

PHYSICS

The background of the cover is a deep blue with a complex, textured pattern. It features concentric, wavy lines that resemble ripples on water, emanating from a central point. Overlaid on these ripples are several thin, white, straight lines that intersect at various angles, creating a grid-like or orbital structure. In the lower right quadrant, there are several white, textured, spherical objects that look like baseballs, arranged in a curved path as if they are orbiting or moving along one of the white lines.

Foundations and Frontiers

THIRD EDITION

GEORGE GAMOW

JOHN M. CLEVELAND

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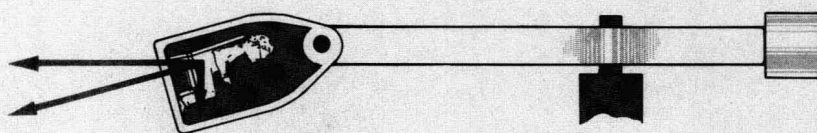
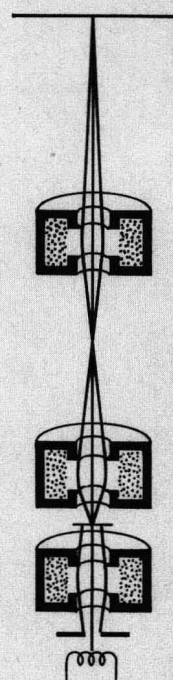
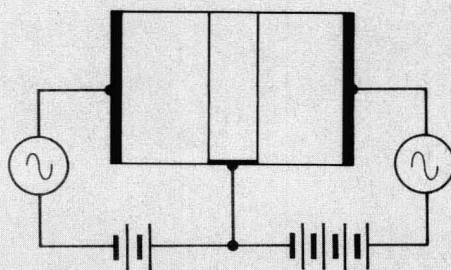
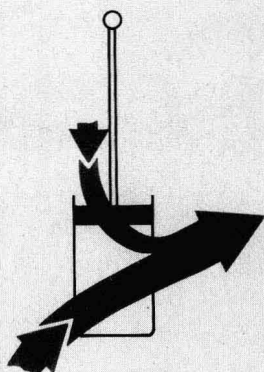
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Foundations and Frontiers



Preface

The third edition of this text is designed to serve the same purpose as the first two editions: a one-year course in introductory physics, requiring only a prior exposure to high school algebra.

A substantial and growing fraction of the students taking such a course are biologically oriented. To better serve the needs and interests of this group, many examples throughout the text have been given a biological slant. Along with the other final chapters on Geophysics and Astrophysics, the chapter on Biophysics has also been retained and extensively revised. Although these revisions may make the flavor more palatable to most students, the basic diet of physics has remained unchanged.

In my own teaching from the second edition, I found it advisable to rearrange the sequence of some of the chapters. This rearrangement has been incorporated in the third edition, and I am certain that those who use the book will find it to be a helpful improvement.

In the extensive rewriting, and in the many decisions on deletions,

additions and rearrangements, the contributions of the late George Gamow's creative imagination have been sadly missed. I hope he would approve of what has been done.

JOHN M. CLEVELAND

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