

A DAY IN THE LIFE OF . . . OR, MY THIRTY-YEAR WAR WITH THE BACKGROUND

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I've had this feeling for more than 30 years now that I was pushing with all my might and ingenuity against a large, amorphous blob called "the background". Those of you who have run a radiocarbon lab and have had this continuing battle to keep the background down, know the fight I'm talking about. Just when you think you have it licked, with stable electronics, tried and true chemicals, foolproof lab techniques, and trusted lab assistants, this enigmatic, unpredictable constant variable (or variable constant) will bust loose and rise to mountainous heights, laughing scornfully at all efforts to tame and conquer it.

I have heard that Bill Libby had the power to stare the background down, and Hans Suess, my mentor, was in league with a certain unnamed power, but I had no such supernatural abilities and relied mostly on luck. Well, I finally thought I had it licked. Backgrounds and moderns had been stable (within statistics, of course) for the past month, the lab was functioning smoothly, and I was happily driving in, thinking that today I'd be able to work on that manuscript. It wasn't going to be like last month, when the building maintenance crew shut off the electricity suddenly without warning, as they are wont to do from time to time, crashing my computer programs, blowing my pre-amps, and ruining a lot of archival data in the storage. They have been repeatedly scolded about that, so I was confident that it wouldn't happen again.

Alas, I was greeted at the door by our new lab assistant, who informed me that she forgot to order liquid nitrogen for today, she needed some bottles for gas storage, and oh yes, she forgot to turn off the voltage again when she was pumping off the counters, and "Did that mean she burned out the center wire again?"

It took Herculean effort on my part to hold my temper, for after all, she was the wife of one of my co-workers. I accepted the prospect of a week's work on the counters with a minimal display of grief and anger, lasting barely an hour. Seems I'm constantly training new lab workers; "Use the N Apeizon for this stopcock, the H is used elsewhere; no, it's acid into water, not the reverse; no, don't use that, it's our oxalic acid standard." Later that day, she was to get even with me for my loss of decorum when she turned the high voltage on while I was working inside the shield, zapping me with 5,550 volts and causing what is left of my hair to stand on end. "Oh, I thought you were finished with Counter II."

Just before lunch, my college student part-time helper (where would labs be without slave labor?) asked if I would "like more practice in glass blowing", his coy way of telling me that the stopcock in his hand was serving a better purpose on the vacuum line before being wrenched off by his nimble fingers (he's a heavyweight wrestler). And, oh yes, that irreplaceable Antarctic sample that he was pretreating – well, the sieve broke and before he could get off the phone (he has numerous girlfriends), "the whole thing washed right down the drain. It just got away from me. Is there any more of that stuff from the ice hole?" Remembering how my scolding had affected him before (when he broke his scuba wrist watch that had a luminous dial, spreading radioactivity in the lab), and subconsciously recalling his 30 and 0 win-loss record in his weight class, I chastised him with the disappointment in my eyes, a devastating weapon. Naturally, there wasn't any hydrogen gas left for the torch. That was used up for balloon-blowing in last week's party. Someone is always having a birthday, baby, wedding, promotion, vacation, *etc.*

The building maintenance crew didn't shut off the electricity while I was out to lunch, I'm happy to say. It was the water. So it was to a fine mercury haze in the air that I returned. The mercury diffusion pumps, lacking cooling water, had overheated, breaking the bulb, pouring the mercury over the heaters and vaporizing about a liter.

After spending the afternoon cleaning up the mess and testing the mercury concentration to the satisfaction of the safety officer, I was driving home thinking, well, maybe I'd get to that manuscript next week.

My understanding wife waited until I had gulped down my third martini before asking me "Did you have a nice day at the office?"

"About average", I replied.

