

What's New

By Bob Park



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Friday, March 1, 2002

1. BUBBLE FUSION: A COLLECTIVE GROAN CAN BE HEARD.

A report out of Oak Ridge of d-d fusion events in collapsing bubbles formed by cavitation in deuterated acetone, is scheduled for publication in the March 8 issue of Science magazine. Taleyarkan et al. observe 2.5 MeV neutron peaks, evidence of d-d fusion, correlated with sonoluminescence from collapsing bubbles. Pretty exciting stuff huh? It might be, if the experiment had not been repeated by two experienced nuclear physicists, D. Shapira and M.J. Saltmarsh, using the same apparatus, except for superior neutron detection equipment. They found no evidence for 2.5 MeV neutron emission correlated with sonoluminescence. Any neutron emission was many orders of magnitude too small to account for the tritium production reported by the first group. Although distinguished physicists, fearing a repeat of the cold fusion fiasco 13 years ago, advised against publication, the editor has apparently chosen not only to publish the work, but to do so with unusual fanfare, involving even the cover of Science. Perhaps Science magazine covets the vast readership of Infinite Energy magazine.

2. NUCLEAR TESTING: NUCLEAR WEAPONS DESIGN RESUMES.

Since 1992, the policy has been to maintain existing weapons under a Science- Based Stockpile Stewardship Program. But the Bush Administration has announced plans to resume design work on new warheads. This is expected to undermine nuclear non-proliferation, and lead to a resumption of testing. Speaking of testing, last week WN put the nuclear test range 100 miles from the Yucca Mountain repository. Several readers corrected our geography. Actually, the Nevada Test Site lies adjacent to Yucca Mountain. The nearest site, Buggy, is only 12 miles from Yucca, plenty far enough to rule out seismic problems, but close enough to arouse public concern.

3. DOOMSDAY CLOCK: IT'S NOW TWO MINUTES CLOSER TO MIDNIGHT.

The symbolic clock was reset to 11:53, the closest to midnight since 1998, after both India and Pakistan tested nuclear weapons ([WN 12 Jun 98](#)). Scientists on the panel that controls the hands said the 9/11 terrorist attacks were not the major factor in setting the clock closer to midnight. Rather, it was the lack of progress toward nuclear disarmament. If the U.S. actually resumes nuclear testing, the clock will presumably be set much closer.

4. FALLOUT: "EVERYONE HAS BEEN EXPOSED TO FALLOUT FROM TESTING."

So what? A wildly irresponsible study from the Center of Disease Control estimates that fallout from testing will result in 11,000 cancer deaths. Would you believe zero? Atmospheric testing was dumb, and any testing now is dumber. But the CDC study assumes a linear, no-threshold model, which is clearly wrong. There is no evidence that low levels cause cancer and some evidence that low radiation levels may stimulate the body's protective mechanisms.

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Opinions are the author's and are not necessarily shared by the University, but they should be.