

December 4, 2012

Dear Prof. Hermann Nicolai

Last year we asked leaders in the physics community, including individuals, organizations, colleges/institutions and journals, what was the solution to the famous Twin Paradox in relativity. We greatly appreciate the responses even though, or actually because, the responses revealed a great deal of conflicting opinions, even within the answers of individual responders, on fundamental concepts in spacetime physics.

It became clear that before one can even discuss issues such as the Twin Paradox or even more basic spacetime topics (e.g., the meaning of “time dilation”), greater clarity is needed on the fundamentals of spacetime physics – especially in the domain of Special Relativity

To start, what’s needed is a clearly stated Standard Interpretation of Special Relativity. To that end, we have created the “Open Letter On Special Relativity” page at <http://TwinParadox.net/> as a follow-on effort (see the 2nd item on the site’s navigation bar). This page gives 12 key topics with associated questions that need to be clearly, explicitly and unambiguously answered and used to establish the aforementioned Standard Interpretation of Special Relativity. The 13th topic notes that while there have long been multiple, contradictory, implicit interpretations of Special Relativity in every decade since 1905, the consensus has been constantly changing and this needs to be articulated to better understand the literature for those periods. .

We would greatly appreciate answers to the 1st topic questions and preferably to the first three topic questions. That should be easy to do and should provide valuable feedback on how to proceed productively with this important task.

We are NOT looking to debate the given interpretation. However, once a Standard Interpretation of Special Relativity has been defined, it will serve as a well-defined base for discussing related topics. It would seem that, given the above, defining a Standard Interpretation of Special Relativity is an obvious necessity and should be supported by all those who put advancement in physics and advancement in physics education above personal agendas and politics.

There will always be criticisms of currently accepted theories and alternatives to those theories and suggested modifications to those theories. A Standard Interpretation of Special Relativity is NOT meant to stifle such. It’s simply a needed aid so that it will be clear to all what is being discussed. In fact, the first version should called something like “Standard Interpretation of Special Relativity (**2013**)” and if data or logic is seen to call for a modification, then it should be updated to be “Standard Interpretation of Special Relativity (**2020**)” with the modifications between standards clearly articulated.

There are areas of controversy for other theories, but this is not the issue. We have tried to think of an analogy, but any analogy with other theories would be gross understatement of the confusion that reigns in mainstream physics and with students regarding Special Relativity. The problem is pervasive throughout the history of Special Relativity literature, textbooks and lectures.

One should be hard pressed to think of a reason why a Standard Interpretation of Special Relativity would not be a benefit to physics students and the world wide physics community. Hopefully, your organization will support such a long overdue and much needed effort. (If you wish to take over the lead, please let us know.)

We look forward to your answering the questions on the web page referenced above. If you contend that Special Relativity is already well defined, then it should be very quick and easy task to respond. Hence, no response would put your organization, by definition, in the “Unwilling or Unable to Respond” category and would be powerful further testimony to the need for explicitly defining the Standard Interpretation of Special Relativity.

Thanks in advance for your cooperation.

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PS – I would think that if you revisit your responses and Nobel Lauriat t’ Hooft’s responses to the Twin Paradox questions, that you would find those responses to be very strong arguments for explicitly and clearly defining the Standard Interpretation of Special Relativity (2013). This would also be confirmed by AEI personnel’s long and well documented reluctance to give clear answers to basic questions on the meaning of Special Relativity. The AEI having been designated the spokesorganization for relativity should not be interpreted as a call to protect Special Relativity by avoiding issues, but should rather be a call to be a leader in addressing requirements for clarification, modification and problem resolution. If you don’t do it, hopefully, someone or some other organization will.