THERMODYNAMICS AND RELATIVITY

By Professor RICHARD C. TOLMAN
CALIFORNIA INSTITUTE OF TECHNOLOGY

(1) INTRODUCTION

We have met to do honor to the memory of Josiah Willard Gibbs. By the labors of this master, the classical principles of thermodynamics were given their most complete and comprehensive expression. As the subject for the tenth memorial lecture, it seems appropriate to discuss the extensions to these classical principles which have since been made necessary by Einstein’s discovery of the special and general theories of relativity.

The need for an extension of thermodynamics to relativity arises in two ways.

In the first place the classical thermodynamics was
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