# Ex–Los Alamos Scientist Reveals True Wartime Role as 'Scientist X'

In PHYSICS TODAY for July 1999, the lead story in "Washington Reports" (page 39) bears the title "New Book Unmasks Scientist X as Spy, but Facts of Case Tell a Different Story."

As that Scientist X himself, though never a KGB or any other brand of spy, I applaud the precision of the laconic but friendly heading. Unhappily, some details given in Irwin Goodwin's story add to the existing mythology about wartime Los Alamos. These additions are being elaborated on and spread by a bizarre chapter in the new book discussed by Goodwin—*Every Man Should Try*, the memoirs of Jeremy Stone, who relies mainly on newer KGB puffery for his sources. I can hardly hope to prevent the dissemination of this awry picture, but surely every man should try—in particular, one who was then (and remains?) on the spot.

Goodwin reports that my Los Alamos office was next to that of General Leslie Groves. Taken from the Stone book, though not from life, this item makes for a good myth, adding false verisimilitude to an unconvincing narrative. I do not know whether that very busy general even had an office at Los Alamos, but it was certainly not cozily next to mine so that he might "keep an eye" on me! Just as Stone imagined in his book that the Pentagon was built only after the war, and draws a self-serving inference from his own anachronism, so he elevates my relationship to Groves to a personal level that goes far outside the facts.

I was indeed an over-the-transom technical proponent, through channels, of what became Groves's Alsos mission, aimed at intelligence efforts against the Germans. Most of my engagement with the Alsos efforts went by official wire and mail, and not in person. I did converse with Groves's young officers, and occasionally with the general himself, in their big Washington offices during a total of three or four visits I made between 1943 and 1945, but almost not at all in Chicago or Los Alamos. I was not among those observers who were first persuaded that the Germans had gotten almost nowhere with their atomic bomb program; I was instead among the last to abandon the worst-case position, in November 1944. So much for Stone's view, as reported by Goodwin, that I would have known the Germans were lagging far behind.

Fifty years later, in 1994, Stone visited me and did in fact accuse me of wartime espionage (Goodwin is wrong on this point), albeit for what he saw as high-minded motives. Soon afterward, Stone returned, bringing with him a veteran ex-CIA lawyer to help me understand how I might testify to having leaked secrets to the KGB, and yet remain immune to legal punishment! The two men seemed rather disappointed when I insisted that I was simply not guilty, and so would hardly seek immunity from law. Stone had my heartfelt denial in writing that same year. When he published his prosecutorial case several years later without even alerting me, he mentioned my denial but did not cite a word of it. All of that is documented in the records. In contrast, Stone's accusation rests on his own errors (many more than are pointed out here), on KGB releases of the 1990s, and on his personal surmises. Its publication, so flawed, was an outrage; its errors of fact and its inconsistencies are what most strike any informed reader.

I believe that this strange stain on the truth will fade away as it is exposed to corrective accounts in print and to active support for me from the physics community.

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Letters submitted for publication should be sent to Letters, PHYSICS TODAY, American Center for Physics, One Physics Ellipse, College Park, MD 20740-3843, or by email to ptletter@aip.org (using your surname as "Subject"). Please include your affiliation, mailing address, and daytime phone number. We reserve the right to edit letters.

# Mrozowski Recalled as Carbon Pioneer, Skater, Party Giver

Many thanks to both author Lucjan Krause and PHYSICS TODAY for the fine obituary of Stanisław Mrozowski (June, page 79), which enabled me to learn much more about the long and productive life of a remarkable individual I worked with more than 50 years ago.

It was under his competent and skilled direction that, along with two others, we began the carbon research group for the Great Lakes Carbon Corp back in 1944. All four of us learned together about that marvelous material—namely, graphite—and I will ever be grateful to Mrozowksi for having persuaded me to join GLCC. He was very adept at teaching us about the complexities of the graphite microcrystal, especially with regard to its ultimate transformation from crude oil. My lasting impression of him is that he was a very patient and effective teacher. Of course, I was sorry to see him leave in 1949, when he moved on to the University of Buffalo and set up and led the Carbon Research Laboratory. It is surprising now to realize that although he was already in his late forties back then, he was scarcely more than one-third the way through his outstanding career.

On the lighter side, I remember that Mrozowski was very much interested in outdoor activities, and he would invite his entire staff to weekend skating parties at a frozen pond near Park Ridge, Illinois. After skating, we'd go to his house to enjoy a special and very tasty Polish hot vegetable concoction, plus finger foods prepared by his wife.

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# Differences Explained in Correlated-Photon Metrology Techniques

I appreciate the comments of Mike Gruntman concerning the history of using correlated pairs of particles (photons) to determine absolute detector quantum efficiencies (PHYSICS TODAY, September, page 80). Unfortunately, there seems to be an overall misunderstanding of the technique by Gruntman.

The review paper he cites[1] leads

*continued on page 81*

## LETTERS *(continued from page 15)*

directly to a section in a book by the eminent Ernest Rutherford *et al.*[2] That section contains a description of the 1924 paper of Hans (or Johannes) Geiger and Alfred Werner, in which two microscopes view a single scintillation flash on a single scintillation screen. The section makes the claim that this setup allows the efficiency of the human observers to be determined. The claim is certainly true—but *only* if the single scintillation event produces enough photons so that each microscope can be guaranteed to collect a perceptible amount of light (a critical qualification, and one noted by Rutherford). Although the Geiger–Werner application does use the same mathematics as the correlated-photon-based quantum efficiency technique described in my original article (PHYSICS TODAY, January, page 41), it is a process that is fundamentally different from an event that must produce exactly two particles.

It appears that the earliest observation of a pair of particles produced by a single event was the 1910 work of Geiger and Ernest Marsden.[3] They observed coincident scintillations on two separate screens that were carefully shielded so that each observer could see only one screen. These coincident scintillations were produced by pairs of alpha particles emitted by a single nucleus. This fundamental guarantee of two particles created at a time is the basis of the "free lunch" method that enables the quantum efficiency of single-particle (photon) detectors to be determined without external measurement standards.

### References


1. M. Gruntman, Rev. Sci. Instrum. **68**, 3617 (1997).
2. E. Rutherford, J. Chadwick, C. D. Ellis, *Radiations from Radioactive Substances*, Macmillan, New York (1930), p. 548.
3. H. Geiger, E. Marsden, Phys. Z. **11**, 7 (1910).



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## University Job Ads Call for Researchers More than Teachers

Looking over the September issue of PHYSICS TODAY, I was struck by the full-page ad on page 97 from the physics department of my alma mater, MIT. The ad solicits applications for five tenure-track positions at the assistant professor level. As I read through the ad, a certain pattern became clear to me. Of the five positions advertised, three mention teaching as secondary to research, and the other two make no mention at all of teaching.

Obviously the faculty research efforts emphasized in the five write-ups will involve students, but the clear message I get from the ad is that the primary role of the university is to conduct research, and the secondary role is to teach students. The same message is evident in many other faculty position ads in PHYSICS TODAY and elsewhere. What a shame.


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## Cavities of Photonic Lasers Resonate with Purcell's Dictum

In her interesting story entitled "Lasing Demonstrated in Tiny Cavities Made with Photonic Crystals" (PHYSICS TODAY, September, page 20), Barbara Goss Levi writes that Edward Purcell asserted in 1946 that (in Levi's words) "the smaller the cavity, the greater the enhancement of spontaneous emission." I believe that her statement needs clarification.

What Purcell was describing was the effect of a resonant cavity, tuned to the radiation corresponding to a particular mode of emission.[1] For a tuned cavity, the rate of spontaneous emission for a mode to which the cavity is tuned is increased as the cavity—and therefore the wavelength of the resonant mode—gets smaller. For more ordinary sized lasers in which the cavity dimensions are much bigger than the wavelength of the laser radiation, the goal for a cavity is usually to reduce the spontaneous emission for wavelengths longer than the wavelength of the light emission. Reducing the cavity size reduces the maximum wavelength of the allowed modes of the zero point fluctuations of the electromagnetic field. These modes can be interpreted as being responsible for the spontaneous decay of excited atoms. Excluding longer wavelength modes eliminates the corresponding spontaneous transitions, allowing more atoms to