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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1. "Report of the Fusion Revision Panel" (President's Committee of Advisors on Science and Technology, Washington, DC, July 1995).

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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."