

letters

some other observers. But if tachyons can have curvilinear trajectories, then their trajectories are not uniquely determined by the position and velocity at one instant of time; there must be other parameters, presumably interpretable as new dynamical quantities.

What is needed is a relativistic statement of a law of motion for charged tachyons or (equivalently) a description of the complete family of possible trajectories.

A possible "out" is to assume that tachyons are uncharged, and also lack all other electromagnetic properties (for example, dipole moments) that could cause Cerenkov radiation. Even this stringent requirement is insufficient; one must also consider the possibility of Cerenkov-like radiation with quanta other than photons. In fact, it is not obvious to me that tachyons can have any interactions with non-tachyons, without automatically becoming sources of Cerenkov-like radiation.

HOWARD ROBBINS
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Rutherford portrait

I should like to congratulate you on the cover of your December 1971 issue, the reproduction of Oswald Birley's portrait of the late Lord Rutherford. It gave me great pleasure for it is the best reproduction of this portrait that I have ever seen; and, in my opinion, Birley's portrait is the best portrait of Rutherford that exists.

I remember the occasion very well, for it was my good fortune to have some talk with Birley about it.

A few years later, Birley painted a copy for the Cavendish Laboratory. This gave him much more trouble, but he thought that the copy was a better picture if not a better portrait.

JAMES CHADWICK
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For more on Rutherford and Chadwick see article by Charles Weiner, page 40.

Second-class currents

I read with interest your report "Do second-class currents exist in beta decay?" in the November 1971 issue (page 18). However, a few important facts should be added.

First of all, I note that only half of the reasoning is quoted from my paper [*Phys. Lett.* 34B, 395 (1971)] explaining why the mass-18 and mass-30 values should be excluded from the discussion. The original reasoning, where besides the fact that these points are compari-

sons of successive positron emissions, the smallness of the energy differences in the decays are also used, enables us to exclude the above points from the discussion independently from the concrete form of the anomaly of the $(ft)^+/(ft)^-$ values.

(To see this in some detail we write $(ft)^+ = (ft)_0(1 \pm \delta(W^\pm))$ where $\delta(W^\pm)$ is the small charge-dependent correction term. Then $(ft)^+/(ft)^- \approx 1 + \delta(W^+) + \delta(W^-) = 1 + \delta$, and $(ft)_1^+/(ft)_2^+ \approx 1 + \delta(W_1^+) - \delta(W_2^+)$, where $\delta(W_1^+) \approx \delta(W_2^+)$ if $W_1^+ \approx W_2^+$.)

Using the remaining points we could conclude that the anomaly is energy independent with large probability. Later this was proved by the excellent work of Denys Wilkinson and David Alburger (*Phys. Rev. Lett.* 26, 1127 (1971)).

Another important point is the use of the K/β^+ ratios to decide whether the second-class currents exist or not. This unique approach gave the first evidence that the magnitude of G_{IT} necessary to explain the $(ft)^+/(ft)^-$ ratios is impossible.

After one rules out the induced tensor interaction, the situation is indeed not too clear with the $(ft)^+/(ft)^-$ ratios. However a very promising contribution to the problem was made by J. Blomquist [*Phys. Lett.* 35B, 375 (1971)], who recalculated the overlap integrals for the $A = 12$ system using the Cohen-Kurath intermediate coupling. He was able to explain the $(ft)^+/(ft)^-$ ratios in this case, and the same is expected for the $A = 8$ system. It remains to be seen what the calculations give in other cases.

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Question of genius

As a retired engineer and physicist I have been collecting material and planning an essay on the characteristics of professional technical people. My interest was again stimulated by the recent article "On Trying to Understand Scientific Genius" by Gerald Holton, published in the Winter 1971-72 issue of *The American Scholar*.

I differ from Holton's philosophy in some respects and am making the effort to have these differences published. In particular, I would like to use an article published in one of the New York newspapers in about the years 1930-1940. Unfortunately I have lost all references to the published story and am hoping that a reader could aid in naming the person involved and the approximate date of occurrence. The story as I remember is as follows:

A physicist, a man whose name, very unfortunately, I have lost, was publicly

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