INTERVIEW WITH CHEN NING (FRANK) YANG EINSTEIN PROFESSOR OF PHYSICS DIRECTOR INSTITUTE OF THEORETICAL PHYSICS

December 15, 1987

Dr. Hartzell: Name, department, rank or position.

Dr. Yang: I'm Albert Einstein Professor in the Physics Department, also Director of the Institute of Theoretical Physics.

Dr. Hartzell: And what year did you come to Stony Brook?

Dr. Yang: I came in April 1966.

Dr. Hartzell: April 1966. And how old were you at the time?

Dr. Yang: I was 43.

Dr. Hartzell: From what institution and position did you come?

Dr. Yang: I was Professor at Institute for Advanced Studies in Princeton, New Jersey, for many years before I came.

Dr. Hartzell: And who was primarily responsible for your coming to Stony Brook? How was it you came to Stony Brook?

Dr. Yang: That came about one day, as I remember it, in the spring of '65 when John Toll, who was president designate of this campus called me. He and I had known each other because we were in the same field. He called me and said he would like to drop by to talk to me in Princeton. I said of course, fine. So, he came, and then he told me that Stony Brook, that first he was coming to Stony Brook to become president starting in the fall of '65, and he wanted to build up Stony Brook to be a research university, and second he said that the state was formulating plans to have five Einstein Professors and five Schweitzer Professors to be funded by the state, and he wanted me to agree to join Stony Brook if Stony Brook could get one of these Einstein Chairs. And that was how it began. Clearly before Toll called me, he must have had considerable discussions with people here already in the Physics Department and that certainly would

have included Alec Pond and Leonard Eisenbud and Max Dresden, but I don't know the details.

Dr. Hartzell: Right. Have you been at Brookhaven at various times prior to that time, what was your connection, if any, with Brookhaven?

I first visited Brookhaven in 1952. In 1953 Brookhaven was searching Dr. Yang: for a young theoretician because their accelerator, the cosmatron, then the world's largest accelerator, was just beginning operation; and they wanted to build up theoretical program and eight experimental work. And George Collins, who was Chairman of the Cosmatron Department, I think it was called the Cosmatron Department, wrote me in 1953 asking me to spend a year there. So in the summer of 1953 I moved to Brookhaven and did spend one academic year there. That was my first real contact with Brookhaven. Brookhaven had been the Laboratory with the largest accelerator in the world in my field. It was natural for me to visit Brookhaven again so after that year, 1953-54, I developed a sort of habit to visit Brookhaven very often in the summers. I was there for, for example, four or five months in the summer of 1956. Again for several months in the summer of 1957 and so on and so forth. So I was very acquainted with Long Island, and part of the attraction that Stony Brook had for me was the realization that if I came here, I would be close to Brookhaven and I could visit Brookhaven very easily rather than having to drive three hours from Princeton.

Dr. Hartzell: What were the factors, the most important factors, in your decision to come to Stony Brook, you were in a very important position at a very important institution, why did you move?

Dr. Yang: Well, I had already told you one of the reasons, namely, Stony Brook's close to Brookhaven and that's very convenient for my work. But that's not the only reason. Another very important reason was that at the Institute for Advanced Studies there were no students. It is an ivory tower with doing their own research work. That was, of course, a very good mode of operation and highly successful, and I myself have greatly benefited from doing my years there from the lack

of worldly chores, you might put it that way. But it was clear to me already that that's not the only mode of life to participate in a different kind of adventure, different type of enterprise, namely the build up of a research university; it's also a challenging and potentially very fulfilling task. So when it became clear to me that the University, the State and its new President, John Toll, were determined to make a go of this idea to create a new research University here, I thought that that was a very important challenge. In 1983 I published a book called "Selective Papers" with commentary; I'll give you a copy, Karl, later; and in it there was a few paragraphs that was related to the subject that we just talked about, let me read the particular relevant one to you. Here I was commenting on my move to Stony Brook, and there was on page 60 a commentary on the years 1965-66 the following paragraph:

During 1964 to '65 the Legislature of the State of New York voted to establish five Einstein Professorships at universities within the State. John Toll, who was to take over as President of State University of New York at Stony Brook, T. A. Pond, the Chairman of the Physics Department, and Max Dresden, Professor of Physics at Stony Brook, decided to approach me to accept an Einstein Professorship at Stony Brook that they hoped to They mobilized Chairman Chang, a professor of electrical engineering at Stony Brook (by the way, he is still here) and the oldest classmate of mine from the Southwest Associated University in Kuomin, to talk me into visiting the campus to get acquainted with its atmosphere and its faculty. My wife and I brought our two younger children, Gilbert and Ulie, with us to visit Stony Brook in the spring of 1965. We were at Sunwood, the University's guest house overlooking the Long Island Sound. The first evening we were there the window of our room framed a spectacular sunset over the Sound. It captured our hearts. But there was hesitation on my part. Stony Brook was launching a program of expansion. Toll and Pond offered to have me head an Institute of Theoretical Physics to be built up over the next few years. It would be quite small, and I would have had to spend much time running it. So I was never a person whose chemistry pushes him to take charge. My first reaction to the offer was did I know how to be in charge of a group, even it is a small. I struggled with this question consciously and subconsciously and eventually decided I could learn to do the job. Around the end of April I accepted the Stony Brook offer and told Toll I would take up my post in 1966.

Dr. Hartzell: You accepted, as I understand it, even before we knew that the Einstein Professorship would come to Stony Brook.

Dr. Yang: Yes.

Dr. Hartzell: It was a conditional one.

Dr. Yang: I would accept if you succeed in getting one.

Dr. Hartzell: Right. You've already indicated what your understanding of the purposes behind the creation of Stony Brook were, what vision was being transformed into reality. What were your impressions of Stony Brook when you came, the campus, the people, the leadership, and the spirit?

Dr. Yang: I came, first I came to visit in 1965 for two days as I just had read to you. I found the people in the Physics Department to be very forward looking. That was the first time I had met Alec Pond. I knew Max Dresden from before.

Dr. Hartzell: Did you know him at Michigan or at Iowa?

Dr. Yang: Neither, I knew him because he used to visit Princeton from time to time. He didn't visit Princeton for any great length of time, but I think he had the habit of visiting Princeton on the way to the New York meetings every year, so I had gotten to know him for quite a number of years. And I also visited Iowa where he was. Leonard Eisenbud I think I also met for the first time in Stony Brook in 1965. I found that, as I said Pond I met for the first time, I found that the Department had people with excellent taste, they know what is excellent physics and what are the things that should be emphasized, so that was sort of my first impression. When I came a year later physically

Dr. Hartzell: And we had students versus the hard hats, people who were involved in construction primarily over the Vietnam War, we had that problem. How were the students?

Dr. Yang: I thought that the students from the very beginning the situation that the graduate students were very good, not every graduate student was excellent but you have a class of graduate students there are always a number of very good ones, the average also quite good. The undergraduate students, the level of undergraduate students was not so good, and this persists until today. It is a problem which is complicated, and I am not the person who is an expert to talk, I'm only given you a general impression I have. In terms of research associates, we have even better quality ones. When you get to the more research area in the Physics Department, you find that our applicants for research associateships are excellent, and we are constantly in competition, sometimes successfully, with the best institutions in the country -- MIT, Harvard, Cal Tech for that research associates. You notice that I didn't mention Yale because Yale is no competition. Our major competitors are Harvard, Princeton, MIT and Cal Tech.

Dr. Hartzell: Chicago and Stanford?

Dr. Yang: Stanford is a dangerous competitor too, Chicago is, Chicago fluctuates. At times it is not that dramatic, it's good, but not that good. Now it is good, but

Dr. Hartzell: What was the money used for?

Dr. Yang: The money was used by a national organization. I don't remember who was the chairman, but one of the top people in that national organization was Jerry Weisner, who had previously been Kennedy's science advisor. Most of the money, if I remember correctly, was used to support Senators and Congressmen whose political views about the Vietnam we supported. very large national effort, but we were very proud at Stony Brook that we raised more money than any similar organization on other campuses. Then, of course, there are particularly Stony Brook events, change of guard in the late '70's when Toll and Pond left; the buildup of many new buildings; the finishing of the medical school building; the effort to recruit more disadvantaged students, in which I also participated -- I'm afraid it was not too successful but a number did fine; the phenomena related to the increasing enrollment on campus. All of these, of course, left memories of their times with me. Even more in a smaller focus, there are the upside downs in the Physics Department, and we enjoyed all these years good visibility

internationally, and we have very successful recruiting at various times. But we also suffered, we suffered disappointments, I guess life is always like that. Now, I would say that the Toll-Pond phase of Stony Brook was the phase of initially of rapid expansion, later of steady but not so rapid expansion, and there was a certain style set by Toll and Pond which is very distinctive. They were very efficient, very, to many people, very aggressive in their efforts to build up Stony Brook. After Toll and Pond the present regime came, Marburger came, and then of course the similar, maybe that's not the right word, similar changes of Provostship over, before Homer Neal there was Sidney Gelber for a long time, and before that Bentley Glass. It is from my viewpoint very satisfying and remarkable that all of these Vice Presidents and Provosts for all these years have kept the tradition set at the time of 1965 that this University would pursue excellent research and pursue good quality graduate education, and I think that original purpose has been embraced by all these academic leaders in that office all these years. And it's very fortunate, because I think that that is what makes Stony Brook big.

Dr. Hartzell: Where you here when Stony Brook received the NSF Grant of Excellence?

Dr. Yang: Yes.

Dr. Hartzell: Were you involved in that in any way?

Dr. Yang: No, I was not involved, I think the Physics Department was the ITP that I direct was not involved at all. Now, if the Physics Department was involved, it was not a major involvement if I remember correctly. It was a major thing for the University, but I think it was mostly involved with other departments than Physics. Maybe the Physics Department had a small participation.

Dr. Hartzell: I think Leland Haywood was then chairman of the National Science Foundation from Brookhaven. I know Johnny and I went down and talked with him.

Dr. Yang: That was in the late '60's?

Dr. Hartzell: It was earlier than, well, '66, '67 around there, yes. Did you have any international conferences?

Dr. Yang: Yes, we had five or six international conferences organized by ITP.

Dr. Hartzell: I noticed that Jerry Tate got the Fermi Award recently.

Dr. Yang: Oh, I didn't know that. I should congratulate him. This was just within the last few weeks?

Dr. Hartzell: Yes, well

Dr. Yang: Did he share it with somebody?

Dr. Hartzell: I don't think so, no, no. Let's see, did Bengt Stromgren come when you

were here?

Dr. Yang: He came to visit.

Dr. Hartzell: He came for a short time two different years while he was at the Institute.

Dr. Hartzell: I remember that the History Department was interested in getting someone in the history of science, that's all I remember about it. How have your expectations of your life and work here been realized, how have they worked out, have you been happy here?

Dr. Yang: Yes, I have been very happy here. I think when I said that before I came I deliberated for a long time and one of the attractions here was that if I come I could

participate in this very exciting enterprise to build a new University, and although there were problems on the way, but overall I think I made the right decision, and I did in some ways participate in this very important enterprise. My experience here in assembling a group has been in general quite satisfactory. We have acquired very fine people who then became very promised research wise, one of them is Jerry Brown. I knew him at Princeton, he was a professor at Princeton. I was at the Institute but we talked physics with each other, and I was impressed by his of the physics side of our subject he was not a formalist. There are many people in theoretical physics who are too formal. Jerry Brown was not of that kind. And I think is good if you look at his achievements later. Anyway, I remember going down to Princeton from Stony Brook one day and taking a walk with Jerry, and after he joined me here, and he accepted, he came, and he has done excellent work all these twenty years. He became a member of the National Academy about ten years ago, and the work he has done in the last ten years is a new field for him, about and all that have been excellent. it's a most satisfying experience on my part to have the perception that here is a man whose research work is going to go to higher deeds to come. Another example of a successful acquisition for Stony Brook was Benjamin Lee. Benjamin Lee was with Jerry, four years younger than I. Benjamin Lee was about ten years younger, and I've known him because he has been post doctoring at Princeton before I moved here. So as soon as I accepted here I took him here. I talked to him one day when we were at a meeting in Chicago, in the late fall of 1965, and I told him that I asked him to come to Stony Brook in 1966, I asked him whether he wanted to join and he did. He came a few months after I came. the department here, he was already a well known young theoreticist, but his best work was all that after he came. In 1973, the work for which he would be remembered was done here at Stony Brook, then he became so prominent that in 1973 the newly established biggest laboratory in the United States, the Fermi Lab in Chicago, asked him to become their Director. He talked to me and he said he would like

to go, and I said, of course, it is a very important step in your career. He went but he did not want to sever our connections, so he was officially on leave when he, but then he died in a car accident in 1977. Another great success in our hiring a brilliant young person is Peter van Nieuwenhuizen. Peter van Nieuwenhuizen was hired by us I think it must be 1973 or 1974, and his work was good after that time, but he was not so well known, and after he came, his work took off. And in 1976, together with Dan Friedman, who was with us at that time, they invented something called super....., which is a beautiful new idea, and it launched a whole new field. Peter is now a Leading Professor at Stony Brook. So I think that to have acquired colleagues who do their best work in Stony Brook and continued to do excellent work is of course a most satisfying thing, and that is an aspect of my career I consider to be very good. I had had about 15 graduate students. I usually don't like to have many graduate students. You probably know that in the scientific field, maybe this is so also in other fields, but I don't know for sure, but in scientific fields the relationship between a teacher advisor and his student varies from individual to individual in very marked ways. For some people, for some advisors there will be a large number of students. Others like to work with a very few students, and I'm of the latter kind, so I never had more than one, more than two graduate students at the same time. In fact that is very rare, usually I have either no graduate student or work graduate student because I don't have that many good problems to give to graduate students to work on. But of the dozen or fifteen graduate students that have taken their thesis with me at Stony Brook, there have been some very satisfying experience too. One of my graduate students for example, Chao, who came here in 1974, I helped to launch into a career in accelerator theory. Somewhat against his wishes, he was reluctant, I think I had the good perception, I felt that the accelerator area is where he would do very well, and he did. He is now the chief designer of the SND, which is the largest accelerator to be built in the world. I think it would cost about \$5 billion.

Dr. Hartzell: I heard, where is it going to be located?

Dr. Yang: That is, there is a national committee to select from some half a dozen sites. New York State offered a free site, and Alexander is in a group that is now borrowing space from the Livermore Lawrence, they have a lab in Berkeley, but they are only temporarily there. When the site is identified, and when the project is funded, they would move to the site, but he is the man who is designing the site. It is a \$5 billion project. Another student who was my first graduate was Bill Sutherland. Bill is a very quiet spoken person and upon first encounter, he usually conveys the impression of diffidence because he is not very assertive, and he would say things in a hesitating, which at first would be taken as a kind of a lack of a threat, but after you talk to him for a while, you know that that is his manner, he knew what you were talking about precisely and much more. And he is a very original graduate student, he would do things that I did not tell him to do, and oftentimes I did not believe that he had done that when he told me, but later I was convinced that in fact had invented something new and this he has done repeatedly. And after he left Stony Brook he first went to Berkeley, then he went to the University of Utah, and his major work continues to show this ability to originate a new aspect of the problem that

Dr. Hartzell: He was on the frontier with his work.

Dr. Yang: So these experiences have been

Dr. Hartzell: Satisfying.

Dr. Yang: I should say that not every one of my graduate students were good, there were some which didn't do well, and there was one whom eventually I said, I think we cannot work together well, maybe you should look for another thesis advisor. And this young man did finally work with somebody else in the Department and eventually, after a long time, he got his Ph. D. But that is to be expected, you have good experiences and not so good experiences.

Dr. Hartzell: You mentioned Jerry Brown, I think, is Andrew Jackson also at Princeton now?

Dr. Yang: I think Andy was I think Jerry had but Jerry did have some of his former students and his colleagues here. By the way when you were asking me about my experience at Stony Brook, I had said something about the satisfying experience of getting colleagues here and about my experience with graduate students, I should also say something about my own research work. My own research work in the last twenty years, twenty-one years now at Stony Brook, has been, I would say, very successful, but I would say not as successful as it was when I was younger. I think it's generally recognized now, not just by myself but I think by the whole field, that my best works were done while I was in Princeton. Actually, in fact, it turns out that my most important two papers were both written at Brookhaven. I was at Princeton, but I was visiting Brookhaven in the summer of 19, no I was visiting Brookhaven from 1953 to 1954, as I told you, and during that year, I wrote a paper which undoubtedly will be remembered as my most important work. It is called "Gatefield," otherwise called "Young Field." Then two years later when I was visiting, I had earlier mentioned that I had spent some four or five months there in the summer of 1956, I wrote a paper with about parity, which later earned us the Nobel Prize. Undoubtedly, these were my most important papers. Nothing that I did after 1950's could compare in importance with these two, but it is a satisfying experience for me that I continue to do, I will not be bashful, very good work. In the early '60's in Princeton and after '66 when I came here, my research work in the lab twenty-one years is divided into several areas because I would be active in one area, sometimes in two for some time and then that area may become sort of mine too much and then I would move on to other things, sometimes I would move back to one of the early areas. I would say that there are three areas which I have engaged in in the last twenty-one years that have given me some great satisfaction. I've had many papers published; I didn't count them, probably 150 papers in the last twenty-one years, but they did have many subjects this time, I am generally interested in many things, but there are three main areas that I've engaged in in the last twenty-one years, and one of these in particular lately have become very

important because, and that's not by design, I didn't know it at the time that I was working on it in the late '60's here, it was a problem in statistical mechanics in back of physics, which had always been one area of my interest in the beginning of my career and still is. But I left that field, left that area of research in the early '70's because I was interested in other things. Lately in the last two or three years the work I did in the late '60's seemed of great prominence because some mathematicians took of it what I wrote down, which is now called "Young-Baxter Equation," was deeply related to the theory of Knot. Now we all know what a knot is, a loop or a kind of knot when you make in a new loop, you can tie two knots, you can tie three knots, so it's obvious that you can different knots. Now, one of the fundamental problems of knot is to classify all knots, this is a branch of You can have a very complicated map, but be just a simple loop, so it is not the problem of how complicated a knot could be and to classify them you see the problem which is a very difficult problem, which is still not solved today. But in the last two years, there were new developments which made great penetrations into the field and the two that are used are the Young-Baxter Equation, so I'm trying to get back into this area.

Dr. Hartzell: The mind is somewhat like a tornado, it travels, the core travels occasionally from one field to another and back. It's a

Dr. Yang: Well, when you mention this, I would also say that one characteristic of the ITP work here, and it's very prestigious in the research circles all over the world, that the ITP has a particularly good interaction with the Mathematics Department. I will not be bashful here, I think that largely because of my work was primarily in physics, of course, but I am, my style approach in physics has more the mathematics element to it. If you want to probe this a little further, this particular aspect of it, I would suggest that you talk to Max because he could give you a third person's view more clearly

Dr. Hartzell: Of your work?

Dr. Yang: Yes, and of the relationship between ITP work and Mathematics. But anyway, I think ITP stands in among the research centers in the world, and a in

Dr. Hartzell: Do we have good mathematicians here?

Dr. Yang: Yes, Stony Brook has excellent mathematicians. It all built up after Jim Simons came in the late '60's, and we have several people here who will eventually

Dr. Hartzell: I have not interviewed anybody in mathematics yet, except Irving Gerst who was here a long time ago. Is there somebody that I ought to talk to there?

Dr. Yang: Well, yes, I think that the two aspects, three aspects of mathematics you probably would find very interesting to talk to, one is the of the department in the hands of Jim Simons. You know Jim Simons has just become President of the Stony Brook Foundation.

Dr. Hartzell: Has he really.

Dr. Yang: Yes.

Dr. Hartzell: Good.

Dr. Hartzell: 1964

Dr. Yang: 1964, thank you, and he handled all these developments and participated in them.

Dr. Hartzell: Let's see if I can find any other questions here. Were your activities confined to the Stony Brook campus or did you have relations outside with the Central Office in Albany or the discipline nationally?

Dr. Hartzell: Discipline wide.

Dr. Hartzell: Who invited you?

Dr. Yang: I invited myself. I went to visit my parents who were in Shanghai at the time; they are both dead now. But when I got to China it became clear that China regarded this as a very important aspect of the developing negotiations, and as a consequence Premier Chou En Lai invited me to dinner. And since that time I have been quite active in serious activities to arrange exchanges between China and the United States. And I arranged for the exchange agreements between Stony Brook and three universities in China, and I also raised some funds so that we now support some visiting scholars on the campus through funds I raised through the Stony Brook Foundation.

Dr. Hartzell: John Toll was very supportive of that, very much interested in it.

Dr. Yang: And I in turn, in 1979 did something which is of some use for the University of Maryland and John Toll. Toll had just moved there, and I was in China, and I was invited to dinner by the one who was the head of one of the projects, it happened in my native province, but that's not so relevant, I was visiting that province because there is a university there, and then to come

Dr. Hartzell: What was your native province?

Dr. Yang: Ah Kwae. Because in Ah Kwae and in Peking

Dr. Hartzell: Has that happened?

Dr. Yang: Yes, he has been Deputy Premier for the last seven or eight years. At that time it was rumored that he would be moved to Peking. So I thought to myself since it is very important for America and China to come to more friendly relations, at that time diplomatic relations were not established.

Dr. Hartzell: What year was that?

the first sisterly state to state relation, Maryland was fine and subsequently Governor Hughes has gone to visit China and I think there are some trade agreements going on. And Toll said they were beginning quite friend of Wan Lee. Some four years ago I saw Wan Lee, and he said how's your friend President Toll, I said he's doing well, he said, give to him my regards and ask him to come to visit us again. So I called John Toll after I came back and Toll did write to Wan Lee and Wan Lee invited him and Debbie and their two kids to visit, and Wan arranged for them to visit Tibet. They were very happy with that trip. I wouldn't be surprised if he hasn't come back again, and the University of Maryland after their long exchange program with their universities in China. So this kind of activity also has taken a bit of my time. And in recent years, because of the China connection, I have become a frequent visitor to Hong Kong because Hong Kong is a place where one can raise funds. And I told you previously about a program which is called CEEC, Committee on Educational Exchange with China, of which I am the Chairman, and I have in the last seven or eight years raised approximately \$100,00 a year from Hong Kong, so every year I will go to Hong Kong to help raise the funds, and so we support about eight or ten scholars on campus from China in a year. It has been a successful program. Also because of this Hong Kong connection, in 1983 or 1984 I got a company owner named Leonard Shaw to give a million Hong Kong dollars to Stony Brook. He did give that money and Marburger and I went personally to receive it, and he is now in one of the funds in the Foundation, and it is used to, it's called the Leonard Shaw Distinguished Lectureship, and every year we invite a number of people to The idea is to let Stony Brook Foundation manage it and we use half of the interest and dividend, and the other half is plowed back so that it can stand inflation, and we use the half of the proceeds to finance these lectureships. Currently we were first negotiating with Albee to come and playwright, but the venture collapsed because Albee is very interested in coming but the Theater Department didn't want him, because he had been here once before and apparently he offended a number of people in the Theater Department. I didn't know that so I was approaching Albee and Albee was

very happy but the Theater Department would prefer somebody else. So if you don't want him, of course we shouldn't have him, so they are now looking up some new names. The previous ones had been, well, it is my idea it is a new aspect of my life the last seven or eight years, I realized that to raise funds is very important. I did raise some funds, so after the Leonard Shaw Distinguished Lectureship was set up the first one that we invited was Arthur Backler. Now Arthur Backler was a very wealthy man; he unfortunately died He was He, more importantly, he gave after he had come. generously to educational institutions. He donated the Arthur Backler Museum for Harvard which just opened a year or two. He donated Arthur Backler Medical Center for Tufts which just opened two years ago. He donated the Arthur Backler Museum for the Smithsonian to house his collection of oriental and Chinese and near Eastern art, it opened last September, there was a big ceremony. He gave to the Metropolitan where the Chinese Buddha are kept, the Arthur Backler Gallery, and then where the Egyptian extended their large rooms on the northern side of the Metropolitan where there is a rebuilt Egyptian tomb, if you look at the wall, the wing is called by the names of three Backler brothers. They were all But anyway he was the first Leonard Shaw Distinguished Lecturer, I invited him, and he was happy to accept. We gave him an honorarium of \$2,000 which he promptly gave to charity. We gave it to him because those are our rules, and the idea was to get him acquainted with Stony Brook with the he would eventually give us some money. Unfortunately he suddenly died last July before the opening, it was all set up that he would participate in the opening of his museum at the Smithsonian, but suddenly he died. The opening continued, the ceremony continued, I was asked to give a talk but I couldn't go because at that time my mother became very ill and I rushed to Hong Kong and she died in September so I did not participate in the Arthur Backler Museum opening in Washington. But maybe we will get something from, his wife and the foundation which she manages.

Dr. Hartzell: The Foundation has grown and is performing many functions. George Collins, Ward Melville and I were the three incorporators.

Dr. Yang: Is that right.

Dr. Hartzell: Yes.

Dr. Yang: By the way, George

Dr. Hartzell: Yes, he is, he's down in Virginia. I stayed overnight with him.

Dr. Yang: Oh, recently?

Dr. Hartzell: Last year, two years ago.

Dr. Yang: I haven't seen him for quite a number of years. He was in Saudi Arabia back and forth. He retired from Brookhaven, then he moved to Georgia, to Virginia Polytechnic Institute, then he retired from that. I went to ceremony when he retired. Then he went, but that retirement must be from seven years or thereabouts from VPI, and after that he got a job at one of the universities in Saudi Arabia, so every year he would spend some months. I think he retired from that too, and now he's back at VPI. But I suspect he

Dr. Hartzell: I go to Florida and I stay with friends on the way down, and I have interviewed George, I have him on tape too.

Dr. Yang: Give him my regards. As I told you, my first encounter with Brookhaven was because of George offered me a job there in 1953.

Dr. Hartzell: I left in 1952. Well, this has been very, very interesting and broader than I had anticipated in many directions that I did not know about. I am very glad you have spoken the way you have.

Dr. Yang: Yes, it is a very important thing to put these things down.

Dr. Hartzell: Yes, you are number 46 now.

Dr. Yang: You have interviewed 46 persons.

Dr. Hartzell: Yes, I'm going to interview Alec.

Dr. Yang: He was here.

Dr. Hartzell: Yes, I understood he was. I couldn't stay unfortunately. All right [tape 1 - end of interview]