

S. Zolver Preston

Samuel Tolver Preston (8 July 1844 – 1917) was an English engineer and physicist.

His parents were Daniel Bloom Preston (born 1807) and Mary Susannah Tolver. Preston was educated as a Telegraph-engineer. He went to Munich where he attained his Ph.D in 1894 with Ludwig Boltzmann. After that, he worked as a teacher.

He is known for his works (1875–1894) on the kinetic theory of gases and his attempts to combine this theory with Le Sage's theory of gravitation. In his book [Physics of the Ether](#) (1875) he claimed that if matter is subdivided into ether particles, they would travel at the speed of light and represent an enormous amount of energy. In this way, one grain of matter would contain energy equal to 1000 million foot-tons (whereby one foot-ton = 2240 foot pounds).

However, Preston's thoughts were entirely based on classical, non-relativistic physics and cannot be compared with Albert Einstein's mass-energy equivalence, which is a consequence of special relativity.

Preston also seemed to be the first (1885) to recognize the redundancy of Michael Faraday's explanation of electromagnetic induction. Einstein recognized a similar problem in his paper "On the electrodynamics of moving bodies" (1905, i.e. special relativity).

In 1876 he corresponded with James Clerk Maxwell and alluded to the work of John James Waterston. In 1880 he corresponded with Charles Robert Darwin. [Wikipedia, Samuel Tolver Preston](#) ↗

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S. Zolver Preston, in his "[Physics of the Ether](#)" says: "A quantity of *matter* only 1 gram and of the normal *velocity* of the *ether*, or a *wave* of *light* encloses a state of *energy* represented by 1,000,000,000 foot tons. Or the *mass* of a grain contains an *energy* sufficient to project a *weight* of 100 tons to a height of 1.9 miles." [[Snell Manuscript - The Book, page 3](#)]

See Also

Ether

[Physics of the Ether](#)