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Charles Schweighauser Memoir

Schweighauser, Charles

Interview and memoir

3 Digital Audio Files, 72.5 min., 22 pp.

UIS Alumni Sage Society

Charles Schweighauser, professor emeritus at UIS, details his involvement in the creation of the Environmental Studies program at SSU, starting in 1973. He also reminisces about his role in developing the University's astronomy program, including the construction of observatories located on top of Brookens Library and west of Springfield. Schweighauser relates how he tied the University's astronomy program to the local community through public events. Schweighauser further discusses the courses he taught as a member of the English department. Individuals prominently mentioned include Dick Sames, Bart Bok (distinguished visiting professor of astronomy at SSU), Dick Williams, Margot Duly, Liz Weir, and former SSU Presidents Durward Long and Alexander Lacy. The interviewer is Cheryl Peck, former UIS Director of Public Relations.

Interview by Cheryl Peck, 2011/4/19

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Narrator: Charles Schweighauser
Date: April 19, 2011
Place: Springfield, Illinois
Interviewer: Cheryl Peck

Q. Today is April 19th, 2011 and this is Cheryl Peck speaking, and I'm about to interview Charlie Schweighauser. So Charlie, I'm going to turn the recorder your way and why don't we start by talking about how you came to SSU and something about those very early years.

A. Well, in 1973 I was in St. Louis...directing a heart research program (laughs). And I got a call from Craig Brown, whom I have known for years. We were at Williams together...

Q. Uh-huh, I remember him.

A. And Craig said, there's an opening in Environmental Studies here and I had been instrumental in setting up Environmental Studies at Williams...first undergraduate program in Environmental Studies in the country, in fact. And he said, there's an opening available at Sangamon State University and I said, where? (laughs) What?

Q. (laughs)

A. And he told me about the University and how it started. He said, "Well I'll arrange to have you come up for an interview and spend a day here and see what you think and what they think of you here." I said, "Fine." So I came up and spent a day here. This was in the summer of 1973, and I spent a lot of time with Dick Sames, of course, who was head of the natural science cluster at the time. Dean, at the end of the day, he offered me a job. And I turned it down (laughs).

Q. (laughs)

A. The reason was we were still in the planning stage and were on the cusp of beginning to do heart research. My family, my wife and my boys, were at a camp in Colorado, a boys camp and a girls camp. My wife ran the crafts program at the girls' camp and my boys were at the boys' camp.

I said, "I can't make a major decision like that without them." So I told Dick, "Why don't we do this? You need a course in environmental policy, and I will come up and teach that course for you some night, whenever you want me to. When my family gets back and we have a chance to talk it over, and you'll have a chance to get to know me and I'll have a chance to get to know the University and the people here, then we'll see where we go from there."

I said, "If you'll keep the job open for me for a year, then I'll teach the course for you and keep the job open." He agreed to that. So I came up on Thursday nights. I left St. Louis at four o'clock and came up here to teach at 6:30 (laughs).

Q. Wow.

A. Every Thursday night in the fall of 1973 and I met a lot of people. They had a party for me here and I ran into Chris Breiseth whom I also knew from Williams and Jane, his wife, and Pete Kalkela and Jerry Wade in the Environmental Studies program. By the end of that semester, I was convinced I would like to go back into teaching. I said, "Yes, we'd come." He said, "Fine." In the spring of 1974, he put me on two thirds time (laughs) here and I was still doing heart research full time in St. Louis.

Q. Wow.

A. So I would come up on Thursday night to teach the policy course again and I would come up on the weekends and I interviewed a lot of faculty about what they thought Environmental Studies should be. Dick wanted somebody with some experience and a little older (laughs).

Q. How old were you at that time?

A. I was...let's see, that was in the spring of 1974 so I would have been 37 years old. I spent a good deal of time talking to people on the campus over the weekends, and Dick kind of wanted me to put the program together. Are we recording?

Q. Oh yes.

A. Okay. So, I did and I talked to a lot of people. Ed Hawes was involved. He was the first one in Environmental Studies except we called it Environments and People in those days.

Q. Right.

A. Ed was the first tenured faculty member in the Environments and People program. I was really interested in coming up here and getting back into teaching. So I told Dick, "Yes, we'd come." [We] came in the fall of 1974, full-time then. So I really began in 1973 but then became fulltime in 1974. I bought a house in Chatham. We looked at a lot of school districts because my kids were, one in junior high and one in high school, and they were getting close to college age. We wanted to make sure they were going to get a good secondary education.

And so I taught two courses in the fall of 1974 and had a third release time to work on the development of the Environmental Studies program; the same thing in the spring of 1975. So I did nothing but Environmental Studies for the first year. Then sometime during that year, I was also a member of the old Physical Science program that we had which had two physicists and chemistry and you could get a degree in either physics or chemistry. There were a couple of chemists here.

One of our physicists in one of our meetings [I] said, "Why don't you, for the fall of 1975, why don't you teach a course in astronomy? You have a background in astronomy, you've taught it on the college level before (which I had, in St. Louis, at Washington University and St. Louis University, all at the same time (laughs))." Anyway, it hadn't even entered my mind. I hadn't even thought about that. I said, "Well, yes, it'd be kind of fun to get back into astronomy. I've been out of it for eight years."

So I taught the first course in astronomy in the fall of 1975 and had forty-four students, I remember that and well, as they say, the rest is history. It just took off from there. Of course, I had my Environmental Studies and the planning of the Environmental Studies program. We had lots of people we consulted, hired as consultants and brought in as consultants. Things sort of took off from there and then I said to myself, "Well, if that course went over so well, maybe I'll teach another astronomy course."

And I taught a course on the solar system. The first was just a survey, a non-technical survey course. Then I did a course on the solar system and that had a lot of students and we just kept on going (laughs). Anyway, we got the Environmental Studies program together, I think, in pretty good fashion and we lost two faculty members. One went to Michigan State, the other one didn't get tenure (laughs) and so we had to hire some new faculty members.

Malcolm Levin came the same year I did in 1973, in Environmental Studies and so we put that program together then. It went very well, went very nicely. We had both an undergraduate and a graduate program in Environmental Studies, which gave the board a little bit of a ...

Q. Yes indeed.

A. We were a regency school, along with Northern Illinois University and Illinois State and gave them a little pause; what's the difference between the two degrees? So the early 1980s and I don't remember a date now, the Board of Higher Education said, "Well, you've got to get rid of one degree." The Regents said, "You had to get rid of the other degree (laughs)."

So we fought for the graduate degree. We made a decision to let the undergraduate degree go and fight for the graduate degree, which is what happened of course. We had only graduate students then and still have only graduate students. Although I believe there is at least one undergraduate Environmental Studies course taught, but you can't major in it as an undergraduate.

Q. Right.

A. And astronomy kept going and I kept adding new courses (laughs).

Q. You were a one man shop.

A. (laughs)

Q. Right?

A. (laughs) Right.

Q. In that regard.

A. Yes, I was by myself in astronomy. And then, one of our physicists left, went to a research facility up in Northern Illinois and the other one didn't get tenure. By that time, Al Casella had moved. He was a physicist. He had moved into Environmental Studies, so we didn't have any physicists left. But I fought for keeping the name, and we made it astronomy-physics. Even

though we weren't teaching any physics, we kept it and we were very fortunate that we did because now we have physics, have had for a number of years when John Martin came. Having a university without physics is like having a University without English.

Q. Right.

A. And so we were very fortunate that we were able to keep the name. Bill Bloemer allowed us to do that...

Q. Oh, uh-huh.

A. He became dean. Judy Everson was dean and Richard Shereikis was dean and Dennis Camp, all from the English program and there were several other deans in there too that didn't stay (laughs). And they all allowed me to keep Physics in there so and that was very fortunate because we didn't have to go back to the Board and say, "We want to hire a physicist." And go through all the paperwork of hiring a physicist and saying, "We now have Physics. This takes a lot of work."

Q. Yes.

A. We were able to hire John Martin then without a lot of hassle about program names and that sort of thing. In the meantime, astronomy kept going and we developed the observatory, a small observatory, on top of Brookens Library. Dick Sames came to me, or I went to him and said, "We need some telescopes if I'm going to continue to teach astronomy." This was about, the end of 1975, maybe, maybe early 1976.

And he said, "Fine, give me a list of what you want." I gave him a list of a couple of small telescopes. He said, "Oh, no, no, do better than that." He said, "I've got ten thousand dollars for you." I said, "Fine." So we got a bigger telescope. We got the 14" telescope and, about that time, I got a call from the City of Springfield saying, do you want an astronomical dome? I said, "We have one." There was an amateur astronomer where Lake Hunter, Lake Springfield II was going to be built, which still hasn't been built (laughs).

Q. Right.

A. And the city condemned the land and had this observatory and we didn't know what to do with it. He said, "Would you like to buy it from us?" I said, "Well, who am I going to be competing with? Why don't you just give it to us?" And he said, "Ok and so he gave us the dome and the old observatory." Our carpenters went out to the site, and dismantled the thing and brought it up here. We were building the PAC at that time and we were getting pretty close to the end, but the big crane was still here. So we used that crane and lifted the whole thing on top of the building and the carpenters put it back together again, and we had our observatory.

Q. Wow.

A. I got the folks at Hanson Engineers... In the meantime I had also been hired by Hanson Engineers as their chief environmental consultant on what was called the Madison Street

project. In the old days, both Madison Street and Jefferson were two ways, and they wanted to make it one way because they wanted a north-south, excuse me, an east-west corridor across Springfield.

So Hanson Engineers got the contract from the State to do the environmental impact statement and I was their chief environmental consultant along with a fellow from Champaign-Urbana. We built the observatory here and I knew the people at Hanson Engineers and I asked them if they could survey the exact center, the core of the pillar, the concrete pillar on top of the building. We got our architect at the time, his name was Takeuchi, to design the observation deck for people and so forth.

My other thought was, not only to use this for students but because we were the State's Public Affairs University at the time and I thought public affairs ought to include science, not just politics and economics and things of that nature. So we designed the facility on top of Brookens Library so we could have a lot of people up there because I thought, "Well, we'll have Star Parties."

We had the concrete pillar and had the people at Hanson Engineers survey it and find the exact center, and we put the telescope on it and bolted it down and so forth. We got that all set and then I used it with my students, but we opened it up to the public in the spring of 1976. And I made a big mistake. We opened it in January and we had 6 people show up (laughs).

Q. (laughs).

A. It was so cold. Well, I decided what we were going to do was hang in there until the spring. Of course, as the weather warmed up, we got more and more people. My first assistant was an undergraduate student who helped me with the Star Parties, an undergraduate by the name of Jim Sparks who was our first graduate in the physics part of the physical science program.

Q. Oh.

A. And he has since become a teacher and I believe is still teaching, although I've lost contact with him now. Then as the weather warmed up, we got more and more people. It became pretty popular, so we did it again in the fall of 1976 and just kept going. But we didn't do it in the middle of the wintertime anymore (laughs).

Q. No (laughs).

A. And we did it starting the first Monday, the first Star Parties, starting the first Friday after Labor Day and we ran through the Friday night before Thanksgiving. We did that for years and the crowds kept increasing. We got very good publicity from the newspapers and thanks to you (laughs) we got a lot of...

Q. It used to be easier than it is now.

A. (laughs) Yes, that's right. We got a lot of publicity from the television station, Channel 20 here.

Q. Right.

A. It really worked out very nicely. About that time, we were having the intersessions if you remember?

Q. Yes, I do.

A. The old intersessions were held in the break between the fall semester and the beginning of the spring semester, at the beginning of January. In 1976, we did one on the Bicentennial, of course, the country's Bicentennial, and Phil Kendall was the one overseeing that from an administrative point of view. Phil asked me to do the next one, in 1977, and I said, "Let's do one on science." So we did it on science and human values, I did and got a lot of the science faculty here involved.

We got all kinds of scientists, a couple of Nobel Prize winners and people I knew in astronomy including a fellow named Bart Bok. Bart was from the Netherlands, from Holland but he had been at Harvard. They recruited him in Australia to set up their big observatories in Australia. Then he came back and was at the Astronomy Department of the University of Arizona, which was the second largest astronomy department in the country.

Anyway, I became very good friends with Bart at this intersession. He had such a wonderful personality that he appealed to everybody, students, adults, just everybody. He was retired from the University of Arizona by that time and his wife had just died so he was sort of at sixes and sevens, so we got him to come up here for the intersession.

But then I said, "Bart, how would you like to come back here and become our distinguished visiting professor of astronomy? Occasionally spend a couple of weeks here, two or three times a year." Phil Kendall said, "I'll supply the money." So Bart became our visiting professor of astronomy. He died in 1982 I think it was. But before that, he made several trips here a year, and he would give lectures in my classes. So we had an internationally famous astronomer (laughs) as our distinguished visiting professor of astronomy here.

And he'd been president of the American Astronomical Society, which is a society of professional astronomers in the country. It was really wonderful having him here. We were just off and running. Then, I got the thought, "We're really light impacted here on the campus, with our observatory—lights from Springfield and Lincoln Land and the highways and our own lights here on the campus." I said, "Besides we have a pretty small telescope; I'd like to build something bigger out in the country under dark skies."

So, at that time, Bob Spencer was back on the faculty' he was no longer president and Alex Lacey was president. I went to Alex and I said, "I think we need an observatory in the country. I'd like to do some investigating on how were going to build this and what size we need and what we can do and so forth. And Bart Bok who lives in Tucson, Arizona, where the University of Arizona is, has invited me to come down and he'll introduce me to people in the technical field there, people who build telescopes and all that sort of thing."

I said, "I'd like to go down and spend a week or two down there and just talk to people and put together a proposal." Alex said, "Fine, I'll supply the money for that." So I went down there and I stayed with Bart at his house and talked to people at Kitt Peak National Observatory, which, at that time, was the center of American astronomy and still is pretty useful. It has the largest collection of telescopes in the world.

Q. Wow.

A. There are seventeen telescopes on a mountain about 55 miles south of Tucson. So I spent a good deal of time down there on the mountain, and I spent a lot of time with Bart. I talked to a lot of astronomers, and I talked to the people who built telescopes down there and figured out what I needed, what we could do and what we should do here in the center of Illinois. I came back and wrote up a twenty page document on what we should do on building a telescope in the country. This was for Alex Lacy and, on the back end of that, I tacked about four pages on how nice it would be to have a planetarium here on the campus. Well, Alex read the whole thing very carefully and he said, "Let's get the planetarium first. Then we'll get your research observatory." Well, I didn't want to do it that way but he was the president.

Q. Right.

A. I said, "Ok." So I got together kind of a blue ribbon committee of community leaders who had been students of mine in my astronomy courses. Bob Lanphier, Dean Collins, Dave Kinser. Bob Lanphier, of course, was head of Dickey-John. He had started the Dickey-John Corporation down in Auburn, old Springfield family, of course, Lanphier High School and all that sort of thing.

He had been a student of mine. He was wonderful to have in class. I remember he eventually became a member of the National Academy of Engineering, had a couple of degrees from Yale. Then we had Dave Kinser, who was an ophthalmologist in town. He was a physician but he also had a PhD in engineering, which he got first before his medical degree. Dean Collins, who was head of Collins and Rice Engineering, he was an engineer from Champaign-Urbana but he had taught engineering at Cornell.

I mean this was a wonderful, wonderful group of people. I got these guys together, and we all got along fine. I mean we're all just like peas in a pod (laughs). We used the Dickey-John airplane and flew around the country so I could break these fellas in on what a planetarium was because they're the ones who are going to have to raise the money for it. So we went all over the country. We went to Rochester, New York, we went down to Tennessee and we went to Chicago and we went to St. Louis and a bunch of other places.

Then we identified some people in town who could give money for a planetarium. Not everybody's got that kind of money; that takes a good deal of money. Without going into a lot of details, we were able to identify a person who promised us the money and, of course, the planetarium would be named for this person. I went in to tell Alex that we had the money. He couldn't believe it. Well, unfortunately he was out looking for money for the soccer lights, for the soccer field at the time.

He wanted this person, same person, unbeknownst to us, to give extra money for the soccer lights. The person got so mad that he withdrew everything, and that's why we don't have a planetarium on the campus (laughs). Then Alex was no longer president and I was on the search committee for the next president, who turned out to be Durward Long, so I knew him before he got here of course.

Durward came and he'd been here about six weeks and I knocked on his door and I said, "Durward, we've got to build that observatory." I said, "Maybe you want to read the document." He came back to me after checking with Michael Ayers who was the VPAA at the time. Michael said, "Sure, let's do it." Durward said, "Yes, you can get your observatory but you can't use State funds. You have to go out and raise all the money yourself, in the community or wherever you get it from but you can't use any state funds because we don't have it." I said "Ok." So I went out and I raised the money (laughs).

Q. Was that hard to do?

A. Yes and no. Judy Stephens was head of the foundation at the time and she was very helpful and put us in touch with Henry Barber of the law firm, old line, Springfield law firm. Henry had been a navigator during World War II, and he knew something about the sky from a navigation point of view. In fact, he named one of his sons Rigel, which is the name of a star, one of the navigation stars in the sky.

He said, "Well, I'll help you, but we're going to need some more money." Well, other people came through, Dave Kinser came through, and other people came through with money. Monty Siegreist from Taylorville agreed to build the building at cost so it wouldn't... just the cost of materials and labor, no profit involved.

Durward arranged for that. Through various places and various people, we got enough money together to build a 20" telescope, state of the art telescope. In the meantime, I had made friends through Bart Bok with Ron Hilliard in Tucson. Ron was a research astronomer at Kitt Peak National Observatory, at the big observatory the University of Arizona had, a 90" telescope.

He was also a person who could design and build anything, I mean a real genius at building high-tech equipment. He had built for us a spectrograph, which was a piece of equipment we could use on our 14" telescope that divides the light of a star up into its various wavelengths, where it's putting out energy. From that we could tell what the star is made of and how much of it's there and how hot it is and all kinds of things.

Spectroscopy has probably given us about 80% of what we know about the universe. It's *the* primary research tool, so we had this spectrograph that he had built. I went to Ron and I said, "Well it looks like we're going to be able to build a telescope here. Could you design for us and build a 20" telescope?" He said, "Well I can do everything but I can't do the optics. I'm not an optician but we have one of the world's greatest opticians here in Tucson and he'll do the mirror for us." I said, "Ok."

At about that time we got all the money together and we were able to put the telescope together. I had started this process in 1978 and we opened the observatory in 1991, so it took thirteen years to put everything together. Being persistent and having really strong backing from really strong community leaders, particularly in the technical field, which we don't have a whole lot of (laughs) in Springfield, as you know, we were able to get the 20" observatory put together.

Well, the Barber family, Henry Barber, had contributed most of the money, so we called it the Barber Observatory. In the meantime, I had to find a place for it. I had looked...there are places you can't build it. You can't build it north of Springfield because you'd be looking south over Springfield. We do most of our work in the southern sky, not all of it but a great deal of it. The lights would be a problem. Henry Barber owned some land north of Springfield and wanted to give us that. I said, "Henry, we just can't use it." I talked to Liz Weir about this. Remember Liz Weir? She became director of Clayville.

Q. Right.

A. [Liz] had gotten a degree from us here. I had known Liz quite well and she said, "I have a person who has some land west of Springfield, a pretty fair distance, not too far from Clayville. She doesn't live here, she lives in California. She might be interested, but she still has a house here in Pleasant Plains." I said, "Well, who is it and what's her phone number (laughs)?"

Her name is Doris Hamel, she's from Pleasant Plains but she married... she went to San Diego State and her husband went to San Diego State. He had been very successful in setting up a number of medical research facilities in California where they would test blood and all kinds of things like that, body fluids and so forth. Anyway, I called her absolutely, completely cold. She didn't know who I was from Adam (laughs). I told her who I was and what I wanted and she said, "That sounds like a really interesting idea. I'm going to be in Pleasant Plains for the summer, in just a few months and let's get together then and talk this over."

We did this in June and we talked it over and she said, "Ok, I've got a strip of land I can give you. It's about an acre and a half and it's just exactly where you want it." It had limited access, I mean no cars are going to go by or anything like that. She said, "I'll let you have it, actually a much smaller part of it." I went back to her and I said, "Look, I wonder if we can have the whole thing just for protection and also in case we wanted to build a few more observatories, we'd have a little more land." She said, "Yes, let's do it that way." And so Doris gave us this acre and a half of land on the north side of a fairly extensive piece of land that she was sharecropping.

She owns a lot of land around here. In fact, the transmitter for WUIS is on her land near Mechanicsburg, so she knew the University because that had been there since day one of the radio station. She gave us the land. So now I had the land, I had the money, I had the people to build. Ron Hilliard also drew up plans for an observatory for us with a lab and with a dome and all that kind of thing, and we were up and running.

It took about a year and a half to get it built and we finally got the last of the money together and opened the observatory. This is for research. It's not for the public, but it's for research

only and training advanced students. We opened that in 1991 and we installed the telescope on April 6 and 7 of 1991. It's still there; it's still enormously productive, so that's how we got started.

Q. That's a fascinating story.

A. Well, one other thing happened in this period that's interesting and that is my undergraduate and graduate degrees are in English. I have as much work in astronomy, but I don't have any degrees in astronomy. I've always had this kind of dual relationship with the liberal arts and with science.

The people in the English department came to me and said, "Would you like to do some teaching for us?" And I said, "Sure." So I became a member of the English Department. Now I'm in three different departments that have nothing to do with each other (laughs). They have no conceptual or substantive connection with each other: Environmental Studies, English and Astronomy-Physics.

At that time Wayne Penn was the dean of what became the School of Public Administration. Then, as you know, he became Vice President and Provost. He was kind enough to let me have a one third time appointment in each of the three different programs with which I was involved. Then I began developing a number of courses in English. I started out with one that was cross-listed with Environmental Studies called Expressions of American Naturalism.

Then I developed courses in the American Renaissance. I developed a graduate course on Dante because I had done some work on Dante when I was a graduate student. I developed a course on Joyce. My major professor when I was doing my thesis in graduate school was one of the world's leading authorities on Joyce, although I did not write my thesis on Joyce but I knew I had access to absolutely first-class scholarship through a fellow named Don Gifford at Williams.

And so I developed a course, graduate course, on James Joyce. Then, I always wanted to teach a course on comedy (laughs) so I developed a graduate course on comedy. Actually it started as a 400 level, this was before we had freshmen and sophomores. I found out that juniors and seniors don't have much of a sense of humor (laughs). It didn't work very well.

I made it only a graduate course so I'd get older students. I think you have to be a little older to have a sense of what's comic and have a sense of humor. So I developed a course in comedy and I think eventually I had eight English courses and eleven Astronomy courses and about six or seven Environmental Studies courses. I didn't do this all at once; it would take me about five years to get through my whole sequence of courses.

Q. Wow, that's fascinating. Did you like... was that arrangement satisfactory to you?

A. At the beginning it was difficult because it's very hard to go from a class one night where you're teaching, let's say, an advanced astronomy course. You're dealing with very quantitative kinds of thinking. To go from differential equations to James Joyce the next night (laughs), but I became used to that and it worked. You need a certain amount of flexibility and it took me awhile to develop that but it worked. As I have said on many occasions, I would rather be at

this institution, in those days, in the 1970s, 1980s, 1990s, and into the 2000s, than any other place I can think of in the United States.

The reason for that is I was getting wonderful students. I was getting students who had many degrees on their own, who were mature. They were interested and enthusiastic and what a wonderful, wonderful place to be. I'd rather be here than any other place I can think of.

Q. Well, that's good to hear, yes. I was going to ask you that question.

A. Yes (laughs) right, right.

Q. Did that continue to be true until you retired?

A. Yes, but things were changing then. When we got the Capitol Scholars first and then they became sophomores, we really became focused on undergraduate courses.

Q. Right.

A. Then online came along.

Q. Right. Did you teach any courses online?

A. No, I did not. I am not particularly a fan of online, and I don't mind saying that, too.

Q. That's alright.

A. For public consumption, I want my students in front of me. I want them to know who I am and I want to know who they are. I want to deal directly with them because a lot of times I deal with them, and I want to deal with them, on a one-to-one basis. If I'm doing research in astronomy or helping someone with their master's thesis in English or Environmental Studies, that's on a one-to-one basis, and I don't, for me, personally, and I make no comment on anybody else on campus, people are teaching online—the wonderful work that Ray Schroeder has done. But for me, personally, I want to be in a classroom.

Q. Yes. Why did you decided to retire?

A. Well, there are a lot of reasons. One is that I had a lot of other things that I wanted to do (laughs). Two, I'd been here a long time. Three, the University was changing significantly, and I was getting younger and younger students when I had been used to older students. I was getting older and frankly, I think I was having trouble relating to younger students. I just felt the time had come to retire.

Q. And what year was that?

A. That was 2002. Now when I say I retired, I kept on doing exactly the same kinds of things that I've always done, teaching three courses but I could go to two if I wanted to for a semester. I was doing research, I was publishing. I was doing the same things I'd always done here except, I didn't have to go committee meetings (laughs).

So that freed me up to begin some other projects and things that, really, I'd put off, some of them for forty years, that I wanted to get back to. And I knew that I could not just stop teaching because it was so much of my involvement here at the University. It was a very complex, complicated sort of thing. I couldn't just stop or too many things just wouldn't continue. Like the observatory, for example. I had to keep that up.

I had to keep on directing the observatories, keep on doing research, keep on directing the research. I had a research group by this time, a wonderful group of people who lived here in the area, who were not going to go on to get degrees in astronomy but they had enough astronomy with me that they could do research. They brought great talent, I mean really great talent, particularly with the revolution in the electronic age and computers.

So they brought a lot of talent, a lot of skills, a lot of knowledge and a lot of background to the observatories that I didn't have, particularly in data analysis with computers and things of that nature. I mean I learned as I went along but I still don't regard myself as being particularly computer literate. So that was just wonderful and I had this large group of people whom I was working with and some students, some advanced students that I was taking out there to work with them too.

So the time had come to turn things over to somebody younger. Well, at that time, there was no money to hire a replacement for me. So I kind of had to stay on even though I was retired to run the observatories. I mean, who else was going to do it? There's nobody else around.

Then we got a wonderful, wonderful dean named Margot Duly and I spent a whole day with her. She said, "Charlie, I want to see what you're doing in astronomy." So we started with the 14" on top of Brookens Library. Then I took her out to the observatory in the country and told her what we were doing and how we got started. And she said, "Charlie, we have to keep this up and you need help." She said, "You're retired now. We need to find a replacement for you."

So she gave me permission to go ahead and chair a search committee for another astronomer. We did that and let's see that would have been 2006, I guess. John Martin came on board then. He likes to do the kinds of things we do here. This is not a normal position in astronomy. A normal position in astronomy is you teach one course a semester or one course a year. You publish several papers a year, and that's how you get tenure. That's a normal position. That's what they do at Champaign-Urbana, where there are 22 people in the astronomy department.

But John likes to do the public outreach, likes to do the Star Parties, in addition to doing research, in addition to running the observatories and working with what used to be my research staff. And then, of course, he came from a post-doc position at the University of Minnesota and that post-doc position involved working with the Hubble Telescope, and he's keeping that up, too. So he's got high powered research, he's got our research here and then, of course, he has the teaching.

Q. Are there other faculty members in astronomy?

A. No, no. So it's Just John now and he has permission to hire a physicist so he doesn't have to teach some of the physics courses for, let's say, premed students and so forth. So if we get a physicist now, that will free him up to teach more astronomy. So things are beginning to fall into place there, also.

Q. Good, great.

A. But one of the things I'm very pleased about; when I retired, the foundation, which at that time we had our foundation here on campus. They set up a program, spearheaded by Bob Lanphier, to raise funds to build a second observatory. The two major research techniques for ground-based astronomy are spectroscopy as I mentioned and the other is called photometry. That's measuring the brightness of a star in various wavelengths at which the star is putting out energy. From that you get a very accurate profile of the star's temperature, and you can learn a lot of other things through photometry.

Well, my students through Bob's effort and the effort of the Office of Development and Vickie Megginson, were able to raise enough money to build a second observatory for my students. So we built a second observatory that we opened in 2004. It's devoted to photometry, so we have spectroscopy and photometry, which means we can study the same star with the two basic techniques for studying stars at the same time, which gives us very high quality data.

Q. Wow, yes.

A. As far as I know, we may be the only observatory in the United States able to do that, photometry and spectrometry at the same time on the same object. The other thing which I think is probably pretty close to being accurate is that we here at the University of Illinois Springfield have been able to develop astronomical teaching, research and training equipment that is better than anybody else in the state of Illinois.

And that's saying quite a bit when you consider the University of Illinois Champaign-Urbana has, as I said, about 22 people in their astronomy department and offer a Ph.D. in astronomy. Northwestern offers a Ph.D. in astronomy and the University of Chicago is very powerful, of course, mostly in theoretical astronomy and theoretical physics and things of that nature and offers a Ph.D. in astronomy. Being able to say that, in terms of equipment, is really a big feather in our cap.

Q. Yes indeed.

A. Yeah. Now, that doesn't mean the other people aren't doing wonderful work.

Q. Right.

A. They're doing far, far more work than we're doing in research and that sort of thing and they have access to telescopes around the world that we didn't have access to until John Martin came. But within the state of Illinois, within easy travel distance of the campus, we have really superior equipment.

Q. Another thing we have here is a telescope for the disabled.

A. Right, that's an interesting story. I came back from vacation in, I think it was the end of the summer in 1992, the campus at that time was being retrofitted for people with disabilities. In other words, ramps were being put in so wheelchairs could go up where they couldn't go upstairs, things of that nature.

It always bothered me, particularly in my introductory course for non-majors in astronomy, that I had never been able to take youngsters who were in wheelchairs and I'd have maybe one a year. There would be a student in a wheelchair, and I could never get them to the observatory on top of Brookens. There's no way to get them there because there are steps to be climbed. And even if you're up there, you can't look through the telescope because you have to go up more steps to get to the dome.

Q. Right.

A. So I'd work with these students with a small telescope, down on the ground, show them a few things, just so they'd have a little experience with a telescope but that was not satisfactory. Well, I got back from vacation and the campus was being retrofitted, including up on top of Brookens. They put a ramp on top of the steps so we could now bring students who use wheelchairs up in the elevator through the mechanical room to a little office I have up there and then up the ramp and out on the observation deck.

But they still couldn't use the 14" telescope, so this bothered me. I remembered that in 1957 when I was an undergraduate, I had worked with a telescope in Springfield, Vermont that had a fixed focal point. In other words, wherever the telescope pointed in the sky, the focal point, the eye piece remained in the same place. So you could be at the same place, all night long, no matter where the telescope moved.

It's called the Harkness Telescope and it was located in Springfield, Vermont, which is a small town but very highly technically oriented there and kind of the center for amateur astronomy in the United States at that time. Anyway, I worked with this telescope one weekend doing (laughs) not very interesting stuff. Lunar occultations, when the moon moves in front of a star, you time that and you can refine the orbit of the moon that way.

It wasn't very interesting astronomy to me. I'm much more interested in what makes a star produce energy and astrophysics than in this kind of positional astronomy. Anyway, I remembered this telescope had what was called the Springfield Mount. So I called Ron Hilliard down in Tucson. I said, "Ron, have you ever heard of the Springfield Mount, with a fixed focal point?" And he said, "Yes, I've heard of it." And I said, "Do you think you could build one for us if I get the money together?" He said, "Well, I don't know, let me think about it."

So he called back a couple of days later and said that with modern technology I can build a telescope with a fixed focal point but it won't have all the gears and chains and all this other stuff of this telescope that had been designed in 1927 (laughs) that I had used in 1957.

Anyway, I said, “Ok, send me a bid.” So he did, how much he wanted for building this telescope. I took it to Dick Williams, who was head of Physical Planning and Operations at the time. I said, “Dick, could you take this to the Capital Development Board—because the Capital Development Board was the state agency that handled American Disability Act money, ADA money, from the federal government to the states to retrofit buildings so that people who use wheelchairs have access?”

A couple of days later, they sent out two representatives to see what we had here. Two days later, we had the money (laughs) from the Capital Development Board. Well, that’s almost unheard of for a state agency to move that fast.

Q. Right.

A. But the reason is, Capital Development Board doesn’t have a lot of friends in the state. They oversee the construction of all the public buildings in the state and so they’re always working with architects and builders and so forth. Sometimes they change things around and some people don’t like that, so they don’t have a lot of friends here.

But here was a way to get a real feather in their cap, to support something that had no controversy involved and that would be a wonderful addition to the University. So they provided the money. I called Ron and I said, “Ron, we’ve got the money.” He couldn’t believe it (laughs), and he said, “Ok, I’ll build your telescope for you.”

Then we designed it over the phone. I mean, he’d make a suggestion and I’d agree or we’d talk it over. So about nine months later, the telescope ended up in crates at my office (laughs), and we set it up. I consulted with Jack Genskow, who was on our faculty here. Jack, unfortunately, is no longer with us but Jack had been in a wheelchair, had been ever since he was a freshman at Yale. I had a lot of questions for him. How should we treat these people? Should we have a separate Star Party? Should we do it on Friday night and on and on and on and I said am I using the right words? I don’t want to offend anybody, am I being correct? And he straightened me out (laughs).

We decided to hold them on Sunday night. That people in wheelchairs with crowds of 250 people on top of the observation deck are going to be on Friday night would just get in each other’s way. So we decided to have separate Star parties. I hate to separate out people with disabilities, but it’s for their benefit. It’s for everybody’s benefit. So we had Sunday night Star Parties, but they had to make reservations for these.

The Friday Star Parties, anybody could come any time. But for Sunday night, they had to make reservations. We developed the first telescope in the world dedicated to people with disabilities. Ron has since sold at least one other telescope to the Adler Planetarium in Chicago. Now I don’t know what use they have made of it. I have not seen it up there but this has been a number of years ago. Then we had written articles. Ron and I both wrote articles for *Sky and Telescope* Magazine, so it got worldwide attention. Champaign-Urbana called me and wanted to know how they could get one. I don’t think they ever did, it didn’t work out for them over there but anyway we had the first telescope.

Q. And it's still attracting a lot of...

A. Yes, well, it attracts some. What we discovered is that people who use wheelchairs simply do not have the vigorous life that the rest of us have. We'll set up a full house, which would be ten people in wheelchairs, and three will show up. It's just that they go to bed early, they get tired easily. I understand all of that, but we've opened up the skies to a whole new constituency of people that I think is really wonderful.

Q. Yes, I remember that. That was a wonderful publicity opportunity.

A. Yes, it was indeed. We've had a lot of really good experiences here in astronomy. In 1977, in February 26th of 1977, there was a partial eclipse of the sun. In February, well you figure bad weather. Well, this turned out to be a beautiful day in February.

It was also teacher's workshop day in District 186, all the kids are home. Their mothers don't know what to do with them, so they brought them out here. It was just a partial eclipse of the sun, not a full eclipse but a partial one of the sun. It lasted maybe, I've forgotten, maybe three hours, four hours, something like that. We figured we had three thousand people here (laughs).

Q. And then again in the 1990s.

A. And then the 1990s we had a comet in the sky in March, Comet Hyakutake, and as the earth turned on its axis, it just got higher and higher in the sky. I opened the doors at eight o'clock, and I couldn't believe the number of people out there. They were lined up eight across, and I followed the line out. I said, "Don't go upstairs yet. Let me see how many people are here." I followed the line out and they were lined up almost off the campus (laughs).

I mean there were a huge number of people here. I walked up and down the line and I said, "It's going to take a while for you to stand in line before you get to see the comet, but you will get to see it." It was a beautiful night, a warm March night. I said, "Just be patient and you'll get to see it because it'll be in the sky all night long. We'll stay here as long as there's anybody left in line." Well, we figured 2,200 people showed up for that one (laughs).

Q. Then again, was it the annular eclipse of the sun?

A. That's right, the annular eclipse. That was on March 10th 1994. Of course, I knew that was coming, and I had worked with Ray Schroeder and we'd planned how we were going to do that. Obviously we couldn't open the observatory on top of Brookens. I mean we just couldn't accommodate the people. So what we did was to put a small television camera on the 14" telescope, with a solar filter, and then ran transmission lines over the side of the building to the people who would broadcast it then over television.

Well, we had another small telescope up there that I had a couple students at, and there was a television camera that was focused on them. It wasn't attached to the telescope, but it was focused on them. We would explain what was happening and what an annular eclipse was. We had ABC, CBS, NBC and CNN here for that one (laughs).

Q. I remember that well (laughs).

A. Well, then I got another student to handle all the people who brought their own telescopes out here down on the ground, and he took care of them.

Q. That's right, yes.

A. I guess there were a couple hundred telescopes out here for that. Of course, I was upstairs on top of Brookens, kind of quarterbacking what was going on there. It took several people to run Friday night Star Parties because we were averaging well over two hundred people in those days, in the 1980s and 1990s, so it took a lot of people to run those Star Parties. It wasn't just the 14", we had two other telescopes set up there.

Anyway, one of the people who was helping was a young lady who was at Lanphier High School. She was first in her class at Lanphier and she had worked with me ever since she'd been a freshman at Lanphier. Jennifer Forbes is her name from a wonderful family. They had ten children (laughs) and I used, over the years, I used three of them to help me at the observatory.

Q. Wow.

A. All young ladies and they were so mature when they were in high school. They had the maturity of a college senior or graduate student and they were wonderful, wonderful help up there. Anyway, I got Jennifer and we taped a television show that spring, long before the eclipse.

It was done in my office and she would ask me questions about the eclipse and then I would draw on the blackboard what was happening and what to look for. So the television office then used that, intermittently, while we were upstairs during the eclipse.

Q. Oh.

A. And that explained then the eclipse also.

Q. Neat.

A. And it was really quite a show.

Q. Yes.

A. And the eclipse only lasted a few minutes of course. We were only a few hundred yards from the center of the annular eclipse, it was just south of us here.

Q. It was a fascinating thing.

A. But the maximum... oh it was wonderful, a beautiful, beautiful, beautiful day, absolutely beautiful day. And so we had international exposure on that one.

Q. I remember so often that what we did, what you did in terms of astronomy and those kinds of events in the heavens really gave this university so much wonderful stature that it would not have otherwise would have had.

A. It was good exposure and really positive.

Q. Put us on the map.

A. Yes, well also.

Q. Absolutely, right.

A. There will be more events like that coming up. It's up to John now and he'll handle them; he'll do very well with them.

Q. So what is your, what are you doing now at the university?

A. Well, I still have an office here where we are doing this interview obviously, still occasionally trying to give some help to John when he has some questions. And it's not directly associated with the university although they use the auditorium, I am more associated with the Illinois Symphony Orchestra on a volunteer basis on the search committee for a new music director.

And we have five candidates for next year of which one will be picked for the new music director. And then we're putting together a strategic plan for the next five years, where the orchestra should go and what a regional orchestra is and what it should be doing. I'm working on that, which is taking up a lot of time now but really fun and interesting work. It's all volunteer and I am just thoroughly enjoying it.

And then, of course, I'm doing a lot of things that I've always wanted to do, too, that are studying, reading, and then I've also developed a very interesting playpen in my backyard. I call it my playpen of flowers and a prairie patch and a piece of sculpture that was done by a world-class sculptor who has been a friend of mine for fifty years. So that's been very interesting, that keeps me busy, too. That takes a lot of work, so it's just a wonderful life.

Q. Yes, it sounds like it. Are there other things that you'd like to say at this point that we may have not touched on?

A. Let's turn this off for just a minute, if you don't mind.

Q. Ok, well that's a good time.

A. Just after I had retired at the end of the summer, just before classes were beginning, one of the people whom we had hired to teach Victorian literature and other things, too, died the day before classes began of a heart attack. That was Razak Dahmane.

We had an emergency meeting in the English department that night. Nancy Perkins was chair of the department at that time. We said, "Razak was going to teach the required graduate course

seminar and who in the world's going to do that?" I said, "Well, I'm retired and I'll do it for you." I said, "I don't know what Razak was planning to do. I'll go look at the books."

Then they said, "Thank God someone volunteered to do it." So I did and with their blessing and when I saw what the course was about, which was literary criticism, almost everything that he was doing in there had not even been thought of when I had done my graduate work. Somebody said, "Why don't you just go to your graduate school notes and teach from them?" And I said, "We didn't have anything like that."

In the academy, there was nothing like that when I was doing graduate work. So I had to invent a course. We couldn't find Razak's syllabus. We looked at his hard drive at home, we looked at his hard drive at his office, and it wasn't there. So I had to do a syllabus. I had 24 hours to put all this together (laughs) and so I did the syllabus. I used his books. One of them I didn't use extensively but the others I did and through just a lot of hard work stayed about a half an inch in front of the students (laughs).

Q. That was an experience.

A. It was an interesting experience for me because I learned a lot, number one, and number two, hopefully they did too. And then I was teaching the Joyce course at the same time, so I had two English courses. No astronomy courses, I think that's true, maybe I had an astronomy course, I can't remember. I was right back into full time again (laughs).

Q. Wow.

A. But of course, I mean we all felt terrible about Razak not being with us any longer but somebody had to teach that course because we had students signed up for it and they were required to take it, graduate students. Anyway, I did it and I'm sure we all got something out of it (laughs).

Q. Wow.

A. But then I had the Joyce course, too, which I had taught many times, but it's not that I didn't have to work for it. I reread *Ulysses* and *Portrait of the Artist* and *Dubliners* and the other books that I used in there again but at least I had the notes for that course.

Q. Right.

A. About 600 handwritten pages for that course (laughs).

Q. Holy Cow.

A. But the graduate seminar was an interesting experience and actually some of the students came back to me and wanted help with their theses. I know I had at least gotten through to some of them with it.

Q. Exactly.

A. But I had to learn all this as I was going along, too.

Q. Oh, my gosh.

A. But it was an interesting experience.

Q. Wow. That's very interesting.

A. Well, in 1990 I took a sabbatical leave and went to Italy for the semester, and I had three purposes for going to Europe and to Italy. Number one, I have an interest in landscape painting and I was interested in looking firsthand at the beginnings of landscape painting, which took place at the beginning of the Italian Renaissance. Number two, I wanted to brush up on some things with Galileo. And number three, I also taught a graduate seminar on Dante, and Dante was a native of Florence. And Florence was one of the places where we were going to spend a great deal of time.

So I went with a group of art history graduate students from Williams College and their professor, who turned out to be a real gem. I mean, just a really, really fine teacher and mentor for me. While I was in Florence, we went lots of places. We started in Rome and worked our way north. We flew home from, well, flew home from Switzerland but left Italy from Milan, in the northern part.

One of the great highlights of my life was, of course, this professor knew of my background, too, and we got to be very good friends, was when we were in Venice. He said, "When we get there, I want you to talk to the graduate students about Galileo and his discoveries and their significance."

So he had made many of his discoveries in top of the bell tower or a campanile as they're called in Italian, at St. Giorgio Maggiore, which is one of the big cathedrals but it's on an island. You have to take a water taxi out to the island in Venice. Well, we were out there and we finished our tour and discussions and analysis of the church and then we went up in the bell tower. And he said, "Alright Charlie, it's your turn now."

So I had all these wonderful graduate students, about twenty of them and I gave a talk then for about, well, close to two hours I guess, on the significant discoveries that Galileo had made with his telescopes and he had more than one that he made. I was right there where he had made his discoveries, talking about them and that had to be one of the highlights of my entire life.

Q. Oh my, yes.

A. I really enjoyed that and I think the students got a great deal out of it, too.

Q. Oh, how wonderful.

A. Yes and, of course, they knew no astronomy and they didn't know anything about Galileo, so I had to keep it at a fairly elementary level even for graduate students. I think it worked out pretty well and I really enjoyed that.

And then, that night when we were all eating at a restaurant, we were all at a big table. Their professor and I were sitting next to each other and we got into a discussion. Of course, he was trained as an art historian and his training, his background was all in what I would call Euclidian and Newtonian mathematics and astronomy—in science. Not that he was a trained scientist, he wasn't. But his art background came from that kind perspective, that kind of geometric, Euclidian, geometric perspective.

We got talking about Einstein and curved space and I gave him some simple formulas that he could use to show that time is relative and that space is relative and that mass is relative. We got into this really deep discussion; he was a very bright person so he could pick up things pretty easily and after about an hour or two, we both looked up and here all the students were around us listening to us going on.

Q. Oh wow.

A. So it was like having a class inside this restaurant, and it was really just a very rewarding experience for me. Then we continued on the plane on the way home and the students took part in that too (laughs).

Q. The students were lucky.

A. We had a really, really interesting time with that. But he was so wonderful to work with because he was so bright that he picked up on things right away. [He] had a little trouble understanding relativity because he was so used to thinking in terms of Euclid's geometry, the straight lines and one point perspective and all the other things that go along with the Italian Renaissance art and Galilean astronomy that he had a little bit of trouble with non-Euclidian geometry. But then in one of the books he published after that, he gave me credit for helping him along.

Q. That's wonderful.

A. So that was another very fun, unique experience.

Q. Oh yes.

A. I've been very fortunate.

Q. Oh, that's just great.

End of Interview

72 minutes 5 seconds