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led the CERN council to request contributions from nonmember states scheduled to be major users. These contributions should be not only for the detectors but also for the accelerator itself. The American contribution to the accelerator is not intended to replace some missing member state's contribution, but rather to hasten completion of the project.

The LHC could be built by the CERN member states alone, as had to be demonstrated when the project was approved in 1994. The initial stand-alone scenario assumed that a 10 TeV machine would be operating in 2004 and that it would be completed at 14 TeV by 2008 (after a one-year shutdown). However, with the extra contributions now expected from the US, Japan (which has already made two generous contributions in cash), Russia (which has pledged an important contribution in kind) and others (Canada, India and Israel, so far), the now-approved and ongoing plan is to complete the full machine at 14 TeV as early as 2005. And 2005 already looks far away to the many physicists eager to explore the new promising domains that will be opened by the LHC!

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Theory Is Tied in Nots, but Strings May Have 'Signatures'

Gordon Kane is to be complimented on his trenchant commentary about experimental tests of string theory [PHYSICS TODAY, February, page 40]. When a realistic string theory—namely, one that is mathematically complete, calculable and in agreement with existing experiments—is eventually formulated, it certainly will make testable predictions of the type Kane describes.

At present, no satisfactory realistic string theory exists. It may therefore seem surprising that some experiments potentially testing strings are actively being performed.

The point is that there may be detectable “string signatures”: observable physical effects from strings that are forbidden in conventional particle physics. They could serve as signals of strings even in the absence of a specific realistic model.

Kane mentions one possibility that my colleagues and I have suggested:

a mechanism in strings producing CPT (charge conjugation-parity-time reversal) violation that could be detectable in the K system.¹ Current experimental sensitivity to these effects² is close to the Planck scale, and experiments now being designed will reach it.

The idea has been extended to the D and B systems.³ The first experimental measurement of a CPT-violating parameter in the B system has been performed.⁴ This result provides a bound near the Planck scale on possible CPT-violating effects involving the b quark. Any future B-system measurements are likely to be an order of magnitude more sensitive. Effects may also be observable in other sectors of the Standard Model.⁵

So, if anything, Kane has understated the situation. Not only will a realistic string model eventually make testable predictions, but the framework of string theory can already be experimentally investigated now.

References

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Author-to-Author Contact Simplifies AIP Figure Reprint Policy

Both David Stern (“Letters,” February, page 11) and Keith Seitter (“Letters,” May, page 94) complain about the time and trouble involved in authors obtaining permission to reprint figures in, say, review articles. They each offer what they hope will be a solution to the problem.

The American Institute of Physics policy regarding copying of figures, tables etc. is printed in the front matter of all its journals: “Permission is granted to quote from the journal with the customary acknowledgment of the source. To reprint a figure, table, or other excerpt requires the con-

sent of one of the authors and notification to AIP.”

Here at AIP (where I am journal publisher), we believe that the requirement to get the original author's permission, besides being a common courtesy, is good policy because an author might well wish to supersede the original figure with new data, or simply to disown the figure even if nothing better is forthcoming. I remember that the physicists on the advisory committee that helped us establish the wording of our “permissions” statement insisted on the inclusion of this particular statement about obtaining the author's permission.

Notice that we do not require the copying author to get our permission, but only to notify us and provide “customary acknowledgement of the source.” However, for the editors and production staff at most publishing houses, it is much easier to insist that their authors get permission for everything, from everybody, than to try to keep track of the various permissions policies in place elsewhere. Despite our policy, we still receive many letters “requesting permission,” rather than providing notification (we are happy to reply with our approval), and I suspect that Seitter at the American Meteorological Society still gets them too.

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New Elements Could Be Better Identified: Namely by Number

I read with dismay your May story (page 52) on the naming of elements 104 through 109. While creating new elements through anthropogenic means can contribute to an understanding of our physical universe, I believe it is extremely pretentious to name these elements, since, for all intents and purposes, they are not found in nature. Worse yet, for learned men and women to engage in pointless wrangling over such names demeans the noble goals of physics, and it makes even me, a devoted student of science, question how society's money is being spent at publicly funded institutions.

I am not indicting the fine work done by the people involved in creating the new elements. Rather, I am encouraging them to put aside self-congratulation and recognize that these created elements mainly serve academic purposes and should not be held in the same esteem as the discov-