the luminosity are nearer to those required for the physics.

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Fusion Firsts?

The sentence "ITER is intended to be the first experiment to study burning, magnetized plasmas and test a panoply of fusion science issues at reactor scale," appearing in the letter by D. E. Baldwin, R. D. Hazeltine, R. C. Davidson, and M. Porkolab (17 Jan., p. 289), does not represent the evolution of an important area of plasma physics and fusion research. In fact, the Ignitor Program was devised and is being pursued and funded in order to investigate, for the first time, the physics of burning magnetically confined plasmas, with all the reactor relevant ratios of the microscopic and macroscopic time scales.

Given the present state of our knowledge, I believe that the following statement made by the President's Committee of Advisors on Science and Technology (*1*) gives the correct perspective for experiments to attain fusion burn conditions.

Producing an ignited plasma will be a truly notable achievement for mankind and will capture the public's imagination. Resembling a burning star, the ignited plasma will demonstrate a capability with immense potential to improve human well-being. Ignition is analogous to the first airplane flight or the first vacuum-tube computer. As in those cases, the initial model need not resemble the one that is later commercialized; much of what would be learned in a tokamak ignition experiment would be applicable both to more advanced tokamak approaches and to other confinement concepts.

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Risk Analysis

Richard Kerr's News & Comment article "A new way to ask the experts: Rating radioactive waste risks" (8 Nov., p. 913), describes recently completed expert elicitation on "Probabilistic volcanic hazard analysis for Yucca Mountain, Nevada" prepared for the Department of Energy (DOE). This study constitutes an important step in assembling the technical basis for evaluating safety at the proposed repository site.

In the highly complex repository program, several years may pass between the completion of an expert elicitation and its application in licensing and other decision-making; during that time, new data and information may become available that should be evaluated to determine whether the results of a past elicitation warrant updating. For example, recent work (*1*) that accounts explicitly for structural control of basaltic volcanism in the Yucca Mountain region indicates the probability of volcanic eruptions at the proposed site in the next 10^4 years to be 10^{-3} to 10^{-4}, which differs from the central tendencies of the DOE-sponsored expert elicitation, but overlaps the range of uncertainty.

Kerr states, "Ironically, these numbers match the only other numerical analyses of the problem, made as early as 15 years ago before recent arguments flared up."

More recent numerical analyses (2) have arrived at volcanic probabilities that are different from the estimates obtained in DOE's study. DOE's panel of experts arrived at an aggregate mean that is essentially the same as the minimum reported in the recent literature, and some estimates by individual members of the expert panel are one to two orders of magnitude lower. Because volcanism has a low probability, but is potentially a high-consequence event, such differences may affect estimated risk (3). Although a factor of 10 difference in probability is often of little concern in risk assessments, environmental standards for the proposed geologic repository have not, to date, required consideration of potentially disruptive events with probabilities less than 10^{-4} in 10^4 years.

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2. C. B. Connor and B. E. Hill, *J. Geophys. Res.* **100**, 10 (1995); C.-H. Ho, *Math. Geol.* **24**, 347 (1992); ———, E. I. Smith, D. L. Feuerbach, T. R. Naumann, *Bull. Volcanol.* **54**, 50 (1991).
3. National Research Council, *Technical Bases for Yucca Mountain Standards* (National Academy Press, Washington, DC, 1995).

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Risks in Collaboration?

If fraudulent work is published (Letters, 3 Jan., p. 14), all co-authors must take some measure of responsibility, not for the fraudulent acts, but because author responsibility is implicit in the process of scientific publishing. Risks of fraud in collaborations outlined by the correspondents should not reduce collaboration: surely they should strengthen collaboration by reminding us to understand that which is attributed to us. Nor should they require the banning of all but single-author papers: collaboration often strengthens work because it requires frequent and critical discussion of all facets of the problem. Nor should they limit the number of authors: all significant contributors must receive recognition and take the responsibilities of authorship. Nor should they be comparable to acts of individuals in a marriage that are not inherently essential to the relationship.

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Funding Sequencing Efforts

In "Life with 6000 genes" (Articles, 25 Oct., p. 546), André Goffeau *et al.* note that, despite the potential gain of sequencing a number of human pathogenic organisms, only limited funds have been made available for such projects. The Burroughs Wellcome Fund and the National Institute of Dental Research, part of the National Institutes of Health (NIH), have recently co-funded a project at Stanford University to use "sample-sequencing" to identify genes in *Candida albicans*, a major pathogenic fungus. The researchers' strategy will reveal at least a portion of about 95% of all *Candida* genes that can be identified by their similarity to genes in other species. Information