

Editorial

Fifteen Years Later

Physics Essays was officially launched 15 years ago, in April 1988, with its first issue. The process of establishing the journal, however, started many years before, in 1971, with discussions with prominent members of the physics community on the need for a journal of this nature and scope and the contribution it could make to the advance of physics. The turning point was a discussion that I had with Gene Wells, editor at that time of *Physical Review Letters*. I asked him about the criteria for acceptance of papers in that journal, and he replied, “We reject the bottom 10 percent of the papers submitted to us. We publish the middle 80 percent, and reject the top 10 percent.” To my question, “Why do you reject the latter group?,” he replied, “We do not know if they are right or wrong.”

The mission of *Physics Essays* is to recover this top 10 percent of articles that would otherwise be lost. If the price to pay is to err with the publication of a few papers that might be wrong, it is worth it for the recovery of those many articles that are right. This mission has been carried out now for 15 years, and, as we embark on another 5 years of publication, I would like to share some thoughts on how this journal is fulfilling its mission.

The Statement of Purpose and Editorial Policy, as printed in the masthead for 15 years, includes the following statement:

Different points of view will be accepted as long as they are logically sound and well balanced in their exposition, until the process of truth searching naturally reaches a stage of a convincing argument in favor of one point of view or the other.

Many subjects of physics are debated in *Physics Essays*: cosmology, quantum mechanics, the standard model, classical electrodynamics, astrophysics, gravitational radiation, probability analysis, electromagnetic theory, and so on. The journal offers provocative thoughts on all these subjects.

The debate is always professional and accommodating. There is, however, a subject of physics that is fiercely debated. I refer to the special theory of relativity (STR). Here the debate is adversarial, with the large majority of authors claiming openly that STR is wrong, and the other side claiming that the antirelativists just do not understand STR. The Editor, being in the middle, has taken note of the confusion and has decided that it is time to set the terms for the search for truth, as mandated by the Statement of Purpose mentioned above.

My reasoning goes as follows. If STR is right, clearly the relativists have not done a sufficiently thorough job of explaining it. On the other hand, if the antirelativists are right, clearly they are not doing a sufficiently thorough job of explaining their arguments to the relativists. I believe that STR therefore needs to be dissected piece by piece, in a methodical way, leaving no stone unturned. Ultimately, the truth will prevail. Moreover, I believe that the historical circumstances that led Albert Einstein in 1905 to formulate the STR should also be reviewed in order to have a complete picture of the background in which this young patent office clerk found himself when he came forward with such extraordinary ideas as the constancy of the velocity of light in all reference frames and the principle of relativity itself. The Lorentz transformations, as derived or postulated by Lorentz himself, should also be reconsidered, because they form one of the components of the historical background. The Michelson–Morley experiment and the theory of the ether should also be reviewed.

So *Physics Essays* wants to shed conclusive light on this important subject. More explicitly, I want the truth to prevail. Irrespective of where the truth is found, *Physics Essays*, by facilitating its discovery, is fulfilling its mission as set forth 15 years ago in this journey of its life.

Emilio Panarella