DD: I'm David DeVorkin and I'm here with Richard Conn –

RH: Henry.

DD: And the date is tax day, April 15, 2015.

RH: Right.

DD: And I am here under the auspices of the Johns Hopkins History Project. That is a project managed and directed by Bill Leslie. This material will be deposited with Bill and with the National Air and Space Museum. As an addendum, if it's all right at the end, if you give your approval to the oral history that Paul Hanle and Robert Smith took with you in 1983.

RH: Sounds good.

DD: Okay, state your name then again.

RH: Richard Conn Henry.

DD: And what is your title here?

RH: Academy Professor.

DD: I want to start by going over a few things in the 1983 interview that you had with Paul Hanle and Robert Smith. In the interview, they only briefly asked you about your early life and who your father and mother were and something about your childhood, and where you perceived you were in culture.
RH: Okay, so I just spout for a little bit?

DD: Absolutely.

RH: All right. My father was Edwin Mackie Henry, born in Oshawa, Ontario, Canada. His father was an apple dealer. He grew up and went to University College, University of Toronto and then went on and became a lawyer.

My mother was Jean Bonar Conn; she grew up in Sarnia, Ontario. She went to University College University of Toronto and she became a housewife after all of that.

DD: Okay, and so grandchild of an apple farmer.

RH: That's correct.

DD: And what did your father do?

RH: He was a lawyer.

DD: Was he the first in your family generation to go to college?

RH: I believe he was. My mother's father, my grandfather, was a school inspector in Sarnia so the family does have some kind of intellectual background.

DD: So it was not unusual that you would in childhood go toward college or was there any question?

RH: No, not at all. In fact I think they realized pretty early that I was reasonably bright, and they went out of their way to make sure. When we moved from Toronto to Ottawa for one year when my father became general manager of a trust company there, it failed. So what they did was they rewarded him by making him manager of their Edmonton, Alberta office. So we got sent to Siberia, and Siberia turned out to be a really lovely, friendly place. I recommend Edmonton to absolutely everyone. Well, in Edmonton it is amazing to me. I was interested in astronomy as long as I can remember. I can't remember a time when I was not interested in astronomy.

DD: So you can't remember a particular point in time when something happened?
RH: No, I theorized about this. We used to go to Georgian Bay each summer and I vividly remember, one day I woke up and my mother said to me, "Richard, last night there was the most incredible display of Northern lights." And I said, "You didn't wake me?" And I think that that was when I really became interested. So the advice to parents is – you see it. You see the logic.

I also remember the year we lived in Ottawa they took me out to the observatory, and I can remember looking through the eyepiece and seeing Mars, and I remember there was a sort of wobbling reddish thing. Now it really amazes me how is it that such a sort of feeble experience viewed objectively could be so effective that I remember it vividly today? It's extraordinary. The human brain, we do not understand.

And then when we lived in Edmonton I one day [read] that there had been a solar eclipse. [I also learned that] there was [an] Edmonton Center of the Royal Astronomical Society of Canada. I hadn't known that existed, and I immediately joined up and I met my good friends there in my childhood going to the observatory there. Particularly Franklin Loehde, who lives in Edmonton today and is extremely accurate. Look up the Edmonton Center and you'll find him.

RH: And I also met Ian McClennan, who is a big planetarium person and got his start at Edmonton as well. I remember he got a job with the local radio station, and they were testing him to see how he was. They got him not on the air but on a test thing, and they said, “Now there's an interruption, and you've got to fill in.” So Ian McClennan said, "Now we are on the Sunwapta Broadcasting System. And let me tell you the history of Sunwapta." In other words, he did essentially a perfect job of filling in.

DD: What is Sunwapta?

RH: I don't know.¹

DD: Were you an only child?

RH: No, two younger brothers neither of whom had any intellectual pretensions at all and who – in fact both at a time joined the so-called Children of God. One of them is still in it, living in Japan, seems very happy and has many descendants, many more than I

¹ There is a Sunwapta Falls in Jasper National Park, Canada.
do. The other one got into it a little bit but then got out, but he still is very much the Christian.

DD: You were Lutherans?

RH: No. The Reverend Thomas Henry, the sort of founder of our family, came from Ireland in 1811, landed in New York as a child, with his father, and went across and just got into Canada before the war of 1812 broke out. They moved to Oshawa and if you go to Oshawa today, and I highly recommend it, you go to Lake Side Park and visit Henry House Museum.

DD: Henry House Museum.

RH: Henry House Museum. It's there today.

DD: Your schooling, you went to Ridley?

RH: My parents in Edmonton, bless their hearts, wanted me to go to the University of Toronto, the University College as they both had done, and they knew I wouldn't get in from Edmonton. And so they spent a lot of money, which they didn't have that much of, to send me to Ridley for one year for the Grade 13 and I came out as head boy of Ridley College with firsts in practically everything and got into University College, and hence I'm here in this room today.

DD: Exactly. Did they do that for your brothers?

RH: They did not but my brothers, bless them, lovely people, would not have benefited from it. They wouldn't have gotten anywhere.

DD: And they knew that at the time.

RH: Oh yes. They knew perfectly well.

DD: And did you feel as if you were being singled out? Of course you were the oldest.

RH: I was the oldest, and I frankly paid virtually no attention whatsoever to my younger brothers. I'm sorry.

DD: Oh, what was the age difference?

RH: A couple of years and then a couple more years. Usual.

DD: You went to University of Toronto.
RH: Right.

DD: Did you go with the understanding that there was astronomy there and that you were going to study astronomy or was it not that specific yet?

RH: I remember specifically, very much so, looking through the catalog of the University of Toronto as to what all the options were, and I looked at the subjects that were involved. I said every single one of these arts and sciences, I knew I had no interest in engineering, but I knew it was arts and sciences and I looked through it and I vividly remember saying to myself all of this stuff that's offered here with one exception I can teach myself. The one I can't teach myself is MPC, math/physics/chemistry. I'm going into math/physics/chemistry. It interested me of course, particularly astronomy. And so the sequence was that in the first year my ranking was 2/4 – number four in second class honors, not first class honors.

DD: What's the difference?

RH: First class honors is better than second-class honors.

DD: Okay [laughs].

RH: And also because I got a second I lost my entrance scholarship, which I had gotten.

DD: Oh.

RH: Not that it matters. It cost my parents. So then in the second year for some unknown reason, then I had to make a choice. The first was MPC. Second year for some reason I went into pure and applied mathematics. And then my ranking was 1/10! I was the last person, lowest person to get first class honors in math, which is unbelievable considering how badly I feel I did in the math, but that's okay. So then in the third year I switched back over into the physics and astronomy option. Then I came in 2/4, another second class honors in that. But then in the fourth year I went into astronomy and I was 1/1. Top of the class.

DD: Now who was your professor? Who was the first astronomer you encountered?
RH: Well, I vividly remember in the hall seeing Jack Heard. He was the chair of the observatory in the astronomy department. [I recall] sort of grabbing his sleeve and saying, “I'd like to work at the David Dunlap Observatory in the summer.” When Sputnik went up they launched him into space so that he would be the “Heard shot round the world.”

DD: Oh, thank you for that!

RH: I hope that goes into the transcript.

DD: And do you tell your students that? What was your first astronomy course like?

RH: Oh, it was excellent. Don McCrae was in second year actually and Don McCrae taught the astronomy course. And it was fine but by far the best thing about it was at that time, that would be 1958 at the University of Toronto on the entire University of Toronto there was precisely one computer and Don McCrae taught us to program that one computer in assembly language. Bless his heart. And then the next year I can vividly remember being told that there was something coming along called FORTRAN. That's how the person pronounced it or told me about it, and I'd been programming Fortran ever since and I do it today.

DD: Can you remember when you developed a specialty interest in astronomy, what you would do? Did you ever start wondering about what you would do?

RH: Yes, I did. I did that about grade four or five sitting in the back of the room with astronomy books and making drawings of planets and things like this and I can very specifically remember thinking I'm going to be a planetary astronomer, which I did not in the end, but I have this memory of that.

DD: What were the options open to you at Toronto to you?

RH: I forced myself to get to be an assistant at the David Dunlap Observatory.

DD: So that did succeed.

RH: That did succeed. Oh yeah, and that was wonderful of course. And then also the other great thing was they knew I was bright, so Jack Heard and all of the other astronomers wanted me to get into a good graduate school. So they said, "Dick, what you should do
since your previous year grades are not that scintillating and it looks like they are going to be this year, you should stay for a one-year master's degree."

And so I did a one-year master's degree under Sidney van den Bergh, which was wonderful, and they got me into Caltech and Berkeley. They both admitted me and at Princeton I was number one on the waiting list, and then the person who was accepted, whoever she or he was, declined and then I had to decide among Princeton and Caltech and Berkeley, which is very nice.

DD: Wow, that's a big choice. A very big choice.

RH: Well it was an easy choice for me.

DD: But before we get there, and we'll get back to easy choices, I want to know more about what you did with van den Bergh.

RH: There is a published paper, but it's in the publications of the David Dunlap Observatory, which is very hard to find these days, even on the computer. It was scanning of globular clusters with a scanner. It is titled: “Photoelectric Spectrophotometry of Globular Clusters.” Publications of David Dunlap in 1962.²

DD: Did you do observations directly?

RH: Oh yes. At the telescope of course. I'd been a night assistant for a year there because of my approach to them.

DD: So you weren't just reducing observations that van den Bergh –

RH: Oh, no, no, no. I was making the observations.

DD: And this was your Master’s.

RH: Yes.

DD: Yes. Okay, that's good to know. Now observing with a large telescope –

RH: Yes.

DD: I have to note you have a three-inch telescope in your office.

² [http://adsabs.harvard.edu/abs/1962PDDO....2..281V](http://adsabs.harvard.edu/abs/1962PDDO....2..281V)
With a three and a half inch SKY SCOPE. Again, living out at Edmonton as a teenager and my father was going to take us all and did take us all from Edmonton. We drove all the way to Atlantic City for a law society meeting or something I had received, and when I graduated from middle school in Edmonton I had received a scholarship. I placed second in my class. The scholarship was $15.00 and the $15.00 I wanted to put toward buying this telescope.

So we ordered the telescope, and the idea was for some odd reason we would pick it up in Chicago on our way driving back to Edmonton. Don't ask me why, but that's exactly what we did. I remember being in the back seat of the car with the big package, and I can remember I was so anxious. I was tearing open the corners of the package in order to see it.

When we got to Edmonton, I opened it up, set up that same telescope that you see there, and believe you me, I remember. I took it out onto the front lawn and over in the west was Saturn. I had seen a billion pictures of Saturn. I knew all about Saturn, but I tell you I looked into that telescope and I just could not believe my eyes. It was so beautiful and it looked so fake.

And you had it ever since.

Yes.

Let's get back to the 72-inch. Did you observe with any telescopes between your SKY SCOPE and the 72-inch Toronto?

I don't believe I did. No.

So you never made your own telescope or anything?

No, never made my own telescope. I never would have thought of doing so. I'm not that kind of person.

But the 72-inch was quite a telescope I would imagine to be confronted with than your first telescope.

No, you keep saying the 72-inch. I wouldn't ring if it isn't the 74-inch because the 72-inch was in Victoria. And it was smaller. I was on the bigger telescope. Me in Toronto.

But still, that is a big telescope.
RH: Oh yeah.

DD: Was it a complicated telescope? Did you need training to use it?

RH: Oh, a little bit of training but it was all pretty straightforward. In those days of course you actually were in the dome and that was the only way the telescope could operate. Toronto isn't Edmonton, but Toronto does get cold and it was a little warm room there that you could go in it, et cetera, et cetera.

DD: But I bet you it got really cold there.

RH: The most amusing thing about the warm room was that Sidney van den Bergh who had been there for a few years and who was my master's advisor, he had come from South Africa, and he did observing himself too on a regular basis, but nobody had told him there was this warm room. He went through is entire first winter without even knowing there was a little room where he could warm up.

DD: My heavens. Did he complain about the cold?

RH: This was before my time, but he told me this story.

DD: Well then it was an issue for him.

RH: He was aware of it.

DD: Well, that's marvelous. As a teacher, you said he was the best. What did that mean? What does that mean to you? How was he the best?

RH: Well, he taught us astrophysics and he's not a physicist. I'm sure he'd be the first to say that, but at least it got me acquainted with the reality of physics. Physics, as you possibly have noticed, is not an easy subject to learn. It isn't for most people, and it was not for me. I know it now, I'm pleased to say, but the only reason I know it now is that for most of the last 44 years I've been teaching it, and that's what taught it to me.

DD: Did you know it because it was important for astronomy, or did you know it because it's intrinsic?

RH: I'm far more interested in physics than I am in astronomy today.

DD: Oh, and when did that change happen?
When did I begin to realize that? I don't know. I think it was gradually over those 40 years that suddenly – as I understood the physics better I suddenly realized that the universe is not this astronomer's universe of things. No, the universe is a universe of mathematics and mind. The net result of that as this dawned on me, and I said I realize this now but nobody's told me this. Why hasn't anybody told me this since it's so fundamentally important? So I said, well let me try an experiment to find out. So I wrote an essay for Nature Magazine, entitled, “The Mental Universe.”

I submitted it to Nature, and I expected I would get referee reports that explained to me the error of my ways. Instead, they published it, and it was great. And “The Mental Universe” was not my title. I forgot what I called it when I submitted it, but the editor suggested that title after reading the essay, which I'm extremely pleased with, and it's because it's calling a spade a spade and not euphemisms or disguising things. It's saying what I think.

That's quite interesting, but that did happen late – relatively late.

Oh yes. Look, it took me most of my life for this to dig into this, and suddenly the light bulb went on.

Can you recall what it was that turned the light bulb on?

I think there were two stages to it. Early in my teaching career, I taught electromagnetic theory. That's very, very important physics. The first year I taught it I taught it the traditional way, but then I stumbled across the book and E&M is complicated. Then maybe the second or third year I taught it I stumbled across a book that taught it through special relativity for that groups, and suddenly it all made sense.

So that was step number one, and that had a big effect on me because I said if in fact electromagnetism, which looks so complicated isn't, you know what? I'll bet quantum mechanics is simple and understandable, too. So I taught quantum mechanics over a period of about seven years, and then that result was my published paper in The American Journal of Physics, a very respectable journal indeed, with four referees that were all supportive, every single one of them, called “Quantum Mechanics Made Transparent.” If you look up citations of it you will find – I did it a short time ago – exactly one citation of it, and that citation

was by me. I don't know. I think I'm the only person that understands the universe. I'm sorry.

DD: Well could it have been that people who don't publish necessarily there or in citable journals or traceable journals have been reading it, like teachers?

RH: Oh yes, that's my hope. Yes, actually I do think that might well be the explanation.

DD: Now you said you made a choice for Princeton, and what was that choice?

RH: The choice was extremely simple. At Berkeley on my arrival they would have given me a set of diagnostic examinations.

DD: Really?

RH: Oh yes. To see what I didn't know. At Caltech, on my arrival, I would have gone through a set of diagnostic exams to find out what I didn't know and what courses I should take. At Princeton there were no such exams. I looked at the three possibilities and said, “I'm going to Princeton.” Simple as that.

DD: That's it. Caltech had telescopes?

RH: Never went through my mind.

DD: So you weren't attached to the 74-inch?

RH: No.

DD: And two telescopes and thinking in terms of that, you were attached to questions or [crosstalk] –

RH: I was attached to not having to take diagnostic exams on my arrival. That was all there was to it.

DD: Did you know about Princeton's unusual place in graduate educations, that it only took two students a year?

RH: I think I did. I'm not absolutely certain of that, but yes indeed, there were just two. That year it was me and Carl Heiles, and Carl is a professor at Berkeley now. Carl is a wonderful fellow and great friend.
DD: But it's a school that's strong in theory also.

RH: Well, yes.

DD: Did Sidney van den Bergh prefer one over the other here? Where did he come in?

RH: Excellent diagnostic question. What I vividly remember, I undoubtedly consulted Sidney on this. All I can remember is two things. First of all, obviously he did not dissuade me. I mean I have no memory of any real discussion. The second thing he said, “Now Dick, when you go there, when it comes thesis time, remember that Bengt Strömgren is over at the Institute for Advanced Study and he has a lot of unanalyzed data.”

DD: Yeah, you did say that in there.

RH: Oh, I did.

DD: But that's very good. I find that fascinating.

RH: Boy, I do too.

DD: How did you find him?

RH: Oh, I found him a pussycat.

DD: Oh, boy.

RH: Oh yes, absolutely. Maybe the story is in there already, but I really love this story and of course he was over at the institute. So I would walk over to the institute once a week for the whole period I was doing, and he had a really nice office in the main building. I did remember noticing there was a picture on the wall of Albert Einstein, but no thought went through my head. It was only 20 years later there was this book called Who got Einstein's Office? I said, “That's interesting,” and I discovered I had done my PhD in Einstein's office.

DD: No kidding. So access to the data was in Strömgren’s office?

RH: Oh, no.

DD: Or Einstein's office?
RH: The only thing I did in Einstein's office was give a report every so often to Strömgren about my progress. That was all.

DD: That would have been an interesting thing to be aware of, but would it have changed how you felt?

RH: Oh, of course not.

DD: You were aware of Spitzer's projects, of Stratoscope, the OAO plans and things like that, and you are performing a number of things with George Field and Dimitri Mihalas, very, very powerful theorists and people. What was your role collaborating with them?

RH: The system that they had at Princeton, which was very good, was for the first couple of years, each semester you did a term research project with a different professor. The first term project I did was experimental with Don Morton, and that was very good. Then I did a term project with Dimitri Mihalas which did result in a published paper. Then I did a term project with George Field, and that was enormously influential on me, far more than working with Dimitri. George Field became basically a mentor for me. I owe that man an enormous amount.

DD: Did you do observations, or did you reduce observations, or were there any observations?

RH: For what?

DD: For the work that you did.

RH: Oh, all of that was theoretical.

DD: But you must have had something for the abundance of magnesium in the atmospheres of O and B stars.

RH: I can't even remember the paper. But there's another astronomer with the same name as me.

DD: Really?

RH: Yes. It's a lovely story. There was an AAS meeting at College Park [about] 20 years ago and I was giving a paper there, and I noticed there were 2 papers by Richard C. Henry. I thought that was funny, so I gave my talk and at the end of the talk up comes this nice young man and says, "Hi Dick Henry, I'm Dick Henry." And so I said, "Well, well, well, it's nice to meet another Richard C. Henry."
And so I was intrigued by that, and so I said now my middle name is Conn, C-o-n-n, right? What's your middle name? I was expecting Charles, right? Connor.

DD: Oh for heaven's sake.

RH: The net result of this was that Dick Henry changed his name. He changed his name, and you look at the AAS directory now and you'll find he is Richard B. C. Henry. He put in an extra name just because of citation. I'm glad he did it.

DD: Yeah, because you can see what can happen. I was wondering what you were doing.

RH: I accused him later of having the B as the other initial so he would come first alphabetically, and he hadn't thought of it. He's a sweet guy, and oh he was embarrassed.

DD: That's hilarious. That is amazing. Well, you collaborated with Carl Heiles, and you worked on the lack of neutral hydrogen in two globular clusters.

RH: That was a great project working with Carl. We went out to NRAO. We made observations. It was terrific.

DD: That was my question. You made observations.

RH: Yes we did.

DD: What was the difference between working for someone who made the observations, if you ever did that, or making your own, and how important it was to make your own observations in your research?

RH: I don't have anything to say on that subject. Sorry, it just doesn't interest me. I don't have any response.

DD: Oh, I see.

RH: It's not something I've ever thought about.

DD: So if you had a body of data like you did with Strömgren, that was just as exciting as going out and producing the data yourself?

RH: Oh no, you're under a misapprehension.
DD: Oh, okay. Sorry. Clarify that.

RH: Sidney van den Bergh – be very careful when you say something to a young person because they’re a tabula rasa. You are programming that kid. And Sidney van den Bergh had told me, “Don't forget about Strömgren over there at the institute.” So practically like an automaton, the time came when it was clear I was going to have to do something about a thesis, and I vividly remember there was a colloquium maybe in the Physics department, our department, I'm not sure. And Strömgren came over for these, and so when the whole thing was over, I remember getting up, walking over, introducing myself to Strömgren and saying to him, “Sidney van den Bergh told me that when it was time to do a thesis that I should talk to you.”

I can still see the big smile that came over his face, and he invited me to visit him out at the Institute for Advanced Study, and he also said, “Now, what I would like you to do is to make up a list of possible PhD thesis topics that you might pursue.” And this was later, and he gave me a bunch of his reprints. So a couple of weeks later I went through and I read all the reprints and I made up a list, so I wish to God I still had that list, but I don't.

I think I came up with about 10, maybe 12 what I thought were potential PhD thesis topics. What I didn't realize at the time was that this really was the interview as to whether he would accept me as a graduate student. He hadn't had any in years. So I went out there to the institute and I gave him my list, and I can still see him sitting there going down the list, and he's saying, “Now that's a good topic. Now that one's a good topic, but it's been done,” and crossing it out. And he went down the list, and “I don't think that would be very good, or that,” and so on, and went through the entire list with those notations.

When he was finished he said, “However, I have an idea,” and that was what he wanted me to do in the beginning, and that was something that was involved, actually building a new instrument, taking it out to Kitt Peak National Observatory, and making observations. It was an ideal PhD topic, and Lyman Spitzer, bless his heart, came up with the money that was necessary for Eichner's instrument, and the rest is history. I look back on that, David, and I say, “How do I deserve to have had everything work out so incredibly for me? Thank you, God.”
DD: Well as Henry Norris Russell would have said, who was at Princeton a few generations ago, thinking about Shapley, he said, “God favors those who are prepared.”

RH: Yes.

DD: Well that K-Line Photometry of A Stars is your thesis.

RH: Right.

DD: And you went to Kitt Peak with your instrument.

RH: Right.

DD: You designed the instrument at Princeton?

RH: Well, the instrument was designed by me, by Strömgren, and by L.C. Eichner in New Jersey. Most of the design work was done by Eichner, who built the instrument.

DD: What were you doing that required a new instrument?

RH: “K-Line Photometry of A Stars.” Strömgren was huge in four-color photometry, stellar classification, etcetera, and there was an ambiguity in the A stars. And because the calcium lines get stronger and stronger as you go to later and later types, that would resolve the ambiguity. That was all there was to it.

DD: So you needed something that was optimized for a specific wavelength?

RH: Oh yes.

DD: Very high dispersion?

RH: I can't even remember. It didn't require very much dispersion actually. The calcium H and K lines are pretty strong.

DD: Yeah, but it could be noisy. Well A stars, now, right? Not that noisy in an A star.

RH: No, it was fine.

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DD: So this certainly was not your first experience observing or experience doing a research paper. You've done quite a few of those now. But it is your first building something.

RH: Well, Eichner built it.

DD: You were involved.

RH: Oh yes.

DD: Just as with my question about observing, did it change your association with the question because you were involved in actually building the instrument?

RH: I don't think so.

DD: It was just simply something that had to be done?

RH: Yes.

DD: I'm asking that simply as looking for the key to your subsequent experience, building instruments and using them on rockets and satellites and space related stuff, because that is a much more tool-building enterprise than mainline astronomy.

RH: Don't think of me as being of that type. I always manage to have people around me who actually did that stuff. I didn't.

DD: I see.

RH: I'm not an instrument builder at all.

DD: I think that's good to at least record. In the interview, you talked about moving to NRL and your discovery of x-ray pulsar in the [crosstalk] when you knew with your data your Fortran –

RH: That I was excited about.

DD: Now Paul Handley indicated to you during the interview that I would be interested. I'm the Dave he mentioned. Whenever you want to get rid of that framed copy of the pulsar trays. Let's see, where is it? Lovely. Okay, I didn't bring my camera. I forgot my camera but I want to get a picture of it somehow.
RH: If you want to hang that in the Smithsonian I could arrange that as long as it doesn't go into storage as almost 99 percent of the stuff that gets into the Smithsonian does.

DD: It sure does.

RH: Or maybe even if it goes into storage, it would be nice. Actually that is a good idea because my sons are not interested in science in that sense and so that would be good. It's a discovery of that magnitude.

DD: Where are your papers going?

RH: My papers?

DD: By that, I mean your correspondence and stuff.

RH: A lot of it is junk, but there it is. [Points to a stack less than a foot high.] It's in a separate thing, but most of it is trash, frankly. In fact I really doubt there's anything there that really would be worth preserving.

DD: This is your correspondence with other scientists?

RH: Some of it, yeah.

DD: Your proposals to different funding agencies?

RH: I don't know. It's just a bunch of stuff that can be ___? [drifts off]

DD: Well I don't believe it for an instant, but let's move on.

RH: All right.

DD: Is there anything about, and this is something we can do later at another session, once you read through the NRL period, I'm just curious how you went from, and what your choices were, going from Princeton for a postdoc. You had other choices, didn't you?

RH: That, again, is in terms of these extraordinary things in life. Okay, we came to that point. Now I was finally finishing my PhD with Strömgren.

DD: And this is 1967.
RH: Yes. And so now I have to go somewhere else and so I was "looking around." The one thing I vividly remember, Emory Fletcher was a more senior graduate student there, and I told him that I was wondering what I should do. And he said, and again in my mind's eye I can see him, “Well, Dick, I've got this pile of papers where I've been doing the same kind of thing. Would you like to go through it?” Now, if that hadn't happened, I would not be in this office today. See? One of these little tiny things.

If I hadn't happened to ask him that, because I looked through there and one of the things I saw was a program at the Naval Research Lab, Herb Friedman's program, and so I got a bunch of other things there and I applied to Herb's program. Now I did get bites from Bendix, from a number of other places. I actually traveled out to one or two places.

I remember in one of those places, since I did of course follow up with Herb Friedman, but I vividly remember one of those people, I won't say which company it was but he won't be employed there anymore. He said, "Well Dick, I'm supposed to recruit you but if Friedman is after you, you should go with Friedman." Bless his heart.

DD: Now you mentioned Bendix. Was that the contractor for Copernicus?

RH: No, I don't think so but there were so many Bendix things. There's Bendix all over the place. But the critical thing was that I had sent off my CV to Herb Friedman. This thing.

DD: So you sent off your CV once you saw it in Fletcher's list.

RH: Yeah. That was enough for me to send it off. I don't remember sending it off with any particular feeling that this was crucially important.

DD: So you weren't looking on following up your thesis, your A star work, your globular clusters, you were open to just about anything.

RH: Yes. Totally open. But I did send that off to Herb Friedman and then again I vividly remember Princeton at that time, the new building hadn't been built, and the old building, we'd left. We were in a little temporary building down by Lake Carnegie. It was a miserable little building. It had the library there, and the books. [For] the graduate students, our desks, you'd have rows of books, and at the end, there's a desk in the library.
No office, just a general table, and I was sitting at that general table talking to Emory Fletcher or someone around the table, Carl Heiles, when Don Morton came down the hall, stuck his head in and said, "Dick, did you apply for a job with Herb Friedman?" And I said, "Yes." And he said, "Do you really want it?" And I said, "Yes, I do." And he turned around and walked out. Now obviously he went back to Friedman, lied his head off about how good Dick Henry was, and I got the job. Thank you, Donald Morton.

DD: So Morton must have been contacted by Friedman.

RH: Oh, yes, because Morton had been at NRL in this same program, the E. O. Hulburt Fellows Program.

DD: There were other fellows there, Paul Feldman –

RH: Paul Feldman was there.

DD: Now he wasn't at Princeton, was he?

RH: No, he was not.

DD: So you did not meet Paul until NRL.

RH: Right. Oh, excuse me. I'm confused there. I was confusing him with someone else. Our Paul Feldman at JHU.

DD: Yeah.

RH: Yes, Paul Feldman was there. I met him and he was working in infrared were as I was working with Carruthers in –

DD: Oh, the NRL, but not at Princeton.

RH: Oh, not at Princeton.

DD: No.

RH: No, no, no. Paul Feldman came from Columbia University out of physics, actually.

DD: Feldman was in the infrared group. In your oral history from '83 he gave you advice, or at least from his own experience, he found infrared not to be too effective from sounding rockets.
RH: I had forgotten that he said that, but yes I observed myself, it's very odd, you know. How can it conceivably be that I've always been deeply interested in UV and I've always been totally uninterested in infrared? How is that possible? It's bizarre.

DD: Okay, but you know when you were at Princeton the UV was very important.

RH: Well, that's a good point, and that's probably the reason.

DD: Copernicus took quite a long time to gestate, and during that time the question was all of the things it could do in the interstellar medium and the fact that you had been later interested in the interstellar medium.

RH: You've answered my question.

DD: No, I'm supposed to ask the question. Now you answer it.

RH: Well, what you said.

RH: It's the quantum mechanical effect. You can't make an observation without affecting the observation. It is physics in action. But let me tell you this story just on the off chance that you have not heard it. Now like most of my stories I can't substantiate this but my understanding is the following. Of course Lyman Spitzer had built Copernicus. Now one story I vividly remember was in my interactions in much later years with the engineers at Goddard who used Spitzer. They told me that Spitzer was the smartest person they'd ever met in their lives. Somehow the following came out. It's about how we all make mistakes, right? And I love this. Look, I'm like you. I make mistakes, but I've got one rule: I never make the same mistake more than seven times. And I told that, and the engineers all nodded and said that's about right. I'm still on Spitzer so we haven't got to this. So I wasn't involved at all at Copernicus, but they launched Copernicus and I'm told that they got it up there and they haven't started yet, and they pointed it at the first star. This is all preplanned, and they turned it on and they looked at the signal and there was no signal. Zero. No signal. And I'm told that the whole team headed by Spitzer spent hours that evening trying to figure out what was going on.

And I'm told that Spitzer finally said, “Look, we're all tired. Let's go to our motels, let's go to sleep, and then we'll figure it out in the morning.” They got together in the morning, and Spitzer had
figured it out. He said we had to preset the spectrometer at a certain wavelength, and we set it right in the bottom of a big absorption line, and of course we're not getting any signal. Let's scan a little bit. They scanned a little bit and then came the signal.

DD: Oh, that's fantastic.

RH: Isn't that?

DD: What a story. That's amazing. So that would have been about '72 pretty much.

RH: I guess so.

DD: And by then you were here.

RH: It had nothing to do with me.

DD: No, but that's a great story.

RH: Isn't that a marvelous story?

DD: Yeah, I've never heard that story. That's quite a nail biter. Well let's go back to NRL. You chose NRL even though it wasn't ground based astronomy and that didn't mean anything to you.

RH: No.

DD: Okay, what were you interested in? Why did Herb Friedman's program appeal to you?

RH: I think that the reason that Herb Friedman was interested in me was because of the paper I wrote with George Field on diffuse ultraviolet background radiation, which has been my major theme through my entire career. When I got there, he wanted me to work with George Carruthers on UV astronomy, the UV background. I said that was great and started working with George Carruthers, but I was emphatic that I was also deeply interested in the soft X-ray background, and so he allowed me also to work with Gilbert Fritz on the X-ray background.

So I worked with both of those, and in both cases I got along with all the people beautifully, and the work was highly successful in both cases. And again, looking back, how could I have been so lucky? Working with George Carruthers was a dream. Working with Gil Fritz was a dream.
DD: Different people, though. Very different people but they were very good instrumentalists.

RH: They were very good instrumentalists and they were also very good human beings. Really, really nice people.

DD: I've had some contact in the past years with George Carruthers and I certainly can agree with that. His mentor was just strikingly powerful and the project SMART I think he was involved in.

Now you're at NRL. This is as a Hulburt fellow so it is a finite appointment.

RH: Right.

DD: Did you talk to Herb or anyone about what you would do next?

RH: Now as you say the Hulburt fellow was NSF funding.

DD: Oh, was it?

RH: Oh, yes. Believe you me, it was. So I vividly remember finishing my last day at Princeton, putting everything in my little red Volkswagen, driving out to Route 1, filling up with gas at 29 cents a gallon, and then heading down toward Washington, D.C. I arrived at NRL.

DD: Well what you were thinking of, what was it about working with Herb Friedman that attracted you?

RH: I show up at NRL and I go through the security and then I meet up with Herb, and he says, “The NSF money hasn't come through yet, so we won't be able to pay you for a while.” I said that's all right, so I was in a nice little rooming house in downtown D.C.

DD: So you didn't have money problems, you didn't have big loans?

RH: No, no, no. Heavens, no. My parents had been supporting me, and I don't remember ever having money problems in my life. And so weeks went by, and then months went by, and then I did go to Herb and say I am getting a little low on money, and the NSF hasn't come through. I guess I had called Harold Lane, and the story about Harold Lane was it was very hard to get funding from him. Very hard. Very hard. But if you did get funding from him, it
was almost impossible to not get funding from him from that point on.

DD: Once you got into the system –

RH: Once you got into his system it did. I think I remember calling Harold Lane once, and he said, “Now, if you really want, we don't have an answer yet, but if you really want an answer today, of course, I can give you an answer.” And I said no, don't give me an answer today. So eventually that wasn't a big issue, but eventually the funding came through, and that was how Herb did this thing, his whole Hulburt Center.

DD: So Herb didn't have any slush funds or anything that he could – multiple – the way we do it today?

RH: Well, when I did let him know that I was getting low on [funds], he said, “Well, we'll have you give a talk, and I'll pay you $500 to give the talk,” so that carried me through.

DD: In terms of your goals, you said that it was really the background X-ray admission work that –

RH: Yes, with George Field, and I was intensely interested in the x-ray background and I was also very interested indeed in the UV background, but I'm not quite sure what it was that got me focused on the UV. I really don't know, but I was.

DD: Well, let's put you then now looking for position. Was that a factor, looking for a place where you can continue that work?

RH: No. Again, I lived this charmed life. I'm sorry. It's not my fault. One day, out of the blue, Paul Feldman, who by that time was an assistant professor here said to me, "Dick, we'd like you to give a colloquium at my university, Johns Hopkins."

DD: You did talk about that.

RH: Okay, and it just happened. I had no idea that they were looking at me. I got the offer out of the blue.

DD: This is now, we're talking '69, '70. The astronomy is getting pretty crowded. Money is getting shaky. This is post Apollo and –

RH: It's not post Apollo. I arrived as an assistant professor at the Johns Hopkins University. I met Bill Fastie. Now Bill Fastie had just
been accepted to have his ultraviolet spectrometer go to the moon on Apollo 17, and I vividly remember sitting down with Bill Fastie and talking about it, and talking about my deep interest in diffuse ultraviolet background. I said, “Your spectrometer, on the way to and from the Moon, can make crucial observations on the diffuse ultraviolet background. And bless his heart, he immediately made me a co-investigator on the Apollo 17 UV spectrometer. Bingo.

DD: And with those duties as co-investigator, how would you contribute?

RH: Yes. My contribution was at that point I went to the department chair and I said now, you know, I'm just here this year and maybe it was the previous year, very soon, and I can see quickly I'm gonna get bogged down with graduate students and things like that. I'd like to take a year off without pay and hitch hike around the world, which I then did, so that was my contribution to Bill's project, except of course when I got back I went down with him and we did the observations.

DD: Yes, and you did talk about that in the interview. I still have a few questions about that. It's one year without pay, and the way that you presented it, it's still quite amazing.

RH: Oh, it's amazing. Oh, it is amazing.

DD: You had no tenure, no security, how did your parents feel about that?

RH: They were fine. I'm amazed they were fine.

DD: It was a wanderlust?

RH: Yeah. Specifically the Sahara Desert. If you look in a map at the Sahara Desert you look in the middle and you'll see Tamanrasset.

RH: And I said I have no idea. This was days before the internet of course. I have no idea what that would be.

DD: You want to go there.

RH: And so I won't give you the entire story, but I hitchhiked across the Sahara Desert and I vividly remember there being a little street café in Tamanrasset, which was very tiny, watching a camel being slaughtered.
DD: So you wanted to be able to do that without responsibility for graduate students.

RH: Without any responsibility at all. I just wanted to do it. Now I came back, and I had two wonderful graduate students, Bob Lucke and Bill McClintock, but also independent of them with Fastie, and now Paul Feldman was also added as a co-investigator after me on the Apollo 17.

DD: That was a big project to ride to the moon.

RH: I really got back at the beginning of the reality of it. I mean the spectrometer was built at APL. Obviously I didn't have anything to do with that, but I vividly remember the first trip that Fastie had ever made to Johnson Space Flight Center. This was going to be for the Apollo 17 mission, and Paul Feldman and I were with him. I've possibly told you this story before. Anyway, the three of us arrived. None of us had ever been to Johnson before. We go into the main building at Johnson. We're walking across the entrance lobby, and I see coming toward us an astronaut, and I recognize him, and the astronaut's coming toward the three of us, and he says, "Aren't you Dick Henry?" It was Karl Henize.

DD: Karl Henize. Okay, because he had the diary of an ex-astronaut and all that.

RH: I should read that.

DD: Yeah, that was quite a time for him. So he had not flown.

RH: No, at that time he had not.

DD: And he was an astronaut. That's quite right. And he was an astronomer —

RH: And he did fly in the end.

DD: I'll have to check that. I'm not sure.

RH: Yeah, I think he did. I'm virtually certain he did.

DD: One of the scientist astronauts.

RH: Yeah.
DD: So you do discuss that, but not the Henize, but I'll check on that. Now you can check on it too. And since it's digital you can just search. Now Fastie became a very important part of your life and career.

RH: Certainly.

DD: And I see Fastie as a legacy here, from dating back to people like Hastings. You're going way back, you've got a line, a legacy here of people who built instruments, did physics, or astrophysics with them.

RH: Let me tell you a little anecdote, a minor anecdote regarding Fastie. We would all of us typically lunch together every day at the Johns Hopkins Club: Fastie, Warren Moos, Paul Feldman, myself, and then later Arthur Davidson. I was becoming more and more deeply interested in quantum mechanics and physics generally, and so I would babble a little bit about that, and I remember Fastie saying, “I vividly remember when I came here in 1925 that was all they were talking about, is an electron a particle or a wave?” He said that personal connection with that moment when quantum mechanics suddenly changed the universe.

DD: You're already now pretty much answering a question that I wanted to raise about Hopkins. You have a PhD in astronomy. You have been interested in astronomy all your life. You did ground based observing with telescopes. You don't seem to be too attached to telescopes generally. You do move away from the traditional autonomous astronomy group moving to NRL.

RH: I'm not sure what you mean there. Oh, the move to NRL as from away from the community of astronomy.

DD: That's right.

RH: No, I agree.

DD: Herb Friedman certainly did what people recognized as astronomy, but he never recognized himself as an astronomer.

RH: Oh absolutely.

DD: So coming to Johns Hopkins then is not that unusual for someone who did not have to be autonomously identified as an astronomer, and that also raises a very interesting question that moves us into the modern period and that is how the institute got here.
RH: Yes.

DD: Because there was no dominating astronomy department, as at Princeton and various other places that you could have gone to.

RH: Well surely I've already told you the story of how that happened.

DD: Well, I would like, if you don't mind, to indulge me.

RH: It's very short.

DD: Go ahead.

RH: Right. I've already told you that the group of five of us had lunch at the Johns Hopkins Club every day, right?

DD: Yes.

RH: Now I was back from my two years at NASA Headquarters where I was Deputy Director of the Astrophysics Division. I was simply back, and that was all there was to it. Sitting around the table every day five days a week you look for topics to talk about, right? Someone spoke up and said, “Well, what about Hopkins as a site for the Space Telescope Science Institute?” That was followed by 30 seconds of complete silence, and then someone else brought up another topic, feeling that it wasn't worth discussing. It was a preposterous idea.

DD: Who could that have been?

RH: I don't know.

DD: Was it you?

RH: No, I'm sure it was not me. I wouldn't have brought that up. I don't know who would have brought that up. I won't even speculate. We didn't even discuss it. But it was only about three or four weeks later that either Fastie or Davidsen, not me, got a phone call from AURA saying would you be interested in being considered as a potential site? And naturally, they said yes. Of course. Anybody would, right? That was the beginning of it just like that. And I'm sure I must have told you why that phone call occurred.

DD: Well, it wasn’t me. It was probably Robert –
RH: Oh, well let me tell you the story again –

DD: Please do.

RH: – because it's so charming.

DD: And we can check it against what you said in 1983.

RH: Good. Okay, well here's what happened, Going back even farther, when I was at NASA, and I was deputy director of the Astrophysics Division, but Nancy Roman and Al Opp working for me, and Noel Hinners was head of space science, wonderful guy, and Noel Hinners – now this was a government structure. Very vertical structure. You don't wing it. And if you're high up, and you're smart, you involve the people below you, so you don't mess up.

DD: Absolutely.

RH: Noel Hinners was approached by the directors of the various institutes, AURA, AUI, all those things that were going to be bidding on Space Telescope Science Institute. They said they all wanted to come in and discuss it with him, and he said, “Alright, come on in,” and he discussed it with them in a room without any of us present at all. And at the end of that meeting, they all dispersed, and Noel said that they had felt that the Institute should be at Princeton and that should not be an issue as far as their proposals were concerned. They shouldn't have to propose a site.

DD: This was the AURA director, the –

RH: AUI director –

DD: AUI –

RH: I don't know how many different ones. There were about five or six of them.

DD: And they wanted it wherever it would go.

RH: They wanted it to be at Princeton. I think what they wanted was it not to be an issue for them in terms of preparing the management proposals. See?

DD: Yes. Now I see. This is before AURA was designated.
RH: Oh yes.

DD: Yeah, way before. Okay.

RH: Noel sent them off and came out of that meeting and announced to us that the site would be Princeton and we rose up and stormed the ramparts, led by Nancy Roman and saying, “Noel, that's a mistake. You are trying to get an organization to run the Institute that will be brilliant at running an institute, and you've let them off the hook on the most difficult single decision they're ever going to have to make, and that is the site of the Institute,” and Noel changed his mind.

DD: So you're saying that they didn't object to Princeton. They objected to the process.

RH: Yes.

DD: Yes. Okay.

RH: That was it. And now all of these organizations that I thought they were off the hook on that difficult issue were all on the hook. I know how a couple of them handled it. I know how AURA handled it, the ultimate winner. AURA handled it by saying, “All right, how do we choose a site? We'll have potential sites write proposals to us,” and we were invited to put in a proposal, and we put in a proposal.

DD: Did your being at NASA Headquarters at this time –

RH: No. I wasn't at Headquarters. I was back.

DD: Oh, you were back by then.

RH: I was back. And believe me, my having been at Headquarters had absolutely nothing to do with why space telescope was here.

DD: I was going to ask that.

RH: Well, I do think about this a little bit myself, and I ask myself why I was selected to be a deputy director of the astrophysics division of NASA? There was a meeting up at Woods Hole on the notion of a Space Telescope Science Institute.

DD: That's right.
RH: George Field was at that meeting. They were obviously having internal discussions. The Hubble Space Telescope wasn't called that, had already been turned down by OMB, they were regrouping, and they were making plans to have a Space Telescope Science Institute. The director of the astrophysics division was there, Bland Norris. A rocket engineer. Head of the Astrophysics Division of NASA. They said, “Bland Norris, you need to get rid of Al Schart.” Al was sent out to Goddard. He was the deputy. And you need to get a professional astrophysicist in there as your deputy. And then they said, “Who should it be?” And they asked George Field. And sitting in my office, the telephone rings, and it's George Field. I'm up at Woods Hole. Would you be interested in being the deputy director of the Astrophysics Divisions of NASA? And of course I must have said, “Well, sure.”

DD: But you were just barely back from your wanderlust, right?

RH: Well, I don't know how long I was back, but it must have been a year or two later.

DD: So that was a leave then from the Johns Hopkins position.

RH: Oh yes, of course. Two years. '76 to '78.

DD: But it was always considered to be a temporary position.

RH: No. I was hired as a permanent civil servant. If I had wished, I could have stayed on there. If I had been a fool I would have.

DD: Why was Nancy not considered to be the deputy?

RH: The ways of government are very mysterious. I don't know the answer to that question.

DD: Okay. She never confided in you any annoyance?

RH: I think, you saw that picture of me sitting beside her there. She was always fine with me, but I suspect that she intensely resented the fact that this whippersnapper of an idiot, Dick Henry, had been brought in as effectively her boss. However, being who I was when I got in there I of course recognized that with both her and with Al Opp, what superb people they were, and they didn't give them any trouble at all. Not a bit.

DD: Because that's quite an important question. It certainly has a lot of gender questions and other things.
RH: I don't know. It would have been between her and Al Opp, and Al Opp did a great job on the high-energy side of that and she did a great job on the astronomy side of that.

DD: Can you bring that picture up again? Wasn't she the only woman in the picture?

RH: Yes.

DD: Okay, well that does it. And that was the group that met later on.

RH: They had been selected competitively a nationwide competition and they selected two telescope scientists, Bill Fastie and Dan Shroeder, who were to determine the integrity of when it launched, so it really would work and be a huge success.

DD: And that was in the mid '70s?

RH: Oh, I suppose. Oh, '76 to '78 was when I was there. That nails it down.

DD: You'd been back here at Hopkins for two, maybe three years.

RH: Yes, that's right.

DD: How had the coming of the institute changed Johns Hopkins?

RH: Enormously.

DD: I'd like to have your testimony there. How has it changed all of that? Their interview ended in '83. The institute was now here, just begun, and what happened subsequently? How did it change?

RH: It isn't even subsequently. Part of the reason, I expect, that the institute is here is the fact that Steve Muller, our president, put up I think it was $2 million, toward it and I think that that may have been a factor. And then the other factor is AURA had to make a decision. They made the decision where the institute it would be, assuming their proposal had won, so they held their own contest. They called and asked Davidsen or Fastie, not me, about it and all this stuff.

The question is, why did they call Johns Hopkins University? It wasn't because I was here. They were in a rush to get a selection because they had to make a selection rather quickly because the
actual proposal was due. And so they said we'll hold a contest ourselves among potential sites, but we can't put out an announcement and let the world command.

We’ve got to pick the potential site so that they can get on the ball and get us a proposal in three weeks. So one of their criteria was [that] maybe it would be useful for the Institute to be close to Goddard Space Flight Center. Now we don't know why that would be, but that's up to them to tell us if that's a key factor. So then they said, now let's see. What plausible university is closest to Goddard? University of Maryland College Park. So they wrote a letter to [Frank] Kerr, [but there was] no reply. Well, what university is next closest? Johns Hopkins. That's why the institute is here today.

DD: Oh, it can't be that simple.

RH: It is. It's as simple as that. It's as simple as that. Now why did he not reply?

DD: Exactly.

RH: Because he had already made a monogamous marriage with Lunar and Planetary – Lunar Science Institute as it was then. They would propose only College Park. College Park would propose only them. And he didn't even bother to reply to [ours?]

DD: Was the Lunar Planetary Science Institute also lobbying?

RH: It wasn't then. It was the organization that ran it. I forget what it is. AUI or one of the alphabet soup things. It wasn't the institute itself.

DD: So he already was in a –

RH: Monogamous relationship.

DD: Monogamous – so I would think, here's a radio astronomer concentrating on NRAO and other radio issues, and maybe that was one of the reasons he wasn't too excited, but that had nothing to do with it. It's much larger than that. This is an institutional responsibility.

RH: Oh, phase two.

DD: What happened to Princeton?
RH: Now AURA out there had to choose among the various proposals, which obviously included Princeton. I don't know how many proposals there were in the end for the institute and most of them proposed Princeton as a site. Maybe all of them proposed Princeton as the site except AURA. The question is, why did AURA not propose Princeton? What we were told was that AURA did it's assessment of the proposals that came in, our proposal, which I don't remember even being involved in preparing it. It was Davidsen and Fastie. And the claim was that the proposals were like this. Here were Princeton and Johns Hopkins about equal –

DD: Okay, you're holding your hands out and –

RH: This is positive high score and this is low score.

DD: Okay.

RH: Yes. They felt that these were out of it, these were much better proposals, but either Princeton or Johns Hopkins University. The decision of course would be made by Art Code, who was the head of AURA.

DD: Code was the head of AURA.

RH: Code was the head of the AURA and Code was the person who made the decision. Code was an ultraviolet astronomer. He was an extremely good ultraviolet astronomer.

DD: Yeah, definitely.

RH: Lyman Spitzer was an absolutely, exquisitely superb ultraviolet astronomer. I won't make any more remarks beyond that. They chose Johns Hopkins.

DD: Oh, I see. Code was on OAO2, the Wisconsin Experiment Package, and it worked beautifully.

RH: Yes.

DD: Yes, it worked beautifully. Amazing. So the institute is here.

RH: Yes.

DD: What did its presence, what did its coming, mean for Johns Hopkins? Now I'm asking you this as a Johns Hopkins faculty member.
RH: When you say that, it's as if it's a level of field and all Johns Hopkins faculty members have the same common interest, etcetera, etcetera. Like any faculty, that's completely and totally incorrect. They all have totally divergent interests. They have a tiny little carve –

DD: That's right.

RH: But what it meant for us was, first of all, that building across the street was built. Because that had happened, Steve Mueller decided, and I have no idea how this happened, that this building would be built.

DD: Bloomberg.

RH: Bloomberg, yes.

DD: Now I don't want to get into it now, but I want to – if you had anything to do with the siting of the institute and the subsequent concerns about taking over forestland and things like that.

RH: Okay, as far as the site is concerned I have a vivid memory [that] after one of those luncheons at the Johns Hopkins Club, when Bill Fastie led the other four of us across from the club there, over to Sam Martin Drive, pointed, and said the Space Telescope Science Institute will be there. That's the total of memory I have.

DD: That's it.

RH: That's it.

DD: But there were protests, were there not? Some resistance?

RH: I vaguely remember that. I was never involved in them.

DD: What about faculty? Did everyone see this as a good thing? Or were there faculty, in various other parts of Hopkins, who said, “No, this will skew our attention too much here or too much there.”

RH: About other departments I never heard a word, and I know absolutely nothing.

DD: Okay.
RH: About our department, well I've heard stories about various departments and various universities around the country. I do not believe that there is a single department as socially nice as this department has always been. It has been an extraordinary pleasure to me to be in this department from the very beginning up to the present day. We did go as a result of the enormous strain on this department of space telescope appearing because the result was that when I came here originally, the biggest part of the department was the fundamental physics, particle –

DD: Particle physicist people. Yeah.

RH: Enormous. And then there was a little teensy bit of astrophysics and a teensy bit of condensed matter, et cetera, et cetera. And then over the decades, the particle physics has gone down and down and down, and the condensed matter has stayed about the same, and the astrophysics has gone up and up and up and up like that. Talk about a social strain. During that period of decades, there was a period when there was active talk about splitting into two departments, one of astronomy and one of physics. I was inalterably opposed to any such splitting.

Again, for one single reason – I was teaching physics, not astronomy, and that was the most important intellectual thing in the world to me, my teaching of physics, and I might have not been able to continue doing it because of that. That was what motivated me.

DD: Had you ever considered staying with physics if it split?

RH: Well I thought to myself, what will I do? And I would have stayed with physics. I wouldn't have been in the astronomy department.

DD: Okay. Was Paul Feldman involved in these discussions, and Warren Moos?

RH: I don't remember any specific discussions, but I remember it was in the air. That's all I remember. Fortunately it went away, and in recent years there has never been a word on that subject. Not a word, unless I don't know what's going on. When you get older you tend to get out of the loop.

DD: But among the physicists who were let's say doing particle physics, were there any who said that they're not getting the attention, they're losing office space?
RH: Not to my memory, but if you want to talk to perhaps the most – Leon Madansky died many years ago. He would have been very good to talk to. But if you wish, you should, talk to Aihud Pevsner. He's around. He lives I think mostly in New York, but he comes here about once or twice a month, and I see him at lunch at the club and chat with him.

DD: I'll alert Bill to that if he wants to pursue it.