

Recollections from my 50-year friendship with Alvin Tollestrup

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Alvin had a significant impact on science, and also on the lives of many friends and younger physicists, myself included.

This story begins with my arrival at Caltech in mid-1970 to begin a postdoc position in nuclear physics at Caltech's Kellogg Lab. I had recently graduated with a Cand. Scient. Degree from the Niels Bohr Institute in Copenhagen and decided that getting a job in the US would be my first choice by far. Luckily, my thesis advisor Ole Hansen offered to write letters of recommendation for me to go along with my applications. The result was an offer from Caltech, which I happily accepted. At that time, I knew about Feynman and Gell-Mann being there, but not all that much more.

What I soon found out was that my destination, Kellogg Lab, the Caltech nuclear physics lab, had been founded by Charlie Lauritsen, a Dane, and that it was continuing its rich history of studying nuclear processes and their role in the energy generation and evolution of stars and the nucleosynthesis of elements ("We are all made of stardust"). In 1970, Kellogg was headed by William A. Fowler, who had succeeded Charlie. With time I also met Alvin and learned that he had gone to graduate school at Kellogg lab working with Charlie and Willy before moving to high energy physics work at Caltech's Lauritsen Lab.

One important aspect of working life at Kellogg must be mentioned: It featured a wonderful combination of interesting work among friendly people and a culture of inclusion that made even new-comers feel comfortable and at home. An important ingredient was the "Kellogg party" which would happen on some Friday evenings during the academic year following the afternoon seminar. Professors, postdocs, students and staff would be invited to the party, which would take place at the home of a professor. Willy was the soul of the party, and he enjoyed singing (Ging Gang Goolie, She'll Be Coming 'Round the Mountain, The Titanic etc.), while gathering us all around him at the piano played by Charlie Barnes. Dancing and talking supplemented with food (often including a large ham served at 10 PM) would fill the evening. I had never experienced anything like it at a place of work, and it made a lasting impression. Alvin participated in and took inspiration from these parties as much as I did. What a way to cement a group into a happy one!

For the next four years while I was at Caltech, my friendship with Alvin also developed. Alvin was single then, so we had time to talk. I told him about life in Copenhagen and the Bohr Institute, and he told me about life in Pasadena and at Caltech. He also told me about his great-grandfather coming from Tollestrup, a village in Northern Jutland, Denmark, who had become a Mormon and then emigrated to Utah in the great Mormon migration in the mid - 1800's.

As a Caltech professor Alvin had a busy life, giving physics lectures and teaching lab courses in addition to working on his experiment, which at the time was at Brookhaven. Part of his responsibility on the experiment was the ultrafast analog electronics which he had decided to design and build himself because that would better suit the needs than any available commercial product.

During this time, Alvin also pursued two interests that he retained for life: Cooking and Art. The daily need for eating he had turned into a real interest in fresh food shopping and associated quality cooking. Since we were both bachelors at the time, the question of food came up, so he introduced me to the original Trader Joe's grocery store with its Hawaiian shirt-wearing employees, which had been opened in Pasadena by Joe Coulombe in 1967. Alvin liked to cook, and he would invite me to home cooked meals at his house from time to time. One of his signature dishes was a potato salad with onions and other flavorful ingredients, which would remain in his cooking repertoire and would often be served at get-togethers at his house for the rest of his life.

Alvin had inherited his talent for and interest in art and art objects from his mother, some of whose paintings were displayed on the walls of Lauritsen lab. Alvin also took art classes given by Lukas van Vuuren, a South African who was the resident visiting artist at Caltech at the time.

Midway through that period, when I began looking for my next job, Alvin in no uncertain terms told me that I ought to follow in his footsteps by switching to high energy physics. I am forever grateful for his friendly advice and feel lucky that the switch became possible. So I spent the next two years at Caltech on a SLAC experiment with Jerry Pine, followed by four years at CERN working on proton-proton collision experiments in the Intersection Storage Ring (ISR) accelerator.

My friendship with Alvin continued when I arrived with my wife Tita at Fermilab on February 1, 1979 to begin work with him on the early phase of the Collider Detector at Fermilab (CDF) proposal. Tita was a professional chef who had graduated from French chef Madeline Kammon's cooking school in Newton, Mass. Alvin and Tita soon became good friends, partly because of their common interests in cooking, and partly because Tita and I would see Alvin quite often, be it for a quick, late dinner of pan fried spaghetti at his house on our way home from a Chez Leon dinner or for talk at the kitchen of Chez Leon, where Alvin would like to visit for the kitchen ambiance

A few years later Tita and I were happy when Alvin introduced us to Janine. The wedding was held at their beautiful Warrenville house, with Father Tim Toohig officiating and Tita cooking the buffet dinner which included a three-tier carrot cake, Alvin's favorite.

Their house soon became the attractive setting for their combined ideas of an active social life, and Tita and I were fortunate to be among those friends often invited for dinners and larger parties at their house. Their natural and informal hospitality was greatly appreciated by their friends and co-workers, and would always include young people, often recently arrived from

abroad. Alvin and Janine shared an interest in art that was displayed around the house. One memorable painting was called "Zip it," which featured, in bold colors, large feminine lips being closed that way. Their wood and glass dining table, which had been built by Alvin, incorporated wood from a Lake Michigan shipwreck that had been salvaged from the deep water. Janine embraced the world of physics by naming the Tollestrups' beloved dogs Pbar (antiproton) and TQ (Top Quark) and then Susy.

Alvin's lifelong friend Leon Lederman had become Fermilab Director Designate in the summer of 1978, and on Nov. 11, 1978 made the fundamental decision for the lab that the future should be based on 1800 GeV proton-antiproton collisions in the Tevatron, rather than on one of the other collider ideas that had been proposed. So, the stage had been set for the work on the detector design to begin.

With Leon as Director and the DOE slowly becoming more supportive of the Fermilab Collider program, faster progress followed on both Tevatron, antiproton source and detector. To build the detector required a substantial CDF collaboration, which had to be formed from the many groups interested in participation. Alvin played a central part, serving as CDF Collaboration Spokesperson (or co-Spokesperson) for many years in addition to being the Head of the Fermilab CDF Group, the largest in the Collaboration. I attribute his success in these leadership roles to two core qualities of his character:

Alvin was a mature and enormously talented and accomplished scientist with strong technical self-confidence and motivation. He was not afraid of taking on difficult technical problems if conditions required it, and he knew enough physics to be able to assess what others could be trusted to be able to do. His strong and capable leadership on a first-rate project was clear, and it enabled him to hire really talented young physicists to work in his group.

Alvin also enjoyed people and their company in general, and young people in particular. He liked and encouraged young people to become physicists, and gave them encouragement along the way, even when he reached high age. He also had a good understanding of the dynamics of groups and collaborations and enjoyed hosting parties and other social gatherings that could help create friendly relations.

Now 50 years since I originally met him, I feel fortunate to have shared so much life and physics with my friend Alvin.