

The report concludes that "there is therefore no serious scientific content to Dr Richter's assertion that he has achieved a controlled thermonuclear reaction, and I deeply regret having had to reach such a conclusion."

Bancora's description is based on an on-site inspection of the fully operational device demonstrated by Richter himself in 1952. Wolfgang Meckbach's account, mentioned in the previous PHYSICS TODAY letters, may have referred to an already dismantled apparatus seen when Meckbach arrived in 1955. I took his course in experimental physics in Bariloche; he was an ingenious and resourceful experimentalist and an inspiring teacher. I never heard him discuss Richter's work, but I have few doubts that he regarded the subject as closed.

Apparently, then, far from using imaginative new plasma physics, Richter was reproducing well-known technology. The fact that Bancora could obtain similar spectacular results without being misled as to their relevance is significant. According to Mario Mariscotti's account,⁴ Richter did not do any follow-up experiments. This implies that he acted under his own delusions and was helped by the fact that no scientist questioned his early results. There were a few competent physicists in Argentina at the time, perhaps the most prominent being Enrique Gaviola, mentioned in Santos Mayo's letter, but the secrecy surrounding the project and the physicists' politically motivated distrust of the government conspired against an early dismissal of Richter's adventure. Now, however, there should be no doubt that it had no sound scientific basis.

References

1. Both reports are available at <http://www.ib.edu.ar/historia/historia.htm>.
2. See http://www.obsolete.com/120_years/machines/arc/index.html for a brief description and history of this device.
3. For a description of Poulsen's work, see H. Buhl, http://www.acmi.net.au/AIC/POULSEN_BUHL.html.
4. M. A. J. Mariscotti, *El Secreto Atómico de Huemul*, Sudamericana-Planeta, Buenos Aires, Argentina (1985).

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Up on the Roof, Another Green Weapon

Reading the letters about green power in the June 2004 issue of PHYSICS TODAY (page 11), I was reminded of an observation I made some years ago in the Bay Area of San Francisco and in Los Angeles; there appear to be almost no solar water heaters on the roofs of buildings there. Many parts of California enjoy essentially the same sunny weather as southern European countries such as Greece, where individual solar water heaters can be seen on the roofs of almost all buildings. Consisting essentially of a small black water-storage tank, such solar collectors are efficient water heaters that offer a low-cost supplement (not replacement) to more conventional technologies. Why are they not used in the sunnier parts of the US? If they were, the financial savings to each household would be great, and the combined energy savings across the US would be enormous.

Local energy-saving solutions have enormous potential to reduce our dependency on fossil fuels. A full account of the economics of solar water heating is contained in the publication *A Consumer's Guide: Heat Your Water with the Sun*, available from the US Department of Energy (<http://www.nrel.gov/docs/fy04osti/34279.pdf>). According to that document, for homes with electric water heaters, up to 25% of domestic energy costs go to heating water. The adoption of local energy-saving solutions should be considered wherever practical and built into new homes. The nature of the solutions depends on the location; excellent insulation and good use of sunlight should be high on everybody's list.

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Misattribution and the Matthew Effect

The part of David Mermin's Reference Frame (PHYSICS TODAY, May 2004, page 10) that I enjoyed most was his exposition of the Matthew effect, which was an exquisitely ironic example of what he was writing about.

The term is very unfair to Mark,



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