

**THE ELEMENTS OF
DESCRIPTIVE
ASTRONOMY**

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The Elements of Descriptive Astronomy by E. O. Tancock

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E. O. TANCOCK

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DESCRIPTIVE
ASTRONOMY**

THE ELEMENTS OF
DESCRIPTIVE ASTRONOMY

BY

E. O. TANCOCK, B.A.

ASSISTANT MASTER AT WELLINGTON COLLEGE, BERKS.

SECOND EDITION

REVISED, WITH ADDITIONAL MATTER ON PRACTICAL WORK
FOR BEGINNERS WITH SMALL INSTRUMENTS

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PREFACE

I HAVE endeavoured in this book to give a simple description of the heavenly bodies and their motions in a form which should appeal to those who know little or nothing of the subject. It has been my aim to strike a mean between the larger and more difficult technical books and the extremely simple ones which weary us with accounts of children walking round tables and oranges. The book is the outcome of the notes which I have used in teaching Astronomy to Junior Forms in a Public School, where experience has shown me that many boys will follow up the subject, read for themselves, and enjoy practical work, when once they have been given a start.

I have tried to preserve a fair proportion between the purely descriptive matter and the account of the more difficult subject of celestial motions. A clear appreciation of the movements of the bodies on the Celestial Sphere is essential to even a most trifling knowledge of Astronomy; but I believe that most of the difficulties will be removed if the reader takes the trouble to make a model as described in Chapter X, and carefully follows out the practical exercises.

Although no particular Examination Syllabus has been followed, I believe that the book will be useful for several elementary examinations, such as that of the Boy Scouts. In the hope that the book will appeal also to those who desire a general, yet brief, review of the elements of astronomical science, I have included many topics which will serve as finger-posts to the more technical accounts that occasionally appear in periodical literature.

I have to acknowledge much valuable assistance in the preparation of this book. The diagrams have been drawn, according to my directions, by my sister, Miss A. K. Tancock. The Rev. T. E. R. Phillips kindly lent me his original drawings of Jupiter and Mars; for the photographs of Mars I am indebted to Dr. Percival Lowell; and Mr. G. F. Chambers has kindly permitted the inclusion of De la Rue's drawing of Saturn from his *Handbook of Astronomy* (Clarendon Press). The remaining plates are reproduced by the kind permission of the Royal Observatory, Greenwich; Lick Observatory; Yerkes Observatory; Mount Wilson Observatory; Dr. E. E. Barnard; Mr. J. Granville Wilson; and Monsieur P. Puiseux, of Paris. I must also express my thanks to the *Royal Astronomical Society* for permission to reproduce illustrations which have appeared in their publications; and to Mr. Charles Everitt, who has given me much assistance in preparing the book for press.

E. O. TANCOCK.

PREFACE TO THE SECOND EDITION

In the First Edition there were a few errors which have been corrected. I wish to thank the Rev. T. E. R. Phillips for allowing me to make use of his drawing of Saturn. Plate III is included by kind permission of the Paris Observatory. The matter which I have added in the text has mostly been suggested to me during my teaching. Mr. W. G. W. Mitchell kindly read the manuscript and gave me valued help.

E. O. TANCOCK.

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