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William Thomson, Baron Kelvin and P. G. Tait
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ELEMENTS

OF

NATURAL PHILOSOPHY

BY

PROFESSORS SIR W. THOMSON
AND P. G. TAIT

PART I

Cambridge

AT THE UNIVERSITY PRESS

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PREFACE.

THE following work consists, in great part, of the large-type, or non-mathematical, portion of our Treatise on Natural Philosophy.

As it is designed more especially for use in Schools and in the junior classes in Universities, the mathematical methods employed are, almost without exception, limited to those of the most elementary geometry, algebra, and trigonometry. Where higher methods are required for an investigation, the reader is, in general, simply referred to our larger work.

It is particularly interesting to note how many theorems, even among those not ordinarily attacked without the help of the Differential Calculus, have here been found to yield easily to geometrical methods of the most elementary character.

Simplification of modes of proof is not merely an indication of advance in our knowledge of a subject, but is also the surest guarantee of readiness for farther progress.

A large part of Chapter VII is reprinted from a series of notes of a part of the Glasgow course, drawn up for Sir W. Thomson by John Ferguson, Esq., and printed for the use of his students.

We have had considerable difficulty in compiling this treatise from the larger work—arising from the necessity for condensation to a degree almost incompatible with the design to omit nothing of importance: and we feel that it would have given us much less trouble and anxiety, and would probably have ensured a better result, had we written the volume anew without keeping the larger book constantly before us. The sole justification of the course we have pursued is that wherever, in the present volume, the student may feel further information to be desirable, he will have no difficulty in finding it in the corresponding pages of the larger work.

A great portion of the present volume has been in type since the autumn of 1863, and has been printed for the use of our classes each autumn since that date.

W. THOMSON.
P. G. TAIT.

November, 1872.

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