

ZIERLER: Okay, this is David Zierler, Oral Historian for the American Institute of Physics. It is April 27th, 2020, and I'm so glad to be here with MaryBeth for the SLAC oral history project. MaryBeth, would you please state your full name?

BEERBOHM: My name is Mary Elizabeth Beerbohm.

ZIERLER: Alright. Let's start at the very beginning. Tell us a little bit about where you were born.

BEERBOHM: Well, I was born in a small town in northern Minnesota, on the Minnesota side of the Red River, quite near Fargo, North Dakota. I went to school in my little town of Halstad. I graduated in 1945, and those were the Second World War years, so there was food rationing, and hard to get nylons and things like that. Then, the year I graduated in '45, we had a graduating class of about 22, I think. Some of the boys were already gone. They had joined the Navy, most of them. So then, of course, the war was over in the summer of '45, so it wasn't too dangerous anymore. Then, the next fall, I went to the University of North Dakota, in Grand Forks, North Dakota. I made a lot of good friends there, and as a matter of fact, I still have two sorority sisters—one in North Dakota, and one in Minneapolis—and we have all been on the phone lately talking about our incarceration in our houses, and such. Anyway, so then I taught school after I graduated from the U in 1949.

ZIERLER: What was your major, MaryBeth? What did you study?

BEERBOHM: English. I never took one course in physics. So, you can imagine. But in high school I had taken shorthand and typing, and that was how I got my job at SLAC when I came to

California, which was kind of interesting. I had to make up an awful lot of new shorthand words, because physics was just not part of me.

ZIERLER: What year did you get to California?

BEERBOHM: 1951. I taught school, freshman and sophomore English, in a town near Grand Forks. But then I had been going with Bob Jenson, and we got married in 1951. He was coming out to Stanford Business School. So, he went there the first year, and I still taught, and then the second year he was there, we got married at Christmastime. That's how I came to California.

ZIERLER: Where did you settle in California?

BEERBOHM: Palo Alto. That's part of Stanford, almost. I got a job in the business manager's office. I couldn't teach school there unless I took a course in, I think it was Western Civ, and I really was kind of tired of teaching. I liked the kids, but there were a lot of other things about teaching I wasn't too crazy about. Anyway, so I was a receptionist for a while there. I worked there for about two years, and then Fred Pindar, who was the head of Hanson Laboratories at Stanford, used to come over to the office for some business thing, and when he heard I was going to stop working he said, "If you ever want to go back to work, come and see me." Well, that was after I guess about ten years of marriage, which wasn't going really well. I think we were both behaving like spoiled brats, maybe. I don't know, but anyway, we were getting a divorce, and Bob was going to be transferred by Standard Oil to Texas. So, that's when we split up, and I stayed here in Palo Alto. Then I went to see Fred Pindar. So, I worked at Hanson Labs for a while, and then they were starting Project M, which became SLAC, and that's how I got going with that.

ZIERLER: Who started Project M? Were you aware of the development of who was involved in that?

BEERBOHM: Oh, yes. Well, Hanson Laboratories was three laboratories. There was the microwave lab, and the high energy physics lab, which we called HEPL, and there was the biophysics lab, which we really didn't have a whole lot to do with. Anyway, Wolfgang Panofsky was head of the high energy physics lab, and Edward Ginzton was the head of the microwave lab. He went with the Varian brothers, and he was part of Varian Associates, too. They were the ones who really cooked up established the idea of the two-mile accelerator. Dr. Ginzton felt that he had a conflict of interest, because he became head of Varian Associates, and they were going to be selling electronic parts to SLAC. Anyway, he bowed out, and Pief Panofsky became the first director of SLAC.

ZIERLER: When did you start to work for Pief?

BEERBOHM: I started to work for Pief—let's see. My first job at SLAC was for the attorney over in another building. That was an interesting job, but of course, I didn't see as many foreign people as I did after I started to work for Pief. Pief's secretary, who was a very capable lady, was having very bad problems with arthritis, and couldn't take shorthand anymore. So, she kind of bowed out of that and went to work somewhere else at SLAC. So, that's how I got over to the other building and began to work for Pief.

ZIERLER: How far developed was SLAC by the time you started working for Pief?

BEERBOHM: Well, by the time I started working for Pief, we'd been out on the hill I think maybe three years. We started down in a warehouse building on campus when it was still called Project M.

ZIERLER: So, your introduction to the job, what were the things that Pief told you about? What was important to him? What did he need you to do so that he could do his job better?

BEERBOHM: Well, just be there for him. Take dictation and get it down as fast as possible. Then he was involved with arms control, and he was on the President's Science Advisory Committee in Washington, D. C. Then I had to get a secret clearance. That was something I really didn't care for.

ZIERLER: Why not?

BEERBOHM: Well, because you had to mark every page you typed. You had to be closed off from everything. If you had to mail something, you had to double wrap it. You had to mark every page. It wasn't my kind of thing. But I did it. So, that was important to him. He was an easy man to work for, because if you went along with the way he wanted things, he never bothered anybody.

ZIERLER: When did his day start? When did you start working for him? Was he an early riser? Did he get in the office later?

BEERBOHM: Let's see. We were supposed to be there at 8:00, lunch hour at noon, and stop at 5:00. I think Pief usually came in around 9:00. He lived in a big old house in Los Altos Hills. It wasn't very far from SLAC. He had a nice, easy drive. He was a family man, too. He was very,

very much involved with his family. He had five children. Of course, they were mostly grown by the time SLAC started.

ZIERLER: What would a typical day look like for him? How would he spend most of his days?

BEERBOHM: Well, I would say when he was the director, he was in a lot of meetings. He'd have project manager meetings with all the different departments. They'd get together, the head of each one, and then they'd talk things over. Then, of course, budget things. And he was on the phone with Washington people. There was an arms control advisor he used to talk to lot named Spurgeon Keeny. We had outside committees that kind of governed SLAC, too, made up of physicists from other labs. Fermilab came much later, but Berkeley, and Los Alamos, and Caltech. Professors would all come to SLAC for two-day weekends, and then they would meet. Pief always entertained them at his house. They did a lot of entertaining.

ZIERLER: Did he ever confide in you about the aspects of the job that he enjoyed, and those things that he found frustrating?

BEERBOHM: I don't know about the frustrating part, but he was a very interesting person. I don't know if you want something like this, but I remember the first week I started working for him we got a call from some lady who lived very near SLAC. We were on a campus by ourselves. We were on Stanford land, but not the Stanford campus land. This lady complained that there was some noise that was coming from SLAC. He said, "Well, what does the noise sound like?" I don't know what she said—E above high C, or something like that. So, he went to the blackboard and started doing physics, and then he said he wanted to call this lady. He said to

her on the phone, “It couldn’t possibly have been SLAC. There isn’t anything that would sound anything like that.” I thought to myself, oh my gosh, what have I gotten myself into?

ZIERLER: Would he confide in you at the end of the day? Would he share stories with you? Would he tell you how he was feeling about certain things?

BEERBOHM: No, he really didn’t. He was very private about things like that. I mean, you could tell sometimes. He wasn’t secret. But I think he and Dr. Joe Ballam, who was the head of research—he was up in our area, and along with Sid Drell, who was head of theoretical. Joe Ballam, I think was Pief’s sounding board. It really felt like that. He once said to me, “Joe can always bring everything down to believable levels on what we can do and what we can’t do.”

ZIERLER: What kind of interaction did Pief have with the Stanford physics department? Did he talk a lot with the professors over there?

BEERBOHM: With some he did. There were some that were closer than others. I think he liked Leonard Schiff, although Schiff died very soon after SLAC started. I’m trying to think who was there at the time. Hofstadter. They were friendly, but not close at all. Who else? Felix Bloch. I think he was there. I’m just not coming up with names from the physics department.

ZIERLER: That’s okay. What do you think were some of the things that were most important to Pief, in terms of his own interests as a physicist, and also as director of SLAC? What do you think the things were that he valued the most?

BEERBOHM: I think he valued the most—well, I don’t know how to put it. He was very, very conscious of wanting everybody to feel good about working at SLAC, and everybody just adored

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him. When he died, you should have seen the people out at SLAC. Everybody just kind of converged like a family. I couldn't believe it. It was just more than Jonathan Dorfan could handle. There have been other good directors. Burt Richter was a good director. He was a nice guy, too, and a good director.

ZIERLER: What was it about Pief that people liked so much? Did he have a warm personality? Did he want to develop people's careers?

BEERBOHM: Yes, yes, he did. He wanted everybody to respect each other. The main thing, he didn't like was race prejudice—I guess that's why all of us office workers felt so good around him. He treated us as he treated the physicists and everybody else. He remembered names of people. We'd have a family day at SLAC every summer, and he was always—and part of it. His wife was very involved, too. Everybody at SLAC knew Adele. She was into bones and archeology and they found this relic when they were excavating at SLAC—paleoparadoxia. She went and found all the parts and made them. I know she went to the La Brea Tar Pits and she went to museums. She actually put together a big replica of this paleoparadoxia. I often wondered what happened to it. We can't go out to SLAC now, even though we have our cards saying that we were former Stanford employees. Some friends and I wanted to just take a run around it one time, just to see. They had a couple of new buildings and things, and we couldn't get in past the guard gate. We weren't allowed. So, it's changed quite a lot, I think.

ZIERLER: Did you ever hear Pief talk about his work on the Manhattan Project? Did he ever talk about that time with you?

BEERBOHM: Yes, he did. When they tested, he was up in a plane. I think he felt that he wanted it to take the place of him not having been in the service.

ZIERLER: Oh, you mean that he saw his service as a member of the Manhattan Project? That's how he saw his service?

BEERBOHM: Yes, because they had drafted him for that, I think. I don't know, from things that I've heard—I think there were certain height limits and things, and Pief was 5'2". So, he may not have been able to get into the Military service. I don't know. But he certainly was involved in the war. His father was a famous art critic, and when Pief was at Princeton, and then Einstein was there—I remember Pief saying that Einstein and his dad used to play chess together. And another funny thing Pief said to me, "it's really funny" he said, "People seem to take the greatest pride in things they don't do as well as others." I think he said, "Einstein really liked to play the violin, but you know he wasn't really that good."

ZIERLER: Not what's best known for. Did Pief ever talk about how he felt about his contributions to building the atomic bomb, in terms of ushering in a very dangerous new world? Did he ever talk about the concerns he had about nuclear weapons?

BEERBOHM: You know, he did that more in his writings for the arms control and disarmament. He did, very much so, I think. He didn't give speeches about it, or anything, but he wrote a lot about it.

ZIERLER: In working for him, and just your sense of him as a person, how did he view arms control? Where did he see his place as a physicist within the broader debate about nuclear weapons, and the arms race, and arms control?

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BEERBOHM: I think he felt a big part of it, and he felt it was terribly necessary. As far as keeping the supply of arms in the country, I don't think that was it so much. I think what he wanted was that countries agree and carry out their agreements. That kind of thing. I didn't put that very well, maybe.

ZIERLER: No, that makes sense. Did you ever get the sense that he wished the world never had nuclear weapons, or was he glad that the world had nuclear weapons as long as they were treated carefully?

BEERBOHM: Well, I guess I can't answer that. I don't know. I know that he talked about being proud of the fact—didn't Einstein write a letter to President Roosevelt?

ZIERLER: Yes, he did.

BEERBOHM: I know he felt that was very significant. I just don't remember all the details. I don't think I ever read the whole letter, or anything like that.

ZIERLER: Pief served as an advisor to the Kennedy and the Eisenhower, and the Johnson administrations. Did you ever get a sense of what his own politics were, if he felt more of a republican, or a democrat?

BEERBOHM: Oh, Lord, I believe he was a good democrat. Oh, yeah. I wonder what he would have thought of Trump.

ZIERLER: If you had to guess, what do you think he would have thought of Trump?

BEERBOHM: I think he would have thought he was a complete fool, which I do myself.

ZIERLER: Well, thank you for sharing that. I appreciate that. Do you feel like—in terms of dealing with the Eisenhower, or the Kennedy, or the Johnson administration, did he ever talk about which White House he liked working with the most, or which individuals he liked working with the most?

BEERBOHM: No, he really didn't. I think he was terribly disappointed that Kennedy didn't last long enough to carry out his term. And I think he liked Eisenhower.

ZIERLER: Where did he see his role as SLAC director within this broader issue of nuclear arms control?

BEERBOHM: I suppose he felt a certain onus. Because he was a very good physicist, and he had something to offer, that it was very necessary that he involve himself in arms control. I think he thought that he really had a great deal to offer in that field.

ZIERLER: Is that because of his work specifically as a physicist, or as director of SLAC?

BEERBOHM: I don't think it was as director of SLAC. I think it was as a physicist, and knowing, I suppose, more about bombs, and having worked at Los Alamos. That was probably why he felt he had a lot to offer.

ZIERLER: What were his views on containing the Soviet Union? Did he ever talk about the various options that the United States had in terms of options of confronting the Soviets versus accommodating them? Did he ever talk about those kinds of things?

BEERBOHM: Well, I know he was involved with Russians. In fact, I remember them coming over for certain conferences. Kapitsa, have you ever heard that name?

ZIERLER: Yes.

BEERBOHM: Well, they came one time, because I remember I took Mrs. Kapitsa shopping. She and I got to be kind of chummy. They were very nice people, but they had lived in England for a while and they knew the language. They were easy to be around. I remember Gersh Budker came—and I think there’s a laboratory in—I don’t know if it’s Novosibirsk, or someplace in Russia—named for Budker. He was a little more formal. I had to take him shopping one time at a drug store, because he wanted to get some things to take back to Russia, but he was not very good at English. He couldn’t tell exactly what he wanted. What he actually wanted was a bathroom scale, but he couldn’t exactly describe. Finally, I took him in the drug store. He ended jumping up and down, and said, “How much I weigh?” That was finally what caught on, and they brought him a bathroom scale, that he was going to take back to Russia with him.

ZIERLER: Did Pief ever talk about his feelings on civilian nuclear energy?

BEERBOHM: No. He may have, but I never heard anything about it.

ZIERLER: What about his work on the JASON group?

BEERBOHM: He was very involved with that.

ZIERLER: What were his goals in terms of being a member of the JASON group?

BEERBOHM: On that, I don’t know. He took it very seriously, and I think he liked the people who were involved in it. Paul Doty? Wasn’t he on that one? I think so. Was Spurgeon Keeny on that one too?

ZIERLER: I'm not sure. I'd have to look that one up.

BEERBOHM: I'm not either. This is where I get mixed up on things, because I don't remember that well. Oh, and Richard Garwin. They were of the same mind, I think. They got along very well together. I think he was on JASON. I know there were more, but I can't remember their names anymore.

ZIERLER: Pief had a lot of honors during his career. He was a member of the National Academy, and so many other recognitions. Did you ever get a sense of what he was most proud of in terms of his legacy?

BEERBOHM: He took them all in his stride, very much. When the group that he was associated with at SLAC, Group A— when they got the Nobel Prize—that was Taylor, and Kendall, and Jerry Friedman—the whole group went to Sweden for the honors, and Pief went, too. In fact, I have a picture that he gave me in his tuxedo when he came back. He was usually no fashion poster. He had a great looking tuxedo, and he had his picture taken beside a giant penguin in Sweden. It was a black and white penguin, and then there was Pief. They were about the same height. He had a great sense of humor, about himself as well.

ZIERLER: What were the kinds of things that he would find funny, and he would make other people laugh about?

BEERBOHM: I don't know. He just had—it's kind of hard to tell. He had a good sense of humor, and he liked to twist things around. Of course, he never told me to write a physics letter for him because I wasn't capable of it, but sometimes if he'd get a letter from a group that wanted him to give a talk and he wouldn't be able to because he'd be somewhere else, he'd ask

me to write it. So, I would write one for him, and bring it in. I'd tell him, this is a calculated risk, which I had learned from my biz school husband. First, he said to me, "If it's calculated, it's not a risk." I said, "Well, I don't know how else to say it." He thought that was pretty funny, and said he liked that calculated risk. He got a big kick out of things like the Pogo comic strips, and funny things that used to be in the—oh, what was the *New York* magazine that used to have the great, great cartoons?

ZIERLER: *The New Yorker*.

BEERBOHM: *New Yorker*. He loved that. I know. He really did. He liked the cartoons in them. He got a big kick out of that.

ZIERLER: Did Pief have any funny pet peeves, like little things that drove him crazy?

BEERBOHM: He didn't like crossword puzzles. One noon hour, I came back early, and I was doing a crossword. He said, "I wouldn't bother with those."

ZIERLER: I wonder if you specifically remember at the end of the Cold War in 1991, and what Pief's reactions might have been when the Soviet Union collapsed, and how he might have understood that event in historical terms. I guess my question is, did he think that nuclear weapons were no longer a dangerous issue when the Cold War ended?

BEERBOHM: I can't answer that.

ZIERLER: That's alright. So, you never got a specific sense if he thought that nuclear weapons became less dangerous after the Cold War?

BEERBOHM: No, I really don't know. I have no idea what he thought about that. The thing was, I think he would have been upset with Putin right now. I do know that—who's the guy that came over to this country with his wife, and they were out on the Stanford campus, and I think Pief met him. His wife was kind of a cute little lady. I think he was the last—

ZIERLER: You're talking about Gorbachev?

BEERBOHM: Yes. Anyway, I'll just have to bow out of that one, because I'm mixed up on the Russian thing.

ZIERLER: That's fine. When did you get the sense that Pief was starting to think about retiring?

BEERBOHM: Well, when he got to be 65, I think they'd had an agreement that then they would step down from the directorship. Then Burt Richter came in, and we moved from the top floor, the director's offices, down to the first floor, and we had a nice little suite down there. I think that's when he took retirement. But he always had an office, and he came in every single day. Even after I retired, he had another secretary, and he was still coming in.

ZIERLER: What was he working on after he retired?

BEERBOHM: Well, campus things. There was an arms control group down on campus with a PTOF named John Lewis, and he was very involved in that. Then he was writing his book. That started after I retired. Then he started with the book.

ZIERLER: How long after he retired did you retire?

BEERBOHM: Well, Pief actually said he was retired, and as far as not taking a salary, he was, but he still came to the office every day. So, let's see. He was 65. If he was born in 1919, when did he become 65? I'd have to have a pencil and paper to figure that one out.

ZIERLER: Well, let's see. He died in 2007. Uh huh. But he still kept coming to the lab.

BEERBOHM: In fact, he came home from the lab at 5:00 at night the night he died. Adele told me that he said he didn't feel right. Then he lay down, and she said that was it.

ZIERLER: When did you retire from SLAC?

BEERBOHM: I retired in 1993.

ZIERLER: Oh, so you stayed on several years afterwards.

BEERBOHM: Oh, yeah. I was with him down in the new office—and that's when he was really involved with the campus arms control group. And then another thing he did, he was very involved—when Nixon opened up China, they asked Pief to be their advisor on getting their own physics going. So, every year he would go over to China and spend time and help them to set up their high energy physics programs. And he'd come back with all kinds of dictation from that trip to China, so we did a lot of that.

ZIERLER: He would bring home tapes?

BEERBOHM: Sometimes he did. Sometimes he would just make notes, and he would come home, and would dictate stuff.

ZIERLER: When he gave them to you, what did he want to do? Did he want to keep this in a filing system for his archive, for his personal papers?

BEERBOHM: We kept copies but, I think what he wanted to do was get them set up so he could send back to China. He and T. D. Lee, I think, were both instrumental. T. D. Lee was at Columbia.

ZIERLER: When Pief retired, what did you move on to do at SLAC?

BEERBOHM: Well, I just went with him. He wasn't going to be without a secretary. I think between the campus and maybe—I don't know if it was the atomic energy commission, or the physics group at Stanford that paid for my salary.

ZIERLER: So, you were with him for the entirety of his time at SLAC.

BEERBOHM: Well, no—I was over with the lawyer. I think we moved out to SLAC something like the early '60s. I think I was with Wiz Field for about three years, at least. I started working for Pief in about 1965. Alice Hunniet was there up until that time. When we moved out to SLAC it might have been 1960. We hadn't been there that long. But don't take these dates terribly seriously.

ZIERLER: So, MaryBeth, I think for one of my last questions, I want to ask you about the memorial service for Pief.

BEERBOHM: Well, it most mostly a whole lot of—all the people at SLAC, and all the people outside who could get to it getting together. They hired a great big tent and put it out on the lawn—have you ever been to SLAC?

ZIERLER: I have not, no. I hope to get there soon.

BEERBOHM: I hope you do, too. Anyway, there's a great big grass area, and they put up a big tent. They put pictures of Pief all around, from all his earliest days. People got up and talked about him—Sid Drell, and I think Persis Drell ran it. Yes, she was the director. So, she kind of officiated at it. They came from campus, and I can't remember the name of the Stanford president at the time, but he talked, and people from the physics department. I mean, it was just—it was very informal, and yet it was very moving.

ZIERLER: Yeah. MaryBeth, you had such a long career at SLAC. What were some of the things that you were most proud of, working at SLAC?

BEERBOHM: Well, I made some really good friendships there. That was a nice thing, and that was due to Pief. He encouraged things like that, that people get together. It was like a small town, really. I think we were about 1200 or 1300 people, and it was like our own little town. I don't keep track of too many. I still have some very close friends that I see quite often, who worked at SLAC. It's always nice to see these people. David Leith, one of the one-time physics directors, died this year. At the Presbyterian church in Palo Alto, they had a memorial for him. A lot of us came to that. That was a nice thing to see so many people that I hadn't seen for a long time. There was just a feeling of we're all together.

ZIERLER: What did you feel like was the overall mission of SLAC, whether you were a secretary, or a physicist, or an engineer, or a student, what was the one thing about SLAC that drew everybody together? What was everybody working towards?

BEERBOHM: Well, everybody was working to do their jobs so that we could be proud. I'm really proud of SLAC. Very few people ever retired from there because they just loved being there. I think that was probably it—and then enjoy life after you've carried out what you were supposed to do. We had a lot of nice social things at SLAC.

ZIERLER: So, speaking of yourself, in terms of the pride, what pride did you feel in SLAC?

BEERBOHM: Well, I thought it was a pretty nifty place to work. I guess that was mainly it—I believe there were at least 4 Nobel Prizes. I have to say, I loved being Pief's secretary. You get a certain amount of status with that, but on the other hand, you work for it.

ZIERLER: So, MaryBeth, I think for my last question, it's a special opportunity, because you have such a long memory of SLAC. Over all the years that you worked there, in what ways did SLAC change over the years, and in what ways did it always remain the same to you?

BEERBOHM: Well, as long as I was there, Pief was always there, too. There was always that devotion to having started SLAC, and being there at the beginning, and being proud of it. That was our thing. I think most people kind of felt that way. Then younger people came in and took over, and they did things a little differently, but they were doing a great job too, I think. I think everybody had great respect for Burt Richter, and Jonathan Dorfman—that's who I was trying to think of. He was a g great director. And Persis Drell, of course. She was Sid's daughter; I wasn't there when she was—but I liked her. She was a nice young woman, and terribly bright, I think. She probably changed a little bit of things at SLAC—a little more formal, maybe.

ZIERLER: Well, it sounds, MaryBeth, that you certainly feel incredibly lucky that you got to spend your career at such a nice place.

BEERBOHM: Oh, yes. I certainly did.

ZIERLER: Well, MaryBeth, with that I want to say thank you so much. It's been such a pleasure speaking with you. Your perspective adds so much to recognizing the heritage of SLAC, and all of the amazing things that were accomplished there, and for giving a window to your perspective and who you see how things developed there. So, I want to thank you so much.