



***HENRI
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***THE NEW
MECHANICS***

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The New Mechanics

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Mechanics and Radium

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I

Introduction

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THE general principles of Dynamics, which have, since Newton, served as foundation for physical science, and which appeared immovable, are they on the point of being abandoned or at least profoundly modified? This is what many people have been asking themselves for some years. According to them, the discovery of radium has overturned the scientific dogmas we believed the most solid: on the one hand, the impossibility of the transmutation of metals; on the other hand, the fundamental postulates of mechanics.

Perhaps one is too hasty in considering these novelties as finally established, and breaking our idols of yesterday; perhaps it would be proper, before taking sides, to await experiments more numerous and more convincing. None the less is it necessary, from to-day, to know the new doctrines and the arguments, already very weighty, upon which they rest.

In few words let us first recall in what those principles consist:

A. The motion of a material point isolated and apart from all exterior force is straight and uniform; this is the principle of inertia: without force no acceleration;