

Table of Contents

INTRODUCTION	1
Eigenvalue Equation	1
Electronic Functions	2
Energy Levels	3
Practical Considerations	11
DESCRIPTION	13
Electric Fields	13
Magnetic Fields	33
TABLES	39
Table I. Configurations	41
Table II. Electric Dipole Polarizabilities	53
Table III. Shielding Potentials	143
Table IV. Probabilities of Barrier Penetration	175
Table V. Electric Dipole Transition Probabilities	183
Table VI. Expectation Values $\langle r^k \rangle$	383
Table VII. Radial Integrals for g Factors	395
PRACTICAL APPLICATIONS	547
Theoretical Description of an Atom	547
REFERENCES	555