

UNITED STATES
DEPARTMENT OF
COMMERCE
PUBLICATION



REFERENCE

NAT'L INST. OF STAND & TECH



A11106 360301

NBS SPECIAL PUBLICATION 320
SUPPLEMENT 2

Bibliography on Atomic Transition Probabilities

July 1971 through June 1973

QC
100
U57
no.320
Suppl. 2
1973

U.S.
DEPARTMENT
OF
COMMERCE

National
Bureau
of
Standards

NATIONAL BUREAU OF STANDARDS

The National Bureau of Standards¹ was established by an act of Congress March 3, 1901. The Bureau's overall goal is to strengthen and advance the Nation's science and technology and facilitate their effective application for public benefit. To this end, the Bureau conducts research and provides: (1) a basis for the Nation's physical measurement system, (2) scientific and technological services for industry and government, (3) a technical basis for equity in trade, and (4) technical services to promote public safety. The Bureau consists of the Institute for Basic Standards, the Institute for Materials Research, the Institute for Applied Technology, the Institute for Computer Sciences and Technology, and the Office for Information Programs.

THE INSTITUTE FOR BASIC STANDARDS provides the central basis within the United States of a complete and consistent system of physical measurement; coordinates that system with measurement systems of other nations; and furnishes essential services leading to accurate and uniform physical measurements throughout the Nation's scientific community, industry, and commerce. The Institute consists of a Center for Radiation Research, an Office of Measurement Services and the following divisions:

Applied Mathematics — Electricity — Mechanics — Heat — Optical Physics — Nuclear Sciences² — Applied Radiation² — Quantum Electronics³ — Electromagnetics³ — Time and Frequency³ — Laboratory Astrophysics³ — Cryogenics³.

THE INSTITUTE FOR MATERIALS RESEARCH conducts materials research leading to improved methods of measurement, standards, and data on the properties of well-characterized materials needed by industry, commerce, educational institutions, and Government; provides advisory and research services to other Government agencies; and develops, produces, and distributes standard reference materials. The Institute consists of the Office of Standard Reference Materials and the following divisions:

Analytical Chemistry — Polymers — Metallurgy — Inorganic Materials — Reactor Radiation — Physical Chemistry.

THE INSTITUTE FOR APPLIED TECHNOLOGY provides technical services to promote the use of available technology and to facilitate technological innovation in industry and Government; cooperates with public and private organizations leading to the development of technological standards (including mandatory safety standards), codes and methods of test; and provides technical advice and services to Government agencies upon request. The Institute consists of a Center for Building Technology and the following divisions and offices:

Engineering and Product Standards — Weights and Measures — Invention and Innovation — Product Evaluation Technology — Electronic Technology — Technical Analysis — Measurement Engineering — Structures, Materials, and Life Safety⁴ — Building Environment⁴ — Technical Evaluation and Application⁴ — Fire Technology.

THE INSTITUTE FOR COMPUTER SCIENCES AND TECHNOLOGY conducts research and provides technical services designed to aid Government agencies in improving cost effectiveness in the conduct of their programs through the selection, acquisition, and effective utilization of automatic data processing equipment; and serves as the principal focus within the executive branch for the development of Federal standards for automatic data processing equipment, techniques, and computer languages. The Center consists of the following offices and divisions:

Information Processing Standards — Computer Information — Computer Services — Systems Development — Information Processing Technology.

THE OFFICE FOR INFORMATION PROGRAMS promotes optimum dissemination and accessibility of scientific information generated within NBS and other agencies of the Federal Government; promotes the development of the National Standard Reference Data System and a system of information analysis centers dealing with the broader aspects of the National Measurement System; provides appropriate services to ensure that the NBS staff has optimum accessibility to the scientific information of the world. The Office consists of the following organizational units:

Office of Standard Reference Data — Office of Technical Information and Publications — Library — Office of International Relations.

¹ Headquarters and Laboratories at Gaithersburg, Maryland, unless otherwise noted; mailing address Washington, D.C. 20234.

² Part of the Center for Radiation Research.

³ Located at Boulder, Colorado 80302.

⁴ Part of the Center for Building Technology.

MAY 6 1974

Bibliography on Atomic Transition Probabilities July 1971 through June 1973

J. R. Fuhr and W. L. Wiese

Institute for Basic Standards
National Bureau of Standards
Washington, D.C. 20234



U.S. DEPARTMENT OF COMMERCE, Frederick B. Dent, Secretary

NATIONAL BUREAU OF STANDARDS, Richard W. Roberts, Director

Issued November 1973

Library of Congress Catalog Number: 76-604227

National Bureau of Standards Special Publication 320 Supplement 2

Nat. Bur. Stand. (U.S.), Spec. Publ. 320 Suppl. 2, 63 pages (Nov. 1973)

CODEN: XNBSAV



U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON: 1973

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402
(Order by SD Catalog No. C13.10:320 Suppl. 2). Price 95 cents.

Foreword

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

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

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

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

Contents

	Page
Foreword	iii
1. Introduction	v
Table of abbreviations used for classification of the articles	vi
2. Available numerical tables of critically evaluated transition probabilities	vii
3. Bibliography	1
3.1. General references	1
3.2 References on isoelectronic sequences	3
3.2.1. Allowed lines	3
3.2.2. Forbidden lines	6
3.3. References on individual elements and stages of ionization	7

Bibliography on Atomic Transition Probabilities

July 1971 through June 1973

J. R. Fuhr and W. L. Wiese

This is the second supplement to the NBS Special Publication 320, "Bibliography on Atomic Transition Probabilities," and it covers the most recent literature on the subject from July 1971 through June 1973. The papers are arranged according to elements and stages of ionization, and the method employed and classification of transitions are indicated for each reference. Only articles on discrete transitions, both allowed and forbidden, are listed. Papers containing data for many elements within isoelectronic sequences are collected separately in front of the list in order to keep this bibliography to a reasonable size. Also included is a selected list of new papers dealing with the subject of atomic transition probabilities from a general point of view.

Key words: Allowed; atomic; discrete; forbidden; transition probability.

1. Introduction

Since the publication of our latest "Bibliography on Atomic Transition Probabilities (July 1969 through June 1971)" in September 1971, which is the first supplement to our earlier general bibliography,¹ the number of articles containing either numerical data or important reviews or comments of general interest has again increased sufficiently as to warrant a new supplement. This second supplement, containing about 300 references, includes all new papers (and a few older papers that were missed before) that were received in the NBS library before June 30, 1973. In this supplement, the format of the preceding bibliographies^{1,2} is retained.

Section 3.1 contains the important new papers dealing with the subject of atomic transition probabilities from a general point of view. However, we do not have new entries under all the subjects listed in the last bibliographies. We would like to note that this section contains only selected papers of special interest.

¹Miles, B.M., and Wiese, W.L., Bibliography on Atomic Transition Probabilities (January 1969 through June 1969). Nat. Bur. Stand. (U.S.), Spec. Publ. 320 (Feb. 1970).

²Fuhr, J. R., and Wiese, W. L., Bibliography on Atomic Transition Probabilities (July 1969 through June 1971). Nat. Bur. Stand. (U.S.), Spec. Publ. 320, Suppl. I (Sept. 1971).

In Section 3.2 we have listed those papers containing data for many spectra (about 20 spectra or more) along isoelectronic sequences and which are therefore rather comprehensive in nature. In these cases we have indicated the transitions for which the numerical data are given, in addition to listing the spectra that have been treated.

In Section 3.3 we have listed, in alphabetical order of the element symbols, all new references containing data on individual spectra and have classified these papers according to the methods employed. The key to the abbreviations follows on the next page. We have marked with an asterisk the element symbols of those species for which additional material is available from the papers listed in Section 3.2.

As an additional piece of information, we have assembled on page vii all available data tables of critically evaluated transition probabilities and their sources.

It is a pleasure to acknowledge the competent assistance of Mrs. B. Specht and Ms. E. White-Frazer in arranging and typing this bibliography.

Table of Abbreviations Used for Classification of the Articles

Except where "rel." (relative) appears, absolute values have been determined.

A. Theoretical methods:

1. SCF—self-consistent field calculations
2. CA—Coulomb approximation
3. quant.—other quantum mechanical calculations
4. quant. forb.—quantum mechanical calculations for forbidden lines
5. estim.—estimations from sum rules, etc.
6. interp.—interpolation within isoelectronic sequences, spectral series or homologous atoms.

B. Experimental methods:

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. Miscellaneous:

1. comm.—comments, additions, or corrections to other articles, methods, etc.
2. incompl.—article not yet classified (because translation is needed, incomplete information available, etc.)
3. compil.—compilations

Material on forbidden lines is marked as "forb."

2. Available 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, Vol. I, Nat.
Stand. Ref. Data Ser., Nat. Bur. Stand. (U.S.), 4,
157 pages (May 1966).

2. For the elements sodium through calcium:

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

4. Selected updated material for elements hydrogen
through calcium:

Wiese, W. L., and Miles, B.M., American In-
stitute 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).

3. BIBLIOGRAPHY

3.1 GENERAL REFERENCES

A. TABLES OF NUMERICAL VALUES

- Garstang, R. H., "Planetary Nebulae--International Astronomical Union Symposium No. 34," 143-152 (Ed. Osterbrock, D. E. & O'Dell, C. R., D. Reidel Publ. Co., Dordrecht, Holland, 1968) (Compilation of selected astrophysically important transition probabilities for forbidden lines).
- Smith, M. W. & Wiese, W. L., J. Phys. Chem. Ref. Data 2, 85 (1973) (A critical compilation of atomic transition probabilities for forbidden lines of the iron group elements).
- Wiese, W. L. & Miles, B. M., "American Institute of Physics Handbook," Ch. 7, 200-263, 3rd Edition (McGraw-Hill, New York, 1972).

* * * * *

B. PREVIOUS LITERATURE COMPILATIONS

- Fuhr, J. R. & Wiese, W. L., "Bibliography on Atomic Transition Probabilities (July 1969 through June 1971)," Nat. Bur. Stand. (U.S.), Spec. Publ. 320, Suppl. 1 (Sept. 1971).

* * * * *

C. REVIEW ARTICLES

- Kessler, K. G., Comments At. Mol. Phys. 2, 151 (1971) (Progress in the measurement of atomic transition probabilities).
- Nicolaides, C. & Sinanoglu, O., "New Directions in Atomic Physics," Vol. II: Experiment, Ch. 8, 139-157 (Ed. Condon, E. U. & Sinanoglu, O., Yale University Press, New Haven, Conn., 1972).
- Transactions of the International Astronomical Union, Vol. XIV B (1970), pp. 120-121.
- Wiese, W. L., "Physics of Ionized Gases 1972," 627-649 (Ed. Kurepa, M. V., Institute of Physics, Beograd, Yugoslavia, 1972) (Regularities in atomic oscillator strengths).

* * * * *

D. FUNDAMENTAL RELATIONSHIPS AND BASIC CONCEPTS

No new entries.

* * * * *

E. DETAILED DESCRIPTIONS OF EXPERIMENTAL OR THEORETICAL METHODS

Huber, M. C. E., "Modern Optical Methods in Gas Dynamic Research," 85-112 (Ed. Dosanjh, D. S., Plenum Press, New York, 1971) (Hook method).

Imhof, R. E. & Read, F. H., J. Phys. B 4, 450 (1971) (An electron-photon coincidence method to measure atomic lifetimes).

* * * * *

F. GENERAL COMMENTS

Berry, H. G., Curtis, L. J., & Subtil, J. L., J. Opt. Soc. Amer. 62, 771 (1972) (The treatment of cascading effects in beam-foil lifetime measurements).

Bonham, R. A., J. Chem. Phys. 56, 762 (1972) (Determination of optical oscillator strengths by electron impact spectroscopy).

Drake, G. W. F., Phys. Rev. A 5, 1979 (1972) (Relativistic corrections to radiative transition probabilities).

Feneuille, S., Physica (Utrecht) 53, 143 (1971) (Relativistic treatment of atomic transition probabilities).

Garstang, R. H., "Highlights of Astronomy," 555-560 (Ed. DeJager, C., D. Reidel, Dordrecht, Holland, 1971) (Comments on magnetic multipole transition probabilities).

Garstang, R. H., "Topics in Modern Physics--A Tribute to Edward U. Condon," 153-167 (Ed. Brittin, W. E. & Odabasi, H., Colorado Associated Univ. Press, Boulder, Colorado, 1971) (On relativistic transition probabilities).

Kay, L., Phys. Scr. 5, 138 (1972) (On influence of cascading effects on atomic lifetimes).

Valters, A. K., Opt. Spectrosc. (USSR) 29, 620 (1970) (The use of outer hooks to determine oscillator strengths by the anomalous dispersion method).

zu Putlitz, G., Comments At. Mol. Phys. 1, 51 (1969) (Concerning Fermi's paper on line strength anomalies).

* * * * *

G. ENVIRONMENTAL INFLUENCES ON TRANSITION PROBABILITIES

No new entries.

* * * * *

3.2 REFERENCES ON ISOELECTRONIC SEQUENCES

3.2.1 Allowed Lines

Brown, R. T. & Cortez, J.-L. M.

Astrophys. J. 176, 267 (1972).

quant.

Transitions treated:

Numerous lines in the $nd - n'f$ array (where $3 \leq n \leq 8$ and $4 \leq n' \leq 8$) for the He Sequence through S XV.

* * * * *

Drake, quoted in Dalgarno, A.

"The Menzel Symposium on Solar Physics, Atomic Spectra, and Gaseous Nebulae," 47-57, Nat. Bur. Stand. (U.S.), Spec. Publ. 353 (Aug. 1971).

quant.

Transitions treated:

The $1s^2 1S - 1s2p 1P^0$ and $1s2s 1S - 1s2p 1P^0$ transitions of the He Sequence through Ar XVII.

* * * * *

Drake, G. W. F.

Phys. Rev. A 5, 614 (1972).

quant.

Transitions treated:

He Sequence:

$3P^0 - 3P$

$1snp - 2p3p$ ($n = 2, 3, 4$)

$1s3d 3D - 2p3d 3D^0$

$2p^2 3P - 2p3d 3D^0$

$2p3p 3P - 2p3d 3D^0$

$1s3d 1D - 2p3d 1D^0$

$2p3p 1P - 2p3d 1D^0$

through Ar XVII.

* * * * *

Safronova, U. I., Ivanova, A. N.,
& Kharitonova, V. N.

Theor. Exp. Chem. (USSR) 5, 209 (1969).

quant.

Transitions treated:

$1s^2 2s^1 2p^{n_2} - 1s^2 2s^{n_1-1} 2p^{n_2+1}$ transitions where $n_1 = 1, 2$ and $n_2 = 0, 1, 2, 3, 4, 5$ for

Li Sequence ($n_1 = 1$; $n_2 = 0$)

Be Sequence ($n_1 = 1, 2$; $n_2 = 0, 1$)

B Sequence ($n_1 = 1, 2$; $n_2 = 1, 2$)

C Sequence ($n_1 = 1, 2$; $n_2 = 2, 3$)

N Sequence ($n_1 = 1, 2$; $n_2 = 3, 4$)

O Sequence ($n_1 = 1, 2$; $n_2 = 4, 5$)

F Sequence ($n_1 = 2$; $n_2 = 5$).

* * * * *

Laughlin, C. & Dalgarno, A.

Phys. Lett. A 35, 61 (1971).

quant.

Transitions treated:

$2s2p \frac{1}{2}P^0 - 2p^2 \frac{1}{2}D$ of the Be Sequence.

* * * * *

Gruzdev, P. F.

"Theory of Electronic Shells of Atoms and Molecules," Institute of Physics and Mathematics, Academy of Sciences of the Lithuanian SSR, 112-114 (Publishing House "Mintis," Vilnius, 1971).

quant.

Transitions treated:

$p^4 - p^3$'s resonance transitions for

O Sequence through Cu XXII

S Sequence through Cu XIV

Se Sequence through Kr III

Te Sequence through Xe III.

* * * * *

Ali, M. A.

Int. J. Quantum Chem. 35, 359 (1970).

quant.

Transitions treated:

$1s^2 2s^2 2p^4 (3p) 3s \frac{4}{2}P - 1s^2 2s^2 2p^4 (3p) 3p \frac{4}{2}D^0, \frac{4}{2}P^0, \frac{4}{2}S^0$

of the F Sequence.

* * * * *

Ali, M. A.

J. Quant. Spectrosc. Radiat. Transfer 11, 503 (1971).

quant.

Transitions treated:

All lines of the $2p^4 3p - 2p^4 3d$ array for the F Sequence.

* * * * *

Gruzdev, P. F.

Opt. Spectrosc. (USSR) 30, 319 (1971).

quant.

Transitions treated:

All lines of the $2p^5 - 2p^4 3s$ array for the F Sequence through Cu XXI.

* * * * *

Ali, M. A.

J. Phys. B 4, 748 (1971).

quant.

Transitions treated:

$4s^2 S - 4p^2 P^o$ and $4p^2 P^o - 4d^2 D$ of the Na Sequence.

* * * * *

Kharitonova, V. N. & Safronova, U. I.

"Theory of Electronic Shells of Atoms and Molecules," Institute of Physics and Mathematics, Academy of Sciences of the Lithuanian SSR, 85-89 (Publishing House "Mintis," Vilnius, 1971).

quant.

Transitions treated:

Numerous transitions within the $n = 3$ shell of the Na and Mg Sequences.

* * * * *

Laughlin, C., Lewis, M. N.,
& Horak, Z. J.

J. Opt. Soc. Amer. 63, 736 (1973).

quant.

Transitions treated:

$3d^2 D - 4p^2 P^o$ and $4p^2 P^o - 4d^2 D$ of the Na Sequence.

* * * * *

3.2.2 Forbidden Lines

Beigman, I. L. & Safronova, U. I.

Sov. Phys.-JETP 33, 1102 (1971).

quant. forb.

Transitions treated:

$1s^2 S - 2s^2 S$ transitions of the H Sequence; $1s^2 1S - 1s2s^3 S$ and $1s2s^3 S - 1s2s^1 S$ transitions of the He Sequence.

* * * * *

Johnson, W. R.

Phys. Rev. Lett. 29, 1123 (1972).

quant. forb.

Transitions treated:

$1s^2 S - 2s^2 S$ two-photon (E1) transitions and magnetic dipole (M1) transitions of the H Sequence.

* * * * *

Kaplan, S. A. & Kleiman, E. B.

Izv. Vyssh. Ucheb. Zaved., Radiofiz. 15, 305 (1972).

quant. forb.

Transitions treated:

The $1s^2 S - 2s^2 S$ transition of the H Sequence.

* * * * *

Zon, B. A. & Rapoport, L. P.

JETP Lett. 7, 52 (1968).

quant.

Transitions treated:

The $1s^2 S - 2s^2 S$ transition of the H sequence.

* * * * *

Freeman, F. F., Gabriel, A. H.,
Jones, B. B., & Jordan, C.

Phil. Trans. Roy. Soc. London, Ser. A 270, 127 (1971).

quant. forb.

Transitions treated:

The $1s^2 1S - 1s2s^3 S$ transition of the He Sequence.

* * * * *

3.3 REFERENCES ON INDIVIDUAL ELEMENTS AND STAGES OF IONIZATION

AUTHOR

JOURNAL

CLASSIFICATION

Ag (Silver)*

Ag I

Bucka, H., Einfeld, D., Ney, J., & Wilken, J.	"Third Conference on Atomic Spectroscopy," No. 21 (University of Reading, Reading, England, 1971).	life
Bucka, H., Einfeld, D., Ney, J., & Wilken, J.	Z. Naturforsch. A <u>26</u> , 1016 (1971).	life
Mølhavé, L. & Sørensen, G.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Moe, G. W. & McDermott, M. N.	Bull. Amer. Phys. Soc., Ser. II <u>17</u> , 150 (1972).	life
Pichler, G.	Fizika <u>4</u> , 179 (1972).	CA

Ag II

Mølhavé, L. & Sørensen, G.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
----------------------------	---	------

Al (Aluminum)*

Al I

Smith, W. H. & Liszt, H. S.	J. Opt. Soc. Amer. <u>61</u> , 938 (1971).	life
-----------------------------	--	------

Al II

Andersen, T., Roberts, J. R., & Sørensen, G.	Phys. Scr. <u>4</u> , 52 (1971).	life
---	----------------------------------	------

Al III

Ali, M. A.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 1611 (1971).	quant. forb.
Davis, J. & Morin, S.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 495 (1971).	CA
Kunze, H. J. & Datla, R. U.	Astrophys. J. <u>169</u> , 425 (1971).	CA
Tull, C. E., Jackson, M., McEachran, R. P., & Cohen, M.	Can. J. Phys. <u>50</u> , 1169 (1972).	quant. forb.
McEachran, R. P. & Cohen, M.	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 197 (1973).	comm. forb.

*See also Section 3.2 for some further references.

Al IX

Shamey, L. T.

J. Opt. Soc. Amer. 61, 942 (1971).

quant.

Al XI

Zapol', B. P., Junin, P. Z.,
Lyubimov, A. V., Taksar,
I. M., & Fabrikant, I. I.Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6,
14 (1971).

quant.

* * * * *

Ar (Argon)*

Ar I

Chenevier, M. & Goulet, G.

J. Phys. (Paris), Colloq. Cl 30, 84 (1969).

life

Lewis, E. L. & Stacey, D. N.

"Optical Pumping and Atomic Line Shape," 123-129 (Ed.
Skalinski, T., Panstwowe Wydawnictwo Naukowe, Warsaw,
1969).

misc.

Cowan, R. D.

J. Phys. (Paris), Colloq. 31, C4-191 (1970).

quant.

Evans, D. L., Marchand, J. M.,
Braun, W. G., & Oss, J. P.AIAA 8th Aerospace Sciences Meeting, New York, 1970,
Paper No. 70-42.

emiss.

Chen, C. J.

J. Opt. Soc. Amer. 61, 1267 (1971).

quant.

Grandin, J. P.

"Third Conference on Atomic Spectroscopy," No. 43
(University of Reading, Reading, England, 1971).

life

Houwelingen, D. van & Kruithof,
A. A.J. Quant. Spectrosc. Radiat. Transfer 11, 1235 (1971).

emiss.

Stedman, D. H. & Setser, D. W.

"Progress in Reaction Kinetics," Vol. 6, Part 4, 193-238
(Ed. Jennings, K. R. & Cundall, R. B., Pergamon Press,
New York, 1971).

quant. forb.

Stokes, A. D.

J. Phys. D 4, 930 (1971).

emiss.

Aymar, M.

Physica (Utrecht) 57, 178 (1972).

quant.

Malaikov, Yu. I. & Potyomkin,
V. G.Opt. Spectrosc. (USSR) 32, 129 (1972).

life

Pichler, G. & Vujnovic, V.

Phys. Lett. A 40, 397 (1972).

emiss.

Shumaker, J. B. & Popenoe, C. H.

Bull. Amer. Phys. Soc., Ser. II 17, 384 (1972).

emiss.

Van Dyck, R. S., Jr., Johnson,
C. E., & Shugart, H. A.Phys. Rev. A 5, 991 (1972).

life, forb.

Yamashita, I.

J. Phys. Soc. Jap. 32, 1447 (1972).

absorpt., rel.

Galy, J., Brunet, H., Birot,
A., & Artigue, J.-L.C. R. H. Acad. Sci., Ser. B 276, 23 (1973).

life

Larcher, G., Maillet, P., &
Thenard, C.C. R. H. Acad. Sci., Ser. B 276, 463 (1973).

comm.

Ar II

Lawrence, G. M. & Savage, B. D.

Astrophys. J. 146, 940 (1966).

life

"Excitation Electronique D'une Vapeur Atomique—Application
a la Spectroscopie," No. 162, 239-245 (Centre National
de la Recherche Scientifique, Paris, 1967).Kitaeva, V. F., Osipov, Yu. I.,
Rubin, P. L., & Sobolev, N. N.IEEE J. Quant. Electron. QE-5, 72 (1969).

quant.

*See also Section 3.2 for some further references.

Evans, D. L., Marchand, J. M., Braun, W. G., & Oss, J. P.	AIAA 8th Aerospace Sciences Meeting, New York, 1970, Paper No. 70-42.	emiss.
Arrathoon, R. & Sealer, D. A.	Phys. Rev. A <u>4</u> , 815 (1971).	life
Church, D. A., Druetta, M., & Liu, C. H.	Phys. Rev. Lett. <u>27</u> , 1763 (1971).	life
Garstang, R. H. & Odabasi, H.	"Topics in Modern Physics-- A Tribute to Edward U. Condon," 261-286 (Ed. Brittin, W. E. & Odabasi, H., Colorado Associated Univ. Press, Boulder, Colorado, 1971).	quant.
Houwelingen, D. van & Kruithof, A. A.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 1235 (1971).	emiss.
Ishii, K.	Sci. Light (Tokyo) <u>20</u> , 66 (1971).	quant.
Pinnington, E. H.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Andersen, T., Madsen, O. H., & Sørensen, G.	Phys. Scr. <u>6</u> , 125 (1972).	life
Livingston, A. E., Irwin, D. J. G., & Pinnington, E. H.	J. Opt. Soc. Amer. <u>62</u> , 1303 (1972).	life
Luyken, B. F. J.	Physica (Utrecht) <u>60</u> , 432 (1972).	quant.
Luyken, B. F. J., De Heer, F. J., Baas, R. Ch., & Tawara, H.	Physica (Utrecht) <u>62</u> , 249 (1972).	emiss., rel.
Malakhov, Yu. I. & Potyomkin, V. G.	Opt. Spectrosc. (USSR) <u>32</u> , 129 (1972).	life
Shumaker, J. B. & Popenc, C. H.	Bull. Amer. Phys. Soc., Ser. II <u>17</u> , 384 (1972).	emiss.
Sijde, B. van der	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 703 (1972).	compil.
Sze, R. C., Antropov, E. T., & Bennett, W. R., Jr.	Appl. Opt. <u>11</u> , 197 (1972).	life
Tidwell, E. D.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 431 (1972).	emiss.
Liu, C. H., Gardiner, R. B., & Church, D. A.	Phys. Lett. A <u>43</u> , 165 (1973).	life
Sijde, B. van der & Tidwell, E. D.	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 289 (1973).	comm.
Ar III		
Church, D. A., Druetta, M., & Liu, C. H.	Phys. Rev. Lett. <u>27</u> , 1763 (1971).	life
Irwin, D. G. J., Kernahan, J. A., Lin, C. C., Livingston, A. E., & Pinnington, E. H.	"Third Conference on Atomic Spectroscopy," No. 49 (University of Reading, Reading, England, 1971).	life
Pinnington, E. H.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Pinnington, E. H., Curnutt, B., & Dufay, M.	J. Opt. Soc. Amer. <u>61</u> , 978 (1971).	life
Livingston, A. E., Irwin, D. J. G., & Pinnington,	J. Opt. Soc. Amer. <u>62</u> , 1303 (1972).	life
Ar IV		
Irwin, D. G. J., Kernahan, J. A., Lin, C. C., Livingston, A. E., & Pinnington, E. H.	"Third Conference on Atomic Spectroscopy," No. 49 (University of Reading, Reading, England, 1971).	life
Pinnington, E. H.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Pinnington, E. H., Curnutt, B., & Dufay, M.	J. Opt. Soc. Amer. <u>61</u> , 978 (1971).	life

Livingston, A. E., Irwin, D. J. G., & Pinnington, E. H.	J. Opt. Soc. Amer. <u>62</u> , 1303 (1972).	life
	Ar V	
Irwin, D. G. J., Kernahan, J. A., Lin, C. C., Livingston, A. E., & Pinnington, E. H.	"Third Conference on Atomic Spectroscopy," No. 49 (University of Reading, Reading, England, 1971).	life
Pinnington, E. H.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Pinnington, E. H., Curnutt, B., & Dufay, M.	J. Opt. Soc. Amer. <u>61</u> , 978 (1971).	life
Livingston, A. E., Irwin, D. J. G., & Pinnington, E. H.	J. Opt. Soc. Amer. <u>62</u> , 1303 (1972).	life
	Ar VI	
Pinnington, E. H.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Livingston, A. E., Irwin, D. J. G., & Pinnington, E. H.	J. Opt. Soc. Amer. <u>62</u> , 1303 (1972).	life
	Ar VII	
Livingston, A. E., Irwin, D. J. G., & Pinnington, E. H.	J. Opt. Soc. Amer. <u>62</u> , 1303 (1972).	life
Kunze, H. J. & Datla, R. U.	Astrophys. J. <u>169</u> , 425 (1971).	CA, emiss.
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, 14 (1971).	quant.
Datla, R. U., Kunze, H. J., & Petrini, D.	Phys. Rev. A <u>6</u> , 38 (1972).	quant.
Druetta, M., Datla, R. U., & Kunze, H. J.	Astrophys. J. <u>174</u> , 215 (1972).	quant.
Livingston, A. E., Irwin, D. J. G., & Pinnington, E. H.	J. Opt. Soc. Amer. <u>62</u> , 1303 (1972).	life
	Ar VIII	
Crance, M.	At. Data <u>5</u> , 185 (1973).	quant.
	Ar IX	
Shamey, L. J.	J. Opt. Soc. Amer. <u>61</u> , 942 (1971).	quant.
	Ar XIV	
Sellin, I. A., Pegg, D. J., Griffin, P. M., & Smith, W. W.	Phys. Rev. Lett. <u>28</u> , 1229 (1972).	life
	Ar XVI	
Schmieder, R. W. & Marrus, R.	J. Opt. Soc. Amer. <u>61</u> , 1129 (1971).	life
	Ar XVII	

Feneuille, S. & Koenig, E.	C. R. H. Acad. Sci., Ser. B <u>274</u> , 46 (1972).	quant. forb.
Marrus, R. & Schmieder, R. W.	Phys. Rev. A <u>5</u> , 1160 (1972).	life, forb.
	Ar XVIII	
Marrus, R. & Schmieder, R. W.	Phys. Rev. A <u>5</u> , 1160 (1972).	life, forb.

* * * * *

As (Arsenic)*

	As IV	
Sørensen, G.	Phys. Rev. A <u>7</u> , 85 (1973).	life
	As V	
Sørensen, G.	Phys. Rev. A <u>7</u> , 85 (1973).	life

* * * * *

Au (Gold)*

	Au I	
Bucka, H., Einfeld, D., Ney, J., & Wilken, J.	Z. Phys. <u>194</u> , 208 (1966).	life
	"Premiere Reunion de l'Association Europeene de Spectroscopie Atomique," No. 11 (Faculte des Sciences, Paris, Orsay, 1969).	
Einfeld, D., Ney, J., & Wilken, J.	Z. Naturforsch. A <u>26</u> , 668 (1971).	life

* * * * *

B (Boron)*

	B I	
Lawrence, G. M. & Savage, B. D.	Phys. Rev. <u>141</u> , 67 (1966).	life
	"Excitation Electronique D'Une Vapeur Atomique--Application a la Spectroscopie," No. 162, 239-245 (Centre National de la Recherche Scientifique, Paris, 1967).	
Bromander, J.	Phys. Scr. <u>4</u> , 61 (1971).	life

*See also Section 3.2 for some further references.

McEachran, R. P. & Cohen, M.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 1819 (1971).	SCF
Smith, W. H. & Liszt, H. S.	J. Opt. Soc. Amer. <u>61</u> , 938 (1971).	life
Sibincic, Z.	Phys. Rev. A <u>5</u> , 1150 (1972).	quant.

B II

Lawrence, G. M. & Savage, B. D.	Phys. Rev. <u>141</u> , 67 (1966).	life
	"Excitation Electronique D'Une Vapeur Atomique—Application a la Spectroscopie," No. 162, 239-245 (Centre National de la Recherche Scientifique, Paris, 1967).	
Nicolaides, C. & Sinanoglu, O.	J. Phys. (Paris) Colloq. C <u>4</u> , Suppl. 11-12, <u>31</u> , C4-117 (1970).	quant.
Bromander, J.	Phys. Scr. <u>4</u> , 61 (1971).	life
Burke, P. G., Hibbert, A., & Robb, W. D.	J. Phys. B <u>5</u> , 37 (1972).	quant.
Nicolaides, C. A., Beck, D. R., & Sinanoglu, O.	J. Phys. B <u>6</u> , 62 (1973).	quant.

B III

Bromander, J.	Phys. Scr. <u>4</u> , 61 (1971).	life
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, 14 (1971).	quant.
Moitra, R. K. & Mukherjee, P. K.	Int. J. Quantum Chem. <u>6</u> , 211 (1972).	SCF
Buchet, J. P. & Buchet-Poulizac, M. C.	J. Opt. Soc. Amer. <u>63</u> , 243 (1973).	life

B IV

Drake, G. W. F. & Dalgarno, A.	Astrophys. J. <u>157</u> , 459 (1969).	quant.
Schiff, B., Pekeris, C. L., & Accad, Y.	Phys. Rev. A <u>4</u> , 885 (1971).	quant.
Cohen, M. & McEachran, R. P.	Can. J. Phys. <u>50</u> , 1363 (1972).	SCF
Cohen, M. & McEachran, R. P.	Chem. Phys. Lett. <u>14</u> , 201 (1972).	SCF
Jacobs, V. L.	J. Phys. B <u>5</u> , 213 (1972).	quant. forb.
Buchet, J. P. & Buchet-Poulizac, M. C.	J. Opt. Soc. Amer. <u>63</u> , 243 (1973).	life

B V

Buchet, J. P. & Buchet-Poulizac, M. C.	J. Opt. Soc. Amer. <u>63</u> , 243 (1973).	life
--	--	------

* * * * *

Ba (Barium)*

Ba I

Chenevier, M. & Goulet, G.	J. Phys. (Paris), Colloq. Cl <u>30</u> , 84 (1969).	life
----------------------------	---	------

*See also Section 3.2 for some further references.

Lidm, G., Ma, I. J., & zu Putlitz, G.	"Premiere Reunion de l'Association Europeene de Spectroscopic Atomique," No. 34 (Faculte des Sciences, Paris-Orsay, 1969).	life
Dickie, L. O. & Kelly, F. M.	Can. J. Phys. <u>49</u> , 2630 (1971).	life
Schaefer, A. R.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 499 (1971).	life
Hameed, S.	J. Phys. B <u>5</u> , 746 (1972).	quant.
Kim, Y.-K. & Bagus, P. S.	J. Phys. B <u>5</u> , L193 (1972).	quant.
L'vov, B. V.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 651 (1972).	absorpt.
	Method. Phys. Anal. <u>8</u> , 3 (1972).	

Ba II

Bucka, H.	Z. Naturforsch. <u>21a</u> , 654 (1966).	life
	"Excitation Electronique D'Une Vapeur Atomique—Application a la Spectroscopie," No. 162, 131-137 (Centre National de la Recherche Scientifique, Paris, 1967).	
Chenevier, M. & Goulet, G.	J. Phys. (Paris), Colloq. Cl <u>30</u> , 84 (1969).	life
Schaefer, A. R.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 499 (1971).	life

* * * * *

Be (Beryllium)*

Be I		
Kelly, H. P.	Phys. Rev. <u>136</u> , B896 (1964).	SCF
Nicolaides, C. & Sinanoglu, O.	J. Phys. (Paris) Colloq. C <u>4</u> , Suppl. 11-12, <u>31</u> , C4-117 (1970).	quant.
Andersen, T., Roberts, J. R., & Sørensen, G.	Phys. Scr. <u>4</u> , 52 (1971).	life
Berry, H. G., Bromander, J., Martinson, I., & Buchta, R.	Phys. Scr. <u>3</u> , 63 (1971).	life
Bromander, J.	Phys. Scr. <u>4</u> , 61 (1971).	life
Kelly, H. P.	"The Menzel Symposium on Solar Physics, Atomic Spectra, and Gaseous Nebulae," 37-46, Nat. Bur. Stand. (U.S.), Spec. Publ. 353 (Aug. 1971).	SCF
Burke, P. G., Hibbert, A., & Robb, W. D.	J. Phys. B <u>5</u> , 37 (1972).	quant.
Hameed, S.	J. Phys. B <u>5</u> , 746 (1972).	quant.
Hontzeas, S., Martinson, I., Erman, P., & Buchta, R.	Phys. Scr. <u>6</u> , 55 (1972).	life
L'vov, B. V.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 651 (1972).	absorpt.
Weiss, A. W.	Phys. Rev. A <u>6</u> , 1261 (1972).	quant.
Hibbert, A.	J. Phys. B <u>6</u> , L127 (1973).	quant.
Nicolaides, C. A., Beck, D. R., & Sinanoglu, O.	J. Phys. B <u>6</u> , 62 (1973).	quant.

Be II

Berry, H. G., Bromander, J., Martinson, I., & Buchta, R.	Phys. Scr. <u>3</u> , 63 (1971).	life
--	----------------------------------	------

*See also Section 3.2 for some further references.

Bromander, J.	Phys. Scr. <u>4</u> , 61 (1971).	life
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, <u>14</u> (1971).	quant.
Hontzeas, S., Martinson, I., Erman, P., & Buchta, R.	Phys. Scr. <u>6</u> , 55 (1972).	life
Moitra, R. K. & Mukherjee, P. K.	Int. J. Quantum Chem. <u>6</u> , 211 (1972).	SCF
		Be III
Kantseryavichus, A.	Litov. Fiz. Sb. <u>6</u> , 215 (1966).	quant.
Drake, G. W. F. & Dalgarno, A.	Astrophys. J. <u>157</u> , 459 (1969).	quant.
Schiff, B., Pekeris, C. L., & Accad, Y.	Phys. Rev. A <u>4</u> , 885 (1971).	quant.
Cohen, M. & McEachran, R. P.	Can. J. Phys. <u>50</u> , 1363 (1972).	SCF
Cohen, M. & McEachran, R. P.	Chem. Phys. Lett. <u>14</u> , 201 (1972).	SCF
Jacobs, V. L.	J. Phys. B <u>5</u> , 213 (1972).	quant. forb.

* * * * *

Bi (Bismuth)*

	Bi I	
Andersen, T., Madsen, O. H., & Sørensen, G.	J. Opt. Soc. Amer. <u>62</u> , 1118 (1972).	life
Svanberg, S.	Phys. Scr. <u>5</u> , 73 (1972).	life

	Bi IV	
Andersen, T., Kirkegaard Nielsen, A., & Sørensen, G.	Phys. Scr. <u>6</u> , 122 (1972).	life

	Bi V	
Andersen, T., Kirkegaard Nielsen, A., & Sørensen, G.	Phys. Scr. <u>6</u> , 122 (1972).	life

* * * * *

Br (Bromine)*

	Br VI	
Sørensen, G.	Phys. Rev. A <u>7</u> , 85 (1973).	interp.

*See also Section 3.2 for some further references.

Sørensen, G.

Phys. Rev. A 7, 85 (1973).

interp.

* * * * *

C (Carbon)***C I**

Lawrence, G. M. & Savage, B. D.	Phys. Rev. <u>141</u> , 67 (1966).	life
	"Excitation Electronique D'Une Vapeur Atomique—Application a la Spectroscopie," No. 162, 239-245 (Centre National de la Recherche Scientifique, Paris, 1967).	
Nicolaides, C. & Sinanoglu, O.	J. Phys. (Paris) Colloq. C <u>4</u> , Suppl. 11-12, <u>31</u> , C4-117 (1970).	quant.
Bromander, J.	Phys. Scr. <u>4</u> , 61 (1971).	life
Nicolaides, C., Sinanoglu, O., & Westhaus, P.	Phys. Rev. A <u>4</u> , 1400 (1971).	quant. forb.
Pegg, D. J., Chupp, E. L., & Dotchin, L. W.	Nucl. Instrum. Methods <u>92</u> , 527 (1971).	life
Poulizac, M. C., Druetta, M., & Ceyzeriat, P.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 1087 (1971).	life
Sinanoglu, O.	"Topics in Modern Physics—A Tribute to Edward U. Condon," 287-295 (Ed. Brittin, W. E. & Odabasi, H., Colorado Associated Univ. Press, Boulder, Colorado, 1971).	quant.
Mallow, J. V. & Burns, J.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 1081 (1972).	life
Nicolaides, C. A.	Chem. Phys. Lett. <u>17</u> , 436 (1972).	quant.

C II

Lawrence, G. M. & Savage, B. D.	Phys. Rev. <u>141</u> , 67 (1966).	life
	"Excitation Electronique D'Une Vapeur Atomique—Application a la Spectroscopie," No. 162, 239-245 (Centre National de la Recherche Scientifique, Paris, 1967).	
Sinanoglu, O.	Comments At. Mol. Phys. <u>2</u> , 73 (1970).	quant.
Bromander, J.	Phys. Scr. <u>4</u> , 61 (1971).	life
McEachran, R. P. & Cohen, M.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 1819 (1971).	SCF
Pegg, D. J., Chupp, E. L., & Dotchin, L. W.	Nucl. Instrum. Methods <u>92</u> , 527 (1971).	life
Poulizac, M. C. & Buchet, J. P.	Phys. Scr. <u>4</u> , 191 (1971).	life
Poulizac, M. C., Druetta, M., & Ceyzeriat, P.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 1087 (1971).	life
Sinanoglu, O.	"Theory of Electronic Shells of Atoms and Molecules," Institute of Physics and Mathematics, Academy of Sciences of the Lithuanian SSR, 31-44 (Publishing House "Mintis," Vilnius, 1971).	quant.
Mallow, J. V. & Burns, J.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 1081 (1972).	life

C III

Eissner, W. & Nussbaumer, H.	"Premiere Reunion de l'Association Europeene de Spectroscopie Atomique," No. 42 (Faculte des Sciences, Paris-Orsay, 1969).	quant.
------------------------------	--	--------

*See also Section 3.2 for some further references.

Nicolaides, C. & Sinanoglu, O.	J. Phys. (Paris) Colloq. C4, Suppl. 11-12, 31, C4-117 (1970).	quant.
Bromander, J.	Phys. Scr. 4, 61 (1971).	life
Feklistova, T.	Izv. Akad. Nauk Eston. SSR, Fiz. Mat. 20, 289 (1971).	quant.
Nussbaumer, H.	Astrophys. J. 170, 93 (1971).	quant.
Poulizac, M. C. & Buchet, J. P.	Phys. Scr. 4, 191 (1971).	life
Poulizac, M. C., Druetta, M., & Ceyzeriat, P.	J. Quant. Spectrosc. Radiat. Transfer 11, 1087 (1971).	life
Burke, P. G., Hibbert, A., & Robb, W. D.	J. Phys. B 5, 37 (1972).	quant.
Nussbaumer, H.	Astron. Astrophys. 16, 77 (1972).	quant.
Nussbaumer, H.	J. Phys. B 5, 1837 (1972).	quant.
Nicolaides, C. A., Beck, D. R., & Sinanoglu, O.	J. Phys. B 6, 62 (1973).	quant.

C IV

Poulizac, M. C. & Buchet, J. P.	Phys. Scr. 4, 191 (1971).	life
Poulizac, M. C., Druetta, M., & Ceyzeriat, P.	J. Quant. Spectrosc. Radiat. Transfer 11, 1087 (1971).	life
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, 14 (1971).	quant.
Leibowitz, E. M.	J. Quant. Spectrosc. Radiat. Transfer 12, 299 (1972).	quant.
Berry, H. G., Buchet-Poulizac, M. C., & Buchet, J. P.	J. Opt. Soc. Amer. 63, 240 (1973).	life

C V

Drake, G. W. F. & Dalgarno, A.	Astrophys. J. 157, 459 (1969).	quant.
Poulizac, M. C. & Buchet, J. P.	Phys. Scr. 4, 191 (1971).	life
Poulizac, M. C., Druetta, M., & Ceyzeriat, P.	J. Quant. Spectrosc. Radiat. Transfer 11, 1087 (1971).	life
Schiff, B., Pekeris, C. L., & Accad, Y.	Phys. Rev. A 4, 885 (1971).	quant.
Cohen, M. & McEachran, R. P.	Can. J. Phys. 50, 1363 (1972).	SCF
Cohen, M. & McEachran, R. P.	Chem. Phys. Lett. 14, 201 (1972).	SCF
Jacobs, V. L.	J. Phys. B 5, 213 (1972).	quant. forb.

* * * * *

Ca (Calcium)*

Ca I

Smith, W. H. & Liszt, H. S.	J. Opt. Soc. Amer. 61, 938 (1971).	life
Hameed, S.	J. Phys. B 5, 746 (1972).	quant.
Kim, Y.-K. & Bagus, P. S.	J. Phys. B 5, L193 (1972).	quant.

*See also Section 3.2 for some further references.

L'vov, B. V.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 651 (1972).	absorpt.
Fischer, C. F.	Method. Phys. Anal. <u>8</u> , 3 (1972).	
	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 201 (1973).	quant., SCF
	Ca II	
Ali, M. A.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 1611 (1971).	quant. forb.
Smith, W. H. & Liszt, H. S.	J. Opt. Soc. Amer. <u>61</u> , 938 (1971).	life
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, <u>14</u> (1971).	quant.
Black, J. H., Weisheit, J. C., & Lariana, E.	Astrophys. J. <u>177</u> , 567 (1972).	quant.
Yukov, E. A.	Sov. Astron. - AJ <u>15</u> , 867 (1972).	quant.
Tully, J. A., Petrini, D., & Bely, O.	Astron. Astrophys. <u>23</u> , 15 (1973).	quant.
	Ca III	
Cowan, R. D.	J. Phys. (Paris), Colloq. <u>31</u> , C4-191 (1970).	quant.
	Ca X	
Kunze, H. J. & Datla, R. U.	Astrophys. J. <u>169</u> , 425 (1971).	CA
	Ca XI	
Crance, M.	At. Data <u>5</u> , 185 (1973).	quant.
	Ca XIV	
Ivanov, L. N., Ivanova, E. P., & Tolmachev, V. V.	Sov. Phys. J. <u>12</u> , 1578 (1969).	quant.
Ivanov, L. N., Ivanova, E. P., & Tolmachev, V. V.	"Theory of Electronic Shells of Atoms and Molecules," Institute of Physics and Mathematics, Academy of Sciences of the Lithuanian SSR, 90-94 (Publishing House "Mintis," Vilnius, 1971).	quant.
	Ca XVII	
Nussbaumer, H.	Astron. Astrophys. <u>16</u> , 77 (1972).	quant.
	* * * * *	
	Cd (Cadmium)*	
	Cd I	
Soleillet, P. & Ploquin, J.	C. R. H. Acad. Sci. <u>217</u> , 368 (1943).	life
Spitzer, M.	Ann. Phys. (Paris) <u>5</u> , 707 (1960).	life
Berkowitz, J. & Lifshitz, C.	J. Phys. B <u>1</u> , 438 (1968).	misc.
Hanle, W., Pepperl, R., & Reuscher, H.	"Physics of the One- and Two-Electron Atoms," 375-379 (Ed. Bopp, F. & Kleinpoppen, H., North-Holland Publishing Co., Amsterdam, 1969).	life

*See also Section 3.2 for some further references.

Pepperl, R.	Z. Naturforsch. A <u>25</u> , 927 (1970).	life
Zilitis, V. A.	Opt. Spectrosc. (USSR) <u>31</u> , 86 (1971).	quant., SCF
Andersen, T., Mølhav, L., & Sørensen, G.	Astrophys. J. <u>178</u> , 577 (1972).	life
L'vov, B. V.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 651 (1972).	absorpt.
Andersen, T. & Sørensen, G.	Method. Phys. Anal. <u>8</u> , 3 (1972).	
	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 369 (1973).	life
	Cd II	
Hyman, H. A.	Chem. Phys. Lett. <u>10</u> , 242 (1971).	quant.
Andersen, T. & Sørensen, G.	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 369 (1973).	life
	* * * * *	

Cl (Chlorine)*

Bashkin, S. & Martinson, I.	Cl II	
Martinson, I.	J. Opt. Soc. Amer. <u>61</u> , 1686 (1971).	life
"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).		life
	Cl III	
Bashkin, S. & Martinson, I.	J. Opt. Soc. Amer. <u>61</u> , 1686 (1971).	life
Martinson, I.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Beck, D. R. & Sinanoglu, O.	Phys. Rev. Lett. <u>28</u> , 945 (1972).	quant.
	Cl IV	
Bashkin, S. & Martinson, I.	J. Opt. Soc. Amer. <u>61</u> , 1686 (1971).	life
Martinson, I.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
	Cl V	
Bashkin, S. & Martinson, I.	J. Opt. Soc. Amer. <u>61</u> , 1686 (1971).	life
Martinson, I.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
	Cl VI	
Bashkin, S. & Martinson, I.	J. Opt. Soc. Amer. <u>61</u> , 1686 (1971).	life
Martinson, I.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
	Cl VII	
Bashkin, S. & Martinson, I.	J. Opt. Soc. Amer. <u>61</u> , 1686 (1971).	life

*See also Section 3.2 for some further references.

Kunze, H. J. & Datla, R. U.	Astrophys. J. <u>169</u> , 425 (1971).	CA
Martinson, I.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Pegg, D. J., Sellin, I. A., Griffin, P. M., & Smith, W. W.	Phys. Rev. Lett. <u>28</u> , 1615 (1972).	life

Cl VIII

Crance, M.	At. Data <u>5</u> , 185 (1973).	quant.
------------	---------------------------------	--------

Cl XV

Sellin, I. A., Pegg, D. J., Griffin, P. M., & Smith, W. W.	Phys. Rev. Lett. <u>28</u> , 1229 (1972).	life
--	---	------

* * * * *

Co (Cobalt)*

Co VIII.

Warner, B. & Kirkpatrick, R. C.	Mon. Notic. Roy. Astron. Soc. <u>144</u> , 397 (1969).	quant., quant. forb.
	Publications of the Department of Astronomy, University of Texas at Austin, Vol. III, No. 2 (1969).	

Co XVII

Tull, C. E., McEachran, R. P., & Cohen, M.	At. Data <u>3</u> , 169 (1971).	SCF
Tull, C. E., Jackson, M., McEachran, R. P., & Cohen, M.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 893 (1972).	quant. forb.

Co XVIII

Crance, M.	At. Data <u>5</u> , 185 (1973).	quant.
------------	---------------------------------	--------

Co XX

Gruzdev, P. F.	Zh. Prikl. Spektrosk. <u>14</u> , 1100 (1971).	quant.
----------------	--	--------

* * * * *

Cr (Chromium)*

Cr I

Cocke, C. L., Curnutte, B., & Brand, J. H.	Astron. Astrophys. <u>15</u> , 299 (1971).	life
Fischer, C. F.	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 201 (1973).	quant., SCF

*See also Section 3.2 for some further references.

Cr II

Kuzmitskite, L. L. & Ushpalis, K. K.	Litov. Fiz. Sb. <u>10</u> , 201 (1970).	quant.
Kuzmitskite, L. L., Ushpalis, K. K., & Dembauskaite, A. V.	Litov. Fiz. Sb. <u>10</u> , 213 (1970).	quant.
Kuzmitskite, L. L., & Ushpalis, K. K.	"Theory of Electronic Shells of Atoms and Molecules," Institute of Physics and Mathematics, Academy of Sciences of the Lithuanian SSR, 144-147, (Publishing House "Mintis," Vilnius, 1971).	quant.

Cr V

Warner, B. & Kirkpatrick, R. C.	Mon. Notic. Roy. Astron. Soc. <u>144</u> , 397 (1969).	quant., quant. forb.
	Publications of the Department of Astronomy, University of Texas at Austin, Vol. III, No. 2 (1969).	

Cr VII

Cowan, R. D.	J. Phys. (Paris), Colloq. <u>31</u> , C4-191 (1970).	quant.
--------------	--	--------

Cr XV

Crance, M.	At. Data <u>5</u> , 185 (1973).	quant.
------------	---------------------------------	--------

* * * * *

Cs (Cesium)*

Cs I

Kantseryavichus, A. Yu. & Zhilionite, S. V.	Litov. Fiz. Sb. <u>7</u> , 73 (1967).	CA
Hertel, I. V. & Ross, K. J.	J. Phys. B <u>2</u> , 484 (1969).	misc. forb.
Rydberg, S. & Svanberg, S.	"Second Conference on Atomic Spectroscopy," No. 24 (Institut A für Experimentalphysik der Technischen Universität, Hannover, Germany, 1970).	life
Klyucharev, A. N. & Lazarenko, A. V.	Opt. Spectrosc. (USSR) <u>30</u> , 628 (1971).	absorpt., rel.
Sayer, B., Wang, R., Jeannet, J. C., & Sassi, M.	J. Phys. B <u>4</u> , L20 (1971).	absorpt. forb.
Sternheimer, R. M. & Peierls, R. F.	Phys. Rev. A <u>3</u> , 837 (1971).	quant.
Rydberg, S. & Svanberg, S.	Phys. Scr. <u>5</u> , 209 (1972).	life
Weisheit, J. C.	Phys. Rev. A <u>5</u> , 1621 (1972).	quant.
Chen, C. L. & Phelps, A. V.	Phys. Rev. A <u>7</u> , 470 (1973).	absorpt.
Norcross, D. W.	Phys. Rev. A <u>7</u> , 606 (1973).	quant.

* * * * *

#See also Section 3.2 for some further references.

Cu (Copper)*

Cu I

Semenova, O. P., Gorbunova, T. M., & Kirilov, A. E.	Sov. Phys. J. <u>12</u> , 927 (1969).	emiss. rel.
Sukhanova, G. B. & Semenova, O. P.	Izv. Vyssh. Ucheb. Zaved., Fiz. No. 11, 147 (1970).	emiss.
Bieniewski, T. M. & Krueger, T. K.	Aerospace Research Laboratories Report ARL 71-0135, Project No. 7114 (1971).	absorpt., SCF
Pichler, G.	Fizika <u>4</u> , 179 (1972).	CA

Cu XIX

Kunze, H. J. & Datla, R. U.	Astrophys. J. <u>169</u> , 425 (1971).	CA
-----------------------------	--	----

Cu XXII

Gruzdev, P. F.	Zh. Prikl. Spektrosk. <u>14</u> , 1100 (1971).	quant.
----------------	--	--------

Eu (Europium)*

Eu I

Kretzen, H., Lange, W., Luther, J., Steudel, A., & Walther, H.	"Premiere Reunion de l'Association Europeene de Spectroscopie Atomique," No. 31 (Faculte des Sciences, Paris--Orsay, 1969).	life
---	---	------

* * * * *

F (Fluorine)*

F I

Irwin, D. J. G. & Livingston, A. E.	Can. J. Phys. <u>51</u> , 848 (1973).	life
--	---------------------------------------	------

F II

Kiselevskii, L. I. & Trukhan, E. P. Sinanoglu, O.	J. Appl. Spectrosc. (USSR) <u>9</u> , 1299 (1968). Comments At. Mol. Phys. <u>2</u> , 73 (1970).	emiss. quant.
Chin-Bing, S. A. & Head, C. E.	Bull. Amer. Phys. Soc. [II] <u>16</u> , 1344 (1971).	life
Irwin, D. J. G. & Livingston, A. E.	Can. J. Phys. <u>51</u> , 848 (1973).	life

F III

Kiselevskii, L. I. & Trukhan, E. P.	J. Appl. Spectrosc. (USSR) <u>9</u> , 1299 (1968).	emiss.
-------------------------------------	--	--------

*See also Section 3.2 for some further references.

Irwin, D. J. G. & Livingston, A. E.	Can. J. Phys. <u>51</u> , 848 (1973).	life
	F IV	
Kiselevskii, L. I. & Trukhan, E. P.	J. Appl. Spectrosc. (USSR) <u>9</u> , 1299 (1968).	emiss.
Barrette, L. & Drouin, R.	Can. J. Spectrosc. <u>18</u> , 50 (1973).	life
Irwin, D. J. G. & Livingston, A. E.	Can. J. Phys. <u>51</u> , 848 (1973).	life
	F V	
Kiselevskii, L. I. & Trukhan, E. P.	J. Appl. Spectrosc. (USSR) <u>9</u> , 1299 (1968).	emiss.
Barrette, L. & Drouin, R.	Can. J. Spectrosc. <u>18</u> , 50 (1973).	life
	F VI	
Nicolaides, C. & Sinanoglu, O.	J. Phys. (Paris) Colloq. C4, Suppl. 11-12, <u>31</u> , C4-117 (1970).	quant.
Burke, P. G., Hibbert, A., & Robb, W. D.	J. Phys. B <u>5</u> , 37 (1972).	quant.
Barrette, L. & Drouin, R.	Can. J. Spectrosc. <u>18</u> , 50 (1973).	life
Nicolaides, C. A., Beck, D. R., & Sinanoglu, O.	J. Phys. B <u>6</u> , 62 (1973).	quant.
	F VII	
Donnally, B., Smith, W. W., Pegg, D. J., Brown, M., & Sellin, I. A.	Phys. Rev. A <u>4</u> , 122 (1971).	life
Sellin, I. A., Pegg, D. J., Brown, M., Smith, W. W., & Donnally, B.	Phys. Rev. Lett. <u>27</u> , 1108 (1971).	life
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, <u>14</u> (1971).	quant.
Richard, P., Kauffman, R. L., Hopkins, F. F., Woods, C. W., & Jamison, K. A.	Phys. Rev. Lett. <u>30</u> , 888 (1973).	life
	F VIII	
Drake, G. W. F. & Dalgarno, A.	Astrophys. J. <u>157</u> , 459 (1969).	quant.
Schiff, B., Pekeris, C. L., & Accad, Y.	Phys. Rev. A <u>4</u> , 885 (1971).	quant.
Jacobs, V. L.	J. Phys. B <u>5</u> , 213 (1972).	quant. forb.
Mowat, J. R., Sellin, I. A., Peterson, R. S., Pegg, D. J., Brown, M. D., & MacDonald, J. R.	Bull. Amer. Phys. Soc., Ser. II <u>18</u> , 610 (1973).	life
Richard, P., Kauffman, R. L., Hopkins, F. F., Woods, C. W., & Jamison, K. A.	Phys. Rev. Lett. <u>30</u> , 888 (1973).	life

* * * * *

Fe (Iron)*

Fe I

Morozova, N. G. & Startsev, G. P.	Bull. Acad. Sci. USSR, Phys. Ser. <u>26</u> , 933 (1962).	emiss., rel.
Gorbunova, T. M. & Semenova, O. P.	Spektrosk. Tr. Sib. Soveshch., 4th, 1965, 429-431 (Ed. Prilezhaeva, N. A., "Nauka," Moscow, 1969).	emiss., rel.
Allen, C. W.	Mon. Notic. Roy. Astron. Soc. <u>152</u> , 295 (1971).	estim.
Bell, R. A. & Upson, W. L., II	Astrophys. Lett. <u>9</u> , 109 (1971).	comm.
Bridges, J. M. & Richter, J.	"Proceedings of the Tenth International Conference on Phenomena in Ionized Gases," 384 (Donald Parsons & Co., Ltd., Oxford, England, 1971).	emiss.
Kelly, H. P.	"The Menzel Symposium on Solar Physics, Atomic Spectra, and Gaseous Nebulae," 37-46, Nat. Bur. Stand. (U.S.), Spec. Publ. 353 (Aug. 1971).	SCF
Huber, M. C. E. & Parkinson, W. H.	Astrophys. J. <u>172</u> , 229 (1972).	hook
Huber, M. C. E. & Tubbs, E. F.	Astrophys. J. <u>177</u> , 847 (1972).	hook, absorpt.
Hilborn, R. C. & De Zafra, R.	Bull. Amer. Phys. Soc., Ser. II <u>18</u> , 121 (1973).	life
Ross, J. E.	Astrophys. J. <u>180</u> , 599 (1973).	quant.

Fe II

Kuzmitskite, L. L., & Ushpalis, K. K.	"Theory of Electronic Shells of Atoms and Molecules," Institute of Physics and Mathematics, Academy of Sciences of the Lithuanian SSR, 144-147, (Publishing House "Mintis," Vilnius, 1971).	quant.
Assouosa, G. E. & Smith, W. H.	Astrophys. J. <u>176</u> , 259 (1972).	life

Fe VII

Warner, B. & Kirkpatrick, R. C.	Mon. Notic. Roy. Astron. Soc. <u>144</u> , 397 (1969).	quant., quant. forb.
	Publications of the Department of Astronomy, University of Texas at Austin, Vol. III, No. 2 (1969).	

Fe IX

Cowan, R. D.	J. Phys. (Paris), Colloq. <u>31</u> , C4-191 (1970).	quant.
Fawcett, B. C., Cowan, R. D., Kononov, E. Y., & Hayes, R. W.	J. Phys. B <u>5</u> , 1255 (1972).	quant.

Fe X

Widing, K. G., Sandlin, G. D., & Cowan, R. D.	Astrophys. J. <u>169</u> , 405 (1971).	quant.
Fawcett, B. C., Cowan, R. D., Kononov, E. Y., & Hayes, R. W.	J. Phys. B <u>5</u> , 1255 (1972).	quant.

Fe XI

Widing, K. G., Sandlin, G. D., & Cowan, R. D.	Astrophys. J. <u>169</u> , 405 (1971).	quant.
Fawcett, B. C., Cowan, R. D., Kononov, E. Y., & Hayes, R. W.	J. Phys. B <u>5</u> , 1255 (1972).	quant.

Fe XII

Widing, K. G., Sandlin, G. D., & Cowan, R. D.	Astrophys. J. <u>169</u> , 405 (1971).	quant.
Fawcett, B. C., Cowan, R. D., Kononov, E. Y., & Hayes, R. W.	J. Phys. B <u>5</u> , 1255 (1972).	quant.

*See also Section 3.2 for some further references.

Fe XIII

Widing, K. G., Sandlin, G. D., & Cowan, R. D.	Astrophys. J. <u>169</u> , 405 (1971).	quant.
Fawcett, B. C., Cowan, R. D., Kononov, E. Y., & Hayes, R. W.	J. Phys. B <u>5</u> , 1255 (1972).	quant.

Fe XIV

Widing, K. G., Sandlin, G. D., & Cowan, R. D.	Astrophys. J. <u>169</u> , 405 (1971).	quant.
Fawcett, B. C., Cowan, R. D., Kononov, E. Y., & Hayes, R. W.	J. Phys. B <u>5</u> , 1255 (1972).	quant.

Fe XV

Fawcett, B. C., Cowan, R. D., Kononov, E. Y., & Hayes, R. W.	J. Phys. B <u>5</u> , 1255 (1972).	quant.
Cowan, R. D. & Widing, K. G.	Astrophys. J. <u>180</u> , 285 (1973).	quant.

Fe XVI

Kunze, H. J. & Datla, R. U.	Astrophys. J. <u>169</u> , 425 (1971).	CA
Tull, C. E., McEachran, R. P., & Cohen, M.	At. Data <u>3</u> , 169 (1971).	SCF
Tull, C. E., Jackson, M., McEachran, R. P., & Cohen, M.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 893 (1972).	quant. forb.

Fe XVII

Loulergue, M.	Astron. Astrophys. <u>15</u> , 216 (1971).	quant.
Crance, M.	At. Data <u>5</u> , 185 (1973).	quant.

Fe XXII

Shamey, L. J.	J. Opt. Soc. Amer. <u>61</u> , 942 (1971).	quant.
---------------	--	--------

Fe XXIII

Doschek, G. A., Meekins, J. F., & Cowan, R. D.	Astrophys. J. <u>177</u> , 261 (1972).	quant.
Nussbaumer, H.	Astron. Astrophys. <u>16</u> , 77 (1972).	quant.

Fe XXIV

Doschek, G. A., Meekins, J. F., & Cowan, R. D.	Astrophys. J. <u>177</u> , 261 (1972).	quant.
Vainshtein, L. A. & Safronova, U. I.	Kratk. Soobshch. Fiz. No. 3, 40 (1972).	quant.

Fe XXV

Vainshtein, L. A. & Safronova, U. I.	Kratk. Soobshch. Fiz. No. 3, 40 (1972).	quant.
--------------------------------------	---	--------

* * * * *

Ga (Gallium)*

Ga I

- Andersen, T. & Sørensen, G. Phys. Rev. A 5, 2447 (1972). life
"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).

Ga II

- Andersen, T. & Sørensen, G. Phys. Rev. A 5, 2447 (1972). life
"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).

- Sørensen, G. Phys. Rev. A 7, 85 (1973). life

Ga III

- Andersen, T. & Sørensen, G. Phys. Rev. A 5, 2447 (1972). life
Sørensen, G. Phys. Rev. A 7, 85 (1973). life

* * * * *

Ge (Germanium)*

Ge I

- Miller, M. H. & Roig, R. A. Phys. Rev. A 7, 1208 (1973). emiss.

Ge II

- Miller, M. H. & Roig, R. A. Phys. Rev. A 7, 1208 (1973). emiss.

Ge III

- Sørensen, G. Phys. Rev. A 7, 85 (1973). life

Ge IV

- Sørensen, G. Phys. Rev. A 7, 85 (1973). life

* * * * *

H (Hydrogen)*

H I

- Schürmann, D., Schlagheck, W., Heckmann, P. H., Bukow, H. H., & Buttlar, H. v. Z. Phys. 246, 239 (1971). life

- Kaplan, S. A., Kleiman, E. B., & Oiringel', I. M. Sov. Astron.-AJ 16, 241 (1972). quant. forb.

*See also Section 3.2 for some further references.

* * * * *

He (Helium)*

He I

Kantseryavichus, A.	Litov. Fiz. Sb. <u>6</u> , 215 (1966).	quant.
Bridgett, K. A. & King, T. A.	"Optical Pumping and Atomic Line Shape," 359-368 (Ed. Skalinski, T., Panstwowe Wydawnictwo Naukowe, Warsaw, 1969).	life
Buchhaupt, K.	Z. Naturforsch. A <u>24</u> , 1058 (1969).	life
Drake, G. W. F. & Dalgarno, A.	Astrophys. J. <u>157</u> , 459 (1969).	quant.
Berry, H. G.	"Third Conference on Atomic Spectroscopy," No. 11 (University of Reading, Reading, England, 1971).	life
Berry, H. G., Desesquelles, J., & Dufay, M.	Phys. Lett. A <u>36</u> , 237 (1971).	life
Campos, J.	An. Fis. <u>67</u> , 439 (1971).	life
Carre, M., Desesquelles, J., Dufay, M., & Gaillard, M. L.	Phys. Rev. Lett. <u>27</u> , 1407 (1971).	life
Carre, M., Desesquelles, J., Dufay, M., & Gaillard, M. L.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Imhof, R. E. & Read, F. H.	J. Phys. B <u>4</u> , 450 (1971).	life
Jacobs, V.	Phys. Rev. A <u>4</u> , 939 (1971).	quant. forb.
Khrustenko, S. V. & Vetchinkin, S. I.	Opt. Spectrosc. (USSR) <u>31</u> , 269 (1971).	quant.
Schäfer, J.	Max-Planck-Institut für Physik und Astrophysik, München, MPI-PAE/Astro 48, 1971.	quant.
Schäfer, J.	Max-Planck-Institut für Physik und Astrophysik, München, MPI-PAE/Astro 49, 1971.	quant.
Schiff, B., Pekeris, C. L., & Accad, Y.	Phys. Rev. A <u>4</u> , 885 (1971).	quant.
Van Dyck, R. S., Jr., Johnson, C. E., & Shugart, H. A.	Phys. Rev. A <u>4</u> , 1327 (1971).	life, forb.
Bachmann, W. & Jarke, W.	Z. Naturforsch. A <u>27</u> , 579 (1972).	life
Berry, H. G., Curtis, L. J., & Subtil, J. L.	J. Opt. Soc. Amer. <u>62</u> , 771 (1972).	life
Berry, H. G., Desesquelles, J., & Dufay, M.	Phys. Rev. A <u>6</u> , 600 (1972).	life
Buchhaupt, K.	Z. Naturforsch. A <u>27</u> , 572 (1972).	life
Chung, K. T. & Chen, I-hsiun	Phys. Rev. Lett. <u>28</u> , 783 (1972).	quant.
Cohen, M. & McEachran, R. P.	Can. J. Phys. <u>50</u> , 1363 (1972).	SCF
Cohen, M. & McEachran, R. P.	Chem. Phys. Lett. <u>14</u> , 201 (1972).	SCF
Cohen, M., McEachran, R. P., & Rosenthal, D.	J. Phys. B <u>5</u> , 184 (1972).	quant. forb.
Devine, K. R. & Stewart, A. L.	J. Phys. B <u>5</u> , 2182 (1972).	quant.
Jacobs, V. L.	J. Phys. B <u>5</u> , 213 (1972).	quant. forb.

*See also Section 3.2 for some further references.

McCavert, P. & Rudge, M. R. H.	J. Phys. B <u>5</u> , 832 (1972).	quant.
Peresse, J., Pochat, A., & Le Nadan, A.	C. R. H. Acad. Sci., Ser. B <u>274</u> , 791 (1972).	life
Pochat, A., Gelebart, F., Doritch, M., & Peresse, J.	Analisis <u>1</u> , 368 (1972).	life
Erman, P., Brzozowski, J., & Sigfridsson, B.	Phys. Lett. A <u>43</u> , 125 (1973).	life
Moos, H. W. & Woodworth, J. R.	Phys. Rev. Lett. <u>30</u> , 775 (1973).	emiss. forb.
Yellin, J., Hadeishi, T., & Michel, M. C.	Bull. Amer. Phys. Soc., Ser. II <u>18</u> , 121 (1973).	life
Yellin, J., Hadeishi, T., & Michel, M. C.	Phys. Rev. Lett. <u>30</u> , 417 (1973).	life

He II

Novick, R.	"Physics of the One- and Two-Electron Atoms," 296-325 (Ed. Bopp, F. & Kleinpoppen, H., North-Holland Publ. Co., Amsterdam, 1969).	quant.
Baumann, M. & Eibofner, A.	Phys. Lett. A <u>35</u> , 173 (1971).	life
Eibofner, A.	Z. Phys. <u>249</u> , 73 (1971).	life
Kocher, C. A., Clendenin, J. E., & Novick, R.	Phys. Rev. Lett. <u>29</u> , 615 (1972).	life
Prior, M. H.	Phys. Rev. Lett. <u>29</u> , 611 (1972).	life

* * * * *

Hg (Mercury)*

	Hg I	
May, A. D. & Leung, C. Y.	"Excitation Electronique D'Une Vapeur Atomique-Application a la Spectroscopie," No. 162, 167-170 (Centre National de la Recherche Scientifique, Paris, 1967).	life
Dodd, J. N., Sandle, W. J., & Williams, O. M.	J. Phys. B <u>3</u> , 256 (1970).	life
Popp, M., Schäfer, G., & Bodenstedt, E.	Z. Phys. <u>240</u> , 71 (1970).	life
Dodsworth, B., Gay, J. C., & Omont, A.	"Third Conference on Atomic Spectroscopy," No. 29 (University of Reading, Reading, England, 1971).	life
Platz, P.	J. Phys. (Paris) <u>32</u> , 773 (1971).	misc.
L'vov, B. V.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 651 (1972). Method. Phys. Anal. <u>8</u> , 3 (1972).	absorpt.
Andersen, T. & Sørensen, G.	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 369 (1973).	life

Hg II

Andersen, T. & Sørensen, G.	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 369 (1973).	life
	* * * * *	

*See also Section 3.2 for some further references.

I (Iodine)*

I I

Donovan, R. J. & Husain, D.	Trans. Faraday Soc. <u>62</u> , 11 (1966).	life, forb.
Husain, D. & Wiesenfeld, J. R.	Trans. Faraday Soc. <u>63</u> , 1349 (1967).	life, forb.
O'Brien, D. E. & Bowen, J. R.	J. Appl. Phys. <u>40</u> , 4767 (1969).	quant. forb.
Deakin, J. J., Husain, D., & Wiesenfeld, J. R.	Chém. Phys. Lett. <u>10</u> , 146 (1971).	life
Derwent, R. G. & Thrush, B. A.	Chem. Phys. Lett. <u>9</u> , 591 (1971).	life, forb.
Abrahamsen, E. W., Andrews, L. J., Husain, D., & Wiesenfeld, J. R.	J. Chem. Soc., Faraday Trans. 2, Part 1 <u>68</u> , 48 (1972).	life, forb.

* * * * *

In (Indium)*

In I

Andersen, T. & Sørensen, G.	Phys. Rev. A <u>5</u> , 2447 (1972).	life
	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	

In II

Andersen, T. & Sørensen, G.	Phys. Rev. A <u>5</u> , 2447 (1972).	life
	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	

Andersen, T., Kirkegaard Nielsen, A., & Sørensen, G.

life

In III

Andersen, T., Kirkegaard Nielsen, A., & Sørensen, G.	Phys. Scr. <u>6</u> , 122 (1972).	life
--	-----------------------------------	------

* * * * *

K (Potassium)*

K I

Kantseryavichus, A. Yu. & Zhilionite, S. V.	Litov. Fiz. Sb. <u>7</u> , 73 (1967).	CA
Hertel, I. V. & Ross, K. J.	J. Phys. B <u>1</u> , 697 (1968).	misc., forb.
Hertel, I. V. & Ross, K. J.	J. Phys. B <u>2</u> , 285 (1969).	misc., forb.
Mazing, M. A. & Serapinas, P. D.	Opt. Spectrosc. (USSR) <u>27</u> , 482 (1969).	absorpt.

*See also Section 3.2 for some further references.

Ali, M. A.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 1611 (1971).	quant. forb.
Sternheimer, R. M. & Peierls, R. F.	Phys. Rev. A <u>3</u> , 837 (1971).	quant.
Svanberg, S.	Phys. Scr. <u>4</u> , 275 (1971).	life
Weisheit, J. C. & Dalgarno, A.	Chem. Phys. Lett. <u>2</u> , 517 (1971).	quant.
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, <u>14</u> (1971).	quant.

Weisheit, J. C.	Phys. Rev. A <u>5</u> , 1621 (1972).	quant.
Darrigo, R., Le Toulouzan, J.-N., & Chappey, B.	C. R. H. Acad. Sci., Ser. B <u>276</u> , 119 (1973).	misc.

K II

Cowan, R. D.	J. Phys. (Paris), Colloq. <u>31</u> , C4-191 (1970).	quant.
Poulizac, M. C. & Buchet, J. P.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Kumar, C. K., Assousa, G. E., Brown, L., & Ford, W. K., Jr.	Phys. Rev. A <u>7</u> , 112 (1973).	life

K III

Poulizac, M. C. & Buchet, J. P.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
---------------------------------	---	------

K V

Garstang, R. H.	"Planetary Nebulae—International Astronomical Union Symposium," No. 34, 143-152 (Ed. Osterbrock, D. E. & O'Dell, C. R., D. Reidel Publ. Co., Dordrecht, Holland, 1968).	quant. forb.
-----------------	--	--------------

K IX

Kunze, H. J. & Datla, R. U.	Astrophys. J. <u>169</u> , 425 (1971).	CA
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, <u>14</u> (1971).	quant.

K X

Crance, M.	At. Data <u>5</u> , 185 (1973).	quant.
------------	---------------------------------	--------

* * * * *

Kr (Krypton)*

Kr I

Malakhov, V. P.	Sov. Phys. J. <u>8</u> , 128 (1965).	absorpt.
Stedman, D. H. & Setser, D. W.	"Progress in Reaction Kinetics," Vol. 6, Part 4, 193-238 (Ed. Jennings, K. R. & Cundall, R. B., Pergamon Press, New York, 1971).	quant. forb.

*See also Section 3.2 for some further references.

Aymar, M.	Physica (Utrecht) <u>57</u> , 178 (1972).	quant.
Delgado, A., Campos, J., & Sanchez del Rio, C.	Z. Phys. <u>257</u> , 9 (1972).	life
Miller, M. H., Roig, R. A., & Bengtson, R. D.	J. Opt. Soc. Amer. <u>62</u> , 1027 (1972).	emiss., rel.
Van Dyck, R. S., Jr., Johnson, C. E., & Shugart, H. A.	Phys. Rev. A <u>5</u> , 991 (1972).	life, forb.

Kr II

Levchenko, M. A.	Izv. Vyssh. Ucheb. Zaved., Fiz. No. 10, 147 (1971).	emiss.
Andersen, T., Madsen, O. H., & Sørensen, G.	Phys. Scr. <u>6</u> , 125 (1972).	life
Delgado, A., Campos, J., & Sanchez del Rio, C.	Z. Phys. <u>257</u> , 9 (1972).	life
Miller, M. H., Roig, R. A., & Bengtson, R. D.	J. Opt. Soc. Amer. <u>62</u> , 1027 (1972).	emiss., rel.

Kr VII

Sørensen, G.	Phys. Rev. A <u>7</u> , 85 (1973).	interp.
--------------	------------------------------------	---------

Kr VIII

Sørensen, G.	Phys. Rev. A <u>7</u> , 85 (1973).	interp.
--------------	------------------------------------	---------

Li (Lithium)*

Li I

Kantseryavichus, A. Yu. & Zhilionite, S. V.	Litov. Fiz. Sb. <u>7</u> , 73 (1967).	CA
Berry, H. G., Bromander, J., Martinson, I., & Buchta, R.	Phys. Scr. <u>3</u> , 63 (1971).	life
Berry, H. G., Desesquelles, J., & Dufay, M.	Phys. Lett. A <u>36</u> , 237 (1971).	life
Khrustenko, S. V. & Vetchinkin, S. I.	Opt. Spectrosc. (USSR) <u>31</u> , 269 (1971).	quant.
Novick, R. & Weinflash, D.	Nat. Bur. Stand. (U.S.), Spec. Publ. <u>343</u> , 403 (1971).	life
Sternheimer, R. M. & Peierls, R. F.	Phys. Rev. A <u>3</u> , 837 (1971).	quant.
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, 14 (1971).	quant.
Berry, H. G., Pinnington, E. H., & Subtil, J. L.	J. Opt. Soc. Am. <u>62</u> , 767 (1972).	life
Caves, T. C. & Dalgarno, A.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 1539 (1972).	quant.
Moitra, R. K. & Mukherjee, P. K.	Int. J. Quantum Chem. <u>6</u> , 211 (1972).	SCF
Buchet, J. P., Buchet-Poulicac, M. C., Berry, H. G., & Drake, G. W. F.	Phys. Rev. A <u>7</u> , 922 (1973).	life

*See also Section 3.2 for some further references.

Lunell, S.

Phys. Rev. A 7, 1229 (1973).

quant.

Li II

Kantserjavichus, A.	Litov. Fiz. Sb. <u>6</u> , 215 (1966).	quant.
Drake, G. W. F. & Dalgarno, A.	Astrophys. J. <u>157</u> , 459 (1969).	quant.
Berry, H. G., Bromander, J., Martinson, I., & Buchta, R.	Phys. Scr. <u>3</u> , 63 (1971).	life
Prior, M. H. & Shugart, H. A.	Phys. Rev. Lett. <u>27</u> , 902 (1971).	life
Schiff, B., Pekeris, C. L., & Accad, Y.	Phys. Rev. A <u>4</u> , 885 (1971).	quant.
Berry, H. G., Curtis, L. J., & Subtil, J. L.	J. Opt. Soc. Amer. <u>62</u> , 771 (1972).	life
Cohen, M. & McEachran, R. P.	Can. J. Phys. <u>50</u> , 1363 (1972).	SCF
Cohen, M. & McEachran, R. P.	Chem. Phys. Lett. <u>14</u> , 201 (1972).	SCF
Cohen, M., McEachran, R. P., & Rosenthal, D.	J. Phys. B <u>5</u> , 184 (1972).	quant. forb.
Jacobs, V. L.	J. Phys. B <u>5</u> , 213 (1972).	quant. forb.
Schürmann, D., Haas, D., Heckmann, P. H., & Buttler, H. v.	Phys. Lett. A <u>42</u> , 27 (1972).	life
Adler, A., Kahan, W., Novick, R., & Lucatorto, T.	Phys. Rev. A <u>7</u> , 967 (1973).	life
Buchet, J. P., Buchet-Poulicac, M. C., Berry, H. G., & Drake, G. W. F.	Phys. Rev. A <u>7</u> , 922 (1973).	life

Li III

Schürmann, D., Haas, D., Heckmann, P. H., & Buttler, H. v.	Phys. Lett. A <u>40</u> , 323 (1972).	life
Schürmann, D., Haas, D., Heckmann, P. H., & Buttler, H. v.	Phys. Lett. A <u>42</u> , 27 (1972).	life

* * * * *

Lu (Lutetium)*

Lu I

Göbel, L. H.	Z. Naturforsch. A <u>26</u> , 1559 (1971).	life
	"Third Conference on Atomic Spectroscopy," No. 41 (University of Reading, Reading, England, 1971).	

* * * * *

*See also Section 3.2 for some further references.

Mg (Magnesium)*

Mg I

Ovechkin, G. V., Bakhtovarshoev Sh., & Sandrigailo, L. E.	J. Appl. Spectrosc. (USSR) <u>7</u> , 309 (1967).	emiss.
Heilig, K. & Schimborski, B.	"Third Conference on Atomic Spectroscopy," No. 48 (University of Reading, Reading, England, 1971).	life
Smith, W. H. & Liszt, H. S.	J. Opt. Soc. Amer. <u>61</u> , 938 (1971).	life
Andersen, T., Mølhove, L., & Sørensen, G.	Astrophys. J. <u>178</u> , 577 (1972).	life
Beck, D. R. & Sinanoglu, O.	Phys. Rev. Lett. <u>28</u> , 945 (1972).	quant.
Hameed, S.	J. Phys. B <u>5</u> , 746 (1972).	quant.
Kim, Y.-K. & Bagus, P. S.	J. Phys. B <u>5</u> , L193 (1972).	quant.
L'vov, B. V.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 651 (1972).	absorpt.
	Method. Phys. Anal. <u>8</u> , 3 (1972).	
Bates, G. N. & Altick, P. L.	J. Phys. B <u>6</u> , 653 (1973).	quant.

Mg II

Ali, M. A.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 1611 (1971).	quant. forb.
Kunze, H. J. & Datla, R. U.	Astrophys. J. <u>169</u> , 425 (1971).	CA
Smith, W. H. & Liszt, H. S.	J. Opt. Soc. Amer. <u>61</u> , 938 (1971).	life
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, 14 (1971).	quant.
Andersen, T., Mølhove, L., & Sørensen, G.	Astrophys. J. <u>178</u> , 577 (1972).	life
Black, J. H., Weisheit, J. C., & Lariana, E.	Astrophys. J. <u>177</u> , 567 (1972).	quant.
Tull, C. E., Jackson, M., McEachran, R. P., & Cohen, M.	Can. J. Phys. <u>50</u> , 1169 (1972).	quant. forb.
McEachran, R. P. & Cohen, M.	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 197 (1973).	comm. forb.

Mg VI

Garstang, R. H.	"Planetary Nebulae--International Astronomical Union Symposium," No. 34, 143-152 (Ed. Osterbrock, D. E. & O'Dell, C. R., D. Reidel Publ. Co., Dordrecht, Holland, 1968).	quant. forb.
-----------------	--	--------------

Mg IX

Nussbaumer, H.	Astron. Astrophys. <u>16</u> , 77 (1972).	quant.
----------------	---	--------

Mg X

Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, 14 (1971).	quant.
---	--	--------

* * * * *

*See also Section 3.2 for some further references.

Mn (Manganese)*

Mn I

Blackwell, D. E. & Collins, B. S.	Mon. Notic. Roy. Astron. Soc. <u>157</u> , 255 (1972).	absorpt., rel.
Blackwell, D. E., Collins, B. S., & Petford, A. D.	Solar Phys. <u>23</u> , 292 (1972).	absorpt., rel.
Nussbaumer, H. & Swings, J. P.	Astrophys. J. <u>172</u> , 121 (1972).	quant. forb.
Fischer, C. F.	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 201 (1973).	quant., SCR

Mn VI

Warner, B. & Kirkpatrick, R. C.	Mon. Notic. Roy. Astron. Soc. <u>144</u> , 397 (1969).	quant.,
	Publications of the Department of Astronomy, University of Texas at Austin, Vol. III, No. 2 (1969).	quant. forb.

Mn XVI

Crance, M.	At. Data <u>5</u> , 185 (1973).	quant.
------------	---------------------------------	--------

* * * * *

Mo (Molybdenum)*

Mo I

Kirsanova, N. N.	Zh. Prikl. Spektrosk. <u>15</u> , 536 (1971).	emiss.
------------------	---	--------

* * * * *

N (Nitrogen)*

N I

Lawrence, G. M. & Savage, B. D.	Phys. Rev. <u>141</u> , 67 (1966).	life
	"Excitation Electronique D'Une Vapeur Atomique—Application a la Spectroscopie," No. 162, 239-245 (Centre National de la Recherche Scientifique, Paris, 1967).	
Morris, J. C., Krey, R. U., & Garrison, R. L.	Aerospace Research Laboratories Report No. ARL 68-0103 (1968).	emiss.
Nicolaides, C. & Sinanoglu, O.	J. Phys. (Paris) Colloq. C4, Suppl. 11-12, <u>31</u> , C4-117 (1970).	quant. forb.
Berry, H. G., Bickel, W. S., Bashkin, S., Desesquelles, J., & Schectman, R. M.	J. Opt. Soc. Amer. <u>61</u> , 947 (1971).	life
Desesquelles, J.	Ann. Phys. (Paris) <u>6</u> , 71 (1971).	life
Nicolaides, C., Sinanoglu, O., & Westhaus, P.	Phys. Rev. A <u>4</u> , 1400 (1971).	quant. forb.
Dumont, P. D.	Physica (Utrecht) <u>62</u> , 104 (1972).	life

*See also Section 3.2 for some further references.

N II

Lawrence, G. M. & Savage, B. D.	Phys. Rev. <u>141</u> , 67 (1966).	life
	"Excitation Electronique D'Une Vapeur Atomique—Application a la Spectroscopie," No. 162, 239-245 (Centre National de la Recherche Scientifique, Paris, 1967).	
Nicolaides, C. & Sinanoglu, O.	J. Phys. (Paris) Colloq. C <u>4</u> , Suppl. 11-12, <u>31</u> , C <u>4</u> -117 (1970).	quant., quant. forb.
Sinanoglu, O.	Comments At. Mol. Phys. <u>2</u> , 73 (1970).	quant.
Berry, H. G., Bickel, W. S., Bashkin, S., Desesquelles, J., & Schechtman, R. M.	J. Opt. Soc. Amer. <u>61</u> , 947 (1971).	life
Desesquelles, J.	Ann. Phys. (Paris) <u>6</u> , 71 (1971).	life
Nicolaides, C., Sinanoglu, O., & Westhaus, P.	Phys. Rev. A <u>4</u> , 1400 (1971).	quant. forb.
Sinanoglu, O.	"Theory of Electronic Shells of Atoms and Molecules," Institute of Physics and Mathematics, Academy of Sciences of the Lithuanian SSR, 31-44 (Publishing House "Mintis," Vilnius, 1971).	quant.
Sinanoglu, O.	"Topics in Modern Physics--A Tribute to Edward U. Condon," 287-295 (Ed. Brittin, W. E. & Odabasi, H., Colorado Associated Univ. Press, Boulder, Colorado, 1971).	quant.
Buchet, J. P., Poulicac, M. C., & Carre, M.	J. Opt. Soc. Amer. <u>62</u> , 623 (1972).	life
Dumont, P. D.	Physica (Utrecht) <u>62</u> , 104 (1972).	life
Mallow, J. V. & Burns, J.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 1081 (1972).	life
Nysten, K.-E. & Weckström, K.	Comment Phys.-Math. <u>42</u> , 59 (1972).	life

N III

Sinanoglu, O.	Comments At. Mol. Phys. <u>2</u> , 73 (1970).	SCF
Berry, H. G., Bickel, W. S., Bashkin, S., Desesquelles, J., & Schechtman, R. M.	J. Opt. Soc. Amer. <u>61</u> , 947 (1971).	life
Desesquelles, J.	Ann. Phys. (Paris) <u>6</u> , 71 (1971).	life
McEachran, R. P. & Cohen, M.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 1819 (1971).	SCF
Nussbaumer, H.	Astrophys. J. <u>170</u> , 93 (1971).	quant.
Sinanoglu, O.	"Theory of Electronic Shells of Atoms and Molecules," Institute of Physics and Mathematics, Academy of Sciences of the Lithuanian SSR, 31-44 (Publishing House "Mintis," Vilnius, 1971).	quant.
Buchet, J. P., Poulicac, M. C., & Carre, M.	J. Opt. Soc. Amer. <u>62</u> , 623 (1972).	life
Dumont, P. D.	Physica (Utrecht) <u>62</u> , 104 (1972).	life

N IV

Eissner, W. & Nussbaumer, H.	"Premiere Reunion de l'Association Europeene de Spectroscopie Atomique," No. 42 (Faculte des Sciences, Paris-Orsay, 1969).	quant.
Friedrich, H. & Trefftz, E.	Max-Planck-Institut fur Physik und Astrophysik MPI-PAE/ASTRO 29 (1969).	quant.
Nicolaides, C. & Sinanoglu, O.	J. Phys. (Paris) Colloq. C <u>4</u> , Suppl. 11-12, <u>31</u> , C <u>4</u> -117 (1970).	quant.
Berry, H. G., Bickel, W. S., Bashkin, S., Desesquelles, J., & Schechtman, R. M.	J. Opt. Soc. Amer. <u>61</u> , 947 (1971).	life

Desesquelles, J.	Ann. Phys. (Paris) <u>6</u> , 71 (1971).	life
Buchet, J. P., Poulicac, M. C., & Carre, M.	J. Opt. Soc. Amer. <u>62</u> , 623 (1972).	life
Burke, P. G., Hibbert, A., & Robb, W. D.	J. Phys. B <u>5</u> , 37 (1972).	quant.
Dumont, P. D.	Physica (Utrecht) <u>62</u> , 104 (1972).	life
Nussbaumer, H.	Astron. Astrophys. <u>16</u> , 77 (1972).	quant.
Dalgarno, A., Constantinides, E., & Victor, G. A.	Air Force Cambridge Research Laboratories Report No. AFCLR-73-0215 (1973).	quant.
Nicolaides, C. A., Beck, D. R., & Sinanoglu, O.	J. Phys. B <u>6</u> , 62 (1973).	quant.

N V

Berry, H. G., Bickel, W. S., Bashkin, S., Desesquelles, J., & Schechtman, R. M.	J. Opt. Soc. Amer. <u>61</u> , 947 (1971).	life
Desesquelles, J.	Ann. Phys. (Paris) <u>6</u> , 71 (1971).	life
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, 14 (1971).	quant.
Buchet, J. P., Poulicac, M. C., & Carre, M.	J. Opt. Soc. Amer. <u>62</u> , 623 (1972).	life
Dumont, P. D.	Physica (Utrecht) <u>62</u> , 104 (1972).	life

N VI

Drake, G. W. F. & Dalgarno, A.	Astrophys. J. <u>157</u> , 459 (1969).	quant.
Desesquelles, J.	Ann. Phys. (Paris) <u>6</u> , 71 (1971).	life
Schiff, B., Pekeris, C. L., & Accad, Y.	Phys. Rev. A <u>4</u> , 885 (1971).	quant.
Cohen, M. & McEachran, R. P.	Can. J. Phys. <u>50</u> , 1363 (1972).	SCF
Cohen, M. & McEachran, R. P.	Chem. Phys. Lett. <u>14</u> , 201 (1972).	SCF
Jacobs, V. L.	J. Phys. B <u>5</u> , 213 (1972).	quant. forb.

N VII

Desesquelles, J.	Ann. Phys. (Paris) <u>6</u> , 71 (1971).	life
------------------	--	------

* * * * *

Na (Sodium)*

Na I

Kantseryavichus, A. Yu. & Zhilionite, S. V.	Litov. Fiz. Sb. <u>7</u> , 73 (1967).	CA
Baumann, M.	Z. Naturforsch. A <u>24</u> , 1049 (1969).	life
Hertel, I. V. & Ross, K. J.	J. Phys. B <u>2</u> , 285 (1969).	misc., forb.
Ali, M. A.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 1611 (1971).	quant. forb.
Kunze, H. J. & Datla, R. U.	Astrophys. J. <u>169</u> , 425 (1971).	CA
Nagibina, I. M. & Polushkina, I. A.	Izv. Fiz. Inst. ANEB (At. Nauchnoeksp. Baza), Bulg. Akad. Nauk <u>21</u> , 201 (1971).	hook, rel.
Sternheimer, R. M. & Peierls, R. F.	Phys. Rev. A <u>3</u> , 837 (1971).	quant.
Taksar, I. M., Kunin, P. E., Zapol', B. P., & Kruglevskii, V. A.	"Theory of Electronic Shells of Atoms and Molecules," Institute of Physics and Mathematics, Academy of Sciences of the Lithuanian SSR, 100-102 (Publishing House "Mintis," Vilnius, 1971).	quant.
Weisheit, J. C. & Dalgarno, A.	Chem. Phys. Lett. <u>9</u> , 517 (1971).	quant.
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, 14 (1971).	quant.
Andersen, T., Madsen, O. H., & Sørensen, G.	Phys. Scr. <u>6</u> , 125 (1972).	life
Erdmann, T. A., Figger, H., & Walther, H.	Opt. Comm. <u>6</u> , 166 (1972).	life
Tull, C. E., Jackson, M., McEachran, R. P., & Cohen, M.	Can. J. Phys. <u>50</u> , 1169 (1972).	quant. forb.
Weisheit, J. C.	Phys. Rev. A <u>5</u> , 1621 (1972).	quant.
Korff, D. F., Chung, S., & Lin, C. C.	Phys. Rev. A <u>7</u> , 545 (1973).	quant.
McEachran, R. P. & Cohen, M.	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 197 (1973).	comm. forb.

Na VIII

Nussbaumer, H.	Astron. Astrophys. <u>16</u> , 77 (1972).	quant.
----------------	---	--------

Na IX

Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, 14 (1971).	quant.
---	--	--------

* * * * *

Ne (Neon)*

Ne I

Vasilenko, L. S. & Chebotaev, V. P.	J. Appl. Spectrosc. (USSR) <u>6</u> , 353 (1967).	emiss.
Decomps, B. & Dumont, M.	IEEE J. Quantum Electron. <u>QE-4</u> , 916 (1968).	life

*See also Section 3.2 for some further references.

Vainshtein, L. A. & Minaeva, L. A.	J. Appl. Spectrosc. (USSR) <u>9</u> , 684 (1968).	quant.
Yabuzaki, T. & Ogawa, T.	J. Appl. Phys. <u>39</u> , 4477 (1968).	life
Carrington, C. D. & Corney, A.	"Premiere Reunion de l'Association Europeene de Spectroscopie Atomique," No. 76 (Faculte des Sciences, Paris-Orsay, 1969).	life
Chenevier, M. & Goulet, G.	J. Phys. (Paris), Colloq. Cl <u>30</u> , 84 (1969).	life
Wang, C. H., Tomlinson, W. J., & George, R. T., Jr.	Phys. Rev. <u>181</u> , 125 (1969).	life
Arrathoon, R. & Sealer, D. A.	Phys. Rev. A <u>4</u> , 815 (1971).	life
Carre, M., Desesquelles, J., Dufay, M., & Gaillard, M. L.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Kazantsev, S. & Chaika, M.	Opt. Spectrosc. (USSR) <u>31</u> , 273 (1971).	life
Kernahan, J. A., Denis, A., & Drouin, R.	Phys. Scr. <u>4</u> , 49 (1971).	life
Kohl, J. L., Curtis, L. J., Schechtman, R. M., & Chojnacki, D. A.	J. Opt. Soc. Amer. <u>61</u> , 1656 (1971).	life
Kotlikov, E., Todorov, G., & Chaika, M.	Opt. Spectrosc. (USSR) <u>30</u> , 99 (1971).	life
Stedman, D. H. & Setser, D. W.	"Progress in Reaction Kinetics," Vol. 6, Part 4, 193-238 (Ed. Jennings, K. R. & Cundall, R. B., Pergamon Press, New York, 1971).	quant. forb.
Andersen, T., Madsen, O. H., & Sørensen, G.	Phys. Scr. <u>6</u> , 125 (1972).	life
Carrington, C. G.	J. Phys. B <u>5</u> , 1572 (1972).	life
Lilly, R. A.	J. Opt. Soc. Amer. <u>62</u> , 1023 (1972).	misc.
Van Dyck, R. S., Jr., Johnson, C. E., & Shugart, H. A.	Phys. Rev. A <u>5</u> , 991 (1972).	life, forb.
Menzies, R. T.	Phys. Lett. A <u>43</u> , 209 (1973).	life
Schechtman, R. M., Curtis, L. J., & Chojnacki, D. A.	J. Opt. Soc. Amer. <u>63</u> , 99 (1973).	life
Schechtman, R. M., Shoffstall, D. R., Ellis, D. G., & Chojnacki, D. A.	J. Opt. Soc. Amer. <u>63</u> , 80 (1973).	quant. rel., life
Starace, A. F.	J. Phys. B <u>6</u> , 76 (1973).	quant.
	Ne II	
Lawrence, G. M. & Savage, B. D.	Astrophys. J. <u>146</u> , 940 (1966).	life
	"Excitation Electronique D'Une Vapeur Atomique—Application à la Spectroscopie," No. 162, 239-245 (Centre National de la Recherche Scientifique, Paris, 1967).	
Sinanoglu, O.	Comments At. Mol. Phys. <u>2</u> , 73 (1970).	quant.
Ishii, K.	Sci. Light (Tokyo) <u>20</u> , 66 (1971).	quant.
Kernahan, J. A., Denis, A., & Drouin, R.	Phys. Scr. <u>4</u> , 49 (1971).	life
Luyken, B. F. J., De Heer, F. J., Baas, R. Ch., & Tawara, H.	Physica (Utrecht) <u>62</u> , 249 (1972).	emiss., rel.
	Ne III	
Denis, A., Desesquelles, J., & Dufay, M.	"Physics of the One- and Two-Electron Atoms," 399-406 (Ed. Bopp, F. & Kleinpoppen, H., North-Holland Publ. Co., Amsterdam, 1969).	life

*See also Section 3.2 for some further references.

Kernahan, J. A., Denis, A.,
& Drouin, R.

Phys. Scr. 4, 49 (1971).

life

Denis, A., Desesquelles, J.,
& Dufay, M.

"Physics of the One- and Two-Electron Atoms," 399-406
(Ed. Bopp, F. & Kleinpopp, H., North-Holland Publ.
Co., Amsterdam, 1969).

life

Kernahan, J. A., Denis, A.,
& Drouin, R.

Phys. Scr. 4, 49 (1971).

life

Ne IV

Denis, A., Desesquelles, J.,
& Dufay, M.

"Physics of the One- and Two-Electron Atoms," 399-406
(Ed. Bopp, F. & Kleinpopp, H., North-Holland Publ.
Co., Amsterdam, 1969).

life

Kernahan, J. A., Denis, A.,
& Drouin, R.

Phys. Scr. 4, 49 (1971).

life

Ne V

Denis, A., Desesquelles, J.,
& Dufay, M.

"Physics of the One- and Two-Electron Atoms," 399-406
(Ed. Bopp, F. & Kleinpopp, H., North-Holland Publ.
Co., Amsterdam, 1969).

life

Kernahan, J. A., Denis, A.,
& Drouin, R.

Phys. Scr. 4, 49 (1971).

life

Shamey, L. J.

J. Opt. Soc. Amer. 61, 942 (1971).

quant.

Ne VI

Eissner, W. & Nussbaumer, H.

"Premiere Reunion de l'Association Europeene de
Spectroscopie Atomique," No. 42 (Faculte des
Sciences, Paris-Orsay, 1969).

quant.

Beauchemin, G., Kernahan, J. A.,
Krystautas, E., Irwin, D. J. G.,
& Drouin, R.

Phys. Lett. A 40, 194 (1972).

life

Burke, P. G., Hibbert, A., &
Robb, W. D.

J. Phys. B 5, 37 (1972).

quant.

Nussbaumer, H.

Astron. Astrophys. 16, 77 (1972).

quant.

Nicolaides, C. A., Beck, D. R.,
& Sinanoglu, O.

J. Phys. B 6, 62 (1973).

quant.

Ne VII

Zapol', B. P., Kunin, P. E.,
Lyubimov, A. V., Taksar,
I. M., & Fabrikant, I. I.

Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6,
14 (1971).

quant.

Druetta, M., Datla, R. U.,
& Kunze, H. J.

Astrophys. J. 174, 215 (1972).

quant.

Ne VIII

Drake, G. W. F. & Dalgarno, A.

Astrophys. J. 157, 459 (1969).

quant.

Schiff, B., Pekeris, C. L., &
Accad, Y.

Phys. Rev. A 4, 885 (1971).

quant.

Jacobs, V. L.

J. Phys. B 5, 213 (1972).

quant. forb.

* * * * *

Ni (Nickel)*

Ni I

Becker, U., Göbel, L. H., & Klotz, W. D.	"Third Conference on Atomic Spectroscopy," No. 9 (University of Reading, Reading, England, 1971).	life
Marek, J.	Astron. Astrophys. <u>17</u> , 83 (1972).	life
	Ni IX	

Warner, B. & Kirkpatrick, R. C.	Mon. Notic. Roy. Astron. Soc. <u>144</u> , 397 (1969).	quant., quant. forb.
	Publications of the Department of Astronomy, University of Texas at Austin, Vol. III, No. 2 (1969).	

Ni XII

Cowan, R. D.	J. Phys. (Paris), Colloq. <u>31</u> , C4-191 (1970).	quant.

Ni XVIII

Tull, C. E., McEachran, R. P., & Cohen, M.	At. Data <u>3</u> , 169 (1971).	SCF
Tull, C. E., Jackson, M., McEachran, R. P., & Cohen, M.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 893 (1972).	quant. forb.

Ni XIX

Crance, M.	At. Data <u>5</u> , 185 (1973).	quant.

Ni XXI

Gruzdev, P. F.	Zh. Prikl. Spektrosk. <u>14</u> , 1100 (1971).	quant.

O (Oxygen)*

O I

Evans, W. F. J. & Vallance Jones, A.	Can. J. Phys. <u>43</u> , 697 (1965).	life, forb.
Lawrence, G. M. & Savage, B. D.	Astrophys. J. <u>146</u> , 940 (1966).	life
	"Excitation Electronique D'Une Vapeur Atomique-Application a la Spectroscopie," No. 162, 239-245 (Centre National de la Recherche Scientifique, Paris, 1967).	
Morris, J. C., Krey, R. U., & Garrison, R. L.	Aerospace Research Laboratories Report No. ARL 68-0103 (1968).	emiss.
Nicolaides, C. & Sinanoglu, O.	J. Phys. (Paris) Colloq. C4, Suppl. 11-12, <u>31</u> , C4-117 (1970).	quant.
Nicolaides, C., Sinanoglu, O., & Westhaus, P.	Comments. At. Mol. Phys. <u>2</u> , 79 (1970).	comm.
Forsman, E. N.	Phys. Rev. A <u>4</u> , 1400 (1971).	quant. forb.
	Diss. Abstr. <u>31</u> , 4245B (1971).	absorpt.

*See also Section 3.2 for some further references.

Irwin, D. G. J., Kernahan, J. A., Lin, C. C., Livingston, A. E., & Pinnington, E. H.	"Third Conference on Atomic Spectroscopy," No. 49 (University of Reading, Reading, England, 1971).	life
Pinnington, E. H.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Scourfield, M. W. J., Parsons, N. R., Dennis, L. P., & Innes, W. F.	J. Geophys. Res. <u>76</u> , 3692 (1971).	emiss. forb.
Corney, A. & Williams, O. M.	J. Phys. B <u>5</u> , 686 (1972).	life, forb.
Johnson, C. E.	Phys. Rev. A <u>5</u> , 2688 (1972).	life
Lin, C. C., Irwin, D. J. G., Kernahan, J. A., Livingston, A. E., & Pinnington, E. H.	Can. J. Phys. <u>50</u> , 2496 (1972).	life
Mallow, J. V. & Burns, J.	J. Quant. Spectrosc. Radiat. Transfer <u>12</u> , 1081 (1972).	life
Nicolaides, C. A.	Chem. Phys. Lett. <u>17</u> , 436 (1972).	quant.
Wells, W. C. & Zipf, E. C.	Trans. Amer. Geophys. Union <u>53</u> , 459 (1972).	life
Forsman, E. N. & Clark, K. C.	Phys. Rev. A <u>7</u> , 1203 (1973).	absorpt.
Sawada, T. & Ganas, P. S.	Phys. Rev. A <u>7</u> , 617 (1973).	quant.
O II		
Nicolaides, C. & Sinanoglu, O.	J. Phys. (Paris) Colloq. C ⁴ , Suppl. 11-12, <u>31</u> , C4-117 (1970).	quant. forb.
Irwin, D. G. J., Kernahan, J. A., Lin, C. C., Livingston, A. E., & Pinnington, E. H.	"Third Conference on Atomic Spectroscopy," No. 49 (University of Reading, Reading, England, 1971).	life
Pinnington, E. H.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Pinnington, E. H., Lin, C. C., Kernahan, J. A., & Irwin, D. J. G.	Phys. Lett. A <u>36</u> , 299 (1971).	life
Nicolaides, C., Sinanoglu, O., & Westhaus, P.	Phys. Rev. A <u>4</u> , 1400 (1971).	quant. forb.
Clark, J. H. & Head, C. E.	Phys. Rev. A <u>6</u> , 1722 (1972).	life
Liu, C. H. & Church, D. A.	Phys. Rev. Lett. <u>29</u> , 1208 (1972).	life
Lin, C. C., Irwin, D. J. G., Kernahan, J. A., Livingston, A. E., & Pinnington, E. H.	Can. J. Phys. <u>50</u> , 2496 (1972).	life
O III		
Eissner, W. & Jones, M.	J. Phys. (Paris), Colloq. <u>31</u> , C4-149 (1970).	quant.
Nicolaides, C. & Sinanoglu, O.	J. Phys. (Paris), Colloq. C ⁴ , Suppl. 11-12, <u>31</u> , C4-117 (1970).	quant., quant. forb.
Irwin, D. G. J., Kernahan, J. A., Lin, C. C., Livingston, A. E., & Pinnington, E. H.	"Third Conference on Atomic Spectroscopy," No. 49 (University of Reading, Reading, England, 1971).	life
Nicolaides, C., Sinanoglu, O., & Westhaus, P.	Phys. Rev. A <u>4</u> , 1400 (1971).	quant. forb.
Pinnington, E. H.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Pinnington, E. H., Lin, C. C., Kernahan, J. A., & Irwin, D. J. G.	Phys. Lett. A <u>36</u> , 299 (1971).	life
Sinanoglu, O.	"Theory of Electronic Shells of Atoms and Molecules," Institute of Physics and Mathematics, Academy of Sciences of the Lithuanian SSR, 31-44 (Publishing House "Mintis," Vilnius, 1971).	quant.

Sinanoglu, O.	"Topics in Modern Physics--A Tribute to Edward U. Condon," 287-295 (Ed. Brittin, W. E. & Odabasi, H., Colorado Associated Univ. Press, Boulder, Colorado, 1971).	quant.
Lin, C. C., Irwin, D. J. G., Kernahan, J. A., Livingston, A. E., & Pinnington, E. H.	Can. J. Phys. <u>50</u> , 2496 (1972).	life
	O IV	
Irwin, D. G. J., Kernahan, J. A., Lin, C. C., Livingston, A. E., & Pinnington, E. H.	"Third Conference on Atomic Spectroscopy," No. 49 (University of Reading, Reading, England, 1971).	life
McEachran, R. P. & Cohen, M.	J. Quant. Spectrosc. Radiat. Transfer <u>11</u> , 1819 (1971).	SCF
Pinnington, E. H.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Pinnington, E. H., Lin, C. C., Kernahan, J. A., & Irwin, D. J. G.	Phys. Lett. A <u>36</u> , 299 (1971).	life
Sinanoglu, O.	"Theory of Electronic Shells of Atoms and Molecules," Institute of Physics and Mathematics, Academy of Sciences of the Lithuanian SSR, 31-44 (Publishing House "Mintis," Vilnius, 1971).	quant.
Buchet, J. P., Dufay, M., & Poulizac, M. C.	Phys. Lett. A <u>40</u> , 127 (1972).	life
Lin, C. C., Irwin, D. J. G., Kernahan, J. A., Livingston, A. E., & Pinnington, E. H.	Can. J. Phys. <u>50</u> , 2496 (1972).	life
	O V	
Eissner, W. & Nussbaumer, H.	"Premiere Reunion de l'Association Europeene de Spectroscopie Atomique," No. 42 (Faculte des Sciences, Paris-Orsay, 1969).	quant.
Nicolaides, C. & Sinanoglu, O.	J. Phys. (Paris) Colloq. C4, Suppl. 11-12, <u>31</u> , C4-117 (1970).	quant.
Druetta, M., Poulizac, M. C., & Ceyzeriat, P.	J. Phys. B <u>4</u> , 1070 (1971).	life
Irwin, D. G. J., Kernahan, J. A., Lin, C. C., Livingston, A. E., & Pinnington, E. H.	"Third Conference on Atomic Spectroscopy," No. 49 (University of Reading, Reading, England, 1971).	life
Pinnington, E. H.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Buchet, J. P., Dufay, M., & Poulizac, M. C.	Phys. Lett. A <u>40</u> , 127 (1972).	life
Burke, P. G., Hibbert, A., & Robb, W. D.	J. Phys. B <u>5</u> , 37 (1972).	quant.
Lin, C. C., Irwin, D. J. G., Kernahan, J. A., Livingston, A. E., & Pinnington, E. H.	Can. J. Phys. <u>50</u> , 2496 (1972).	life
Nussbaumer, H.	Astron. Astrophys. <u>16</u> , 77 (1972).	quant.
Dalgarno, A., Constantinides, E., & Victor, G. A.	Air Force Cambridge Research Laboratories Report No. AFCRRL-73-0215 (1973).	quant.
Nicolaides, C. A., Beck, D. R., & Sinanoglu, O.	J. Phys. B <u>6</u> , 62 (1973).	quant.
	O VI	
Donnelly, B., Smith, W. W., Pegg, D. J., Brown, M., & Sellin, I. A.	Phys. Rev. A <u>4</u> , 122 (1971).	life

Sellin, I. A., Pegg, D. J., Brown, M., Smith, W. W., & Donnelly, B.	Phys. Rev. Lett. <u>27</u> , 1108 (1971).	life
Capol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, <u>14</u> (1971).	quant.
Huchet, J. P., Dufay, M., & Pouliquac, M. C.	Phys. Lett. A <u>40</u> , 127 (1972).	life
	O VII	
Drake, G. W. F. & Dalgarno, A.	Astrophys. J. <u>157</u> , 459 (1969).	quant.
Schiff, B., Pekeris, C. L., & Accad, Y.	Phys. Rev. A <u>4</u> , 885 (1971).	quant.
Cohen, M. & McEachran, R. P.	Can. J. Phys. <u>50</u> , 1363 (1972).	SCF
Cohen, M. & McEachran, R. P.	Chem. Phys. Lett. <u>14</u> , 201 (1972).	SCF
Jacobs, V. L.	J. Phys. B <u>5</u> , 213 (1972).	quant. forb.

* * * * *

P (Phosphorus)*

	P I	
Lawrence, G. M. & Savage, B. D.	Astrophys. J. <u>146</u> , 940 (1966).	life
	"Excitation Electronique D'Une Vapeur Atomique—Application a la Spectroscopie," No. 162, 239-245 (Centre National de la Recherche Scientifique, Paris, 1967).	
Curtis, L. J., Martinson, I., & Buchta, R.	Phys. Scr. <u>3</u> , 197 (1971).	life
Grof, W. F.	Thesis, Air Force Institute of Technology, 1971.	absorpt.
Martinson, I.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Miller, M. H., Roig, R. A., & Bengtson, R. D.	Phys. Rev. A <u>4</u> , 1709 (1971).	emiss.

	P II	
Lawrence, G. M. & Savage, B. D.	Astrophys. J. <u>146</u> , 940 (1966).	life.
	"Excitation Electronique D'Une Vapeur Atomique—Application a la Spectroscopie," No. 162, 239-245 (Centre National de la Recherche Scientifique, Paris, 1967).	
Curtis, L. J., Martinson, I., & Buchta, R.	Phys. Scr. <u>3</u> , 197 (1971).	life
Martinson, I.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Miller, M. H., Roig, R. A., & Bengtson, R. D.	Phys. Rev. A <u>4</u> , 1709 (1971).	emiss.
Mølhhave, L. & Sørensen, G.	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	life
Beck, D. R. & Sinanoglu, O.	Phys. Rev. Lett. <u>28</u> , 945 (1972).	quant.

*See also Section 3.2 for some further references.

P III

Curtis, L. J., Martinson, I.,
 & Buchta, R. Phys. Scr. 3, 197 (1971). life

Martinson, I. "Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971). life

P IV

Curtis, L. J., Martinson, I.,
 & Buchta, R. Phys. Scr. 3, 197 (1971). life

Martinson, I. "Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971). life

Mølhave, L. & Sørensen, G. "Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971). life

Beck, D. R. & Sinanoglu, O. Phys. Rev. Lett. 28, 945 (1972). quant.

P V

Curtis, L. J., Martinson, I.,
 & Buchta, R. Phys. Scr. 3, 197 (1971). life

Kunze, H. J. & Datla, R. U. Astrophys. J. 169, 425 (1971). CA

Martinson, I. "Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971). life

Mølhave, L. & Sørensen, G. "Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971). life

P VI

Crance, M. At. Data 5, 185 (1973). quant.

P XIII

Zapol', B. P., Kunin, P. E.,
 Lyubimov, A. V., Taksar, Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, quant.
 14 (1971).

* * * * *

Pb (Lead)*

Pb I

Grof, W. F. Thesis, Air Force Institute of Technology (1971). absorpt.

Gibbs, H. M. Phys. Rev. A 5, 2408 (1972). life, forb.

Baghdadi, A., Halpern, J. B.,
 & Saloman, E. B. Phys. Rev. A 7, 403 (1973). life

Gibbs, H. M., Churchill, G. G.,
 & Salamo, G. J. Phys. Rev. A 7, 1766 (1973). emiss., rel.

Pb III

Andersen, T., Kirkegaard Nielsen,
 A., & Sørensen, G. Phys. Scr. 6, 122 (1972). life

*See also Section 3.2 for some further references.

Pb IV

Andersen, T., Kirkegaard Nielsen,
A., & Sørensen, G.

Phys. Scr. 6, 122 (1972).

life

* * * * *

Pd (Palladium)*

Pd I

Baumann, M. & Liening, H.

Phys. Lett. A 36, 329 (1971).

life

* * * * *

Rb (Rubidium)*

Rb I

Kantseryavichus, A. Yu. &
Zhilionite, S. V.

Litov. Fiz. Sb. 7, 73 (1967).

CA

Hertel, I. V. & Ross, K. J.

J. Phys. B 2, 484 (1969).

misc. forb.

Belin, G. & Svanberg, S.

Phys. Scr. 4, 269 (1971).

life

Sternheimer, R. M. & Peierls,
R. F.

Phys. Rev. A 3, 837 (1971).

quant.

Zapol', B. P., Kunin, P. E.,
Lyubimov, A. V., Taksar,
I. M., & Fabrikant, I. I.

Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6,
14 (1971).

quant.

Weisheit, J. C.

Phys. Rev. A 5, 1621 (1972).

quant.

Rb II

Kumar, C. K., Assousa, G. E.,
Brown, L., & Ford, W. K., Jr.

Phys. Rev. A 7, 112 (1973).

life

Rb VIII

Sørensen, G.

Phys. Rev. A 7, 85 (1973).

interp.

Rb IX

Sørensen, G.

Phys. Rev. A 7, 85 (1973).

interp.

* * * * *

*See also Section 3.2 for some further references.

S (Sulfur)*

S I

Lawrence, G. M. & Savage, B. D.	Astrophys. J. <u>146</u> , 940 (1966).	life
	"Excitation Electronique D'Une Vapeur Atomique-Application a la Spectroscopie," No. 162, 239-245 (Centre National de la Recherche Scientifique, Paris, 1967).	
Schulz-Gulde, E.	Z. Phys. <u>245</u> , 308 (1971).	emiss.

S II

Lawrence, G. M. & Savage, B. D.	Astrophys. J. <u>146</u> , 940 (1966).	life
	"Excitation Electronique D'Une Vapeur Atomique-Application a la Spectroscopie," No. 162, 239-245 (Centre National de la Recherche Scientifique, Paris, 1967).	
Schulz-Gulde, E.	Z. Phys. <u>245</u> , 308 (1971).	emiss.
Beck, D. R. & Sinanoglu, O.	Phys. Rev. Lett. <u>28</u> , 945 (1972).	quant.

S III

Beck, D. R. & Sinanoglu, O.	Phys. Rev. Lett. <u>28</u> , 945 (1972).	quant.
-----------------------------	--	--------

S VI

Kunze, H. J. & Datla, R. U.	Astrophys. J. <u>169</u> , 425 (1971).	CA
Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Takser, I. M., & Fabrikant, I. I.	Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, 14 (1971).	quant.

S VII

Crance, M.	At. Data <u>5</u> , 185 (1973).	quant.
------------	---------------------------------	--------

S X

Ivanov, L. N., Ivanova, E. P., & Tolmachev, V. V.	Sov. Phys. J. <u>12</u> , 1578 (1969).	quant.
Ivanov, L. N., Ivanova, E. P., & Tolmachev, V. V.	"Theory of Electronic Shells of Atoms and Molecules," Institute of Physics and Mathematics, Academy of Sciences of the Lithuanian SSR, 90-94 (Publishing House "Mintis," Vilnius, 1971).	quant.

S XII

Shamey, L. J.	J. Opt. Soc. Amer. <u>61</u> , 942 (1971).	quant.
---------------	--	--------

S XIII

Nussbaumer, H.	Astron. Astrophys. <u>16</u> , 77 (1972).	quant.
----------------	---	--------

S XVI

Schmieder, R. W. & Marrus, R.	Bull. Amer. Phys. Soc., Ser. II <u>16</u> , 848 (1971).	life
-------------------------------	---	------

* * * * *

*See also Section 3.2 for some further references.

Sb (Antimony)*

Sb IV

Andersen, T., Kirkegaard Nielsen,
A., & Sørensen, G. Phys. Scr. 6, 122 (1972). life

Sb V

Andersen, T., Kirkegaard Nielsen,
A., & Sørensen, G. Phys. Scr. 6, 122 (1972). life

* * * * *

Sc (Scandium)*

Sc I

Birkhahn, R., Ney, J., &
Tuszynski, W. "Third Conference on Atomic Spectroscopy," No. 15
(University of Reading, Reading, England, 1971). life

Buchta, R., Curtis, L. J.,
Martinson, I., & Brzozowski, J. Phys. Scr. 4, 55 (1971). life

L'vov, B. V. J. Quant. Spectrosc. Radiat. Transfer 12, 651 (1972). absorpt., rel.

Fischer, C. F. Method. Phys. Anal. 8, 3 (1972). J. Quant. Spectrosc. Radiat. Transfer 13, 201 (1973). quant., SCF

Sc II

Warner, B. & Kirkpatrick, R. C. Mon. Notic. Roy. Astron. Soc. 144, 397 (1969). quant.,
Publications of the Department of Astronomy, University quant. forb.
of Texas at Austin, Vol. III, No. 2 (1969).

Buchta, R., Curtis, L. J.,
Martinson, I., & Brzozowski, J. Phys. Scr. 4, 55 (1971). life

Sc III

Ali, M. A. J. Quant. Spectrosc. Radiat. Transfer 11, 1611 (1971). quant. forb.
Buchta, R., Curtis, L. J.,
Martinson, I., & Brzozowski, J. Phys. Scr. 4, 55 (1971). life

Warner, B. Observatory 92, 50 (1972). quant.,
quant. forb.

Sc IV

Cowan, R. D. J. Phys. (Paris), Colloq. 31, C4-191 (1970). quant.

Sc XII

Crance, M. At. Data 5, 185 (1973). quant.

* * * * *

*See also Section 3.2 for some further references.

Se (Selenium)*

Se V

Sørensen, G.

Phys. Rev. A 7, 85 (1973).

life

Se VI

Sørensen, G.

Phys. Rev. A 7, 85 (1973).

life

* * * * *

Si (Silicon)*

Si I

Lawrence, G. M. & Savage, B. D.

Astrophys. J. 146, 940 (1966).

life

"Excitation Electronique D'Une Vapeur Atomique—Application
a la Spectroscopie," No. 162, 239-245 (Centre National
de la Recherche Scientifique, Paris, 1967).

Cowan, R. D.

J. Phys. (Paris), Colloq. 31, C4-191 (1970).

quant.

Schulz-Gulde, E.

Astron. Astrophys. 21, 313 (1972).

emiss.

Si II

Lawrence, G. M. & Savage, B. D.

Astrophys. J. 146, 940 (1966).

life

"Excitation Electronique D'Une Vapeur Atomique—Application
a la Spectroscopie," No. 162, 239-245 (Centre National
de la Recherche Scientifique, Paris, 1967).

Berry, H. G., Bromander, J.,
Curtis, L. J., & Buchta, R.

Phys. Scr. 3, 125 (1971).

life

Beck, D. R. & Sinanoglu, O.

Phys. Rev. Lett. 28, 945 (1972).

quant.

Yukov, E. A.

Sov. Astron. - AJ 15, 867 (1972).

quant.

Irwin, D. J. G. & Livingston,
A. E.

Can. J. Phys. 51, 848 (1973).

life

Si III

Berry, H. G., Bromander, J.,
Curtis, L. J., & Buchta, R.

Phys. Scr. 3, 125 (1971).

life

Beck, D. R. & Sinanoglu, O.

Phys. Rev. Lett. 28, 945 (1972).

quant.

Yukov, E. A.

Sov. Astron. - AJ 15, 867 (1972).

quant.

Irwin, D. J. G. & Livingston,
A. E.

Can. J. Phys. 51, 848 (1973).

life

Si IV

Berry, H. G., Bromander, J.,
Curtis, L. J., & Buchta, R.

Phys. Scr. 3, 125 (1971).

life

Kunze, H. J. & Datla, R. U.

Astrophys. J. 169, 425 (1971).

CA

Zapol', B. P., Kunin, P. E.,
Lyubimov, A. V., Taksar,
I. M., & Fabrikant, I. I.

Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6,
14 (1971).

quant.

Irwin, D. J. G. & Livingston,
A. E.

Can. J. Phys. 51, 848 (1973).

life

*See also Section 3.2 for some further references.

Si V

Crance, M. At. Data 5, 185 (1973). quant.

Si VI

Nicolaides, C. A. & Beck, D. R. J. Phys. B 6, 535 (1973). quant.

Si VII

Nicolaides, C. A. & Beck, D. R. J. Phys. B 6, 535 (1973). quant.

Si VIII

Nicolaides, C. A. & Beck, D. R. J. Phys. B 6, 535 (1973). quant.

Si IX

Nicolaides, C. A. & Beck, D. R. J. Phys. B 6, 535 (1973). quant.

Si X

Eissner, W. & Jones, M. J. Phys. (Paris), Colloq. 31, C4-149 (1970). quant.

Shamey, L. J. J. Opt. Soc. Amer. 61, 942 (1971). quant.

Nicolaides, C. A. & Beck, D. R. J. Phys. B 6, 535 (1973). quant.

Si XI

Nussbaumer, H. Astron. Astrophys. 16, 77 (1972). quant.

Nicolaides, C. A. & Beck, D. R. J. Phys. B 6, 535 (1973). quant.

Nicolaides, C. A., Beck, D. R., & Sinanoglu, O. J. Phys. B 6, 62 (1973). quant.

Si XII

Zapol', B. P., Kunin, P. E., Lyubimov, A. V., Taksar, I. M., & Fabrikant, I. I. Izv. Akad. Nauk. Latv. SSR, Ser. Fiz. Tekh. Nauk No. 6, 14 (1971). quant.

* * * *

Sn (Tin)*

Sn I

Gvechkin, G. V., Bal'tovarovshoev Sh., & Sandrigaalo, L. E. J. Appl. Spectrosc. (USSR) 7, 309 (1967). emiss.

L'vov, B. V., Katskov, D. A., & Kruglikova, L. P. Zh. Prikl. Spektrosk. 14, 784 (1971). absorpt., rel.

Andersen, T., Madsen, O. H., & Sørensen, G. J. Opt. Soc. Amer. 62, 1118 (1972). life

Holmgren, L. & Svanberg, S. Phys. Scr. 5, 135 (1972). life

*See also Section 3.2 for some further references.

Sn III

Andersen, T., Kirkegaard Nielsen,
A., & Sørensen, G.

Phys. Scr. 6, 122 (1972).

life

Sn IV

Andersen, T., Kirkegaard Nielsen,
A., & Sørensen, G.

Phys. Scr. 6, 122 (1972).

life

* * * * *

Sr (Strontium)*

Sr I

Zilitis, V. A.

Opt. Spectrosc. (USSR) 29, 438 (1970).

quant.

Hameed, S.

J. Phys. B 5, 746 (1972).

quant.

Kim, Y.-K. & Bagus, P. S.

J. Phys. B 5, L193 (1972).

quant.

L'vov, B. V.

J. Quant. Spectrosc. Radiat. Transfer 12, 651 (1972).

absorpt.

Method. Phys. Anal. 8, 3 (1972).

Sr IX

Sørensen, G.

Phys. Rev. A 7, 85 (1973).

interp.

Sr X

Sørensen, G.

Phys. Rev. A 7, 85 (1973).

interp.

* * * * *

Te (Tellurium)*

Te I

Garpman, S., Lidø, G., Rydberg,
S., & Svanberg, S.

Z. Phys. 247, 238 (1971).

life

"Third Conference on Atomic Spectroscopy," No. 37
(University of Reading, Reading, England, 1971).

Te V

Andersen, T., Kirkegaard Nielsen,
A., & Sørensen, G.

Phys. Scr. 6, 122 (1972).

life

Te VI

Andersen, T., Kirkegaard Nielsen,
A., & Sørensen, G.

Phys. Scr. 6, 122 (1972).

life

* * * * *

*See also Section 3.2 for some further references.

Ti (Titanium)*

Ti I

Protop'ev, V. N. & Ratobyl'skaya, T. A.	Izv. Krym. Astrofiz. Observ. <u>39</u> , 186 (1969).	compil.
Hese, A.	Z. Naturforsch. A <u>27</u> , 188 (1972).	life
Fischer, C. F.	"Second Conference on Atomic Spectroscopy," No. 8 (Institut A für Experimentalphysik der Technischen Universität, Hannover, Germany, 1970).	quant., SCF
Roberts, J. R., Andersen, T., & Sørensen, G.	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 201 (1973).	life
Wolnik, S. J. & Berthel, R. O.	Astrophys. J. <u>181</u> , 567 (1973).	emiss.
	Astrophys. J. <u>179</u> , 665 (1973).	

Ti II

Andersen, T., Roberts, J. R., & Sørensen, G.	"Third Conference on Atomic Spectroscopy," No. 4 (University of Reading, Reading, England, 1971).	life
Roberts, J. R., Andersen, T., & Sørensen, G.	Astrophys. J. <u>181</u> , 567 (1973).	life emiss., rel.
Wolnik, S. J. & Berthel, R. O.	Astrophys. J. <u>179</u> , 665 (1973).	emiss.

Ti III

Warner, B. & Kirkpatrick, R. C.	Mon. Notic. Roy. Astron. Soc. <u>144</u> , 397 (1969).	quant., quant. forb.
Andersen, T., Roberts, J. R., & Sørensen, G.	Publications of the Department of Astronomy, University of Texas at Austin, Vol. III, No. 2 (1969).	life
Roberts, J. R., Andersen, T., & Sørensen, G.	"Third Conference on Atomic Spectroscopy," No. 4 (University of Reading, Reading, England, 1971).	life
	Astrophys. J. <u>181</u> , 567 (1973).	life

Ti IV

Roberts, J. R., Andersen, T., & Sørensen, G.	Astrophys. J. <u>181</u> , 567 (1973).	life
---	--	------

Ti V

Cowan, R. D.	J. Phys. (Paris), Colloq. <u>31</u> , C4-191 (1970).	quant.
--------------	--	--------

Ti XIII

Crance, M.	At. Data <u>5</u> , 185 (1973).	quant.
------------	---------------------------------	--------

* * * * *

Tl (Thallium)*

Tl I

Andersen, T. & Sørensen, G.	Phys. Rev. A <u>5</u> , 2447 (1972).	life
	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	

*See also Section 3.2 for some further references.

Hsieh, J. C. & Baird, J. C.	Phys. Rev. A <u>6</u> , 141 (1972).	life
Tl II		
Andersen, T., Kirkegaard Nielsen, A., & Sørensen, G.	Phys. Scr. <u>6</u> , 122 (1972).	life
Andersen, T. & Sørensen, G.	Phys. Rev. A <u>5</u> , 2447 (1972).	life
	"Proceedings of the 2nd European Conference on Beam-Foil Spectroscopy and Connected Topics," (Lyon, 1971).	
Tl III		
Andersen, T., Kirkegaard Nielsen, A., & Sørensen, G.	Phys. Scr. <u>6</u> , 122 (1972).	life
* * * * *		
Tm (Thulium)*		
Tm I		
Wallenstein, R.	Z. Phys. <u>251</u> , 57 (1972).	life
* * * * *		
V (Vanadium)*		
V I		
Fischer, C. F.	J. Quant. Spectrosc. Radiat. Transfer <u>13</u> , 201 (1973).	quant., SCF
Mie, K. & Richter, J.	Astron. Astrophys. <u>25</u> , 299 (1973).	absorpt.
Roberts, J. R., Andersen, T., & Sørensen, G.	Astrophys. J. <u>181</u> , 587 (1973).	life, emiss., rel.
V II		
Roberts, J. R., Andersen, T., & Sørensen, G.	Astrophys. J. <u>181</u> , 587 (1973).	life, emiss., rel.
V III		
Roberts, J. R., Andersen, T., & Sørensen, G.	Astrophys. J. <u>181</u> , 587 (1973).	life
V IV		
Warner, B. & Kirkpatrick, R. C.	Mon. Notic. Roy. Astron. Soc. <u>144</u> , 397 (1969).	quant., quant. forb.
	Publications of the Department of Astronomy, University of Texas at Austin, Vol. III, No. 2 (1969).	

*See also Section 3.2 for some further references.

Grande, M.

At. Data 5, 185 (1973).

quant.

* * * * *

W (Tungsten)*

W I

Kirisanova, N. N.

J. Appl. Spectrosc. (USSR) 10, 444 (1969).

emiss.

* * * * *

Xe (Xenon)*

Xe I

Malakhov, V. P.

Sov. Phys. J. 8, 128 (1965).

absorpt.

Anderson, D. K.

Phys. Rev. 137, A21 (1965).

life

"Excitation Electronique D'Une Vapeur Atomique-Application
a la Spectroscopie," No. 162, 211-215 (Centre National
de la Recherche Scientifique, Paris, 1967).Chenevier, M. & Nguyen Truong
Dung"Second Conference on Atomic Spectroscopy," No. 26
(Institut A für Experimentalphysik der Technischen
Universität, Hannover, Germany, 1970).

life

Chenevier, M. & Nguyen, T. D.

Phys. Lett. A 36, 177 (1971).

life

Karimov, R. G. & Klimkin, V. M.

Izv. Vyssh. Ucheb. Zaved., Fiz. No. 3, 24 (1971).

life

Stedman, D. H. & Setser, D. W.

"Progress in Reaction Kinetics," Vol. 6, Part 4, 193-238
(Ed. Jennings, K. R. & Cundall, R. B., Pergamon Press,
New York, 1971).

quant. forb.

Aymar, M.

Physica (Utrecht) 57, 178 (1972).

quant.

Davis, C. C. & King, T. A.

Phys. Lett. A 39, 186 (1972).

life

Hackmann, J., Michael, H., &
Uhlenbusch, J.Z. Phys. 250, 207 (1972).

emiss.

Husson, X. & Margerie, J.

Opt. Commun. 5, 139 (1972).

life

Wieme, W. & Mortier, P.

Physica (Utrecht) 65, 198 (1973).

life

Xe II

Karimov, R. G. & Klimkin, V. M.

Izv. Vyssh. Ucheb. Zaved., Fiz. No. 3, 24 (1971).

life

Levchenko, M. A.

Izv. Vyssh. Ucheb. Zaved., Fiz. No. 10, 147 (1971).

emiss.

Andersen, T., Madsen, O. H.,
& Sørensen, G.Phys. Scr. 6, 125 (1972).

life

Hackmann, J., Michael, H., &
Uhlenbusch, J.Z. Phys. 250, 207 (1972).

emiss.

*See also Section 3.2 for some further references.

Xe III

Andersen, T., Madsen, O. H.,
& Sørensen, G.

Phys. Scr. 6, 125 (1972).

life

* * * * *

Y (Yttrium)*

Y I

Beer, H.

Z. Phys. 239, 351 (1970).

life

Beer, H.

Ann. Phys. (Leipzig) 27, 110 (1971).

life

* * * * *

Zn (Zinc)*

Zn I

Spitzer, M.

Ann. Phys. (Paris) 5, 707 (1960).

life

Osherovich, A. L., Anisimova,
G. P., Burstein, M. L.,
Verolainen, Ya. F., Szigeti,
J., & Ledovskaya, E. A.

Opt. Spectrosc. (USSR) 30, 429 (1971).

life

Penkin, N. P. & Redko, T. P.

Opt. Spectrosc. (USSR) 30, 1 (1971).

life

Spitzer-Aronson, M., &
Soleillet, P.

C. R. H. Acad. Sci., Ser. B 272, 520 (1971).

life

L'vov, B. V.

J. Quant. Spectrosc. Radiat. Transfer 12, 651 (1972).

absorpt.

Method. Phys. Anal. 8, 3 (1972).

Andersen, T. & Sørensen, G.

J. Quant. Spectrosc. Radiat. Transfer 13, 369 (1973).

life

Zn II

Andersen, T. & Sørensen, G.

J. Quant. Spectrosc. Radiat. Transfer 13, 369 (1973).

life

Hyman, H. A.

Chem. Phys. Lett. 10, 242 (1971).

quant.



U.S. DEPT. OF COMM. BIBLIOGRAPHIC DATA SHEET			
1. PUBLICATION OR REPORT NO. NBS SP-320, Supplement 2			
2. Gov't Accession No.			
3. Recipient's Accession No.			
4. TITLE AND SUBTITLE Bibliography on Atomic Transition Probabilities July 1971 through June 1973			
5. Publication Date November 1973			
6. Performing Organization Code			
7. AUTHOR(S) J. R. Fuhr and W. L. Wiese			
8. Performing Organization			
9. PERFORMING ORGANIZATION NAME AND ADDRESS NATIONAL BUREAU OF STANDARDS DEPARTMENT OF COMMERCE WASHINGTON, D.C. 20234			
10. Project/Task/Work Unit No. 2320171			
11. Contract/Grant No.			
12. Sponsoring Organization Name and Address Same as #9.			
13. Type of Report & Period Covered Interim July 1971 -- June 1973			
14. Sponsoring Agency Code			
15. SUPPLEMENTARY NOTES			
16. ABSTRACT (A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here.) <p>This is the second supplement to the NBS Special Publication 320, "Bibliography on Atomic Transition Probabilities," and it covers the most recent literature on the subject from July 1971 through June 1973. The papers are arranged according to elements and stages of ionization, and the method employed and classification of transitions are indicated for each reference. Only articles on discrete transitions, both allowed and forbidden, are listed. Papers containing data for many elements within iso-electronic sequences are collected separately in front of the list in order to keep this bibliography to a reasonable size. Also included is a selected list of new papers dealing with the subject of atomic transition probabilities from a general point of view.</p>			
17. KEY WORDS (Alphabetical order, separated by semicolons) Allowed; atomic; discrete; forbidden; transition probability.			
18. AVAILABILITY STATEMENT <input checked="" type="checkbox"/> UNLIMITED. <input type="checkbox"/> FOR OFFICIAL DISTRIBUTION. DO NOT RELEASE TO NTIS.		19. SECURITY CLASS (THIS REPORT) UNCL ASSIFIED	21. NO. OF PAGES 63
		20. SECURITY CLASS (THIS PAGE) UNCL ASSIFIED	22. Price 95

NBS TECHNICAL PUBLICATIONS

PERIODICALS

JOURNAL OF RESEARCH reports National Bureau of Standards research and development in physics, mathematics, and chemistry. Comprehensive scientific papers give complete details of the work, including laboratory data, experimental procedures, and theoretical and mathematical analyses. Illustrated with photographs, drawings, and charts. Includes listings of other NBS papers as issued.

Published in two sections, available separately:

• Physics and Chemistry (Section A)

Papers of interest primarily to scientists working in these fields. This section covers a broad range of physical and chemical research, with major emphasis on standards of physical measurement, fundamental constants, and properties of matter. Issued six times a year. Annual subscription: Domestic, \$17.00; Foreign, \$21.25.

• Mathematical Sciences (Section B)

Studies and compilations designed mainly for the mathematician and theoretical physicist. Topics in mathematical statistics, theory of experiment design, numerical analysis, theoretical physics and chemistry, logical design and programming of computers and computer systems. Short numerical tables. Issued quarterly. Annual subscription: Domestic, \$9.00; Foreign, \$11.25.

DIMENSIONS, NBS

The best single source of information concerning the Bureau's measurement, research, developmental, cooperative, and publication activities, this monthly publication is designed for the layman and also for the industry-oriented individual whose daily work involves intimate contact with science and technology—for engineers, chemists, physicists, research managers, product-development managers, and company executives. Annual subscription: Domestic, \$6.50; Foreign, \$8.25.

NONPERIODICALS

Applied Mathematics Series. Mathematical tables, manuals, and studies.

Building Science Series. Research results, test methods, and performance criteria of building materials, components, systems, and structures.

Handbooks. Recommended codes of engineering and industrial practice (including safety codes) developed in cooperation with interested industries, professional organizations, and regulatory bodies.

Special Publications. Proceedings of NBS conferences, bibliographies, annual reports, wall charts, pamphlets, etc.

Monographs. Major contributions to the technical literature on various subjects related to the Bureau's scientific and technical activities.

National Standard Reference Data Series. NSRDS provides quantitative data on the physical and chemical properties of materials, compiled from the world's literature and critically evaluated.

Product Standards. Provide requirements for sizes, types, quality, and methods for testing various industrial products. These standards are developed cooperatively with interested Government and industry groups and provide the basis for common understanding of product characteristics for both buyers and sellers. Their use is voluntary.

Technical Notes. This series consists of communications and reports (covering both other-agency and NBS-sponsored work) of limited or transitory interest.

Federal Information Processing Standards Publications. This series is the official publication within the Federal Government for information on standards adopted and promulgated under the Public Law 89-306, and Bureau of the Budget Circular A-86 entitled, Standardization of Data Elements and Codes in Data Systems.

Consumer Information Series. Practical information, based on NBS research and experience, covering areas of interest to the consumer. Easily understandable language and illustrations provide useful background knowledge for shopping in today's technological marketplace.

BIBLIOGRAPHIC SUBSCRIPTION SERVICES

The following current-awareness and literature-survey bibliographies are issued periodically by the Bureau:

Cryogenic Data Center Current Awareness Service (Publications and Reports of Interest in Cryogenics). A literature survey issued weekly. Annual subscription: Domestic, \$20.00; foreign, \$25.00.

Liquefied Natural Gas. A literature survey issued quarterly. Annual subscription: \$20.00.

Superconducting Devices and Materials. A literature survey issued quarterly. Annual subscription: \$20.00. Send subscription orders and remittances for the preceding bibliographic services to the U.S. Department of Commerce, National Technical Information Service, Springfield, Va. 22151.

Electromagnetic Metrology Current Awareness Service (Abstracts of Selected Articles on Measurement Techniques and Standards of Electromagnetic Quantities from D-C to Millimeter-Wave Frequencies). Issued monthly. Annual subscription: \$100.00 (Special rates for multi-subscriptions). Send subscription order and remittance to the Electromagnetic Metrology Information Center, Electromagnetics Division, National Bureau of Standards, Boulder, Colo. 80302.

Order NBS publications (except Bibliographic Subscription Services) from: Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

U.S. DEPARTMENT OF COMMERCE
National Bureau of Standards
Washington, D.C. 20234

OFFICIAL BUSINESS

Penalty for Private Use, \$300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE
COM-215



9721

