

Personal Reflections of Prof. Hélène R. Dickel on her employment history at the University of Illinois and how the University has changed in its treatment of women professionals over the years since she first arrived in 1964.

1965 – 1977 Research Associate in Astronomy

1965 – 1970 VRO position – support from US Navy

John and I met and married while in graduate school in the astronomy department of the University of Michigan 1960-1964. In the spring of 1964, I finished my thesis and my PhD defense; that summer I typed John's thesis and he did his defense before we moved in late August to Champaign for him to take up a tenure track Assistant Professorship in the Astronomy Department of the University of Illinois. In those days the husband applied for jobs and the wife followed along and would look for a position later, if at all. Also, unlike today, one usually wrote up one's thesis for publication for a journal after getting the degree rather than before. I was given an office in the Transit room of the old Observatory (before the new addition) and wrote a journal article based on my thesis during the fall of 1964. At this time Prof. George C. McVittie was the Head of the Astronomy Department. John had a courtesy appointment with Electrical Engineering to work on the joint Vermillion River Observatory radio survey as his research. Prof. George Swenson Jr. was head of this effort. I inquired about a half-time research associate position on the VRO project. Normally University nepotism rules hindered the hiring of spouses, especially in the same department, but Prof. McVittie argued persuasively – John would not determine my salary, I was qualified, and they needed help - so I was hired. To my knowledge, there were at the time no affirmative action requirements concerning openly advertising the position.

So I began my Research Associate position in January 1965. There was a University requirement that all new hires had to take a physical exam at the McKinley Health Center so mine was scheduled in early February after I'd already been working a month. It was just a week or so before that appointment that I learned that I was pregnant with our first child. I went to the physical exam and filled out various forms, saw a variety of nurses, and finally got to the final stop – a physician ~~who~~, upon noting that I had checked the box that I was pregnant, stopped the whole process by saying that I was not hireable!

Now I was in a fix – when I started work, I was not pregnant or at least did not know that I was but by the time of the exam I was. Prof. McVittie was an older, distinguished English gentleman, married but with no children. Normally, we would not be announcing our pregnancy so soon, certainly not for another month or two... so meekly and apologetically I walked into Prof. McVittie's office to explain that I was not hireable since I was pregnant (after he'd gone to the trouble to overturn nepotism rules). He asked if I wanted to work and I said yes and that I could continue to work until the beginning of the fall semester. So I worked, got paid, and didn't go back to the McKinley Health Center – I don't know what Prof. McVittie did but he was successful again. Only in later years did I come to appreciate how "ahead of the times" he was in working for equality

for women. After our daughter Cyndi was born, I took off a year from my Research Associate position. I was able to return to it a year later in the fall of 1966 and continued until John took his first sabbatical leave in 1970-71. It was during these years that Heinrich Wendker was also a postdoc on the VRO grant and we began a 10 year collaboration on the optical and radio studies of the Cygnus X region.

Although I only wanted a half-time position so that I could be home with Cyndi (and later Becky), it was only later that I learned that if I had been 51% I would have been tenure-track even in a purely research position.

In the spring of 1970, our second daughter Becky was born, only a few months before we left for John's sabbatical year at CSIRO, Division of Radiophysics in Epping (a Sydney suburb), NSW, Australia where we both had full-time positions as Visiting Research Fellows. It was there that I really got involved in the new field of observing the radio spectra of interstellar molecules. Before we left for Australia, I took out my contributions to the State of Illinois retirement system as I was allowed to do (and invested the funds) and was promised that when I returned the next year, if I wished, I could put the funds back into the Illinois retirement system and the University would honor its contribution. However, a year later when we returned, the rules had changed and the University would no longer add its contribution so I did not put my funds back until much later when I was trying to get enough years in the system to get an annuity upon retiring.

1971-1972 Switching over from VRO grant to my own NSF grant

When I returned from Australia, the Navy was in the process of getting rid of some of the research it was supporting and the VRO was having funding problems. I wanted a tenure-track position at the UI but there were no openings. About this same time, Prof. McVittie retired and Prof. George Swenson became the acting Head of the Department. It was over a lunch conversation with Urbana home-town, Cal. Tech. astronomer Dr. Alan Sandage, that I got the idea for a research project on the Cygnus X region (which Heinz and I worked on together). After discussions with the University, it was deemed possible for me to apply for an individual NSF grant but someone else would have to be the PI. If the grant were awarded, the University would agree to hire me as the Postdoc to do the work that I'd outlined in the proposal. I failed to get the NSF grant the first time – one of the reviewers wondered why someone else was the PI - if I was the one to do all the work, why wasn't I the PI... Instead, the NSF added my salary to the VRO grant so I could be hired on it. For the second proposal attempt, I was allowed to be the PI and I got the NSF grant. About the same time, Prof. Icko Iben was hired as the Head of the Astronomy Department. We think John got off on the wrong footing with Icko when John gave his honest opinion about whether it was now time for the VRO to be shut down and his answer was not what Icko wanted to hear. John has since learned to be more diplomatic over the years.

**1972 – 1977 Research Associate in Astronomy -
Principal Investigator of my own NSF grants**

During these years I basically funded my own research. NSF grants were made to the University of Illinois with me as the PI and then the University hired me one year at a time on the grants. There was one difficulty that we faced in regard to these grants. On most proposals from the University of Illinois, the PI is a tenure-track professor so that the “cost-sharing” contribution is from the time off from teaching duties devoted to research. This couldn’t be the case for me... so there were some creative solutions over the years that I was not entirely comfortable with – such as charging me to observe with the UI Prairie 40-inch telescopes while others in the department did not have to pay, or saying that the astronomy department would allow me to compute for free (but those computing funds were funded indirectly through grants from NSF), etc.... but I got funded and was able to do my research and that was all that mattered at the time. My research now involved mapping molecular clouds at mm-wavelengths with the new NRAO 36-foot radio telescope at the Kitt Peak Observatory in Arizona.

1977 – 1992 Research Associate Professor in Astronomy

1977 – The struggle for a more permanent position at UI

It was sometime in the mid 1970s that our friend from grad-school days and now colleague in the department, Jim Kaler was promoted to Full Professor. I began to reflect on how I had gotten my PhD at the same time, was just as bright, had gotten NSF grants but at this rate, I was destined to become PostDoc Emerita at the end of my career. It was also a time when NSF grants were getting more and more difficult to obtain. Requesting a half-time salary plus the associated overhead meant that I was requesting more funds than a tenure-track faculty person would for the same research because their salaries were already paid by the Department.

So, seeing the writing on the wall, in the fall of 1976, I went to Head, Prof. Iben, and asked whether I might get some kind of permanent appointment, preferably ½ time, and then I would try to get the other half via grants. It was not unusual in the 1970s for some faculty, such as in the School of Engineering to have ½-time teaching and ½-time research professorships. Iben didn’t think I was good enough for this and wouldn’t even consider a 1/10th funded position. The most he would support would be a zero-time appointment so that I would be listed in the Department and then if I got NSF funding, I would have a salary. To do this, he said I would need 12 letters of recommendation (note that in those days, it only took 3 letters of recommendation for tenure or to be promoted). Even though I was a junior scientist, I managed to come up with 12 respected astronomers who were willing to write letters of recommendation for me. About this same time, Prof. Iben went on sabbatical leave for the spring semester and Prof. James Truran became acting Head. Not having heard anything from Icko before he left, in early January 1977 I went into Jim Truran’s office to see whether any of the letters of

recommendation had come through and how the process was proceeding. It was then that I learned that Icko had not even requested the letters from anyone on my list. However, Jim was more sympathetic and he sent out the request, and ushered me through the whole process so that by the fall of 1977, I had a zero-time appointment as Research Associate Professor of Astronomy; a position which was to be reviewed every 5 years and if satisfactory to the Department (and I added "to me as well"), it could be continued. The position was never reviewed by the Department or the University to my knowledge and I did not want to "rock the boat" and lose what little I had, so I did not bring up the matter of review.

It was good that I had managed to get even this non-tenured, zero-time appointment – for two reasons: 1) as expected, my NSF grants ran out in the 1980s and 2) without my name appearing in the UI Faculty Directory, I would not be credible. Further, even when I ran out of grant support and was not paid, I was able to put the UI as my institution – again giving credibility to my research, not to mention visibility to the University.

1977 - 1980 Productive years with NSF grant support

I was awarded NSF grants through 1980. During 1977-1979, we were in the Netherlands while John was on sabbatical for a year and then he took another ½ year as a Professor at the University of Leiden. During this time, I was a Visiting Astronomer at the Sterrewacht te Leiden (Observatory) and took my NSF grant support with me. It was while we were in the Netherlands that we observed with the new Westerbork Synthesis Array of Radio Telescopes (WSRT). They were just beginning to observe molecules with the array so I got in on the ground floor and started my ~15 year collaboration with Prof. Miller Goss, using both the WSRT and the then-new Very Large Array in NM.

1981 - 1990 The Lean years without NSF grants

Just when both children were in school and I was ready to do astronomy fulltime, it was not possible. During the 1980s there were several tenure-track openings in the department: for some, my research specialty was not really what they wanted but I was "perfect" for a later opening for a senior astronomer with experience in molecular spectroscopy using aperture synthesis radio telescopes – but the department hired Ron Allen as Head and to oversee the creation of the Berkeley-Illinois collaboration which eventually became the Berkeley-Illinois-Maryland Association mm-array. (BIMA) But that is getting ahead of the story.

By the time these positions were being advertised in the 1980s, affirmative action was in full swing. I decided to go to the University of Illinois Affirmative Action officer and see how the astronomy department stacked up regarding the % of female tenure-track staff to see whether we were below the targeted number. I forget the name of the black gentleman who was the affirmative action officer at the time. In any case, he looked up

the information and saw that there was one Asian research professional on the astronomy staff (I knew who that was – Yang), one woman instructor (Margaret Hansell) and one ½-time tenure-track female – I asked who that was because I didn't not know of any and I didn't see where I was listed among the categories he had mentioned. He checked and discovered that "I" was that female tenure-track professor. I said that was in error because I was not tenure track and I asked if he would make the correction. He informed me that the US government updates that information every two years so it was pointless. When they would update it next, since I was now without a grant (i.e. no salary), I would not be listed. However, at the moment when I was inquiring, my erroneous "tenure-track" position meant that we met the female "quota" (10-percent of the astronomers were female and 10-percent of the astronomy tenure-track positions were female) but I was the one who was making it look as though the department did not need to hire a female to meet the affirmative-action guidelines – catch 22! He also discovered that in the Physical Sciences in the College of Liberal Arts which included chemistry, there was one female half-time tenure track professor listed (guess who) and they still needed another one to meet the affirmative action quotas (yes, we used that word back then).

Fortunately, because of my zero-time appointment as Research Associate Professor, even without a salary, I was able to get grants to cover page charges for articles, some travel money from the NRAO for observing trips, etc. These included a UI Research Board grant, a NATO travel grant, and several Small Research Grants from the American Astronomical Society. When the Department was short-staffed, I also taught the Introductory Astronomy classes during several semesters in the 1980s.

During this period, I did look for possible tenure-track openings elsewhere but they were few and/or were looking for someone in a different subfield. Furthermore because of the weak job-market, it looked like we'd just trade John as the tenured professor and me on soft-money to my being tenure-track and he being on soft-money which did not seem much of an advance to me – not worth uprooting the family from Champaign-Urbana and thus we stayed at the University of Illinois.

Although my research was well-respected outside the University of Illinois and others assumed that I had a tenure track position, there was a downside to my situation here at the UofI. In their frustration with my having a title-only appointment, some of my good friends and colleagues in the department, including my husband, began to refer to me as a "non-person" and I was too insecure to protest. One day, I finally asserted myself and told them that after being called a "non-person" for over ten years, I was beginning to believe it so that they should stop saying that – and they stopped!

It was after attending the General Assembly of the International Astronomical Union held in Montreal during the summer of 1979 that I became very active in the Task Group on Nomenclature of Commission, becoming its Chair from 1982 to 1991)

During this same period, my research involved observations of molecular clouds at cm wavelengths with the VLA of NRAO and also with the 3-element interferometer of the Hat Creek Observatory, run by the Astronomy Department of the University of California

at Berkeley – the group which we later joined forces with to expand the array from 3 to 6 and eventually 10 antennas during the 1990s.

Because both John and I were heavily involved with observations of radio sources, he investigating the remains of supernova explosions and I, regions of star-formation, we both decided to team up with theoretical astronomers who could collaborate in modeling these sources. Therefore, John's next sabbatical took us to the Los Alamos Laboratory in New Mexico during 1985-6. There, John worked with Eric Jones on declassified codes for nuclear explosions which were suitable to mimic the explosions of stars. I worked with Lawrence Auer to modify some radiative transfer codes from applications to stellar atmospheres to applications to molecular clouds with central HII regions. For several years both before and after the sabbatical at Los Alamos, we returned each summer for several weeks to continue working with our colleagues there. My collaboration with Larry Auer collaboration ran from about 1983 through 2004, past when both of us were officially retired, but still doing research.

1991 The good times return -

During the late 1980s into 1990 several undercurrents were underway - the radiative transfer calculations were progressing well and I put in another proposal to the NSF. About the same time, the UI Astronomy Department was forming a collaboration with UC Berkeley which later included U. Maryland to form the Berkeley-Illinois-Maryland-Association (BIMA) to run and upgrade the mm-array of radio telescopes. I was a co-principal investigator on the BIMA NSF proposal which included a ½-time salaried position for me. I was still feeling insecure after so many years without funding (and was also coping with mood-swings during peri-menopause) when, as I recall, Lew Snyder told me to be more positive and assertive when describing my research during the NSF site visit.

In 1991, both NSF grants were awarded! So I went from no support to two grants!

In 1990 I began a collaboration with Prof. John A. Williams of Albion College when he took a sabbatical leave in the UI Astronomy Department to learn how to analyze radio observations. I had just made observations with the BIMA array of the emission from the CS molecule from the star-forming region W 49 A North so John joined me on that project. Some of the data reduction was also performed by David Upham, at the time an undergraduate physics major at Carroll College in Waukesha, WI who came as a career intern to work with me during January 1991. Now David is my son-in-law, having married our daughter Beckley. John Williams returned each year during the Christmas and spring breaks and for a month during the summer to continue work on the W 49 CS project.

1992 – 2001 Research Professor of Astronomy

Prof. Ron Allen stepped down from being the Head of the department and we went to a Chair instead. The first Chair of the Astronomy Department was Prof. Ronald Webbink. He was instrumental in putting forward my application to be a Research Professor in the Graduate College. Once again, I wrote my colleagues for letters of recommendation and many expressed their dismay that I was not being offered a tenure-track position. In any case, the appointment came through – zero-time, non-tenured appointment as Research Professor of Astronomy so that now I am able to be the primary Faculty Advisor for a Ph.D. dissertation.

During 1992-3 we went on sabbatical back to CSIRO in Epping, but this time to the new Australia Telescope National Facility and observed with the Australia Telescope (array of 6 antennae).

After we returned to Illinois in the fall semester of 1993, I resumed my BIMA research. In addition, I was still collaborating on VLA projects as well as working on radiative transfer calculations.

It was during the 1990s that the BIMA array was being expanded, first from 3 element to 6 element array and then ultimately to 10 antennas. The scheduling for BIMA observations was rotated among the three institutions – someone from each group taking a 2-3 year turn. In the fall of 1993, Prof. Fred Lo at UI was the BIMA Scheduler. After I returned from the year in Australia, Prof. Lew Snyder, the Local BIMA Director, asked me just before the Christmas Holidays if I would take over from Fred in January 1994 because Fred was going on sabbatical during the spring semester. Because I was paid ½-time on the BIMA NSF grant, I felt obliged to agree.. I had assumed that we would have a month overlap during which time, Fred would show me how the system operated. It turned out that we had just 2 days of overlap. So not only did I have to handle the proposal call for the next round of observations, but I had to deal with the scheduling from the previous round – with next to no help. It was a very stressful, time-pressured semester. I did little else beyond keep afloat with the proposal process and scheduling, while dealing with the three local BIMA Directors, topped off by putting on a wedding that June! The proposal/scheduling process was not as well defined or automated as it was to become during my 6+ years tenure as BIMA Scheduler.

In the middle of all this, John Williams returned in 1997 for his second sabbatical leave at U. Illinois; this time to start applying the radiative transfer code to the CS observations. He made improvements to the display aspect of the code while here on sabbatical and then returned, as before, during fall, winter, springs 1-week breaks and for a month during the summer (when he stayed with us) to run various models to try to reproduce the CS observations.

By the time my husband John's next sabbatical leave came round – 1999-2000, I was glad to head off to the Netherlands Foundation for Research in Astronomy in the provincial town of Dwingeloo where I would be relieved of most of my BIMA duties and

could concentrate on wrapping up the radiative transfer calculations and modeling for the W 49 A North region and start writing the first draft of the paper. The earlier journal article on the CS observations had just been published. In the spring, as a visiting Professor at the Astronomical Institute of the University of Amsterdam, I taught an advanced seminar on Molecular Clouds to about a dozen students.

2001 – 2005 Emerita Research Professor of Astronomy

Before we left for the Netherlands, I started to investigate my retirement options at the University of Illinois. Did I have enough years in the system to qualify for an annuity or just get a lump sum back? It turned out that if I put back in the funds for the earlier years (that I'd taken out in 1970 and some later years where I had not been required to contribute), that I would have just qualify.. I had assumed that even though I'd accumulated over 20 years at the UI, that because most of it was ½-time, that I would have to pay for part of my Health Insurance once I retired. I'd been covered under John's Health Insurance as his spouse to save money on the BIMA NSF grant. It was a pleasant surprise to learn that once I retired, I would be fully covered (minus the usual deductibles) by the University of Illinois Health Insurance... the best thing I ever got out of the UI!

But let me backtrack - we returned to Illinois in the fall of 2000 just before classes began. We had flown into Chicago to reclaim our car from our daughter and husband who lived in Evanston and had pulled into the Astronomy Building to check on things before continuing on to our house after being a full year away. We were in our offices when Prof. Lew Snyder popped into the office and asked to talk to me – it was nearly 5 pm. The first thing he asked after welcoming me back was - did I want to become the BIMA Scheduler again? I had intended to let him know a bit later in the Fall that I planned to retire sometime in the summer of 2001. I told him that I was not interested in becoming the Scheduler and further, that I planned to retire. He said they'd have to find something for me to do in support of the BIMA array (since my salary was still coming from that NSF grant). He said he'd consult with Prof. Richard Crutcher who had become the Local BIMA Director when Lew moved up to Chair of the department. Well, they gave me the next most undesirable job after BIMA Scheduler – namely, learning how to use the then still-under-development AIPS++ code and to create a Cookbook on its use for BIMA observers. I had the help of the two local AIPS++ programmers and one BIMA graduate student. After 9 months, at the end of June 2001 just before I took two months of accumulated vacation time before officially retiring, I submitted the finished AIPS++ Cookbook to Dick (Crutcher). Two chapters were left unfinished because the associated program-tasks had yet to be completed. Now four years later, very few of the original collaborating institutions are using AIPS++ for the analysis of their radio observations.

With the support of the Chair and department, I was granted Emerita Professor status when I retired. When John retired a year later, he was also given Emeritus status. Once retired and no longer performing duties as BIMA Scheduler, I was free to concentrate on completing the mammoth research article that resulted from the radiative

transfer modeling of the CS molecular observations of the W 49 A North star-forming region. After about 10 years on this project, the 37-page paper was published in the August 2004 in the refereed Supplement to the Astrophysical Journal. During 2001 to 2003, I also prepared for the meeting of the Working Group on Designations of the International Astronomical Union when I would hand over the reigns of the Chair to my successor, Marion Schmitz of the Nasa Extragalactic Database at the California Institute of Technology.

When I retired, Lew Snyder made an informal arrangement with me whereby I could keep the old SUN workstation and BIMA would pay the departmental computer registration and maintenance fee in return for my going out to the Hat Creek Observatory once or twice a year as the official BIMA Observer which I enjoyed doing. During the early 2000s, the BIMA consortium and the California Institute of Technology formalized an agreement for the combination of their two mm-wave arrays, CARMA, to Cedar Flats, a higher and dryer site not far from Cal. Tech's Owens Valley Observatory in southern California. During that last ~~trip~~ year before the telescopes were moved to Cedar Flats, John and I went out to Hat Creek for two weeks during the Christmas/New Year's holiday period 2003/4 as Observers and again for ten days in May 2004 to assist with the observing of a new comet. We were the last Illinois observers to use the BIMA array before the telescopes made the journey to the new CARMA site during the late summer and early fall of 2005. Thus ended BIMA and my formal connection with it.

2005 and beyond - moving to Albuquerque and University of New Mexico while remaining Emerita Research Professor of Astronomy at the U of I

During a meeting of the American Astronomical Society in Albuquerque, NM in June 2002, we investigated several retirement communities in the area and found one that we liked, a full-life-care community in Albuquerque called La Vida Llena. Soon thereafter, a Champaign friend from church moved in to La Vida Llena, in part due to our recommendation to his daughters who live in Albuquerque. In February 2004, on our way to an NRAO/LANL sponsored Symposium in Sante Fe, we stopped and spent the weekend at La Vida Llena to check it out in detail, meet the residents, sample the meals, and visit our friend. Now we were certain that we would move there in about 5 years. The then Chair and friend in the UNM Physics and Astronomy Department, Prof. Marc Price, indicated that when we came to Albuquerque, with a little warning, they could arrange an office, etc. for us.

After a workshop in August 2004 in Sante Fe on future plans for new instruments for very-long wavelength radio observations in which the Physics and Astronomy Department of the University of New Mexico was involved, John returned very enthusiastic and suggested that we should move to Albuquerque "sooner rather than later" by which he meant in one-to-two years instead of four or five. Because one can get on a list if one is ready to move in within 2 years, I contacted La Vida Llena to inform them. We then went on vacation to Maine and in early October John continued on to a meeting of astronomers and historians in Thailand and I came home. The next day, there

was a phone call from La Vida Llena indicating that an apartment of the type we desired had just become available and we had just 3 days to decide if we wanted it. When John returned home, we made the decision to move to LVL. Because he was teaching an Honor's Class during the spring 2005 semester, we delayed the move-in to June rather than LVL's desired date of April 1. In late January we went out to make measurements in our new apartment and to talk with the new Chair of the department at UNM. We will be able to get Adjunct appointments at UNM after we arrive and we each give a colloquium.

We will continue to be emerita and emeritus professors at the University of Illinois... but our move to Albuquerque and UNM starts a new stage in our lives after 41 years at the UI. Long-time friend and colleague, Professor James Kaler and his wife Maxine gave us a terrific farewell barbecue in their backyard on Memorial Day (May 30, 2005) to which over 70 colleagues, wives, and non-astronomer friends came to bid us farewell. Thus closes one chapter and another begins.

Changes in hiring policies, etc. at the University of Illinois from 1964-2004

When we came to Illinois or soon thereafter there was a female tenure-track professor in the department during this era, Elaine Avner, but I believe she was denied tenure. She stayed on at the University in another position and is now a retired Senior Research Scientist in the Graduate College. During the 1970s and 1980s there were no tenure-track females in the astronomy department although there were three females with non-standard appointments – myself, Susan Lamb who was part-time in physics, and You-Hua Chu who, like myself, was on soft-money from her own NSF and NASA grants.

It was in the early 1990s I believe, that the department hired its first tenure-track woman astronomer, Margaret Meixner, since Elaine Avner. Her astronomer husband, Peter McCullough, was eventually also hired as a tenure-track assistant professor. It was during this time that they tested the newly instituted maternity and paternity leave of the UI when they team taught an introductory astronomy course with each of them taking a leave in turn to take care of their new baby. Later when Margaret got tenure but Peter did not, they both left and got positions at the Space Telescope Institute.

You-Hua was/is a very productive member of the department and brought in more grant money than most of the faculty. Her husband is a tenured professor in the physics department and it was through the relatively new spousal hire program at the UI that she became a tenured associate professor and recently was promoted to Full Professor. You-Hua has just been elected the new Chair of the astronomy department to succeed Lew Snyder. Brian Fields is the other very good, tenure-track spousal hire in the department.

So from nepotism rules to spousal hires, the UI has come a long way in 40 years to solving the "Two Body" problem and some women, like Prof. Chu have broken through the glass ceiling to become Chairs of their departments!

Postscript - [Hélène R. Dickel]

Further thoughts regarding my experiences at University of Illinois

**** Teaching vs Research, Public Lectures ****

For most of my career at Illinois, I did astronomical research. I did teach the introductory astronomy courses during the 1980s but really did not enjoy it, preferring research. However, I did thrive giving Shapley public lectures at small colleges for the Astronomical Society and the week-long Speaking Tours for the American Chemical Society; both the chemists and I enjoyed our interactions and both learned new things from each other.

**** Combining family and career ****

If I had to do it over again, I would probably "make the same mistakes" - as it turned out, it was important to me to be home by midafternoon when the girls came home from school so I would not have been happy working full-time. [part-timers, however, do not get tenure.] Sometimes they went off to friends so it did not matter that I was home, but I do recall at least one instance when my teenager came home upset because she had been unsuccessful at mediating a disagreement among her friends. If I had not been home right at that moment, I might never have heard about this and been able to give her reassurance.

**** Interacting with students ****

We enjoyed having students - undergraduates or graduates - come to our home for pizza and to play with our physics "toys" and our Dutch shuffle board game. Several times we have hosted the Fall Department cookout. From the mid 1970s to 1990, we hosted one to three students from small colleges - initially just from Mount Holyoke College where I was an undergraduate and then from U. Mass., Wheaton (in MA), Oberlin, and Carroll College - for their short January Term of Career Exploration. They lived with us and did research under our guidance for the month as well as sampling graduate courses near the end of their stay. For the past 16 years we have been "Faculty Friends" and of those, the last 11 with Snyder Hall - the students eagerly anticipated the annual tradition of the campout/canoeing each spring.

**** Sabbaticals ****

We fully endorse sabbatical leaves for expanding our scientific horizons: During the first sabbatical in Australia (1970-71), I gained experience in observing the emission from molecules with large radio telescopes. During the second sabbatical in the Netherlands (1977-79), I began a collaboration to make high resolution observations of molecular clouds with synthesis radio telescopes such as the WSRT in the Netherlands and the VLA in New Mexico. I also was given a simple large-velocity-gradient radiative transfer code written by Teije deJong (U. Amsterdam) with which to analyze the data. The third sabbatical at the Los Alamos National Laboratory (1985-86, NM) allowed us to collaborate with top-notch theorists - in my case to adapt a sophisticated radiative transfer code for use in interpreting observations of molecular clouds. Then we started "reruns" with fourth sabbatical back to Australia to use their new Australia Telescope and fifth back to the Netherlands and now we are moving permanently to New Mexico.

**** Traveling ****

Most of our traveling to different parts of the USA and to different countries was for the purpose of making observations with the best telescopes in the world, reporting the results at symposia and meetings, going on sabbaticals to further our research, or attending the IAU General Assemblies. We took advantage of these opportunities to meet many people from different countries and to explore their cultures and enjoy the scenery.

**** BIMA Scheduler ****

Working as the BIMA Scheduler had its good moments in addition to the high stress. I've always been bad at remembering names but as Scheduler when I would see someone at a meeting, I would recognize their names (from proposals and email exchanges) rather than their faces! Corraling three independent-minded Directors to set a proposal deadline was a challenge but also let me develop my management skills :-). My talents as Scheduler of the Array and streamlining its operation was appreciated by many who used the BIMA array. Being on the BIMA NSF grant made life much easier as I no longer spent a month or more preparing an NSF proposal only to have it denied a year later.

**** Research, Observing, Collaborations ****

I like to observe and I like being the first one to see some new image of a source and finding a model to reproduce the data. I have always found collaborators to compliment my talents. Most of my projects have been long term and the collaborations have lasted a decade or more - from the optical observations, first with Heinz Wendker and then with Ted Gull; to radio observations with Bill Wilson and later Miller Goss; to radiative transfer modeling with Larry Auer and John Williams to highlight a few.

**** International Astronomical Union ****

My international career was launched during my first IAU Symposium in Basel, Switzerland in 1969 where I presented a paper on the HII regions in the local spiral arm which was complimentary to a similar study by the famous astronomer, Bart Bok. Prof. Bok gave the final summary of the meeting and highlighted my research. Before that, I was an unknown, young astronomer, almost fresh out of graduate school.

I took the lead in getting the astronomical nomenclature organized and more-or-less under control, first by chairing a Task Group on Nomenclature within the IAU Commission 34 for 9 years and then later for the whole of the IAU under the auspices of Commission 5 when I chaired the WG Designations for 6 years. That WG created a website and a Registry for new acronyms plus organized a multi-commission meeting at the General Assembly of the IAU and produced several IAU resolutions re astronomical nomenclature. We had an amicable working relationship with Editors of several of the major astronomical journals. I feel that it was at the IAU ^{not} where I excelled and made lasting contributions. I will continue on the WG for some time yet during my years in retirement.