

2528. A. Gallagher & E. L. Lewis, Resonance Broadening of Hanle-Effect Signals in Rubidium, Phys. Rev. A 10, 231.

2529. S. Garpman, L. Holmgren, & A. Rosen, Theoretical Transition Probabilities Between the $np^3(n+1)s \rightarrow np^4$ Configurations of Se I and Te I, Phys. Scr. 10, 221.

2530. J. Geiger, Energy Losses of keV Electrons in Ne, Kr, and Xe and Comparison with the Fano-Lu Theory, "Vacuum Ultraviolet Radiation Physics," 28-31 (Eds., E.-E. Koch, R. Haensel, & C. Kunz, Pergamon-Vieweg, Braunschweig, West Germany).

2531. A. Gilbert, K. G. P. Sulzmann, & S. S. Penner, Measurements of gf-Values for Fe I Lines, J. Quant. Spectrosc. Radiat. Transfer 14, 455.

2532. H. Gould, R. Marrus, & P. J. Mohr, Radiative Decay of the $2\ ^3S_1$ and $2\ ^3P_2$ States of Helium-Like Vanadium (Z = 23) and Iron (Z = 26), Phys. Rev. Lett. 33, 676.

2533. I. P. Grant, Gauge Invariance and Relativistic Radiative Transitions, J. Phys. B 7, 1458.

2534. P. F. Gruzdev & A. V. Loginov, Radiation Lifetimes of Levels of the Ca III Ion, Opt. Spectrosc. (USSR) 36, 719.

2535. J. Hamel & J.-P. Barrat, Lifetimes and Depolarization by Collisions with Helium of the $5\ ^2P_{3/2}$ and $5\ ^2P_{1/2}$ Levels of the Cd^+ Ion, Opt. Commun. 10, 331. (Fr.)

2536. J. Hamel, J. Margerie, & J.-P. Barrat, Measurement of the Lifetime of the Energy Levels of Ions by Coherence Transfer in a Penning Collision. Application to the $(4d^9 5s^2)^2D_{5/2}$ and $^2D_{3/2}$ Levels of Cd^+, Opt. Commun. 12, 409. (Fr.)

2537. H. Harde, Intracavity Dye-Laser Excitation of Fast Ions and Atoms, "Sixth EGAS Conference--Summaries of Contributions," 65-66 (West Berlin).

2538. H. Harde & G. Guthöhrlein, New Method for Cascade-Free Lifetime Measurements, Phys. Rev. A 10, 1488.

2539. H. Heise, Experimental Oscillator Strengths for Ni I and Ni II Lines, Astron. Astrophys. 34, 275.

2540. A. Hibbert, Oscillator Strengths of Transitions in the Beryllium Sequence, J. Phys. B 7, 1417.

2541. L. Holmgren & S. Garpman, A Relativistic Calculation of Transition Probabilities Between the $np(n+1)s$ and np^2 Configurations for the Elements of Group IV, Phys. Scr. 10, 215.

2542. R. A. Holt & F. M. Pipkin, Precision Measurement of the Lifetime of the 7 $^3S_1$ State of Atomic Mercury, Phys. Rev. A 9, 581.

2543. M. C. E. Huber, Hook Method Measurements of gf-Values for Ultraviolet Fe I and Fe II Lines on a Shock Tube, Astrophys. J. 190, 237.

2544. D. G. Hummer & D. W. Norcross, Light Ions of Astrophysical Interest--Radiative Transition Probabilities for C III, N IV, O V, and Ne VII, Mon. Not. R. Astron. Soc. 168, 263.

2545. E. Jimenez, J. Campos, & C. Sanchez del Rio, Radiative Lifetimes of Some Levels of Xe I and Xe II, J. Opt. Soc. Am. 64, 1009.

2546. W. R. Johnson & C.-p. Lin, Dirac-Hartree-Fock Calculation of the 2 $^3S_1 \rightarrow 1\,^1S_0$ Transition Rates for the He Isoelectronic Sequence, Phys. Rev. A 9, 1486.

2547. P. S. Julienne, E. S. Oran, & J. Davis, Departure from LTE and Emission in a Low Density Recombining Oxygen Plasma, J. Phys. B 7, 2100.

2548. S. O. Kastner & C. Wade, Dipole and Quadrupole Integrals for the C I, N I, and O I Sequences, Astrophys. J., Suppl. Ser. No. 243, 27, 247.

2549. S. A. Kazantsev & V. P. Markov, Determination of the Lifetime for the 4 $^1P_1$ Level of the Helium Atom by Studying the Alignment in the Discharge, Opt. Spectrosc. (USSR) 36, 355.

2550. F. M. Kelly, T. K. Koh, & M. S. Mathur, Lifetime of the 5p $^2P_{3/2}$ Level of Ionized Strontium, Can. J. Phys. 52, 1438.

2551. F. M. Kelly, T. K. Koh, & M. S. Mathur, Lifetime of the 5p $^2P_{1/2}$ Level of Ionized Strontium, Can. J. Phys. 52, 1666.

2552. F. M. Kelly, T. K. Koh, & M. S. Mathur, Lifetimes and Oscillator Strengths in Singlet Levels of Strontium, Can. J. Phys. 52, 795.

2553. J. A. Kernahan, A. E. Livingston, & E. H. Pinnington, Beam-Foil Mean Life Measurements of Levels in N I-N V, Can. J. Phys. 52, 1895.

2554. Y.-K. Kim, Comments on the Distorted Wave Born Approximation Cross Sections for the 2 ^1P Excitation of He, Phys. Rev. A 9, 1462.

2555. G. C. King & A. Adams, An Accurate Determination of the Lifetime of the 6 ^3P State in Mercury Using a New Electron-Photon Delayed Coincidence Apparatus, J. Phys. B 7, 1712.

2556. H.-J. Kluge & H. Sauter, Level Crossing Experiments in the First Excited $^1P_1$ States of the Alkaline Earths, Z. Phys. 270, 295.

2557. A. N. Klyucharev, V. Yu. Sepman, & B. V. Dobrolezh, Measurement of Relative Oscillator Strengths for Transitions of Subordinate Series in Rubidium and Cesium, Opt. Spectrosc. (USSR) 37, 470.

2558. E. J. Knystautas & R. Drouin, Experimental Oscillator Strengths for UV Resonance Transitions in Ne I, II, and III, Astron. Astrophys. 37, 145.

2559. E. Ya. Kononov, K. N. Koshelev, & L. I. Podobedova, Transitions in Multiply Charged Beryllium-Like Ions, Opt. Spectrosc. (USSR) 37, 1.

2560. J. E. Kouba & W. J. Meath, Lithium Quadrupole Properties and van der Waals Constants Using Pseudo-State Techniques, Mol. Phys. 28, 829.

2561. V. S. Krivchenkova, Probabilities of Infrared Transitions in Neon, "Teor. At. At. Spektrov, Mater. Vses. Semin., 1973," 2, 28-35 (Red.-Izd. Otd. Latv. Gos. Univ., Riga, Latvian SSR). (Russ.)

2562. M. D. Kunisz & J. Migdalek, Theoretical Oscillator Strengths and Transition Probabilities for Some Spectral Lines of the Sn II and Pb II Ions, Acta Phys. Pol. A 45, 715.

2563. Z. I. Kupliauskis & V. M. Lazauskas, Use of Non-Orthogonal Radial Orbitals to Study the Electric Dipole Transitions $1s^2 2s 2p^{N+1}$ - $1s^2 2s^2 2p^N$, Sov. Phys.--Collect. 14, No. 1, 37.

2564. R. L. Kurucz, Semi-Empirical Calculation of gf-Values. II. Fe I $(3d + 4s)^8$ - $(3d + 4s)^7 4p$, Smithsonian Astrophysical Observatory Special Report 359.

2565. P. W. Langhoff, J. Sims, & C. T. Corcoran, Stieltjes-Integral Approximations to Photoabsorption and Dispersion Profiles in Atomic Helium, Phys. Rev. A 10, 829.

2566. C. Laughlin & A. Dalgarno, Z-Expansion of $1s^2 2s^2 2p^2$ - $1s^2 2s 2p^3$ Transitions in the Carbon Sequence, J. Chem. Phys. 60, 1688.

2567. C. Laughlin & G. A. Victor, Multiplet Splittings and $^1S_0$ - $^3P_1$ Intercombination Line Oscillator Strengths in Be I and Mg I, Astrophys. J. 192, 551.

2568. C. M. Lee, Spectroscopy and Collision Theory. III. Atomic Eigenchannel Calculation by a Hartree-Fock-Roothaan Method, Phys. Rev. A 10, 584.

2569. J. N. Le Toulouzan, R. Darrigo, & P. Valentin, Oscillator Strengths of Potassium, J. Quant. Spectrosc. Radiat. Transfer 14, 1239. (Fr.)

2570. E. L. Lewis & A. Gallagher, The Resonance Broadening of Hanle Effect Signals in Rubidium, "Fourth International Conference on Atomic Physics, Abstracts of Contributed Papers," 539 (Eds., J. Kowalski & H. G. Weber, Heidelberg).

2571. H. Liening, Lifetime and Hyperfine Structure Measurements of Some Excited States of the $4d^9 5p$ Configuration in the Pd I Spectrum with the Level Crossing Technique, Z. Phys. 266, 287. (Ger.)

2572. D. L. Lin & G. Feinberg, Radiative Corrections to Relativistic Magnetic Dipole Decays of Hydrogen-Like Ions, Phys. Rev. A 10, 1425.

2574. A. V. Loginov & P. F. Gruzdev, Neon. Transition Probabilities 1. Transitions $2p^5 3p$ - $2p^5 ns$ (n = 3-6), Opt. Spectrosc. (USSR) 37, 467.

2575. E. Luc-Koenig, Relativistic Effects on Transition Probabilities $^3P_1 \rightarrow {}^1S_0$ for Group II Elements, J. Phys. B 7, 1052.

2576. I. Martinson & A. Gaupp, Atomic Physics with Ion Accelerators--Beam-Foil Spectroscopy, Phys. Rep. C 15, 113.

2577. I. Martinson, A. Gaupp, & L. J. Curtis, Comments on the Be I $2s^2\ {}^1S$ - $2s2p\ {}^1P$ Transition Probability, J. Phys. B 7, L463.

2578. M. May, J. Richter, & J. Wichelmann, Experimental Oscillator Strengths of Weak Fe I Lines, Astron. Astrophys., Suppl. Ser. 18, 405.

2579. P. McCavert & E. Trefftz, Oscillator Strengths of Some Ba Lines, Calculated in MCHF Approximation, J. Phys. B 7, 1270.

2580. M. H. Miller, T. D. Wilkerson, R. A. Roig, & R. D. Bengtson, Absolute Line Strengths for Carbon and Sulfur, Phys. Rev. A 9, 2312.

2581. T. Minemoto, T. Goto, & T. Kanda, Collisional Broadening of Level Crossing Signals in $6\ {}^2P_{3/2}$ and $7\ {}^2P_{3/2}$ State of ^{133}Cs Atom, J. Phys. Soc. Jpn. 36, 918.

2582. L. N. Novikov & S. L. Votyakov, Level Crossover in the Ground and Excited States in a Zero Field During Alignment of Hg^{201} Atoms by the 2537 Å Line, Opt. Spectrosc. (USSR) 36, 138.

2583. J. S. Onello, L. Ford, & A. Dalgarno, 1/Z Expansion Study of the $(1s)^2 2s\ ^2S$ and $(1s)^2 2p\ ^2P$ States of the Lithium Isoelectronic Sequence, Phys. Rev. A 10, 9.

2584. A. L. Osherovich, V. N. Ivanov, & V. N. Gorshkov, Determination of Lifetimes of Excited States of Ne I, II, Ar I, II, and Hg I by Means of the Phase Shift Method and the Decrease of Intensity, Vestn. Leningr. Univ., Fiz., Khim. No. 4, 7. (Russ.)

2585. D. J. Pegg, H. H. Haselton, P. M. Griffin, R. Laubert, J. R. Mowat, R. Peterson, & I. A. Sellin, Lifetime and Binding Energy of the Metastable $(1s2s2p)\ ^4P^o_{5/2}$ State in S^{13+}, Phys. Rev. A 9, 1112.

2586. N. P. Penkin, V. A. Komarovskii, & V. V. Smirnov, Relative Values of Oscillator Strengths for Spectral Lines of Dy I, Opt. Spectrosc. (USSR) 37, 223.

2587. E. H. Pinnington, D. J. G. Irwin, A. E. Livingston, & J. A. Kernahan, Mean Life Measurements for Some Energy Levels of O I-O VI, Can. J. Phys. 52, 1961.

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, Phys. Rev. A 9, 1004.

2589. E. H. Pinnington & H. O. Lutz, Experimental Mean Lives for Mn I, II, and III, and Their Implications for a Revised Manganese Solar Abundance, Can. J. Phys. 52, 1253.

2590. E. H. Pinnington, H. O. Lutz, & G. W. Carriveau, The Application of Some Beam-Foil Measurements for Co I and Co II to the Cobalt Photospheric Abundance, Z. Phys. 267, 27.

2591. P. Ranson & J. Chapelle, Spectroscopic Study of an Argon Plasma Jet Not in Local Thermodynamic Equilibrium, J. Quant. Spectrosc. Radiat. Transfer 14, 1. (Fr.)

2592. J. Richter, On the Present State of Oscillator Strengths Measurement, "Physics of Ionized Gases 1974," 603-620 (Ed., V. Vujnovic, Institute of Physics, University of Zagreb, Yugoslavia).

2593. R. A. Roig & M. H. Miller, Relative Transition Probabilities of Cobalt, J. Opt. Soc. Am. 64, 1479.

2594. D. Rosenthal, R. P. McEachran, & M. Cohen, Sum Rules for Electric Quadrupole Transitions, Proc. R. Soc. London, Ser. A 337, 365.

2595. Z. B. Rudzikas, Relativistic Consideration of Many-Electron Atoms, "Fourth International Conference on Atomic Physics, Abstracts of Contributed Papers," 131-134 (Eds., J. Kowalski & H. G. Weber, Heidelberg).

2596. U. I. Safronova, Calculation of Wavelengths and Oscillator Strengths for the Li Isoelectronic Sequence, J. Quant. Spectrosc. Radiat. Transfer 14, 251. (Russ.)

2597. U. I. Safronova, G. L. Klimchitskaya, & L. N. Labzovskii, Relativistic Calculations of Transition Probabilities in Two-Electron Multicharged Ions, J. Phys. B. 7, 2471.

2598. L. D. Schearer, Optical Pumping in a Flowing Helium Afterglow with Additive Metal Impurity Atoms, Phys. Rev. A 10, 1380.

2599. V. P. Shevelko, Oscillator Strengths and Photoionization Cross Sections, Opt. Spectrosc. (USSR) 36, 7.

2600. J. B. Shumaker, A Spectroscopic Study of Equilibrium in Nitrogen Arcs, J. Quant. Spectrosc. Radiat. Transfer 14, 19.

2601. E. Siefart, J. Ney, H. Bucka, & H. Bolouri, Oscillator Strengths for Spontaneous Transitions from the $3d^9 4s4p$ and $3d^{10}4p$ States in the Cu I Spectrum, J. Phys. B 7, 1279.

2602. G. Simons, New Procedure for Generating Valence and Rydberg Orbitals. I. Atomic Oscillator Strengths, J. Chem. Phys. 60, 645.

2603. O. Sinanoglu & D. R. Beck, New Theoretical Transition Probabilities for the Si I $3s^2 3p^2\ ^3P$ - $3s3p^3\ ^3D^o$ Isoelectronic Sequence Including the Important Correlation Effects, Chem. Phys. Lett. 24, 20.

2604. O. Sinanoglu & D. R. Beck, Crucial Role of Electron Correlation in Both the Upper and Lower States in Optical Transitions, Theor. Chim. Acta 34, 183.

2605. J. v. Specht, A New Plasma-Oven of Astrophysical Interest. Application to the Measurement of Ar I Transition Probabilities, Astron. Astrophys. 34, 363.

2606. F. Strumia, P. Minguzzi, G. Giusfredi, & M. Tonelli, Atomic Beam Measurement of the Lifetime of $^3P_1$ State of Magnesium, "Fourth International Conference on Atomic Physics Abstracts of Contributed Papers," 196-199 (Eds., J. Kowalski & H. G. Weber, Heidelberg).

2607. D. Stuck & B. Wende, Measurement of Transition Probabilities of C I Multiplets in the Visible and Vacuum Ultraviolet Spectral Region Utilizing Arc-Plasma Emission and Synchrotron Calibrated Radiometric Transfer Standards, Phys. Rev. A 9, 1.

2608. K.-H. Tan, F. G. Donaldson, & J. W. McConkey, Excitation of the $3s3p^6\ ^2S$ and $3s^2 3p^4 4s\ ^2P$ Levels of Ar^+ and the 736 Å Line of Ne by Electrons, Can. J. Phys. 52, 786.

2609. R. T. Thompson, Lifetime Measurement of the 2^3p State of Helium, J. Quant. Spectrosc. Radiat. Transfer 14, 1179.

2610. V. Vujnovic & A. M. Tonejc, Line Oscillator Strengths Derived from Measurements of the Absorption Coefficient at the Line Center, "Fourth International Conference on Atomic Physics, Abstracts of Contributed Papers," 183-186 (Eds., J. Kowalski & H. G. Weber, Heidelberg).

2611. S. Watanabe, M. Chihara, & I. Ogura, Decay Rate Measurements of Upper Laser Levels in He-Ne and He-Se Lasers, Jpn. J. Appl. Phys. 13, 164.

2612. A. W. Weiss, Series Perturbations in Atomic Spectra: Superposition-of-Configurations Calculations on Al I and Al II, Phys. Rev. A 9, 1524.

2613. W. C. Wells & E. C. Zipf, Lifetime of the Metastable $^5S^o$ State of Atomic Oxygen, Phys. Rev. A 9, 568.

2615. L. G. Williams & D. R. Crosley, Hanle-Effect Studies on the $(5p^46s)^4P_{5/2}$ State of Iodine, Phys. Rev. A 9, 622.

2616. J. R. Woodyard, Sr. & P. L. Altick, An *ab initio* Calculation of Energy Levels and Transition Probabilities in the Spectrum of Ar I, J. Phys. B. 7, 2298.

2617. J. J. Wright, J. F. Dawson, & L. C. Balling, Measurement of the Lifetime of the $^3P_1$ Metastable State of Mg by Dye-Laser Excitation, Phys. Rev. A 9, 83.

2618. J. J. Wright, P. S. Furcinitti, & L. C. Balling, Measurement of the Lifetime of the $^3P_1$ Metastable State of Ca by Dye-Laser Excitation, "Fourth International Conference on Atomic Physics, Abstracts of Contributed Papers," 200 (Eds., J. Kowalski & H. G. Weber, Heidelberg).

2619. A. Yamagishi & H. Inaba, Measurement of Lifetimes of $2p_8$ and $2p_9$ States in Ne I Using a Method of Correlated Photons in Cascade Transitions, Opt. Commun. 12, 213.

2620. V. A. Zilitis, Oscillator Strengths for Resonance Lines of Atoms of the Group II Elements, Opt. Spectrosc. (USSR) 36, 366.

2621. D. Zimmermann, Determination of the Lifetime of the $4\ P_{1/2}$ State of Potassium by Hanle Effect, "Sixth EGAS Conference--Summaries of Contributions," 54-55 (West Berlin).

2622. P. Zimmermann, T. W. Ducas, M. G. Littman, & D. Kleppner, Stark Mixing Spectroscopy in Cesium, Opt. Commun. 12, 198.

2623. B. Zurro, Optical Transition Probabilities in Neutral Argon, An. Fis. 70, 137. (Span.)

1975

2644. R. Abjean & A. Johannin-Gilles, Measurement of Oscillator Strengths by Absorption in an Atomic Jet. II. Oscillator Strength of the $^1P_1$ - $^1S_0$ Transition of Zinc (λ = 2139 Å), J. Quant. Spectrosc. Radiat. Transfer 15, 25. (Fr.)

2645. N. V. Afanaseva & P. F. Gruzdev, Lifetimes of nd and nf Levels of the Neon Atom, Opt. Spectrosc. (USSR) 38, 583.

2646. N. V. Afanaseva & P. F. Gruzdev, Lifetimes of ns and np Levels of a Neon Atom, Opt. Spectrosc. (USSR) 38, 211.

2647. N. V. Afanaseva & P. F. Gruzdev, Lifetimes of the ns and np Levels of the Argon Atom, Opt. Spectrosc. (USSR) 38, 450.

2648. T. Andersen & A. P. Petkov, Th II Mean Life and the Solar Thorium Abundance, Astron. Astrophys. 45, 237.

2649. T. Andersen, A. P. Petkov, & G. Sørensen, Lifetimes of Excited Levels in Mg III, Ca III, K IV-V, Ca V, and Ge I, Phys. Scr. 12, 283.

2650. T. Andersen, O. Poulsen, P. S. Ramanujam, & A. P. Petkov, Lifetimes of Some Excited States in the Rare Earths: La II, Ce II, Pr II, Nd II, Sm II, Yb I, Yb II, and Lu II, Sol. Phys. 44, 257.

2651. M. T. Anderson & F. Weinhold, Bounds to the Lifetime of the Ar XVII 2 ^3S State, Phys. Rev. A 11, 442.

2652. H. J. Andrä, H.-J. Plöhn, W. Wittmann, A. Gaupp, J. O. Stoner, Jr., & M. Gaillard, Lifetimes of Levels in Neutral Strontium (Sr I), J. Opt. Soc. Am. 65, 1410.

2653. L. Armstrong, Jr. & S. Feneuille, Theoretical Analysis of the Phase Shift Measurement of Lifetimes Using Monochromatic Light, J. Phys. B 8, 546.

2654. A. Arnesen, A. Bengtsson, R. Hallin, S. Kandela, T. Noreland, & R. Lidholt, Lifetime Measurements of the Ba II 6p $^2P_{3/2}$ and 6p $^2P_{1/2}$ Levels with the Beam-Laser Method, Phys. Lett. A 53, 459.

2655. I. V. Avilova & L. I. Podlubny, Use of the Model Potential Method for Calculating Oscillator Strengths, Opt. Spectrosc. (USSR) 38, 613.

1974-1975

2656. M. Aymar, Comparative Study of Central-Field and Quantum Defect Methods in the Analysis of Low-Lying Levels of Ne I, J. Phys. (Paris) 36, 299. (Fr.)

2657. C. Backx, R. R. Tol, G. R. Wight, & M. J. van der Wiel, Dipole Term and First Derivative at K = 0 of the Generalized Oscillator Strength of He by keV Electron Impact, J. Phys. B 8, 2050.

2658. M. F. Barnsley & P. D. Robinson, Variational Bounds on Transition Probabilities, Int. J. Quantum Chem. 9, 479.

2659. L. Barrette, D. J. G. Irwin, & R. Drouin, New Identifications and Lifetime Measurements in Ne VIII, Phys. Scr. 12, 113.

2660. G. Baruschka & E. Schulz-Gulde, Transition Probabilities for F I Lines from Wall-Stabilized Arc Measurements, Astron. Astrophys. 44, 335.

2661. Y. Baudinet-Robinet, P. D. Dumont, E. Biemont, & N. Grevesse, Lifetimes and Transition Probabilities in N V, Phys. Scr. 11, 371.

2662. J. A. Bednar, C. L. Cocke, B. Curnutte, & R. Randall, Lifetime of the 2 $^3S_1$ State in Helium-Like Sulfur and Chlorine, Phys. Rev. A 11, 460.

2664. G. D. Bell, L. B. Kalman, & E. F. Tubbs, Absolute f-Values for Resonance Lines of Neutral Titanium, Astrophys. J. 200, 520.

2665. F. Bely-Dubau, C. Camhy-Val, & A. M. Dumont, Mean Lifetimes of Excited Levels of Ar(II). II. Theoretical Considerations, J. Quant. Spectrosc. Radiat. Transfer 15, 375.

2666. A. Bielski, A Critical Survey of Atomic Transition Probabilities for Cu I, J. Quant. Spectrosc. Radiat. Transfer 15, 463.

2667. E. Biemont, Systematic Trends of Hartree-Fock Oscillator Strengths Along the Sodium Isoelectronic Sequence, J. Quant. Spectrosc. Radiat. Transfer 15, 531; 16, 627 (1976).

2669. D. E. Blackwell, P. A. Ibbetson, & A. D. Petford, Precision Measurements of Relative Oscillator Strengths. II. Fe I Transitions from Levels a $^5D_4$ (0.00 eV) and a $^5D_3$ (0.05 eV), Mon. Not. R. Astron. Soc. 171, 195.

2670. K. K. Boyarskii & E. N. Kotlikov, Cascade Hanle Effect in the 5 $^3D_3$ - 5 $^3P_2$ Transition in Cadmium, Sov. J. Quantum Electron. 5, 10.

2671. J. Brochard, R. Vetter, M. Aymar, & M. Hugon, Influence of Excitation Transfers on Anomalous Profiles Observed in the 3.36 μm Line of Xenon, J. Phys. B 8, 165.

2672. J. P. Buchet & M. Druetta, Beam-Foil Spectroscopy of Neon Between 80 and 350 Å, J. Opt. Soc. Am. 65, 991.

2673. P. G. Burke & K. T. Taylor, R-Matrix Theory of Photoionization. Application to Neon and Argon, J. Phys. B 8, 2620.

2674. P. G. Burkhalter, D. J. Nagel, & R. D. Cowan, Laser-Produced L-Series X-Ray Spectra, Phys. Rev. A 11, 782.

2675. C. Camhy-Val, A. M. Dumont, M. Dreux, L. Perret, & C. Vanderriest, Mean Lifetimes of Excited Levels of Ar II. I. Time Correlation Measurements, J. Quant. Spectrosc. Radiat. Transfer 15, 527.

2676. T. C. Caves, Electric Quadrupole Transitions in Neutral Li, J. Quant. Spectrosc. Radiat. Transfer 15, 439.

2677. M. Chantepie, J.-L. Cojan, & J. Landais, Stepwise Excitation of the $(5s5d)\,^1D_2$ Level of Cadmium and Lifetime Measurement by the Hanle Effect, J. Phys. (Paris) 36, 1067. (Fr.)

2678. M. Cornille & R. K. Nesbet, Oscillator Strengths for the $3s^2 3p(^2P^o) \rightarrow 3s3p^2(^2S^e)$ and $3s^2 3p(^2P^o) \rightarrow 3s3p^2(^2D^e)$ Transitions of Al I, J. Phys. B 8, L297.

2679. M. Crance, P. Juncar, & J. Pinard, A New Method for Measuring Relative Oscillator Strengths Using a CW Dye Laser, J. Phys. B 8, 2461.

2680. D. H. Crandall, R. A. Phaneuf, & G. H. Dunn, Electron Impact Excitation of Hg^+, Phys. Rev. A 11, 1223.

2681. F. E. Cummings, Oscillator Strength Sums S(-3) to S(2) and C_6 for the Atoms He to Kr, J. Chem. Phys. 63, 4960.

2682. A. Czernichowski & J. Jazdzyk, Determination of Oscillator Strengths for Some Weak Argon (Ar I) Lines in Pseudoequilibrium Plasma, Pr. Nauk. Inst. Chem. Nieorg. Metal. Pierwiastkow Rzadkich Politech. Wroclaw. 24, No. 13, 87. (Pol.)

2683. R. U. Datla, M. Blaha, & H.-J. Kunze, Collisional Rate Coefficients for the Iron Ions Fe VIII, Fe IX, and Fe X, Phys. Rev. A 12, 1076.

2684. S. L. Davis & O. Sinanoglu, Multiplet Generalized Oscillator Strengths and Inelastic Scattering Cross Sections Calculated Including the Electron Correlation Effects: Transitions of Neutral Atoms: Be, B, C, N, and O, J. Chem. Phys. 62, 3664.

2685. J. S. Deech, R. Luypaert, & G. W. Series, Determination of Lifetimes and Hyperfine Structures of the 8, 9, and 10 $^2D_{3/2}$ States of ^{133}Cs by Quantum-Beat Spectroscopy, J. Phys. B 8, 1406.

2686. E. O. Degenkolb & J. E. Griffiths, Temperature of the Meggers-Corliss-Scribner Copper Arc, J. Opt. Soc. Am. 65, 315.

2687. J. P. Desclaux & Y.-K. Kim, Relativistic Effects in Outer Shells of Heavy Atoms, J. Phys. B 8, 1177.

2688. K. E. Donnelly, P. J. Kindlmann, & W. R. Bennett, Jr., Radiative Lifetimes and Collisional Deactivation Rates of Levels in the $4p^45p$ Configuration of Singly Ionized Krypton, J. Opt. Soc. Am. 65, 1359.

2689. G. A. Doschek, U. Feldman, J. Davis, & R. D. Cowan, Density Sensitive Lines of Highly Ionized Iron, Phys. Rev. A 12, 980.

2690. B. I. Dynefors, Lifetime Measurements in Se I and Te I, Phys. Scr. 11, 375.

2691. Th. M. El Sherbini, Neutral Laser Line Strengths in the Spectra of Heavy Noble Gases, Proc. Indian Nat. Sci. Acad., Part A 41, 590.

2692. Th. M. El Sherbini, Calculation of Transition Probabilities and Radiative Lifetimes for Singly Ionized Krypton, J. Phys. B 8, L183.

2693. Th. M. El Sherbini, Calculation of Xe II Line Strengths and Radiative Lifetimes in Intermediate Coupling, Z. Phys. A 275, 1.

2694. B. Emmoth, M. Braun, J. Bromander, & I. Martinson, Lifetimes of Excited Levels in Ca I-Ca III, Phys. Scr. 12, 75.

2695. B. Engman, A. Gaupp, L. J. Curtis, & I. Martinson, Lifetime Measurements for Excited Levels in Cr II, Phys. Scr. 12, 220.

2696. P. Erman, High Resolution Measurements of Atomic and Molecular Lifetimes Using the High Frequency Deflection Technique, Phys. Scr. 11, 65.

2698. B. C. Fawcett & R. D. Cowan, The Identification of Solar Flare Fe XVIII to Fe XXIII Emission Lines from $2s^n2p^k$-$2s^{n-1}2p^{k+1}$ Transitions, Mon. Not. R. Astron. Soc. 171, 1.

2699. H. Figger, J. Heldt, K. Siomos, & H. Walther, Lifetime Measurements in the Co I and Fe I Spectra Using Tunable Dye Laser Excitation, Astron. Astrophys. 43, 389.

2700. C. F. Fischer, Theoretical Oscillator Strengths for nP → nD Transitions in Mg, Can. J. Phys. 53, 184.

2701. C. F. Fischer, Theoretical Oscillator Strengths for nS-mP Transitions in Mg, Can. J. Phys. 53, 338.

2702. C. F. Fischer & K. M. S. Saxena, Oscillator Strengths from Numerical MCHF Radial Functions, Comput. Phys. Commun. 9, 381.

2703. A. W. Fliflet, H. P. Kelly, & J. E. Hansen, Oscillator Strengths of Ba I $4d^9 4f$, J. Phys. B 8, L268.

2704. D. R. Flower & H. Nussbaumer, Relative Intensities of Solar Emission Lines of Ions in the Sodium Isoelectronic Sequence, Astron. Astrophys. 42, 265.

2705. D. R. Flower & H. Nussbaumer, On the Extreme Ultraviolet Solar Emission of B-Like Ions: Na VII, Si X, and S XII, Astron. Astrophys. 45, 349.

2706. D. R. Flower & H. Nussbaumer, On the Extreme Ultraviolet Solar Emission of B-Like Ions: O IV, Astron. Astrophys. 45, 145.

2707. P. S. Furcinitti, L. C. Balling, & J. J. Wright, A Measurement of the $^3P_1$ Metastable State in Ca, Phys. Lett. A 53, 75.

2708. P. S. Furcinitti, J. J. Wright, & L. C. Balling, Remeasurement of the Mg $^3P_1$ State Lifetime, Phys. Rev. A 12, 1123.

2709. M. Gaillard, H. J. Andrä, A. Gaupp, W. Wittmann, H.-J. Plöhn, & J. O. Stoner, Jr., Mean Lives for the 5p $3/2[1/2]_1$ and 5p $1/2[1/2]_1$ Levels in Singly Ionized Rubidium (Rb II), Phys. Rev. A 12, 987.

2710. T. F. Gallagher, S. A. Edelstein, & R. M. Hill, Radiative Lifetimes of the S and D Rydberg Levels of Na, Phys. Rev. A 11, 1504.

2711. S. Garpman, Polarization Effects on Discrete Transitions in Light Alkali Atoms Calculated in the Linked Diagram Formalism, Phys. Scr. 12, 295.

2713. D. Gebhard & W. Behmenburg, Resonance Broadening and Oscillator Strength of the Mercury Absorption Line 1850 Å, Z. Naturforsch., Teil A 30, 445.

2714. G. Giusfredi, P. Minguzzi, F. Strumia, & M. Tonelli, Atomic Beam Measurement of the Lifetime of the $^3P_1$ Metastable States of Mg and Ca, Z. Phys. A 274, 279.

2715. A. Goly, J. Moity, & S. Weniger, Experimental Oscillator Strengths for Some Ni I and Ni II Multiplets in the Spectral Range 2250 Å - 2550 Å, Astron. Astrophys. 38, 259. (Fr.)

2716. I. P. Grant & A. F. Starace, Gauge Invariance and Radiative Transition Probabilities, J. Phys. B 8, 1999.

2717. K. O. Groeneveld, G. Nolte, & S. Schumann, Lifetime Measurements of the Metastable $1s2s2p\ ^4P_{5/2}$ State in the Lithium-Like N, O, and Ne Ions, "Seventh EGAS Conference--Summaries of Contributions," No. 47 (Grenoble, France).

2718. P. F. Gruzdev & A. V. Loginov, Radiation Lifetimes of Levels of the Argon Atom, Opt. Spectrosc. (USSR) 38, 234.

2719. P. F. Gruzdev & A. V. Loginov, Neon Transition Probabilities. Part 2: $2p^5 4p$-$2p^5 ns$ (n = 3-6) Transitions, Opt. Spectrosc. (USSR) 39, 464.

2720. P. F. Gruzdev & A. V. Loginov, Radiation Lifetimes of Levels of the Kr I Atom, Opt. Spectrosc. (USSR) 38, 611.

2721. A. D. Gurchumeliya, L. N. Labzovskii, & U. I. Safronova, On the Relativistic Calculation of Single-Photon Processes, Soobshch. Akad. Nauk Gruz. SSR 80, 581. (Russ.)

2722. A. D. Gurchumeliya, L. N. Labzovskii, & U. I. Safronova, Relativistic Computation of Intercombinational Transition Probabilities, Sov. Phys. J. 18, 984.

2723. K. C. Harvey, R. T. Hawkins, G. Meisel, & A. L. Schawlow, Measurement of the Stark Effect in Sodium by Two-Photon Spectroscopy, Phys. Rev. Lett. 34, 1073.

2724. H. H. Haselton, R. S. Thoe, J. R. Mowat, P. M. Griffin, D. J. Pegg, & I. A. Sellin, Lifetimes of the Metastable Autoionizing $(1s2s2p)^4P_{5/2}$ States of Lithium-Like Al^{10+} and Si^{11+} Ions: Comparisons with Theory Over the Isoelectronic Sequence Z = 8-18, Phys. Rev. A 11, 468.

2725. W. Heering, Regular Reflection of Pressure Broadened Resonance Lines, Z. Phys. B 20, 69.

2726. W. Heering, Diffuse Reflection and Radiative Transfer of Pressure Broadened Resonance Lines, Z. Phys. A 274, 91.

2727. G. Heine, M. Reinke, & H. H. Bukow, Beam-Foil Lifetime Measurements on He I, "Seventh EGAS Conference--Summaries of Contributions," No. 46 (Grenoble, France).

2728. J. Heldt, H. Figger, K. Siomos, & H. Walther, Lifetime Measurements of Some Levels Belonging to the $3d^8 4s(a\ ^2F)4p$ Configuration of Ni I, Astron. Astrophys. 39, 371.

2729. H. F. Henrichs, The Lower Terms in Ni VII and Possible Identifications in RR Telescopii, Astron. Astrophys. 44, 41.

2730. A. Hibbert, Developments in Atomic Structure Calculations, Rep. Prog. Phys. 38, 1217.

2731. L. Holmgren, Theoretically Calculated Transition Probabilities and Lifetimes for the First Excited Configuration $np^2(n+1)s$ in the Neutral As, Sb, and Bi Atoms, Phys. Scr. 11, 15.

2732. M. C. E. Huber, R. J. Sandeman, & E. F. Tubbs, The Spectrum of Cr I Between 179.8 and 200 nm. Wavelengths, Absorption Cross Sections, and Oscillator Strengths, Proc. R. Soc. London, Ser. A 342, 431.

2733. S. Inatsugu & J. R. Holmes, Transition Probabilities of the 3p-3s Transitions of Ne I, Phys. Rev. A 11, 26.

2734. S. Inatsugu & J. R. Holmes, Transition Probabilities for the 5s-3p Transitions of Ne I, "Atomic Spectroscopy Symposium," 112-113 (National Bureau of Standards, Gaithersburg, Maryland).

2735. A. Johannin-Gilles, Measurement Methods of Atomic and Molecular Transition Probabilities at Faculte Des Sciences de Brest, "Proceedings of the Fourth International CODATA Conference on Generation, Compilation, Evaluation, and Dissemination of Data for Science and Technology, 1974," 120-124 (CODATA Secretariat, Paris, France).

2736. D. Kaiser, Lifetime Measurements of Higher s- and d-Levels in the Na I Spectrum, Phys. Lett. A 51, 375.

2737. E. K. Karabut, V. F. Kravchenko, V. S. Mikhalevskii, & V. F. Papakin, Determination of the Lifetimes of Metastable Pb and Mn Atoms, J. Appl. Spectrosc. (USSR) 22, 702.

2739. O. Karatsu & I. Ogura, Determination of Transition Probabilities Through Stimulated Emission in Rare Gas Ions, J. Appl. Phys. 46, 317.

2741. F. M. Kelly, T. K. Koh, & M. S. Mathur, Hanle Effect in Transitions from the 5s6p and $5s7p\ ^1P_1$ Levels of Strontium and Coherence Narrowing, Can. J. Phys. 53, 930.

2742. E. J. Kelsey & J. Sucher, $2\ ^3S_1 \rightarrow 1\ ^1S_0$ + One Photon Transition in Helium-Like Ions: Exact Result for the Lowest-Order Effect of the Electron-Electron Interaction, Phys. Rev. A 11, 1829.

2743. J. A. Kernahan & P. H.-L. Pang, Experimental Determination of Absolute A Coefficients for 'Forbidden' Atomic Oxygen Lines, Can. J. Phys. 53, 455.

2744. J. A. Kernahan & P. H.-L. Pang, Experimental Transition Probabilities of 'Forbidden' Sulfur Lines, Can. J. Phys. 53, 1114.

2746. J. A. Kernahan, E. H. Pinnington, A. E. Livingston, & D. J. G. Irwin, Mean Life Measurements for Levels in B I-B IV, Phys. Scr. 12, 319.

2747. J. F. Kielkopf, Excitation Transfer, Lifetimes, and Satellite Bands in Cs(7p)-Xe Collisions, J. Chem. Phys. 62, 4809.

2748. G. C. King, A. Adams, D. Cvejanovic, Measured Lifetimes in Mercury Using the Electron-Photon Delayed Coincidence Technique, J. Phys. B 8, 365.

2749. G. L. Klimchitskaya, U. I. Safronova, & L. N. Labzovskii, Relativistic Calculations of Transition Probabilities in Two-Electron, Multiply Charged Ions, Opt. Spectrosc. (USSR) 38, 480.

2750. J. Z. Klose, Mean Life of the 27 887 cm^{-1} Level in U I, Phys. Rev. A 11, 1840.

2751. J. Z. Klose, Mean Life of the 5p $^2P_{3/2}$ Resonance Level in Ag I, Astrophys. J. 198, 229.

2752. E. J. Knystautas & R. Drouin, New Identifications and Lifetime Measurements of Excited States in Highly Ionized Oxygen, J. Phys. B 8, 2001.

2753. H. Krellmann, E. Siefart, & E. Weihreter, Some Lifetimes, Oscillator Strengths, and Radial Integrals in the Cu I Spectrum, J. Phys. B 8, 2608.

2754. H. Krüger & A. Oed, Measurement of the Decay-Probability of Metastable Hydrogen by Two-Photon Emission, Phys. Lett. A 54, 251.

2755. M. D. Kunisz & J. Migdalek, Theoretical Values of Certain Transitions of Type $6p^3$-$6p^2$7s in the Bismuth Atomic Spectrum in Intermediate Coupling, Acta Phys. Pol. A 47, 231.

2756. M. D. Kunisz, J. Migdalek, & J. Rutkowski, Influence of Relativistic Effects on Oscillator Strengths of Certain One-Electron Transitions in the Cd II Spectrum, Acta Phys. Pol. A 47, 227.

2757. R. L. Kurucz & E. Peytremann, A. Table of Semi-Empirical gf-Values. Part 1, Smithsonian Astrophysical Observatory Special Report 362.

2758. J. Landais & M. Chantepie, Lifetime and Hyperfine Structure of the 5 $^1D_2$ State of Cd, "Seventh EGAS Conference--Summaries of Contributions," No. 58 (Grenoble, France).

2759. C. Laughlin, $^3P^o_1$ - $^1S_0$ Intercombination Transitions in the Helium Sequence, J. Phys. B 8, L400.

2760. C. Laughlin, $1s^22s\ ^2S_{1/2}$ - $1s2s2p\ ^4P_{5/2}$ and $1s^22s^2\ ^1S_0$ - $1s^22s2p\ ^3P_2$ Magnetic Quadrupole Transitions, J. Phys. B 8, 842.

2761. C. Laughlin, M. N. Lewis, & Z. J. Horak, Oscillator Strengths and Excited State Lifetimes in the Sodium Sequence, Astrophys. J. 197, 799.

2762. M. Le Dourneuf, V. K. Lan, P. G. Burke, & K. T. Taylor, The Photoionization of Neutral Aluminum, J. Phys. B 8, 2640.

2763. J.-P. Lemoigne, Hanle Effect of Krypton 2p Levels in a Discharge, "Seventh EGAS Conference--Summaries of Contributions," No. 54 (Grenoble, France).

2764. J.-P. Lemoigne, X. Husson, & J. Margerie, Preliminary Results on the 2p Levels of Krypton Obtained by the Hanle Effect, Opt. Commun. 15, 241.

2765. W. N. Lennard, W. Whaling, J. M. Scalo, & L. Testerman, Ni I Transition Probabilities and the Solar Nickel Abundance, Astrophys. J. 197, 517.

2766. P. J. Leonard & J. A. Barker, Dipole Oscillator Strengths and Related Quantities for Inert Gases, "Theoretical Chemistry--Advances and Perspectives," Vol. 1, 117-136 (Eds., H. Eyring & D. Henderson, Academic Press, New York).

2767. J. G. Leopold & M. Cohen, Bounds to Transition Integrals for the Helium Isoelectronic Sequence, J. Phys. B 8, L369.

2768. R. A. Lilly, Transition Probabilities in the Spectra of Ne I, J. Opt. Soc. Am. 65, 389.

2769. A. Lindgard & S. E. Nielsen, Numerical Approach to Transition Probabilities in the Coulomb Approximation: Be II and Mg II Rydberg Series, J. Phys. B 8, 1183.

2770. A. E. Livingston, Y. Baudinet-Robinet, & P. D. Dumont, Radiative-Lifetime Measurements: Effects of Configuration Mixing and Singlet-Triplet Interaction in Singly Ionized Nitrogen, Phys. Lett. A 55, 207.

2771. A. E. Livingston, J. A. Kernahan, D. J. G. Irwin, & E. H. Pinnington, Beam-Foil Studies of Phosphorus in the Vacuum Ultraviolet, Phys. Scr. 12, 223.

2773. J. Lotrian, J. Cariou, & A. Johannin-Gilles, Measurement of the Oscillator Strengths of Transitions of Titanium (I) in the Region 3600-4500 Å, J. Quant. Spectrosc. Radiat. Transfer 15, 815.

2774. M. Loulergue & H. Nussbaumer, A Study of Fe XVII and Ni XIX Coronal Lines, Astron. Astrophys. 45, 125.

2775. S. Lunell, Oscillator Strengths for the Lithium Isoelectronic Sequence from Spin-Optimized SCF Wave Functions, Phys. Scr. 12, 63.

2776. L. Maleki & C. E. Head, Radiative Lifetimes for Some 4p and 4d Levels of Singly Ionized Sulfur, Phys. Rev. A 12, 2420.

2777. M. Malinovsky, New Calculations of Atomic Data Concerning EUV Lines of O V, Astron. Astrophys. 43, 101.

2778. J. Marek, Lifetime Measurements of Some Levels of Mn I and Cr I by Use of Dye Laser Excitation, Astron. Astrophys. 44, 69.

2779. H. E. Mason, The Excitation of Several Iron and Calcium Lines in the Visible Spectrum of the Solar Corona, Mon. Not. R. Astron. Soc. 170, 651.

2780. W. E. McDermott & C. P. Nash, The Measurement of Oscillator Strengths for Copper Lines Involving Autoionizing Levels, Appl. Spectrosc. 29, 408.

2781. C. J. Mitchell, Neutral Magnesium: Determination of f-Values of Principal Series and Intercombination Transitions by the Hook Method, J. Phys. B 8, 25.

2782. K. Miyazaki & K. Fukuda, Measurement of Oscillator Strengths of Cd I $5s5p\ ^3P_{0,1,2}$ - $5p^2\ ^3P_{0,1}$ by the Hook Method, J. Phys. Soc. Jpn. 38, 906.

2784. J. R. Mowat, P. M. Griffin, H. H. Haselton, R. Laubert, D. J. Pegg, R. S. Peterson, I. A. Sellin, & R. S. Thoe, Helium-Like ^{19}F: $2\ ^3P_2$ and $2\ ^3P_0$ Lifetimes, Phys. Rev. A 11, 2198.

2787. C. A. Nicolaides & D. R. Beck, Approach to the Calculation of the Important Many-Body Effects on Photoabsorption Oscillator Strengths, Chem. Phys. Lett. 36, 79.

2788. C. A. Nicolaides & D. R. Beck, A Comment on the Effect of Nonorthonormality on Atomic Transition Probabilities, Can. J. Phys. 53, 1224.

2789. C. A. Nicolaides & D. R. Beck, On the Length, Velocity, and Acceleration Expressions for the Calculation of Accurate Oscillator Strengths in Many-Electron Systems, Chem. Phys. Lett. 35, 202.

2790. A. A. Nikitin & T. Kh. Feklistova, Estimated Probabilities of Forbidden $2s2p^1\ ^3P$ - $2p^2\ ^1S$, ^1D, ^3P Transitions for the Be I, B II, C III Sequence, Sov. Astron.--AJ 18, 516.

2791. H. Nubbemeyer & B. Wende, High Density Correction of the Boltzmann Factors of Highly Excited Argon I Levels in a LTE Plasma and the Influence on the Determination of Transition Probabilities, "Proceedings of the Twelfth International Conference on Phenomena in Ionized Gases, Eindhoven, The Netherlands, Part 1: Contributed Papers," 145 (Eds., J. G. A. Hölscher & D. C. Schram, North-Holland, Amsterdam).

2792. J. S. Onello, $(1s)^2 3s\ ^2S$, $(1s)^2 3p\ ^2P$, and $(1s)^2 3d\ ^2D$ States of the Lithium Isoelectronic Sequence, Phys. Rev. A 11, 743.

2793. J. S. Onello & L. Ford, Magnetic Quadrupole Decay of the $(1s2s2p)\ ^4P^o_{5/2}$ - $(1s)^2 2s\ ^2S^e_{1/2}$ Transition of the Lithium Isoelectronic Sequence, Phys. Rev. A 11, 749.

2794. A. L. Osherovich, E. N. Borisov, M. L. Burshtein, & Ya. F. Verolainen, Radiative Lifetimes of Levels of the Mercury Atom, Opt. Spectrosc. (USSR) 39, 466.

2795. A. L. Osherovich, M. L. Burshtein, Ya. F. Verolainen, & A. Ya. Nikolaich, An Installation with Crossed Beams for Measurement of the Radiation Lifetimes of the Excited States of Atoms, Ions, and Molecules, Instrum. Exp. Tech. (USSR) 18, 1921.

2796. P. P. Ostroumenko & A. M. Eremenko, Measurement of the Relative Values of Oscillator Strengths in the Spectra of Iron and Tin Atoms by the Absorption Method, Opt. Spectrosc. (USSR) 39, 235.

2797. P. W. Pace & J. B. Atkinson, The Lifetimes of the $7\ ^2P_{1/2}$ and $7\ ^2P_{3/2}$ States of Cesium, Can. J. Phys. 53, 937.

2798. H. Panke, F. Bell, H.-D. Betz, W. Stehling, E. Spindler, & R. Laubert, Lifetimes of Multiplet States in One-, Two-, and Three-Electron Sulfur Ions, Phys. Lett. A 53, 457.

2800. J. Pietruszka, J. Chmiela, & K. Melzacki, A Further Evidence of the Validity of the Polarization Method of Cascade-Free Lifetime Measurement, "Proceedings of the Twelfth International Conference on Phenomena in Ionized Gases, Eindhoven, The Netherlands, Part 1: Contributed Papers," 28 (Eds., J. G. A. Hölscher & D. C. Schram, North-Holland, Amsterdam).

2801. W. Pilz & J. Seehawer, Temperature Measurements on Mercury Arcs--A New Set of Hg I Transition Probabilities, "Proceedings of the Twelfth International Conference on Phenomena in Ionized Gases, Eindhoven, The Netherlands, Part 1: Contributed Papers," 146 (Ed., J. G. A. Hölscher & D. C. Schram, North-Holland, Amsterdam).

2802. E. H. Pinnington, Radiative Lifetimes of Some Levels of Xe I and Xe II, J. Opt. Soc. Am. 65, 218.

2803. D. Popescu, I. Popescu, J. Maurer, C. B. Collins, & B. W. Johnson, Doublet Line-Strength Ratios for the Principal Series of Cesium, Phys. Rev. A 12, 1425.

2804. O. Poulsen, T. Andersen, & N. J. Skouboe, Fast-Beam, Zero-Field Level-Crossing Measurements of Radiative Lifetimes, Fine and Hyperfine Structures in Excited States of Ionic and Neutral Beryllium, J. Phys. B 8, 1393.

2805. J. R. Roberts, P. A. Voigt, & A. Czernichowski, Experimentally Determined Absolute Oscillator Strengths of Ti I, Ti II, and Ti III, Astrophys. J. 197, 791.

2806. R. D. Rundel, F. B. Dunning, H. C. Goldwire, Jr., & R. F. Stebbings, Near-Threshold Photoionization of Xenon Metastable Atoms, J. Opt. Soc. Am. 65, 628.

2807. U. I. Safronova, Calculation of Term Energies, Dipole Matrix Elements, and Oscillator Strengths for Isoelectric Series of Light Atoms, Opt. Spectrosc. (USSR) 38, 477.

2808. U. I. Safronova, Wavelengths and Transition Probabilities for the Isoelectronic Sequence of Oxygen, J. Quant. Spectrosc. Radiat. Transfer 15, 223. (Russ.)

2809. U. I. Safronova, Expansion in 1/Z for the Hartree-Fock and Correlation Energy, Relativistic Correction, and Dipole Matrix Elements, J. Quant. Spectrosc. Radiat. Transfer 15, 231. (Russ.)

2810. V. P. Samoilov, Yu. M. Smirnov, & G. S. Starikova, Determination of the Atomic Constants of Kr II, J. Appl. Spectrosc. (USSR) 23, 1117.

2811. V. P. Samoilov, Yu. M. Smirnov, & G. S. Starikova, Transition Probabilities and Cross Sections for Excitation of Xe II, Opt. Spectrosc. (USSR) 38, 707.

2812. W. Schlagheck, Lifetimes of ($2p^5 3s\ ^{1,3}P$) Levels of Na II, Phys. Lett. A 54, 181.

2813. D. Schürmann, Atomic States of Lithium by the Beam-Foil Technique in the Spectral Range 400-1900 Å, Z. Phys. A 273, 331.

2814. S. Sengupta, Electric Quadrupole Transitions in Li I, Be II, B III, J. Quant. Spectrosc. Radiat. Transfer 15, 159.

2815. D. A. Shaw, A. Adams, & G. C. King, Lifetime Measurements in Cadmium II Using the Electron-Photon Delayed Coincidence Technique, J. Phys. B 8, 2456.

2816. O. Sinanoglu, Charge Densities and Transition Densities from the Theory of Non-Closed Shell States and Their Experimental Tests, Int. J. Quantum Chem., Symp. No. 9, 155.

2817. O. Sinanoglu & S. L. Davis, The Large Effects of Electron Correlation on the Multiplet Generalized Oscillator Strengths of Non-Closed Shell Systems: Be $1s^2 2s^2\ ^1S \rightarrow 1s^2 2s2p\ ^1P^o$ and B $1s^2 2s^2 2p\ ^2P^o \rightarrow 1s^2 2s2p^2\ ^2D$, Chem. Phys. Lett. 32, 449.

2818. K. Siomos, H. Figger, & H. Walther, Lifetime Measurements in the Fe I Spectrum Using Stepwise Excitation by Dye Lasers, Z. Phys. A 272, 355.

2819. N. E. Small-Warren & L.-Y. C. Chiu, Lifetime of the Metastable $^3P_2$ and $^3P_0$ States of Rare Gas Atoms, Phys. Rev. A 11, 1777.

2820. G. Smith & J. A. O'Neill, Absolute Transition Probabilities for Some Lines of Neutral Calcium, Astron. Astrophys. 38, 1.

2821. R. F. Stebbings, C. J. Latimer, W. P. West, F. B. Dunning, & T. B. Cook, Studies of Xenon Atoms in High Rydberg States, Phys. Rev. A 12, 1453.

2822. R. F. Stewart, A Time-Dependent Hartree-Fock Study of the Neon Isoelectronic Sequence, Mol. Phys. 29, 1577.

2823. R. F. Stewart, Time-Dependent Hartree-Fock Theory for Three- and Four-Electron Atomic Systems, J. Phys. B 8, 1.

2824. R. F. Stewart, D. K. Watson, & A. Dalgarno, Variational Time-Dependent Hartree-Fock Calculations. I. Applications to Four-Electron Atomic and Molecular Systems, J. Chem. Phys. 63, 3222.

2825. C. Tai, W. Happer, & R. Gupta, Hyperfine Structure and Lifetime Measurements of the Second-Excited D States of Rubidium and Cesium by Cascade Fluorescence Spectroscopy, Phys. Rev. A 12, 736.

2826. Y. Takubo, D. Fujie, & M. Shimazu, The Hook Method with a Tunable Dye Laser, Jpn. J. Appl. Phys. 14, 1633.

2827. R. T. Thompson & R. G. Fowler, Observations on Lifetimes and Excitation Processes for the Upper States in Atomic Helium, J. Quant. Spectrosc. Radiat. Transfer 15, 1017.

2828. P. A. Voigt, Measurement of U I and U II Relative Oscillator Strengths, Phys. Rev. A 11, 1845.

2829. S. Watanabe, K. Kuroda, M. Chihara, & I. Ogura, Lifetime Measurement of Cd II by Lamb Dip Method, Jpn. J. Appl. Phys. 14, Suppl. 14-1, 99.

2830. D. K. Watson & S. V. O'Neil, 1/Z Expansion Study of the $1s^2 2s^2\ ^1S$, $1s^2 2s2p\ ^1P$, and $1s^2 2p^2\ ^1S$ States of the Beryllium Isoelectronic Sequence, Phys. Rev. A 12, 729.

2831. K. Wendt & H. J. Kusch, Self-Broadening of Principal Series Lines of Rubidium at High Number Densities and Oscillator Strengths, Z. Phys. A 275, 111.

2832. W. L. Wiese & J. R. Fuhr, Atomic Transition Probabilities for Scandium and Titanium (A Critical Data Compilation of Allowed Lines), J. Phys. Chem. Ref. Data 4, 263.

2833. J. R. Woodworth & H. W. Moos, Experimental Determination of the Single-Photon Transition Rate Between the $2\ ^3S_1$ and $1\ ^1S_0$ States of He I, Phys. Rev. A 12, 2455.

2834. J. R. Woodyard, Sr. & P. L. Altick, Ab Initio Calculation of Energy Levels and Transition Probabilities in the Spectra of Rare Gases. II. Ne I, J. Phys. B 8, 718.

2835. A. Yamagishi & H. Inaba, Analytical and Experimental Studies on Photon Correlation Method for Lifetime Measurements on Excited Energy Levels in Gaseous Atoms, Jpn. J. Appl. Phys. 14, Suppl. 14-1, 33.

2836. D. L. Yeager, M. A. C. Nascimento, & V. McKoy, Some Applications of Excited-State--Excited-State Transition Densities, Phys. Rev. A 11, 1168.

2837. S. M. Younger & A. W. Weiss, Relativistic Effects on Line Strengths for Transitions in the Hydrogenic Isoelectronic Sequence, J. Res. Nat. Bur. Stand., Sect. A 79, 629.

2838. D. Zimmermann, Determination of the Lifetime of the $4\ P_{1/2}$ State of Potassium by Hanle Effect, Z. Phys. A 275, 5.

1976

2859. R. Abjean & A. Johannin-Gilles, Oscillator Strengths Measurement by Atomic Beam Absorption. III. Oscillator Strength of the Hg(I) $^1P_1$ - $^1S_0$ Transition (λ = 1850 Å), J. Quant. Spectrosc. Radiat. Transfer 16, 369.

2860. M. S. Allen, An Absolute Scale for the Zr II Oscillator Strengths Based on the Solar Spectrum, Publ. Astron. Soc. Pac. 88, No. 523, 338.

2861. M. Ya. Amusya, N. A. Cherepkov, V. Radojevic, & Dj. Zivanovic, Generalized Oscillator Strength and Its First Derivative for Helium in the Optical Limit, J. Phys. B 9, L469.

2862. M. Ya. Amusya, N. A. Cherepkov, Dj. Zivanovic, & V. Radojevic, Photoabsorption for Helium, Lithium, and Beryllium Atoms in the Random-Phase Approximation with Exchange, Phys. Rev. A 13, 1466.

2863. T. Andersen, P. Petersen, & Ö. Hauge, The Solar Hafnium Abundance, Sol. Phys. 49, 211.

2864. T. Andersen, O. Poulsen, & P. S. Ramanujam, Radiative Lifetimes in Zn(II), Cd(II), and Hg(II) Measured by Fast-Beam Zero-Feld Level-Crossing Technique, J. Quant. Spectrosc. Radiat. Transfer 16, 521.

2865. H. J. Andrä, Laser Excitation in Fast-Beam Spectroscopy, "Beam-Foil Spectroscopy," Vol. 2, 835-851 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2866. L. Armstrong, Jr., W. R. Fielder, & D. L. Lin, Relativistic Effects on Transition Probabilities in the Li and Be Isoelectronic Sequences, Phys. Rev. A 14, 1114.

2867. A. Arnesen, A. Bengtsson, L. J. Curtis, R. Hallin, C. Nordling, & T. Noreland, Lifetime Measurement of the Sc II 3d4p z $^3F^o_2$ Level Using Ultraviolet Laser Excitation of a Fast Ion Beam, Phys. Lett. A 56, 355.

2868. G. Astner, L. J. Curtis, L. Liljeby, S. Mannervik, & I. Martinson, A High Precision Beam-Foil Mean Life Measurement of the 1s3p ^{1}P Level in He I, Z. Phys. A 279, 1.

2869. G. Astner, L. J. Curtis, L. Liljeby, I. Martinson, & J. O. Stoner, Jr., Measurements of He I Lifetimes and Fine Structure by a Two-Spectrometer Method, "Beam-Foil Spectroscopy," Vol. 1, 183-190 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

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, Opt. Spectrosc. (USSR) 40, 633.

2871. Y. Baudinet-Robinet, H. P. Garnir, P. D. Dumont, & A. E. Livingston, Effect of the Spatial Resolution Function of the Spectrometer on the Analysis of Multi-Exponential Beam-Foil Decay Curves, Phys. Scr. 14, 224.

2872. D. R. Beck, Oscillator Strengths in N, N^+, O, and O^+ Obtained from the First Order Theory of Oscillator Strengths (FOTOS), "Beam-Foil Spectroscopy," Vol. 1, 115-119 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2873. D. R. Beck & C. A. Nicolaides, Theoretical Lifetimes of the N II $2s2p^3$ and $2s^22p3s$ $^1P^o$ States Obtained by Applying "FOTOS", Phys. Lett. A 56, 265.

2874. D. R. Beck & C. A. Nicolaides, Theoretical Oscillator Strengths for the N I and O I Resonance Transitions, J. Quant. Spectrosc. Radiat. Transfer 16, 297.

2875. D. R. Beck & C. A. Nicolaides, Absorption Oscillator Strengths to Autoionizing States in Li, N, and F and Their Isoelectronic Sequences, Can. J. Phys. 54, 689.

2876. K. Behringer & P. Thoma, Measurement of Ultraviolet Argon(II) Transition Probabilities, J. Quant. Spectrosc. Radiat. Transfer 16, 605.

2877. G. D. Bell & G. A. Lyzenga, Absolute gf-Values for Nine Resonance Lines of Neutral Scandium, Proc. R. Soc. London, Ser. A 351, 581.

2878. R. D. Bengtson & M. H. Miller, Transition Probabilities of Br II, Phys. Rev. A 14, 1915.

2879. A. F. Bernhardt, D. E. Duerre, J. R. Simpson, & L. L. Wood, Oscillator Strength of the Barium $6p5d\ ^1P_1 - 5d^2\ ^1D_2$ Transition, J. Opt. Soc. Am. 66, 420.

2880. A. F. Bernhardt, D. E. Duerre, J. R. Simpson, & L. L. Wood, Oscillator Strength of the Barium $6s6p\ ^1P_1 - 6s5d\ ^1D_2$ Transition Inferred from Photodeflection Efficiency, J. Opt. Soc. Am. 66, 416.

2881. H. G. Berry, Experimental Lifetimes in Vanadium V, Phys. Scr. 13, 36.

2882. H. G. Berry & C. H. Batson, Spectroscopy of Heavy Ions Using the Beam-Foil Technique, "Beam-Foil Spectroscopy," Vol. 1, 367-375 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2883. H. G. Berry, J. Desesquelles, P. Tryon, P. Schnur, & G. Gabrielse, Mean Life Measurements of Ionized Ar and Cl Excited States at Grazing Incidence Wavelengths, Phys. Rev. A 14, 1457.

2884. N. D. Bhaskar & A. Lurio, Lifetime of the $1s_2(^1P_1)$ and $1s_4(^3P_1)$ Levels of Neon by the Cascade Hanle Effect, Phys. Rev. A 13, 1484.

2885. E. Biemont, Theoretical Oscillator Strengths for Ultraviolet Lines of Doubly Ionized Elements of Astrophysical Interest, J. Quant. Spectrosc. Radiat. Transfer 16, 137.

2886. E. Biemont, Cancellation Effects and Trends of Oscillator Strengths in the Potassium Isoelectronic Sequence, Physica C (Amsterdam) 81, 158.

2887. T. M. Bieniewski, Absolute Oscillator Strengths for Chromium and the Chromium Solar Abundance, Astrophys. J. 208, 228.

2888. D. E. Blackwell, P. A. Ibbetson, A. D. Petford, & R. B. Willis, Precision Measurement of Relative Oscillator Strengths. III. Fe I Transitions from Levels a $^5D_2$ (0.09 eV), a $^5D_1$ (0.11 eV), and a $^5D_0$ (0.12 eV), Mon. Not. R. Astron. Soc. 177, 219.

2889. D. E. Blackwell, P. A. Ibbetson, A. D. Petford, & R. B. Willis, Interpretation of the Solar Spectrum 300 nm to 900 nm. I. Fe I Lines of Excitation Potential 0.00 eV-0.12 eV Microturbulence, Damping, Abundance, Tests of Oscillator Strengths, Mon. Not. R. Astron. Soc. 177, 227.

2890. K. B. Blagoev, V. A. Komarovskii, & N. P. Penkin, Oscillator Strengths of the Spectral Lines of Atomic Thulium, Opt. Spectrosc. (USSR) 40, 356.

2891. J. Blaise, P. Camus, P. Kuhn, H.-J. Richter-Ditten, K. Rumpf, F. S. Tomkins, J. F. Wyart, Oscillator Strengths, Transition Probabilities, Lifetimes, "Gmelin Handbuch der Anorganischen Chemie," Seltenerdelemente, Teil B 4, System-Nummer 39, Sc, Y, La, und Lanthanide (Springer-Verlag, Berlin).

2892. P. O. Bogdanovicius, J. I. Boruta, & J. I. Vizbaraite, Calculation of the Probabilities of $np^5n'p \rightarrow np^5n's$ Dipole Transitions for the Ne I and Ar I Spectra in the Two-Configurational Approximation, Sov. Phys.--Collect. 16, No. 2, 42.

2893. M. A. Bouchiat & L. Pottier, Observation of the Interference Between the Magnetic and Electric Dipole Amplitudes of the Cesium 6S-7S Transition in an Electric Field. Measurement of the Transition Magnetic Moment, J. Phys. (Paris), Lett. 37, L-79.

2894. L. Brandus, Calculation of Transition Probabilities for Alkali Atoms, Rev. Roum. Phys. 21, 137.

2895. J. Brzozowski, P. Erman, M. Lyyra, & W. H. Smith, Radiative Lifetimes of Resonance Levels in Fe I and Fe II, Phys. Scr. 14, 48.

2897. J. P. Buchet, M. C. Buchet-Poulizac, & M. Druetta, Lifetime Measurements in O VI, O V, and O IV Between 100 and 1700 Å, J. Opt. Soc. Am. 66, 842.

2898. N. N. Bulatov, Forbidden Helium Radio Lines, Sov. Astron.-AJ 20, 315.

2899. B. R. Bulos, R. Gupta, & W. Happer, Lifetime Measurements in the Excited S States of K, Rb, and Cs by the Cascade Hanle Effect, J. Opt. Soc. Am. 66, 426.

2900. J. Campbell, Jr. & C. E. Head, Beam-Gas Jet Lifetimes for O II, Phys. Rev. A 13, 1965.

2901. B. L. Cardon, J. A. Leavitt, M. W. Chang, & S. Bashkin, Decay of the 2p3p $^3S_1$ Level of O III, "Beam-Foil Spectroscopy," Vol. 1, 251-258 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2902. L. R. Carlson, J. A. Paisner, E. F. Worden, S. A. Johnson, C. A. May, & R. W. Solarz, Radiative Lifetimes, Absorption Cross Sections, and the Observation of New High-Lying Odd Levels of ^{238}U Using Multi-Step Laser Photoionization, J. Opt. Soc. Am. 66, 846.

2903. L. R. Carlson, E. F. Worden, S. A. Johnson, C. A. May, R. W. Solarz, & J. A. Paisner, Radiative Lifetimes, Transition Strengths, and the Observation of New High-Lying Odd Levels in Atomic Uranium, "Abstracts--Fifth International Conference on Atomic Physics," 260-261 (Eds., R. Marrus, M. H. Prior, & H. A. Shugart, Berkeley, Calif.).

2904. M. S. Z. Chaghtai, K. Rahimullah, & S. Khatoon, The Transitions 4p-5s in Y VI, Zr VII, Nb VIII, and Mo IX, Phys. Scr. 14, 281.

2905. M. Chantepie, B. Laniepce, & J. Landais, Hanle Effect of Triplet Levels of the (6s,7d) Configuration of Mercury, Opt. Commun. 18, 354. (Fr.)

2906. L. F. Chase, W. C. Jordan, J. D. Perez, & R. R. Johnston, X-Ray Spectrum of a Laser-Produced Iron Plasma, Phys. Rev. A 13, 1497.

2907. M. A. A. Clyne & L. G. Piper, Kinetic Spectroscopy in the Far Vacuum Ultraviolet. Part 3. Oscillator Strengths for the 3s, 4s, and 5s $^3S - 2p^4\ ^3P_2$ Transitions in Atomic Oxygen, J. Chem. Soc., Faraday Trans. 2, 72, 2178.

2908. C. L. Cocke, Beam-Foil Spectroscopy, "Methods of Experimental Physics--Spectroscopy," Vol. 13, Part B, Ch. 5.1, 213-272 (Ed., D. Williams, Academic Press, New York).

2909. F. J. Comes & S. Pionteck, Laser Induced Photodissociation of C_2F_5I. Radiative Lifetime of the Metastable Iodine Atom ($^2P_{1/2}$), Chem. Phys. Lett. 42, 558.

2910. G. H. Copley, A Comparison of Self Broadening and Shift of Helium, Neon, and Argon Emission Lines, J. Quant. Spectrosc. Radiat. Transfer 16, 553.

2911. C. H. Corliss, Oscillator Strengths for Lines of Ionized Uranium (U II), J. Res. Nat. Bur. Stand., Sect. A 80, 429.

2912. C. H. Corliss, Line Strengths and Lifetimes of Levels in Neutral Uranium, J. Res. Nat. Bur. Stand., Sect. A 80, 1.

2913. C. H. Corliss & J. L. Tech, Revised Lifetimes of Energy Levels in Neutral Iron, J. Res. Nat. Bur. Stand., Sect. A 80, 787.

2914. R. D. Cowan & D. C. Griffin, Approximate Relativistic Corrections to Atomic Radial Wave Functions, J. Opt. Soc. Am. 66, 1010.

2915. R. J. S. Crossley, L. J. Curtis, & C. F. Fischer, Discrepancies Between Theoretical and Experimental Atomic Oscillator Strengths of the Sodium Isoelectronic Sequence Resonance Transition, Phys. Lett. A 57, 220.

2916. R. Crossley & S. Richards, Coulomb Methods in Atomic Transition Probability Calculations, "Beam-Foil Spectroscopy," Vol. 1, 83-87 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2917. L. J. Curtis, Lifetime Measurements, "Topics in Current Physics: Beam-Foil Spectroscopy," Vol. 1, Ch. 3, 63-109 (Ed., S. Bashkin, Springer-Verlag, New York).

2918. L. J. Curtis, B. Engman, & I. Martinson, Lifetime Measurements in Cu I and Cu II, Phys. Scr. 13, 109.

2919. D. Cvejanovic, A. Adams, & G. C. King, Measured Lifetimes in Cadmium Using the Electron-Photon Delayed Coincidence Technique, J. Phys. B 9, 1657.

2920. M. Czempiel & H. J. Andrä, Mean Lives of Rb II in the Visible and Vacuum Ultraviolet, "Beam-Foil Spectroscopy," Vol. 1, 191-198 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2921. W. Dankwort & E. Trefftz, Oscillator Strengths and Collision Strengths in Si X, Astron. Astrophys. 47, 365.

2922. D. K. Datta, S. K. Ghoshal, & S. Sengupta, Hartree-Fock Wave Functions and Oscillator Strengths for the Helium Isoelectronic Sequence, J. Quant. Spectrosc. Radiat. Transfer 16, 49.

2923. D. R. Beck & C. A. Nicolaides, Theory and Calculation of Excited-State Wave Functions and Properties, Int. J. Quantum Chem., Symp. No. 10, 119.

2924. A. Delage & J. D. Carette, Oscillator Strengths of Xe I Electronic Transitions Measured by Electron Spectrometry, Phys. Rev. A 14, 1345.

2925. A. Delage & J. D. Carette, Oscillator Strengths of Kr I Electronic Transitions Measured by Electron Spectrometry, J. Phys. B 9, 2399.

2926. G. A. Doschek & U. Feldman, Diagnostic Forbidden Lines of Highly Ionized Elements for Tokamak Plasmas, J. Appl. Phys. 47, 3083.

2927. G. W. F. Drake, Relativistic Corrections to Spin-Forbidden Electric-Dipole Transitions, J. Phys. B 9, L169.

2928. M. Druetta & J. P. Buchet, Beam-Foil Study of Krypton Between 400 and 800 Å, J. Opt. Soc. Am. 66, 433.

2929. P. D. Dumont, Y. Baudinet-Robinet, & A. E. Livingston, Beam-Foil Study of Nitrogen in the Vacuum Ultraviolet, Phys. Scr. 13, 365.

2930. B. I. Dynefors & I. Martinson, Beam-Foil Study of S III-S VI, "Beam-Foil Spectroscopy," Vol. 1, 223-230 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2931. A. Eibofner, Lifetime of the 4P State of Ionized Helium, Phys. Lett. A 58, 87.

2932. R. S. Ellis, The Solar Abundance of Titanium, Sol. Phys. 50, 261.

2933. Th. M. El Sherbini, Transition Probabilities and Radiative Lifetimes for Singly Ionized Xenon, J. Phys. B 9, 1665.

2934. Th. M. El Sherbini, Line Strengths and Lifetimes for Kr II, Z. Phys. A 276, 325.

2935. Th. M. El Sherbini & S. Allam, Calculation of Line Strengths and Lifetimes for Doubly Excited States in Be I, Atomkernenergie 27, 61.

2936. B. Engman, J. O. Stoner, Jr., & I. Martinson, Lifetimes of the 26099 cm^{-1} and 29973 cm^{-1} Levels in Er II, Phys. Scr. 13, 363.

2937. N. M. Erdevdi & L. L. Shimon, Experimental Investigation of the Lifetimes of the Resonance Excited States of Gallium Atoms, Opt. Spectrosc. (USSR) 41, 640.

2938. N. M. Erdevdi & L. L. Shimon, Lifetimes of Excited States of Indium, Strontium, and Barium, Opt. Spectrosc. (USSR) 40, 443.

2939. R. J. Exton, Cesium Oscillator Strengths Measured with a Multiple-Path-Length Absorption Cell, J. Quant. Spectrosc. Radiat. Transfer 16, 309.

2940. M. Fabry, Theoretical and Experimental Determinations of Cesium Oscillator Strengths, J. Quant. Spectrosc. Radiat. Transfer 16, 127.

2941. M. Fabry & J. R. Cussenot, Theoretical and Experimental Determination of Oscillator Strengths of Transitions in the Cesium Atom, Can. J. Phys. 54, 836. (Fr.)

2942. H. Ferfers, P. Klein, & D. Meiners, Measurement of the Transition Probability for the Kr I Line 5871 Å, Physica C (Amsterdam) 84, 292.

2943. C. F. Fischer, A Z-Dependent Representation of the Transition Integral, Phys. Scr. 14, 269.

2944. C. F. Fischer, Oscillator Strengths for ^2S - ^2P Transitions in the Copper Sequence, J. Phys. B 10, 1241.

2945. C. F. Fischer, Oscillator Strengths for the ^2P - ^2D Transitions of the Al I Sequence, Can. J. Phys. 54, 740.

2946. C. F. Fischer, Correlation Effects and f-Values in the Sodium Sequence, "Beam-Foil Spectroscopy," Vol. 1, 69-76 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2947. C. F. Fischer, Z-Dependence of Correlation Effects and f-Values in the Sodium Isoelectronic Sequence, Can. J. Phys. 54, 1465.

2948. C. F. Fischer, J. E. Hansen, & M. Barwell, Ab Initio Results for V I and Cr I, J. Phys. B 9, 1841.

2949. M. Gaillard, H. J. Plöhn, H. J. Andrä, D. Kaiser, & H. H. Schulz, On the Feasibility of Pulsed Laser Excitation of Fast Atomic Beams, "Beam-Foil Spectroscopy," Vol. 2, 853-857 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2950. Y.-K. Kim & J.-P. Desclaux, Spectroscopic and Bethe Cross Section Data for Sodium-Like Ions, Argonne National Laboratory Report ANL-76-88, Part I.

2951. T. F. Gallagher, S. A. Edelstein, & R. M. Hill, Radiative Lifetimes of Excited p States of Na, Phys. Rev. A 14, 2360.

2952. S. Garpman & N. Spector, Transition Probabilities for the $5p^4 6p$ - $5p^4 6s$ Array of Xe II, J. Opt. Soc. Am. 66, 904.

2953. E. E. Gibbs & P. Hannaford, The Hanle Effect in Atomic Vapours Produced by Cathodic Sputtering, J. Phys. B 9, L225.

2954. M. Godefroid, J. J. Berger, & G. Verhaegen, A Priori Calculation of Atomic Oscillator Strengths Using Correlated Transition States, J. Phys. B 9, 2181.

2955. A. Goly, Experimentally Determined Transition Probabilities of Some Carbon Multiplets in the Spectral Range from 2550 Å to 5100 Å, Astron. Astrophys. 52, 43.

2956. H. Gould & R. Marrus, Radiative Decay and Fine Structure of the 2 $^3P_0$ and the 2 $^3S_1$ States of Helium-Like Krypton (Kr XXXV), "Beam-Foil Spectroscopy," Vol. 1, 305-316 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2957. F. Gounand, P. R. Fournier, J. Cuvellier, & J. Berlande, Determination of Natural Radiative Lifetimes for Highly Excited P States in Rubidium, Phys. Lett. A 59, 23.

2958. P. F. Gruzdev & A. I. Sherstyuk, Use of Coulomb Functions with the Effective Orbital Quantum Number for the Calculation of Oscillator Strengths in Many-Electron Atoms, Opt. Spectrosc. (USSR) 40, 353.

2959. J. Hamel & J.-P. Barrat, Measurement of the Lifetime of Ion Energy Levels by Coherence Transfer in a Penning Collision. Application to the 4f $^2F_{7/2}$ and $^2F_{5/2}$ Levels of Mg^+, Opt. Commun. 18, 357. (Fr.)

2960. J. Hamel-Garcia, G. Cremer, & B. Laniepce, Hanle Effect of the Triplet Levels of the (4s,4d) Configuration of the Zinc Atom, Opt. Commun. 16, 289. (Fr.)

2961. H. Harde, Cascade Free Lifetime Measurements by Laser Excitation of Foil- or Gas-Excited Beams, "Beam-Foil Spectroscopy," Vol. 2, 859-872 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2962. M. D. Havey, L. C. Balling, & J. J. Wright, Measurement of the $^3P_1$ Lifetime in Sr, Phys. Rev. A 13, 1269.

2963. P. H. Heckmann, E. Träbert, H. Winter, F. Hannebauer, H. H. Bukow, & H. v. Buttlar, Lifetimes of O VI, O VII, and O VIII States by the Beam-Foil Technique, Phys. Lett. A 57, 126.

2964. J. Heldt & H. Salajczyk, A New Method of Measuring the Lifetime of Excited Atomic and Molecular States, Postepy Astron. 24, 33. (Pol.)

2965. A. Hibbert, Recent Configuration Interaction Studies in Atomic Lifetimes, "Beam-Foil Spectroscopy," Vol. 1, 29-41 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2966. A. Hibbert, Oscillator Strengths of Transitions Involving 2s3ℓ ^3L States in the Beryllium Sequence, J. Phys. B 9, 2805.

2967. E. A. Hinds & R. Novick, A Precise Lifetime Measurement of He^+ (2 $S_{1/2}$), "Abstracts--Fifth International Conference on Atomic Physics," 204 (Eds., R. Marrus, M. H. Prior, & H. A. Shugart, Berkeley, Calif.).

2968. D. J. G. Irwin & R. Drouin, Recent Beam-Foil Mean Life Measurements in Fluorine V-VIII, "Beam-Foil Spectroscopy," Vol. 1, 347-354 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2969. D. J. G. Irwin, J. A. Kernahan, E. H. Pinnington, & A. E. Livingston, Beam-Foil Mean Life Measurements in Krypton, J. Opt. Soc. Am. 66, 1396.

2970. D. J. G. Irwin & A. E. Livingston, Beam-Foil Spectroscopy of Sulfur in the Vacuum Ultraviolet, Can. J. Phys. 54, 805.

2971. G. S. Janes, I. Itzkan, C. T. Pike, R. H. Levy, & L. Levin, Two-Photon Laser Isotope Separation of Atomic Uranium: Spectroscopic Studies, Excited-State Lifetimes, and Photoionization Cross Sections, IEEE J. Quantum Electron. QE-12, No. 2, Pt. 2, 111.

2972. E. Jimenez & J. Campos, Indirect Population of Some Levels of Xe I in Excitation by Electrons, An. Fis. 72, 162. (Span.)

2973. W. R. Johnson & C. D. Lin, Relativistic Random Phase Approximation Applied to Atoms of the He Isoelectronic Sequence, Phys. Rev. A 14, 565.

2974. W. R. Johnson, C. D. Lin, & A. Dalgarno, Allowed and Forbidden Transitions of Helium-Like Ions, J. Phys. B 9, L303.

2975. N. I. Kaliteevskii & M. P. Chaika, Level Crossing Method Compared with Recent Achievements in High-Resolution Laser Spectroscopy, Sov. J. Quantum Electron. 6, 387.

2976. S. O. Kastner, Forbidden Transition Probabilities for Ground Terms of Ions with p or p^5 Configurations, Sol. Phys. 46, 179.

2977. T. Kato, Calculation of Oscillator Strengths of Dipole Transitions by the Coulomb Approximation, Research Report No. IPPJ-243 (Institute of Plasma Physics, Nagoya University, Nagoya, Japan).

2978. S. A. Kazantsev & E. S. Polzik, Investigation of Neon 4s and 3d Levels Using Alignment in a Discharge, Opt. Spectrosc. (USSR) 41, 645.

2979. F. M. Kelly & M. S. Mathur, Lifetimes of Some Triplet Levels of Neutral Strontium, Can. J. Phys. 54, 800.

2980. P. C. Kepple & J. Davis, Atomic Parameters and Rate Coefficients for Selected Transitions in Al(XII), J. Quant. Spectrosc. Radiat. Transfer 16, 993.

2981. J. A. Kernahan & P. H.-L. Pang, Experimental Transition Probabilities of 'Forbidden' Selenium Lines, Can. J. Phys. 54, 103.

2982. J. A. Kernahan, E. H. Pinnington, & K. E. Donnelly, Mean Life Measurements from Some Nitrogen Lines Below 500 Å, Phys. Lett. A 57, 323.

2983. Y.-K. Kim & J. P. Desclaux, Relativistic f-Values for the Resonance Transitions of Li- and Be-Like Ions, Phys. Rev. Lett. 36, 139.

2984. D. B. King & C. E. Head, Experimental Lifetimes for Selected Laser and Other Levels of Ar^+, Phys. Rev. A 13, 1778.

2985. G. C. King, K. A. Mohamed, F. H. Read, & R. E. Imhof, An Accurate Determination of the Lifetime of the 4p $^4D^o_{7/2}$ State in Argon II, J. Phys. B 9, 1247.

2986. J. Z. Klose, Measurement of Atomic Uranium Lifetimes for Isotope Separation, Proc. Soc. Photo-Opt. Instrum. Eng. 76, 150.

2987. E. J. Knystautas & R. Drouin, Satellite Lines in Highly-Stripped Ions of B, C, N, O, and F, "Beam-Foil Spectroscopy," Vol. 1, 377-384 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2988. E. J. Knystautas & R. Drouin, Doubly-Excited States in N V and N VI, "Beam-Foil Spectroscopy," Vol. 1, 393-400 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

2989. W. Kolyniak, T. Kornalewski, & K. Roszkowska, Multipole Lines in Spectrum of Bi II, Acta Phys. Pol. A 49, 679.

2990. J. Kowalski & F. Träger, Hyperfine Structure of the 4s4p $^1P_1$ State of ^{67}Zn by Level Crossing Spectroscopy, Z. Phys. A 278, 1.

2991. M. G. Kozlov, Determination of Absolute Values of Oscillator Strengths by Measuring the Absorption of Two Spectral Lines, Opt. Spectrosc. (USSR) 40, 551.

2992. M. G. Kozlov & B. E. Krylov, Atomic Constants Characterizing the Absorption Spectrum of Thallium Vapor in the 2030-600 Å Region, Opt. Spectrosc. (USSR) 41, 428.

2993. L. L. Kuzmickyte & K. K. Uspalis, Oscillator Strength for the $3d^N4p \rightarrow 3d^N4s$ Dipole Transitions in Singly Ionized Atoms of the Iron Group, Sov. Phys.--Collect. 16, No. 2, 46.

2994. C. S. Lage & W. Whaling, Transition Probabilities in Pr (II) and the Solar Praseodymium Abundance, J. Quant. Spectrosc. Radiat. Transfer 16, 537.

2995. B. Laniepce, J. Landais, & M. Chantepie, Measurement of Lifetimes of Triplet States of (5s7s), (5s6d), and (5s7d) Configurations of Cadmium, Opt. Commun. 19, 92. (Fr.)

2996. R. A. Lilly, Transition Probabilities for the Ne I 3p-4d Array, J. Opt. Soc. Am. 66, 971.

2997. R. A. Lilly, Transition Probabilities in the Spectra of Ne I, Ar I, and Kr I, J. Opt. Soc. Am. 66, 245.

2998. A. E. Livingston, New Identifications in the Spectra of Kr IV-Kr VII, J. Phys. B 9, L215; 9, 2355.

2999. A. E. Livingston, Y. Baudinet-Robinet, H. P. Garnir, & P. D. Dumont, Radiative-Lifetime Measurements for Si III 3s4s ^3S, S V 3s4f $^3F^o$, and Si IV and S VI 4f $^2F^o$, J. Opt. Soc. Am. 66, 1393.

3000. A. E. Livingston, P. D. Dumont, & Y. Baudinet-Robinet, Configuration Mixing Between 2p3p and 2s4s in N IV, J. Opt. Soc. Am. 66, 375.

3001. A. E. Livingston, P. D. Dumont, Y. Baudinet-Robinet, H. P. Garnir, E. Biemont, & N. Grevesse, Beam-Foil Studies of Nitrogen, Sulfur, and Silicon in the Vacuum Ultraviolet, "Beam-Foil Spectroscopy," Vol. 1, 339-346 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

3002. A. E. Livingston, H. Garnir, Y. Baudinet-Robinet, P. D. Dumont, E. Biemont, & N. Grevesse, Radiative-Lifetime Measurements for Sulfur and Silicon Transitions Observed in Interstellar Absorption Spectra, Astrophys. Lett. 17, 23.

3003. A. E. Livingston, J. A. Kernahan, D. J. G. Irwin, & E. H. Pinnington, Radiative-Lifetime Measurements in Si II-Si V, J. Phys. B 9, 389.

3004. A. V. Loginov & P. F. Gruzdev, Radiation Lifetimes of Xenon Levels, Opt. Spectrosc. (USSR) 41, 104.

3005. J. Lotrian, J. Cariou, & A. Johannin-Gilles, Determination of the Oscillator Strengths of Sn(I) in the Ultraviolet (2400-4000 Å), J. Quant. Spectrosc. Radiat. Transfer 16, 315.

3006. W. L. Luken & O. Sinanoglu, Oscillator Strengths for Transitions Involving Excited States Not Lowest of Their Symmetry: Nitrogen I and II Transitions, J. Chem. Phys. 64, 3141.

3007. W. L. Luken & O. Sinanoglu, Theory of Atomic Structures Including Electron Correlation. V. Excited States Not Lowest of Their Symmetry and Oscillator Strengths in Neutral and Singly Ionized Atoms, Phys. Rev. A 13, 1293.

3008. W. L. Luken & O. Sinanoglu, Oscillator Strengths for Transitions Involving Excited States Not Lowest of Their Symmetry: Carbon I and Fluorine II Transitions, J. Chem. Phys. 64, 4680.

3009. W. L. Luken & O. Sinanoglu, Oscillator Strengths for Transitions Involving Excited States Not Lowest of Their Symmetry: Oxygen I and Oxygen II Transitions, J. Chem. Phys. 64, 1495.

3010. H. Lundberg & S. Svanberg, Determination of Natural Radiative Lifetimes for S and D States in Rubidium and Cesium Using a Pulsed Dye Laser, Phys. Lett. A 56, 31.

3011. L. Maleki, D. G. King, C. E. Head, & T. N. Lawrence, Beam-Gas Studies of Cu II, Cl II, and As II, "Beam-Foil Spectroscopy," Vol. 1, 217-221 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

3012. J. V. Mallow & P. S. Bagus, Ultraviolet Oscillator Strengths for Carbon, Nitrogen, and Oxygen Ions, J. Quant. Spectrosc. Radiat. Transfer 16, 409.

3013. J. Marek & K. Niemax, The Influence of Collisions of Xe Atoms on the Lifetime of Atomic States of Cs, J. Phys. B 9, L483.

3014. G. A. Martin & W. L. Wiese, Atomic Oscillator Strength Distributions in Spectral Series of the Lithium Isoelectronic Sequence, Phys. Rev. A 13, 699.

3015. G. A. Martin & W. L. Wiese, Tables of Critically Evaluated Oscillator Strengths for the Lithium Isoelectronic Sequence, J. Phys. Chem. Ref. Data 5, 537.

3016. I. Martin & G. Simons, New Procedure for Generating Valence and Rydberg Orbitals. III. The Be Isoelectronic Sequence, Mol. Phys. 32, 1017.

3017. E. Meinders, Revised Analysis of the Cu IV Spectrum, Physica C (Amsterdam) 84, 117.

3018. J. Migdalek, Theoretical Oscillator Strengths for Some Transitions in P(III), As(III), Sb(III), and Bi(III), J. Quant. Spectrosc. Radiat. Transfer 16, 385.

3019. J. Migdalek, Theoretical Relativistic Oscillator Strengths. I. Transitions in Principal, Sharp, and Diffuse Series of Al I, Ga I, In I, and Tl I Spectra, Can. J. Phys. 54, 118.

3020. J. Migdalek, Theoretical Oscillator Strengths. II. Transitions in Principal, Sharp, and Diffuse Spectral Series of Al III, Ga III, In III, and Tl III Spectra, Can. J. Phys. 54, 130.

3021. J. Migdalek, Theoretical Oscillator Strengths. III. Transitions in Au I, Hg II, Pb IV, and Bi V Spectra, Can. J. Phys. 54, 2272.

3022. J. Migdalek, Theoretical Oscillator Strengths for Some Transitions in Si(II), Ge(II), Sn(II), and Pb(II) Spectra, J. Quant. Spectrosc. Radiat. Transfer 16, 265.

3023. K. Miyazaki, T. Watanabe, & K. Fukuda, Dispersion and Absorption Studies on the Doubly-Excited $5p^2\ ^3P_{0,1,2}$ States of Cd I, J. Phys. Soc. Jpn. 40, 233.

3024. K. A. Mohamed, G. C. King, & F. H. Read, Accurate Lifetime Measurements of Excited States in Argon II Using the Photon-Photon Delayed Coincidence Technique, J. Phys. B 9, 3159.

3025. A. Monteil, A. Bouvier, & J. Chevaleyre, Relaxation of the $2p_1$ Level of Neon in an Afterglow, C. R. Acad. Sci., Ser. B 282, 91. (Fr.)

3026. C. M. Moser, R. K. Nesbet, & M. N. Gupta, Variational Bethe-Goldstone Calculations of Atomic Oscillator Strengths. Be Sequence, Phys. Rev. A 13, 17.

3027. J. R. Mowat, K. W. Jones, & B. M. Johnson, Excitation Energy of the $(1s2s2p)\ ^4P^o_{5/2}$ State in Lithium-Like Aluminum, Phys. Rev. A 14, 1109.

3028. H. P. Mühlethaler & H. Nussbaumer, Transition Probabilities Within $2s^2$-2s2p-$2p^2$ in the Be I Sequence, Be I-Ni XXV, Astron. Astrophys. 48, 109.

3029. R. K. Nesbet, Stieltjes Imaging Method for Computation of Oscillator Strength Distributions for Complex Atoms, Phys. Rev. A 14, 1065.

3030. A. Ya. Nikolaich & A. L. Osherovich, The Radiative Lifetimes of the ^2S and ^2D States of the Rubidium Atom, Vestn. Leningr. Univ., Fiz., Khim. No. 2, 44. (Russ.)

3031. H. Nubbemeyer, Measurement of Ar(I) and Ar(II) Transition Probabilities in LTE Arc Plasmas, J. Quant. Spectrosc. Radiat. Transfer 16, 395.

3032. H. Nussbaumer, On the EUV Spectrum of Fe X and Ni XII, Astron. Astrophys. 48, 93.

3033. A. L. Osherovich, A. Ya. Nikolaich, & Ya. F. Verolainen, Investigation of the Lifetimes of Excited States of the Cesium Atom, Vestn. Leningr. Univ., Fiz., Khim. No. 3, 42. (Russ.)

3034. A. L. Osherovich & S. A. Pul'kin, Measurement of Radiative Lifetimes of Excited States of the Magnesium Atom, Vestn. Leningr. Univ., Fiz., Khim. No. 4, 40. (Russ.)

3035. A. L. Osherovich, Ya. F. Verolainen, A. Ya. Nikolaich, & V. N. Privalov, Measurement of Radiative Lifetimes of the 7 $^1S_0$, 6 $^1D_2$, 6 $^3S_1$, and 5 $^3D_{1,2,3}$ Levels of Cd I with Multichannel Delayed Coincidence Apparatus and with Crossing Atomic and Electron Beams, Vestn. Leningr. Univ., Fiz., Khim. No. 1, 69. (Russ.)

3036. G. V. Ovechkin & L. E. Sandrigailo, Broadening of Calcium Spectral Lines in an Arc Plasma, J. Appl. Spectrosc. (USSR) 24, 152.

3037. H. P. Palenius, L. J. Curtis, & L. Lundin, Beam-Foil Mean Life Measurements of the 3d4p ^1P and ^3F Levels in Sc II, J. Phys. B 9, L473.

3038. W. H. Parkinson, E. M. Reeves, & F. S. Tomkins, Measurements of Sc I gf-Values, Proc. R. Soc. London, Ser. A 351, 569.

3039. W. H. Parkinson, E. M. Reeves, & F. S. Tomkins, Neutral Calcium, Strontium, and Barium: Determination of f-Values of the Principal Series by the Hook Method, J. Phys. B 9, 157.

3040. D. J. Pegg, S. B. Elston, P. M. Griffin, H. C. Hayden, J. P. Forester, R. S. Thoe, R. S. Peterson, & I. A. Sellin, Radiative Lifetimes and Transition Probabilities for Electric-Dipole $\Delta n = 0$ Transitions in Highly Stripped Sulfur Ions, Phys. Rev. A 14, 1036.

3041. P. F. Liao & J. E. Bjorkholm, Optically-Induced Energy Level Shifts for Intermediate Intensities, Opt. Commun. 16, 392.

3042. N. P. Penkin & V. A. Komarovskii, Oscillator Strengths of Spectral Lines and Lifetimes of Excited Levels of Atoms of Rare Earth Elements with Unfilled 4f-Shells, J. Quant. Spectrosc. Radiat. Transfer 16, 217. (Russ.)

3043. G. Pichler, Measurement of the Oscillator Strengths of Principal Series Lines of Cesium, J. Quant. Spectrosc. Radiat. Transfer 16, 147.

3044. E. H. Pinnington, Beam-Foil Spectroscopy at the University of Alberta, "Beam-Foil Spectroscopy," Vol. 1, 235-250 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

3045. E. H. Pinnington, D. J. G. Irwin, A. E. Livingston, & J. A. Kernahan, Fluorine Mean Life Measurements Below 1000 Å Using the Beam-Foil Technique, Can. J. Phys. 54, 1014.

3046. H. Puell & C. R. Vidal, Determination of Oscillator Strengths with the Phase-Matching Condition, Opt. Commun. 19, 279.

3047. A. J. J. Raassen, Th. A. M. van Kleef, & B. C. Metsch, Term Analysis of the System $3d^6$ - $3d^5 4p$ of the Fifth Spectrum of Nickel (Ni V), Physica C (Amsterdam) 84, 133.

3048. F. H. K. Rambow & L. D. Schearer, Radiative Lifetimes of Some Group II Ions by the Hanle Effect in a Fast-Flowing Helium Afterglow, Phys. Rev. A 14, 1735.

3049. F. H. K. Rambow & L. D. Schearer, Radiative Lifetimes and Alignment Depolarization Cross Sections for Yb I and II by the Hanle Effect in a Flowing Helium System, Phys. Rev. A 14, 738.

3050. U. I. Safronova & A. B. Bolotinas, Wavelengths and Transition Probabilities for the Nitrogen Isoelectronic Series, Czech. J. Phys. B 26, 945.

3051. H. E. Saraph, Use of Frozen-Cores Wavefunctions for the Calculation of Oscillator Strengths in Mg^+ and Mg, J. Phys. B 9, 2379.

3052. I. A. Sellin, Highly Ionized Ions, Adv. At. Mol. Phys. 12, 215.

3053. B. van der Sijde, J. W. H. Dielis, & W. P. M. Graef, Experimental Natural Lifetime Determination of the Ar(II) Lower Laser Levels, J. Quant. Spectrosc. Radiat. Transfer 16, 1011.

3054. J. S. Sims, S. A. Hagstrom, & J. R. Rumble, Jr., Upper and Lower Bounds to Atomic and Molecular Properties. III. Lithium Oscillator Strengths for Various ^2S - ^2P Transitions, Phys. Rev. A 13, 242.

3055. O. Sinanoglu, Theoretical Oscillator Strengths of Neutral, Singly-Ionized, and Multiply-Ionized Atoms. The Theory, Comparisons with Experiment, and Critically Evaluated Tables with New Results, "Topics in Current Physics: Beam-Foil Spectroscopy," Vol. 1, Ch. 4, 111-146 (Ed., S. Bashkin, Springer-Verlag, New York).

3056. O. Sinanoglu & W. Luken, Predicted Lifetimes, Oscillator Strengths, and Wavelengths of Highly Ionized Many-Electron Heavy Atoms (P XI to Sn XLVI), with Both Relativistic and Correlation Effects, J. Chem. Phys. 64, 4197.

3057. E. R. Smith, Electron-Impact Excitation of Atomic Oxygen, Phys. Rev. A 13, 65.

3058. P. L. Smith, Absolute Oscillator Strengths for the Iron Group: A Correction to the Data of Warner for the Second Spectra and a Comment on Some of the Semi-Empirical Results of Kurucz and Peytremann, Mon. Not. R. Astron. Soc. 177, 275.

3059. R. W. Solarz, J. A. Paisner, L. R. Carlson, S. A. Johnson, E. F. Worden, & C. A. May, Observation and Study of High-Lying Rydberg and Valence States in Atomic Uranium by Multi-Step Photoionization, Opt. Commun. 18, 29.

3060. G. Sørensen, Heavy-Element Beam-Foil Lifetime Measurements and Related Experimental Problems, "Beam-Foil Spectroscopy," Vol. 1, 165-182 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

3061. J. O. Stoner, Jr., L. Klynning, I. Martinson, B. Engman, & L. Liljeby, Lifetime of the 3d4p z $^1P^o_1$ Level in Sc II by Laser Excitation of a Fast Ionic Beam, "Beam-Foil Spectroscopy," Vol. 2, 873-876 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

3062. J. O. Stoner, Jr. & I. Martinson, Profiles of the Spectral Lines Near 2363 Å and 2577 Å from Foil-Excited He, "Beam-Foil Spectroscopy," Vol. 1, 259-262 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

3063. A. Taszner, A. Kowalski, & J. Heldt, Decay Rate Measurements of Upper Laser Level in $He\text{-}Cd^+$ Laser, Appl. Phys. 11, 203.

3064. J. Tellinghuisen & M. A. A. Clyne, Role of Hyperfine Structure in Atomic Absorption. Oscillator Strengths in Br and I, J. Chem. Soc., Faraday Trans. 2, 72, 783.

3065. U. Teppner, L. H. Göbel, G. v. Oppen, & K. H. Martens, Polarization and Magnetic Depolarization of Fluorescence Lines of Mg I Excited by Electron Impact Depending on the Electron Energy, Astron. Astrophys. 52, 381. (Ger.)

3066. K. X. To & R. Drouin, Study of the Mean Lifetimes of the 2p, 3p, and 4p Levels of Hydrogen-Like Boron, Can. J. Spectrosc. 21, 21. (Fr.)

3067. E. Träbert, H. Winter, P. H. Heckmann, & H. v. Buttlar, Determination of Beam-Foil Lifetimes < 100 ps with a Grazing Incidence Spectrometer, Nucl. Instrum. Methods 135, 353.

3068. J. C. Weisheit, C. B. Tarter, J. H. Scofield, & L. M. Richards, The Spectra of Helium-Like Ions in Laser-Produced Plasmas, J. Quant. Spectrosc. Radiat. Transfer 16, 659.

3069. S. L. Varghese, C. L. Cocke, & B. Curnutte, Lifetime Measurements of the 2 $^3P_1$ State in Helium-Like Silicon and Sulfur, Phys. Rev. A 14, 1729.

3070. S. L. Varghese, C. L. Cocke, B. Curnutte, & R. R. Randall, Lifetime Measurement of the $^3P_1$ State of Helium-Like Sulfur, "Beam-Foil Spectroscopy," Vol. 1, 299-304 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

3071. S. L. Varghese, C. L. Cocke, B. Curnutte, & G. Seaman, Lifetime Measurements of the $^1P_1$ State of Helium-Like Si and Cl, J. Phys. B 9, L387.

3072. G. A. Victor, R. F. Stewart, & C. Laughlin, Oscillator Strengths for Ca I, Sc II, and Ti III, "Beam-Foil Spectroscopy," Vol. 1, 43-50 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

3073. G. A. Victor, R. F. Stewart, & C. Laughlin, Oscillator Strengths in the Mg Isoelectronic Sequence, Astrophys. J., Suppl. Ser. 31, 237.

3074. P. A. Voigt & R. L. Kornblith, Measurement of U I Relative Oscillator Strengths, J. Opt. Soc. Am. 66, 492.

3075. S. Watanabe, K. Kuroda, & I. Ogura, Line Width Measurement and Population Calculation of a He-Cd Laser, J. Appl. Phys. 47, 4887.

3076. K. Weckström & K.-E. Nysten, Beam-Foil Studies of 720 keV Aluminum Ions, Phys. Scr. 14, 218.

3077. A. W. Weiss, Transition Probabilities for Ionized Atoms, "Beam-Foil Spectroscopy," Vol. 1, 51-68 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

3078. W. Wiese, Regularities of Atomic Oscillator Strengths in Isoelectronic Sequences, "Topics in Current Physics: Beam-Foil Spectroscopy," Vol. 1, Ch. 5, 147-178 (Ed., S. Bashkin, Springer-Verlag, New York).

3079. W. L. Wiese & S. M. Younger, Atomic Oscillator Strengths in Fusion Plasma Research, "Beam-Foil Spectroscopy," Vol. 2, 951-960 (Eds., I. A. Sellin & D. J. Pegg, Plenum Press, New York).

3080. T. Wujec & J. Musielok, Measurements of Absolute Transition Probabilities of Sn I and Sn II Lines by Method of Emission Spectroscopy, Astron. Astrophys. 50, 405.

3081. G. V. Zhuvikin, N. P. Penkin, & L. N. Shabanova, Resonance Broadening and Lifetime of $3\ ^1P^o_1$ Level of Mg I, Opt. Spectrosc. (USSR) 41, 425.

1977

3102. G. Alessandretti, F. Chiarini, G. Gorini, & F. Petrucci, Measurement of the Cs 8S Level Lifetime, Opt. Commun. 20, 289.

3103. T. Andersen & A. Lindgard, Radiative Lifetimes of Excited Levels in Three-Electron Systems: Ga I, Ge II, As III, Se IV, and In I, Sn II, Sb III, Te IV, J. Phys. B 10, 2359.

3104. T. Andersen, P. Petersen, & E. Biemont, Radiative Lifetimes for Excited States in Doubly Ionized Elements ($21 \leq Z \leq 30$) of Astrophysical Interest, J. Quant. Spectrosc. Radiat. Transfer 17, 389.

3105. A. Arnesen, A. Bengtsson, R. Hallin, & T. Noreland, Lifetime Measurements of the La II y $^3F^o_{4,3,2}$ Levels with the Beam-Laser Method, J. Phys. B 10, 565.

3106. M. Aymar & E. Luc-Koenig, Relativistic Effects on Transition Probabilities in the Mg Isoelectronic Sequence, Phys. Rev. A 15, 821.

3107. D. R. Beck & C. A. Nicolaides, High Spin and Mixed States in B I and B II, Phys. Lett. A 61, 227.

3108. U. Becker, H. Bucka, & A. Schmidt, Lifetime Measurements of Excited Chromium I Levels, Astron. Astrophys. 59, 145.

3109. H. G. Berry, Beam-Foil Spectroscopy, Rep. Prog. Phys. 40, 155.

3110. E. Biemont, Study, Along Isoelectronic Sequences, of the Behavior of Lifetimes of Low-Excited Levels of the Alkalis, Physica C (Amsterdam) 85, 393. (Fr.)

3111. E. Biemont, Theoretical Oscillator Strengths in the Lithium Isoelectronic Sequence ($3 \leq Z \leq 22$), Astron. Astrophys., Suppl. Ser. 27, 489. (Fr.)

3112. K. B. Blagoev & V. A. Komarovskii, Relative Oscillator Strengths of the Atomic Lines of Erbium, Opt. Spectrosc. (USSR) 42, 340.

3113. K. B. Blagoev & V. A. Komarovskii, Relative Oscillator Strengths of the Spectral Lines of Atomic Samarium, Opt. Spectrosc. (USSR) 42, 229.

3114. K. B. Blagoev, V. A. Komarovskii, & N. P. Penkin, Lifetimes of Excited States of the Samarium Atom, Opt. Spectrosc. (USSR) 42, 238.

3115. G. E. Bromage, R. D. Cowan, & B. C. Fawcett, Energy Levels and Oscillator Strengths for $3s^2 3p^n$ - $3s^2 3p^{n-1} 3d$ Transitions of Fe X and Fe XI, Phys. Scr. 15, 177.

3116. G. E. Bromage & B. C. Fawcett, The $2p^3$ - $2p^2 3d$ Transition Array in Fe XX and Isoelectronic Ions, Mon. Not. R. Astron. Soc. 179, 683.

3117. G. E. Bromage & B. C. Fawcett, The $2p^4$ - $2p^3 3d$ Transition Array of Fe XIX and Isoelectronic Ions, Mon. Not. R. Astron. Soc. 178, 591.

3118. G. E. Bromage & B. C. Fawcett, The $2p^2$ - 2p3d Transition Array of Fe XXI and Isoelectronic Spectra, Mon. Not. R. Astron. Soc. 178, 605.

3119. G. E. Bromage, B. C. Fawcett, & R. D. Cowan, Classification of $2s^2 2p^n$ - $2s^2 2p^{n-1} 4d$ Fe XVIII and Fe XIX Lines in Laser-Produced Plasma and Solar Spectra, Mon. Not. R. Astron. Soc. 178, 599.

3120. N. H. Brooks, D. Rohrlich, & W. H. Smith, Transition Probabilities and Absolute Oscillator Strengths for Transitions of C I, O I, and N I Observed in Absorption in H I Regions, Astrophys. J. 214, 328.

3121. H. H. Bukow, G. Heine, & M. Reinke, Lifetime Measurements on Atomic States of He I, J. Phys. B 10, 2347.

3122. P. G. Burkhalter, G. A. Doschek, U. Feldman, & R. D. Cowan, Laser-Produced X-Ray Spectra of the Fluorine Isoelectronic Sequence for Zn, Ge, and Se, J. Opt. Soc. Am. 67, 741.

3123. L. R. Carlson, S. A. Johnson, E. F. Worden, C. A. May, R. W. Solarz, & J. A. Paisner, Determination of Absolute Atomic Transition Probabilities Using Time-Resolved Optical Pumping, Opt. Commun. 21, 116.

3124. M. Carre, M. L. Gaillard, & M. Lombardi, Study of Relaxation of Helium Levels Excited by Impact of Heavy Ions: I. Relaxation of the Alignment of Nonresonant Levels of He I, J. Phys. (Paris) 38, 553. (Fr.)

3125. M.-W. Chang, Mean Lives of Some Astrophysically Important Excited Levels in Carbon, Nitrogen, and Oxygen, Astrophys. J. 211, 300.

3126. K. T. Cheng & W. R. Johnson, Excitation Energies and Line Strengths in the Mg Isoelectronic Sequence, Phys. Rev. A 16, 263.

3127. K. T. Cheng & W. R. Johnson, Comment on Relativistic Transition Probability Calculations for the Be Isoelectronic Sequence, Phys. Rev. A 15, 1326.

3128. M. A. A. Clyne & W. S. Nip, Study of Elementary Reactions by Atomic Resonance Absorption with a Non-Reversed Source. Part 2. Oscillator Strengths for Cl 4s-$3p^5$ Transitions and Rate Constants for Specific Product Channels from Ar ($^3P_{2,0}$) + Cl, J. Chem. Soc., Faraday Trans. 2, 73, 161.

3129. J. C. Couturaud, Spectroscopic Study of Laser Created Aluminum Plasma, Opt. Commun. 22, 71.

3130. R. D. Cowan, Spectra of Highly Ionized Atoms of Tokamak Interest, Los Alamos Scientific Laboratory Informal Report LA-6679-MS.

3131. A. Czernichowski, A. Holys, & J. R. Roberts, Transition Probabilities for the 3s-4p Transitions of Ne I, J. Phys. (Paris) 38, 1065.

3132. J. J. Damelincourt, D. Karabourniotis, L. Scoarnec, & P. Herbet, Determination of the Transition Probability and Stark Constant for the 546.1 nm Hg Line, "Proceedings of the Thirteenth International Conference on Phenomena in Ionized Gases," 127 (East Berlin).

3133. W. A. Davis & R. Marrus, Radiative Decay from the $2\ ^3P_2$ and $2\ ^3P_0$ Levels of Helium-Like Argon, Phys. Rev. A 15, 1963.

3134. O. W. Day & E. G. Larson, Oscillator Strengths for the $2s^2$, $2p^2$, $2s3s(^1S)$ - $2s2p(^1P)$ Transitions of B(II), J. Quant. Spectrosc. Radiat. Transfer 17, 613.

3135. J. S. Deech, R. Luypaert, L. R. Pendrill, & G. W. Series, Lifetimes, Depopulation Cross Sections and Hyperfine Structures of Some Rydberg S and D States of ^{133}Cs, J. Phys. B 10, L137.

3136. D. R. Flower, Atomic Data for the Coronal Ion Fe^{8+}, Astron. Astrophys. 56, 451.

3137. D. R. Flower, Excitation of the Fe XII Spectrum in the Solar Corona, Astron. Astrophys. 54, 163.

3138. J. L. Fox & A. Dalgarno, Radiative Transition Probabilities of the $1s2p^2\ ^2P$ and $1s2p^2\ ^2D$ States of the Lithium Isoelectronic Sequence, Phys. Rev. A 16, 283.

3139. H. P. Garnir, Y. Baudinet-Robinet, & P. D. Dumont, Lifetimes of the $2s2p^5\ ^3P^o$ States in O I, Phys. Lett. A 59, 431.

3140. H. P. Garnir, A. E. Livingston, Y. Baudinet-Robinet, P. D. Dumont, E. Biemont, & N. Grevesse, Spectroscopic Studies of Si V and Si VI Between 500 and 1300 Å Using the Beam-Foil Method, J. Opt. Soc. Am. 67, 751.

3141. W. Gough & S. B. Griffiths, Sign and Magnitude of the Hyperfine Structure Interaction Constant, and Mean Lifetime of the $6s^26d\ ^2D_{3/2}$ State of Thallium I, J. Phys. B 10, 817.

3142. H. Gould & R. Marrus, Oscillator Strengths for Long-Lived n = 2 States in the Helium Isoelectronic Sequence at High Z, "Conference on Atomic Processes in High Temperature Plasmas," Abstract D-2 (Knoxville, Tennessee).

3143. J. E. Hansen, Multiconfiguration Hartree-Fock Study of the Interaction Between sp^6 and s^2p^4d in the Cl I, Br I, and I I Isoelectronic Sequences with Particular Emphasis on The Neutral Halogens, J. Opt. Soc. Am. 67, 754.

3144. J. E. Hansen & W. Persson, Strong Configuration Interaction Between 4d5p ^{1}F and the 5snf ^{1}F Series in Sr I, J. Phys. B 10, L363.

3145. M. D. Havey, L. C. Balling, & J. J. Wright, Direct Measurements of Ba^+ Excited-State Lifetimes, Phys. Rev. A 15, 2332.

3146. M. D. Havey, L. C. Balling, & J. J. Wright, Measurement of the Lowest S State Lifetime of Al, Ga, In, and Tl, J. Opt. Soc. Am. 67, 491.

3147. M. D. Havey, L. C. Balling, & J. J. Wright, Direct Measurements of Excited-State Lifetimes in Mg, Ca, and Sr, J. Opt. Soc. Am. 67, 488.

3148. J. D. Hey, The Role of the Oscillator Strength in the Determination of Plasma Densities, J. Quant. Spectrosc. Radiat. Transfer 17, 721.

3149. R. E. Imhof & R. H. Read, Measurement of Lifetimes of Atoms, Molecules, and Ions, Rep. Prog. Phys. 40, 1.

3150. F. M. Kelly & M. S. Mathur, The Density Dependence of the Hanle Effect in the Resonance Line of Atomic Barium, Can. J. Phys. 55, 83.

3151. E. J. Kelsey, The $2s_{1/2} \rightarrow 2p_{1/2}$ + One Photon Transition in Hydrogen and Hydrogen-Like Ions, Phys. Rev. A 15, 647.

3152. J. A. Kernahan, K. E. Donnelly, & E. H. Pinnington, Beam-Foil Spectroscopy of Neon in the Wavelength Range 209-602 Å, Can. J. Phys. 55, 1310.

3153. S. V. Khristenko, Probabilities of Two-Electron, Single-Photon, Inner-Shell Transitions, for Atoms, "All-Union Conference on Recent Theories of Atoms and Atomic Spectra," 42 (Leningrad). (Russ.)

3154. E. J. Knystautas & R. Drouin, Oscillator Strengths of Resonance Lines in Br(VI), (VII), and Kr(VII), (VIII), J. Quant. Spectrosc. Radiat. Transfer 17, 551.

3155. W. Kohsiek, On the Branching Ratios of Several Pairs of He(II) Lines, J. Quant. Spectrosc. Radiat. Transfer 17, 651.

3156. Z. I. Kupliauskis, Oscillator Strengths of X-Ray Transitions in Atoms and Ions of the Second Period, "All-Union Conference on Recent Theories of Atoms and Atomic Spectra," 134 (Leningrad). (Russ.)

3157. Z. I. Kupliauskis & A. V. Kupliauskene, Oscillator Strengths of $3s^2 3p^N - 3s3p^{N+1}$ Transitions in Neutral and Singly and Doubly Ionized Atoms, Opt. Spectrosc. (USSR) 42, 345.

3158. C. D. Lin & W. R. Johnson, Oscillator Strengths for the Beryllium Isoelectronic Sequence, Phys. Rev. A 15, 1046.

3159. C. D. Lin, W. R. Johnson, & A. Dalgarno, Radiative Decays of the n = 2 States of He-Like Ions, Phys. Rev. A 15, 154.

3160. D. L. Lin, W. Fielder, Jr., & L. Armstrong, Jr., Relativistic Oscillator Strengths for El Transitions in the Argon Isoelectronic Sequence, Phys. Rev. A 16, 589.

3161. J. Marek, Radiative Lifetime of the 8S, 9S, and 7D Levels of Cs I, Phys. Lett. A 60, 190.

3162. J. Marek & K. Vogt, Radiative Lifetimes of Some Excited Co I States, Z. Phys. A 280, 235.

3163. P. Martin & J. Campos, Lifetimes for Some levels of the $2p^5 4d$, $2p^5 5d$, $2p^5 4p$, and $2p^5 5s$ Configurations of Ne I, J. Phys. B 10, 1265.

3164. P. Martin & J. Campos, Experimental Absolute Transition Probabilities of Lines from the $3d'(3/2)_2$ Level of Ne I, J. Opt. Soc. Am. 67, 1327.

3165. P. Martin & J. Campos, Radiative Lifetime of Some $2p^4 3p$ Levels of Ne II Obtained by Means of the Delayed Coincidence Method, Physica C (Amsterdam) 92, 147.

3166. H. E. Mason & H. Nussbaumer, On the Unidentified Forbidden Coronal Lines, Astron. Astrophys. 54, 547.

3167. R. M. Measures, N. Drewell, & H. S. Kwong, Atomic Lifetime Measurements Obtained by the Use of Laser Ablation and Selective Excitation Spectroscopy, Phys. Rev. A 16, 1093.

3168. R. Mewe, Oscillator Strength Interpolation Formulae for Transitions to the Ground State within Isoelectronic Sequences of Hydrogen through Aluminum, Astron. Astrophys. 59, 275.

3169. K. A. Mohamed, G. C. King, & F. H. Read, Accurate Lifetime Measurements of Excited States in Krypton II and Xenon II Using the Photon-Photon Delayed-Coincidence Technique, J. Phys. B 10, 1835.

3170. R. K. Nesbet & H. W. Jones, Calculations of Oscillator Strengths and Excitation Energies for Valence-Shell States of Mg and Ca, Phys. Rev. A 16, 1161.

3171. D. V. Neuffer & E. D. Commins, Calculation of Parity-Nonconserving Effects in the $6\ ^2P_{1/2} - 7\ ^2P_{1/2}$ Forbidden M1 Transition in Thallium, Phys. Rev. A 16, 844.

3172. C. A. Nicolaides & D. R. Beck, Electronic Structure and Oscillator Strengths of Highly Excited States: Resonances in He^-, Li, and Be, J. Chem. Phys. 66, 1982.

3173. K. Niemax, Oscillator Strengths of Rb Quadrupole Lines, J. Quant. Spectrosc. Radiat. Transfer 17, 747.

3174. K. Niemax, Broadening and Oscillator Strengths of Cs Quadrupole Lines, J. Quant. Spectrosc. Radiat. Transfer 17, 125.

3175. H. Nussbaumer, The Si II Spectrum in Quasi Stellar Objects, Astron. Astrophys. 58, 291.

3176. D. J. Pegg, J. P. Forester, S. B. Elston, P. M. Griffin, K.-O. Groeneveld, R. S. Peterson, R. S. Thoe, C. R. Vane, & I. A. Sellin, The Splitting and Oscillator Strengths for the $2s\ ^2S - 2p\ ^2P^o$ Doublet in Lithium-Like Sulfur, Astrophys. J. 214, 331.

3177. D. J. Pegg, J. P. Forester, C. R. Vane, S. B. Elston, P. M. Griffin, K.-O. Groeneveld, R. S. Peterson, R. S. Thoe, & I. A. Sellin, Oscillator Strengths for In-Shell ($\Delta n = 0$) Dipole Transitions in Li- and Be-Like Sulfur, Phys. Rev. A 15, 1958.

3178. E. H. Pinnington, J. A. Kernahan, & K. E. Donnelly, Beam-Foil Spectroscopy of Bromine from 450 to 1000 Å, J. Opt. Soc. Am. 67, 162; 67, 853.

3179. E. H. Pinnington, P. Weinberg, W. Verfuss, & H. O. Lutz, Application of Multi-Channel Analysis Techniques to Beam-Foil Spectroscopy of Neutral Cobalt in the Region 3000 Å to 3950 Å, Z. Phys. A 281, 325.

3180. R. C. Preston, Transition Probabilities and Continuum Emission Coefficients in an Argon Arc Plasma, J. Phys. B 10, 1377.

3181. R. C. Preston, Spectroscopic Studies of a Plasma Temperature and Radiation Standard Based on a Wall-Stabilized Arc, J. Quant. Spectrosc. Radiat. Transfer 18, 337.

3182. J. Sabbagh & N. Sadeghi, Experimental Transition Probabilities of Some Xe(I) Lines, J. Quant. Spectrosc. Radiat. Transfer 17, 297.

3183. A. S. Safronova & S. V. Khristenko, Calculation of Dipole Matrix Elements, Oscillator Strengths, and Transition Probabilities for He, Be, and Ne Isoelectronic Sequences, "All-Union Conference on Recent Theories of Atoms and Atomic Spectra," 150 (Leningrad). (Russ.)

3184. A. S. Safronova, U. I. Safronova, & S. V. Khristenko, Derivation of Dipole Matrix Elements for the Isoelectronic Series of He, Be, Ne, Opt. Spectrosc. (USSR) 42, 235.

3185. U. I. Safronova & A. B. Bolotinas, An Expansion of Hartree-Fock and Correlation Energies, Relativistic Corrections, and the Dipole Matrix Element in the Powers of 1/Z, Czech. J. Phys. B 27, 7.

3186. U. I. Safronova & Z. B. Rudzikas, Relativistic Calculations of Transition Probabilities, J. Phys. B 10, 7.

3187. J. Schrijver, Calculated Oscillator Strengths for Some Inner-Shell Transitions in Lithium-Like Ions, Astron. Astrophys. 55, 183.

3188. D. Schulze-Hagenest, H. Harde, W. Brand, & W. Demtröder, Fast-Beam-Spectroscopy by Combined Gas Cell-Laser Excitation for Cascade-Free Lifetime Measurements of Highly Excited States, Z. Phys. A 282, 149.

3189. L. L. Shimon and N. M. Erdevdi, Experimental Study of the Excited State Lifetimes of Thallium Atoms and Ions, Opt. Spectrosc. (USSR) 42, 137.

3190. P. Shorer, C. D. Lin, & W. R. Johnson, Oscillator Strengths for the Magnesium Isoelectronic Sequence, Phys. Rev. A 16, 1109.

3191. N. Spector & S. Garpman, Radiative Lifetimes, Absolute Transition Probabilities, and Oscillator Strengths in Kr II, J. Opt. Soc. Am. 67, 155.

3192. T. Suzuki & K. Shimoda, Lifetimes and Cross Sections of Laser Levels of Xenon Measured by Hanle Effect, J. Phys. Soc. Jpn. 43, 233.

3193. E. Träbert, P. H. Heckmann, & H. v. Buttlar, Beam-Foil Lifetimes of O VII in the 10-100 ps Range, Z. Phys. A 280, 11.

3194. E. Träbert, P. H. Heckmann, & H. v. Buttlar, Beam-Foil Lifetimes of Highly Ionized Silicon, Z. Phys. A 281, 333.

3195. O. Vallee, P. Ranson, & J. Chapelle, Measurements of Broadening of Argon Lines and Oscillator Strengths of Resonance Lines, J. Quant. Spectrosc. Radiat. Transfer 18, 327.

3196. D. S. Victorov & U. I. Safronova, Oscillator Strengths and Transition Probabilities of the Be(I) Isoelectronic Sequence for $2p^2$ - 2s2p and 2s2p - $2s^2$ Transitions, J. Quant. Spectrosc. Radiat. Transfer 17, 605.

3197. D. S. Viktorov & U. I. Safronova, Oscillator Strengths and Transition Probabilities for $1s^2 2s^2$ - $1s^2 2s2p$ and $1s^2 2s2p$ - $1s^2 2p^2$ Transitions for the Be Isoelectronic Sequence, "All-Union Conference on Recent Theories of Atoms and Atomic Spectra," 145 (Leningrad). (Russ.)

3198. W. B. Westerveld & J. van Eck, Determination of Oscillator Strengths from the Self-Absorption of Resonance Radiation in Rare Gases, J. Quant. Spectrosc. Radiat. Transfer 17, 131.

3199. W. Whaling, J. M. Scalo, & L. Testerman, Transition Probabilities in Ti I and the Solar Titanium Abundance, Astrophys. J. 212, 581.

3200. H. Winter & M. Gaillard, Lifetime Measurement in $^{138}Ba^+$ Using Superimposed Ion and Laser Beams, Z. Phys. A 281, 311.

3201. D. J. H. Wort & C. G. Brown, Relative Branching Ratios in U I, Opt. Commun. 21, 205.

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ABSTRACT (*A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here.*)

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.

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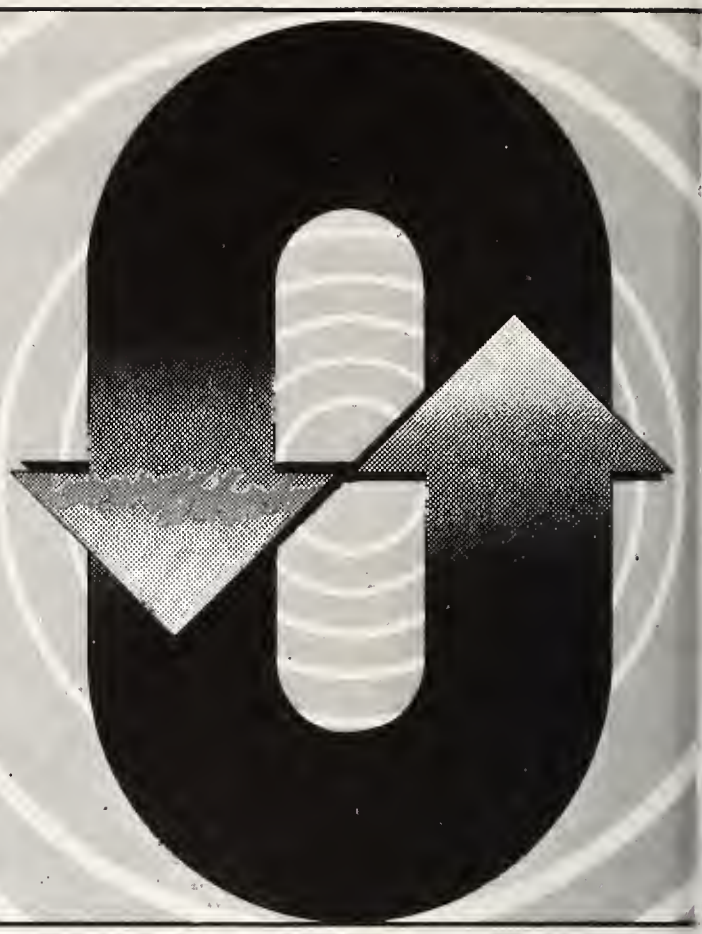

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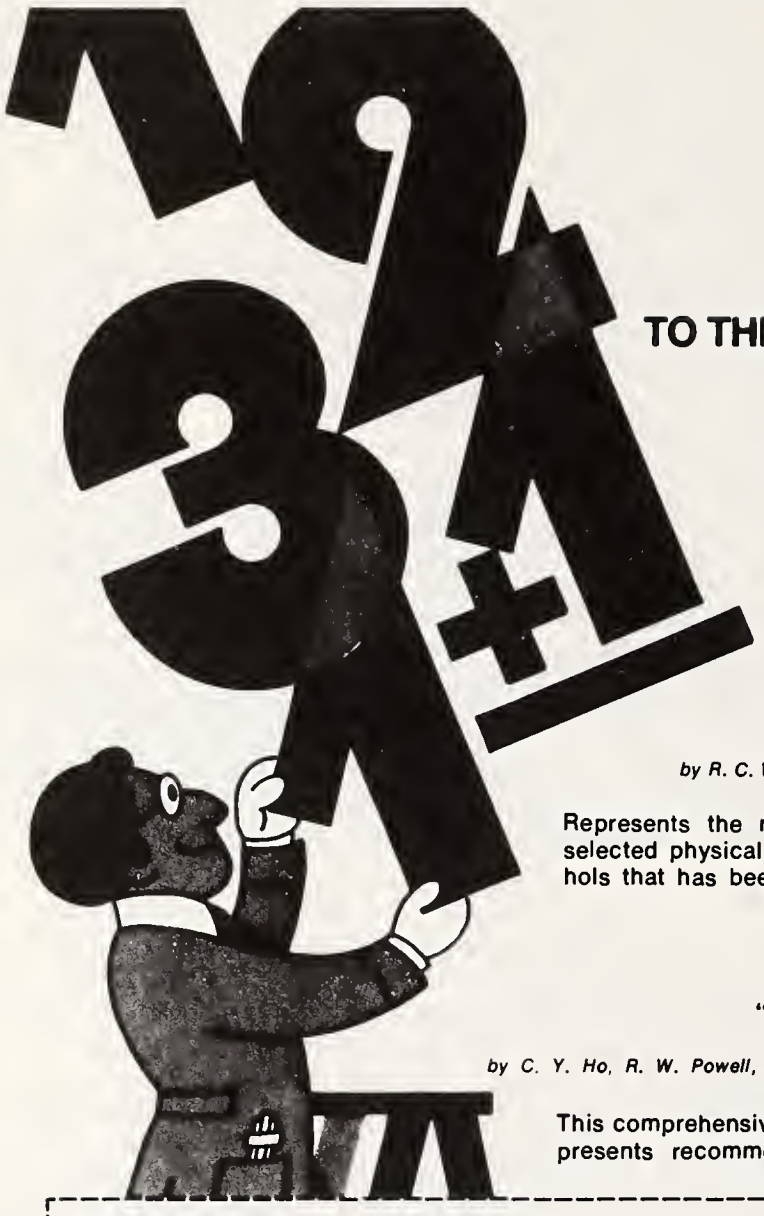

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