PHYSICS UNIFIED

By HAROLD ASPDEN

Perhaps the greatest challenge in 20th century physics is that of discovering how electromagnetism and gravitation can be embraced by a unified theory compatible with Einstein's formulae for the energy-mass relationship, mass increase with speed and the rate of advance of a planet's perihelion. In this work Dr. Aspden shows how this unification emerges from a straightforward analysis of energy deployment in particle interaction, confirming the intuitive prediction of Oliver Heaviside (1893) as later endorsed by Leon Brillouin (1970). However, an essential further step in Dr. Aspden's thesis is the recognition that energy considerations are more fundamental than field concepts. A law of electrodynamics is derived which was, in fact, first suggested empirically by Maxwell and then discarded in favour of one deducible from his field equations.

The unified theory based upon this new law of electrodynamics should have practical application since it can account for anomalies in the electron-ion energy transfer process currently observed in experiments relating to fusion power. Its appeal to the physicist will be the intriguing connection between the properties of elementary particles and the structured character of the vacuum medium, allowing exact theoretical evaluation of several fundamental physical constants.

In its broader sense the work constitutes a general unification by providing a new insight into the processes of creation of the solar system. The event of the sun's creation is shown to result from the onset of the gravitational state as the vacuum became ordered, a phenomenon analogous with the onset of the ferromagnetic state as a ferromagnetic crystal cools below the Curie temperature.

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