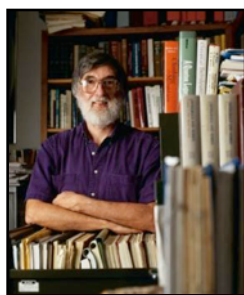


# ΦYAST ΦLYER

*The Homer L. Dodge Department of Physics and Astronomy  
Special Centennial Edition*

## The Centennial Celebration: Fall 2010

by Kim Milton



Kim Milton

After I was appointed chair of the Centennial Committee in Summer 2008, I began by reading David Levy's *The University of Oklahoma A History: Volume 1, 1890-1917* (Norman, OK:

University of Oklahoma

Press, 2005) and Dick Fowler's privately published history of our department. That fall, the committee decided to feature public talks by distinguished speakers known for their ability to

convey science to non-specialists. Two such talks took place. One stemmed from the suggestion by Yun Wang that we invite Andrei Linde, a faculty member at Stanford and a member of the National Academy of Sciences. Linde agreed to attend and, in addition to presenting a departmental colloquium, gave a fascinating, well-attended public lecture on "The Inflationary Multiverse" on Oct. 20. The second talk was a happy by-product of the Midwest Solid State Conference, which our department hosted on October 9 and 10. Kieran Mullen, the conference organizer, had invited as keynote speaker Sir

Please turn to page 7

## The Department's Board of Advisors

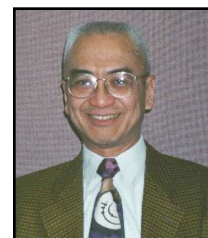
by Michael A. Morrison

At the instigation of Department Chair Greg Parker, a committee consisting of Deborah Watson and John Cowan sought four distinguished individuals with long ties to our department to become our first Board of Advisors. The board held its first meeting during a visit to OU in September 2010. During that visit, members toured the department, visited with faculty and students, met with members of the OU administration, and participated in many events of the Centennial Celebration. We take great pride in introducing the wider departmental community to the current members of this board.

### Chun Lin (Chair)

**John and Abigail Van Vleck Professor of Physics  
University of Wisconsin**

Chun C. Lin received his B.S. degree from the University of California at Berkeley in 1951, and his Ph.D. from Harvard in 1955 under the direction of J. H. Van Vleck. Chun was a faculty member at OU from 1955 to 1968, when he moved to the University of Wisconsin, Madison. Although Chun began



Chun Lin

Please turn to page 4

## From the Chair



I want to express my sincere thanks to all who planned, supported and attended our Centennial Celebration. Everyone in the department pitched in and helped in some way. I was thrilled to see our faculty and staff work with one another and with others in the university community to create such a successful semester-long celebration.

Special thanks go to Kim Milton, the chair of the Centennial Committee, and to Deborah Watson, who organized events for the Board of Advisors and masterfully coped with innumerable details during the celebration. Both faculty members dedicated many hours to ensure that the centennial and the visit by the board were major successes, as did our superb office staff—Danette Loyd, Debbie Barnhill and Sharon Widner. I also appreciate the hard work and dedication of our Publicity Committee, especially Richard Henry and Michael Morrison, who prepared this special issue of our annual newsletter. And, like all attendees, I enjoyed Stu Ryan’s presentation in his alter ego of “Dr. Indestructo.” Special thanks to the OU School of Drama for their production of the play *Copenhagen*, to Susan Shaughnessy for her masterful direction, and to the committed performances of the actors. We also are indebted to Kerry Magruder, curator of the History of Science Collection, who not only developed a special exhibit for the Centennial and provided tours of the collection, but also found and restored the audio of Bohr’s 1957 lecture at OU. The National Weather Center also offered fascinating tours during the Centennial weekend. Other highlights of this special year were provided by speakers who presented special colloquia and public lectures.

Many of these events could not have happened without the support of the OU administration. For

financial support, we thank President David Boren, Vice President for Research Kelvin Droegemeier, and College of Arts and Sciences Dean Paul Bell; for participation in Centennial events, we thank Dean Bell and Provost Nancy Mergler.

We were honored to have our prestigious Board of Advisors—Chun C. Lin, Neal Lane, A. T. Stair and Ward Paxton—present during the celebration, and we appreciate their continuing guidance and hard work on our behalf.

Most of all, I am grateful to the many alumni who attended and who, along with others who could not attend, continue to support the department. Our faculty and staff appreciate having had the opportunity to work with you as students. Through your association and dedication you have enriched our lives, and we take great pride in your intellectual leadership, entrepreneurship and high ethical standards. If you are able and so inclined, we would be honored to include your name in our list of donors. In any case, we delight in learning of your continued accomplishments, and I urge you to send us letters or email about developments in your lives for inclusion in future issues of the newsletter.

—Greg Parker

### Table of Contents

- Department Centennial Celebration.....1
- The Department’s Board of Advisors .....1
- From the Chair.....2
- Alums Weigh in About the Centennial.....9
- Niels Bohr at OU.....11
- Reflections on Copenhagen.....13
- Special HOS Centennial Exhibit.....14

The ΦYAST ΦLYER is the official newsletter of the Homer L. Dodge Department of Physics and Astronomy, University of Oklahoma, College of Arts and Sciences and is published each spring. The newsletter staff includes Dick Henry, Michael Morrison, Howie Baer, Ryan Doezema, and photographer Nima Pourtolami. The newsletter is printed at a cost of \$1.70/copy to the taxpayers of the State of



# Friday Evening Welcome



*Advisory Board, continued*

his career in microwave spectroscopy, while at OU he initiated a program on electron excitation of atoms in collaboration with fellow faculty member Bob St. John. For many years, Chun also worked on the theory of the electronic structure of crystals and impurity atoms in solids. He served as the chairman of the Gaseous Electronics Conference (1990 – 92) and chair of the Division of Atomic, Molecular, and Optical Physics of the American Physical Society (1994–95). In 1996, the American Physical Society honored Chun with the Will Allis Prize for his contributions to study of ionized gases. So far, he has supervised 48 Ph.D. dissertations, including that of fellow board member Neal Lane.

During his remarks at the Centennial Banquet, Lin reminisced about his years at OU:

*“The Centennial brought me back to the fall of 1955 when I met my first course at OU. In those days we taught General Physics in small sections with about 30 students each. In that class was Ward Paxton, who won the Handbook of Chemistry and Physics award for his outstanding performance. I shared an office with Bob St. John on the third floor of the Physics Building. In those days, the cost of living was rather low. We could get a good meal at the Union Cafeteria for about a dollar. A haircut cost only 75 cents! Dallas was five hours away by bus. There I experienced the artistry of Maria Callas which redefined opera for me. On a 15-hour train ride to the Lyric Opera of Chicago in the 1950s, I brought along for reading a copy of The Theory of Atomic Collisions by Mott and Massey. Later when I talked to Bob St. John, I realized his experiments on electron-atom collisions are directly related to the exciting theory that I just learned. Bob told me of the strange pressure dependence of helium excitation functions he had measured. Thus began my romance with research*

*on atomic collisions which continued throughout my career.*

*“I do not want to sign off without mentioning Dr. Nielsen. When I visited Norman in the late 1970s, he came to my talk in a wheelchair even though he could no longer hear very well. He apologized for not being able to invite me to dinner, as his wife had since passed away. I cooked some Chinese dishes and brought them to his house. Dinner was just like the old days—if only there were more of them.”*

**Neal Lane  
Malcolm Gillis University Professor  
and Professor of Physics and Astronomy  
Rice University**

Born in Oklahoma City in 1938, Neal Lane earned his B.S., M.S. and Ph.D. degrees in physics from OU under the direction of Chun Lin. Neal's first faculty appointment was at Rice University, where he joined the Department of Physics in 1966. During that appointment, Neal directed several undergraduate and graduate students in theoretical atomic and molecular physics, including current OU faculty member Michael Morrison. Neal left Rice in mid-1984 to serve for almost two years as chancellor of the University of Colorado at Colorado Springs, after which he returned to Rice as provost and professor of physics.

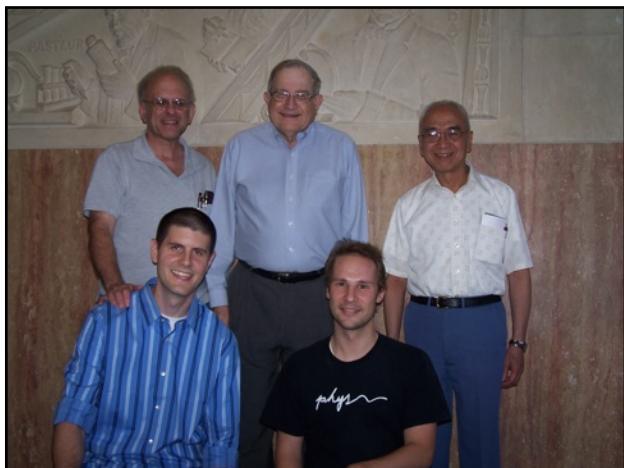


Neal Lane

From 1979 to 1980, during his original appointment at Rice, Neal had taken a leave of absence in 1979–80 to become temporary director of the Division of Physics at the National Science Foundation (NSF). In 1983 he returned to Washington as director of the entire NSF. Neal

Please turn to page 5

Advisory Board, continued



Four generations of physicists: Chun Lin (back row right), advisor of Neal Lane (back row center), who in turn was advisor of Michael Morrison (back row left), who is currently the advisor of Stéphane Valadier (front row right) and James Dizikes (front row left).

held this position until August 1998, when he was appointed assistant to the president for Science and Technology, director of the White House Office of Science and Technology Policy. In 2001, he returned to Rice, where he remains a faculty member in the Department of Physics and Astronomy and a senior fellow of the James A. Baker III Institute for Public Policy, in which he works on science and technology policy.

Widely regarded as a distinguished scientist and educator, Neal's many writings range from theoretical atomic and molecular physics to science and technology policy. He also holds the Distinguished Alumnus Award from the OU College of Arts and Sciences.

At the Centennial Banquet, Neal reflected on about student years at OU and his work with Chun.

*“I was delighted to attend this celebration and am honored to serve on the department’s Board of Advisors. I am optimistic that the department has a very bright future.*

*“I was born and raised in Oklahoma City, met my future wife Joni Sue Williams (she now goes by the name Joni) in high school, and came to OU to become a physicist. OU was affordable, close to home and Joni had decided to be a math major here. The OU Physics Department, which did not include astronomy in those days, was small but had some terrific people on its faculty, some of whom are still here.*

*“I was particularly fortunate to have a few courses from Chun Lin, an extraordinary teacher. Even more fortunate for me, Chun was willing to take me on as a research student. The decision to stay at OU for my PhD was an easy one. And, while I treasure my studies with Chun and other excellent OU physics faculty, to be honest, the most important thing I accomplished as a graduate student at OU was to marry Joni. We recently celebrated our 50th anniversary.*

*“It is impossible to know where one’s career—indeed one’s life—would have gone if things had been different at the very outset. But I consider it my great good fortune to have been able to study physics at OU, to learn from many outstanding faculty—and along side some super-bright fellow students who were good friends and good tutors—and to have done my PhD work with Chun Lin.”*

**A. T. Stair  
President, Visidyne Inc.**

A.T. Stair was born in Oklahoma City, raised near Canton, Okla., and earned a degree in mathematics from OU in 1952 and a Ph.D. in physics in 1956, the latter under the direction of Jens Rud Nielsen. He subsequently was a visiting lecturer in applied physics at the Lowell Technological Institute in Massachusetts (1960--1962). a Ph.D. advisor at Utah State University (1965-1970), a U.S. Air Force project scientist (1960-1970), a program scientific director for high-altitude-effects simulation

Please turn to page 6

*Advisory Board, continued*

(1970-1977), and a branch chief (1975-1982). He was named chief scientist in the senior executive service of the U.S. Air Force Geophysics Laboratory in 1982 and retired from the U.S. Air Force in 1986.

In 1988, A.T. was inducted into the Oklahoma Hall of Fame. He currently is president of Visidyne, Inc., a company with expertise in atmospheric sciences (theoretical modeling and laboratory and field measurements), in modeling optical and the infrared effects of nuclear weapons, optical metrology and engineering design and sensor development. During his career, A.T. helped develop two major technologies—Fourier transform spectroscopy and totally cryogenic infrared sensors—for use in the laboratory, in rockets and in space. In his own laboratory he created the equivalent of an entire Department of Physics and Chemistry devoted to the study of infrared radiation processes of aurora, airglow and nuclear-induced backgrounds.



A.T. Stair

About his recent visit to OU, Stair wrote:

*“I found the Centennial Celebration to be a real delight on many levels: where should I begin?”*

*“First, the visit gave me a reason to bring my wife, Barbara Berkman, who is a full professor at Columbia University, to OU. She had a delightful time despite the heat (whew!). She particularly enjoyed visiting with Neal Lane’s wife, Joni, and Ward Paxton’s wife, Pat, going to a winning OU football game as guests of the Watsons (with an air-conditioned club room),*

*and meeting faculty and Provosts Nancy Megler and Roger Blais at the celebration banquet.*

*“Second, it was such a pleasure to experience the collegiality of the Oklahoma academic culture. Everyone, particularly Greg Parker, made us feel welcome and appreciative of our being there; it makes me wish I had come back to my roots and become a professor. Even though I tried, Bostonians just don’t get it.*

*“Finally, the opportunity to learn more about the research under way in the department and to see the incredibly precise laboratory instruments taking measurements at the forefront of science was very exciting (even though you guys took over my old space). Speaking of which, you are geniuses at using every available inch—amazing! My thesis work in that basement on Infrared and Raman spectroscopy led me seamlessly into my lifelong career of studying the physics and chemistry of the atmosphere. A good thing about coming to Boston was that I was exposed to Fourier Spectroscopy during its birth. Later, I was very proud to be invited back to OU to present some early results using my new interferometer at a meeting of the American Institute of Physics. That was when I was invited to dinner by Prof. Nielsen to meet with Bohr, which just seemed like an everyday event at the Nielsen house.”*

**Ward Paxton  
President and CEO, Intrusion Inc.**



Ward Paxton

Dr. Ward Paxton holds B.S., M.S., and Ph.D. degrees in physics from OU, where his graduate advisor was R.G. Fowler. He also holds the Distinguished Alumnus Award from the OU College of Arts and Sciences. From 1959 to 1969, after graduating, Ward held various managerial and technical

Please turn to page 7



*Advisory Board, continued*

positions at Texas Instruments Incorporated. In 1969, he founded Spectronics, Inc., where he was chairman of the board, president and chief executive officer until 1978, when the company was acquired by Honeywell, Inc. and became Honeywell Optoelectronics. There he subsequently served as vice president from 1978 to 1983. In that year he co-founded Intrusion,

Inc., a company that delivers network monitoring and analysis solutions to high-profile customers and to the U.S. government. After the company's inception in September 1983, he served as its president, chief executive officer, a director, and was chief financial officer from 1983 until 1994. He is now chairman of the board at Intrusion.

*Centennial, continued*

Anthony J. Leggett, John D. and Catherine T. MacArthur Professor and professor of physics at the Center for Advanced Study at the University of Illinois at Urbana-Champaign. Mullen and Leggett agreed to turn his talk into a public lecture, and, on Oct. 8, Leggett spoke to a standing-room-only audience on “Does the Everyday World Really Obey Quantum Mechanics?”

Another major event grew out of my asking Susan Shaughnessy, an associate professor of acting and directing in the OU School of Drama, if the school would put on Michael Frayn's play *Copenhagen*. This gripping play recreates a famous but mysterious meeting between Niels Bohr and Werner Heisenberg that took place in occupied Copenhagen during WWII. Susan was extraordinarily enthusiastic and agreed to direct the play. She assembled a stellar cast, consisting of Paul Austin as Niels Bohr, OU's Tom Orr as Werner Heisenberg and Ginger Gilmartin Smith as Margrethe Bohr, who performed to packed houses in OU's Weitzenhoffer's Theatre Sept. 9-12. I organized a panel of OU scholars who, following the final performance, discussed the historical and scientific issues raised by the play. Students, faculty, others in the university community, and members of the public filled the theater for every performance and reportedly found the play deeply involving, moving and



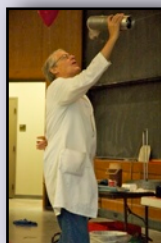
*Deborah Watson*

thought-provoking. It was indeed a highlight of an event-filled celebration.

No celebration would be complete without social events and, with support from the department and the OU administration and extraordinary organizing help from our superb office staff—Danette Lloyd, Debbie Barnhill and Sharon Widner—and from faculty member Deborah Watson, we enjoyed several. The festivities kicked off with a reception Friday afternoon. Saturday morning featured a welcome by the Department Chair Greg Parker and Dean Paul Bell, tours of the department and a picnic lunch. Originally hoping to hold the event outside, the planners capitulated to the record-breaking heat and moved the picnic indoors to the immense relief of everyone present. Following that afternoon's football game (OU vs. Florida State—OU won, of course), we all joined OU administrators and our board of advisors for a scrumptious banquet in the Oklahoma Memorial Union. Prior to the banquet, Provost Nancy Mergler gave a short address, and after dinner, the four members of the board of advisors charmed and regaled the audience with anecdotes about their time at OU.



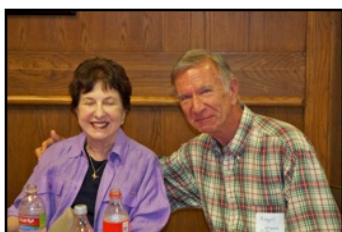
# Saturday





## Alums Weigh in About the Centennial

**Roger Blais:** The celebration of a century of physics at OU will long be remembered as a sensational weekend. The beautiful autumn weather echoed the warm and cordial atmosphere of the events. The visit to the History of Science special collection in the library was high among the special points of pride for us aging alumni. To see Galileo’s personal copies of the books he wrote, with marginal comments in his own hand, was moving. The excellent hospitality also was exemplified by the great production of the play *Copenhagen*, with its multiple perspectives on the same event in the history of our science.



I had bittersweet memories seeing that the room on the northeast corner on the third floor had been restored to use as a classroom. In the fall of 1967 Dick Fowler had three of us graduate students—Jim Mills, the late Geoff Russell, and myself—convert the room into a laboratory for electric-shock-tube and breakdown-wave research. All the windows had to be covered with foil and sheets of black plastic to seal out the light from the photomultipliers that served as diagnostics. The windows were taller in those days because there was no false ceiling to accommodate air conditioning. Seeing the room brought back tragic memories of the November day in 1968 when Geoff, his bride of one week, who had recently arrived from their hometown of Brisbane, and fellow graduate student Owen Robinson all drowned in Lake Thunderbird in a sailing accident. Geoff and Owen were close friends and talented physicists and we will never know what they might have contributed. But that

room also brought back numerous memories of laughter and long hours and time spent with enduring friends.

It was especially wonderful to see some of our old mentors—Robert St. John, Chun Lin, Ron Kantowski and Bob Petry—and other friends of longstanding, like Stu Ryan, who joined the faculty after I graduated. They each have devoted a lifetime to touching the lives of generations of students. We all are in their debt. I am sure that it took great effort to put on this celebration, but you can be certain that those of us who were able to attend will never forget it.



**Bill Kloepping:** My wife Debbie (former department head secretary) and I had a lot of fun! It was great visiting with everyone and seeing the changes the department has made since we were last there. We were a little surprised at how few folks from our era made it to the event. As Debbie put it, they missed out on some wonderful events. It's always fun to see Stu Ryan's show as Dr. Indestructo. I remember, while a student here, seeing the show as presented by Stu and the late Stan Babb. It doesn't matter how many times you've seen the show, Stu always makes it worth watching.

We were both “blown away” by the History of Science display. To actually leaf through volumes that are hundreds of years old and that contain handwritten notes by the authors was a once-in-a-lifetime opportunity we'll never forget. And I never thought someone could produce a play

Please turn to page 10

*Alums, continued*

based around physicists and physics that would be as interesting and have as much public appeal as *Copenhagen*.

The department did an outstanding job organizing the event and arranging such a diverse lineup of activities. All the faculty and staff should be highly commended for their efforts.

**John Felkner:** My physics degree has served me well. It was excellent preparation for my Navy career, during which I often served as an unlisted engineer and uncredentialed (or at least, not very credentialed) scientist. My BS in physics was a satisfactory skeleton to understand the world.

I now realize how much I missed by not participating more in the department—colloquia, conferences, etc. I hope undergrads who joined the department after me take better advantage of what the department offers.

I was glad to see that the atmosphere, which was plainly tense amongst faculty when I was an undergraduate, is now very collegial. The difference is night-and-day, even to a visitor to the hallways.

Dr. Parker impresses me greatly. He and his predecessors must deserve great credit for the improved atmosphere. He has shown more interest in me as an alum than I remember the former administration showing me when I was a student. Dr. Ryan is still at the top of my “best teachers ever” list.

**Kevin Cobble:** Let me start by thanking those involved in setting up the Centennial Celebration. I could tell by the size and scope that it was no easy task setting it up and coordinating the events, but they all were excellent, and my wife and I enjoyed every one. One event we really enjoyed was the historical book collection. I had seen the Galileo collection only once while I was

at OU, and was impressed at that time. In early discussions with Bill Klopping, he had indicated that they were not planning to attend that event, but I told him it was the one event not to miss, and I think he and his wife were quite impressed. The last time I



saw the collection it was behind glass, but being able to see the books up close was truly an incredible experience. The Bohr collection was also quite impressive, as were the mementos from his visits to OU. In our tour group was an older gentleman who actually attended Bohr’s last lecture here, and he told a couple of stories that made it more personal.

Later that evening, we attended the play *Copenhagen*, which I understand was put on especially for the Centennial. It was very interesting. It brought up a number of questions, and my only regret was that we were unable to attend the discussion session on Sunday. I do have a couple of books on the history of that time, including “Hitler’s Uranium Club,” and it spurred me to re-read these to find the answer to some of the questions raised by the play. Once again, thanks to the people (I thank Dr. Parker in particular) who saw to it that the play was put on.

On Saturday we really enjoyed the Dr. Indestructo show; it brought back quite a few memories of my days in the department. I also enjoyed the lab tours. It is amazing how far the department has come since I left in 1981. It is truly a world-class department. Given the amount of dysfunction that marked a lot of the departmental interactions in the ‘70s, I was very pleased that the current tone is much more cordial and much more supportive. It was good

Please turn to page 12

## Neils Bohr at OU

by Peter Barker, OU History of Science

Niels Bohr visited Norman several times at the invitation of fellow Dane

Jens Rud Nielsen, for whom the OU Physics and Astronomy building is named. Bohr's visit in 1937 is remembered in a number of striking photographs. Still on display in Nielsen Hall, one shows Bohr with his wife Margrethe and his son Hans standing with three Native Americans in "fancy dancing" regalia. During a second documented visit in 1957, Bohr gave a public lecture to a standing-room-only crowd in Holmberg Hall on "Atoms and Human Knowledge." Bohr, as usual, lapsed into inaudibility as the lecture progressed.

Did Niels Bohr visit Norman a third time, secretly, during World War II? By September 1943, Bohr had escaped from Nazi-occupied Denmark. He stopped briefly in London, where he heard for the first time about the Allied atomic bomb projects. In

November of that year, the British and American projects were amalgamated. Bohr and his son Aage crossed the Atlantic with the British contingent and spent the next two years advising the Manhattan Project. During this period Bohr traveled across the country several times and could have stopped in Norman to visit his friend Nielsen, although the visit would have been strictly secret. Like other scientists working on the Manhattan Project, he was assigned a

codename by the Secret Service: he was traveling as "Nicholas Baker."

In his notebook of memories about Bohr, Nielsen specifically denies that Bohr visited Norman during the war. But in Nielsen's obituary in *Physics Today*, his colleague, former OU faculty member Richard G. Fowler, relates that Bohr visited Norman "under his illustrious wartime pseudonym "Nicholas Baker." Who is right? Perhaps both. By denying that Bohr visited him during the war, Nielsen was keeping faith with his friend and mentor, whose presence in the United States was a highly classified secret from

fall 1943 to summer 1945. But Nielsen never denied what Fowler reports: that Nicholas Baker visited Norman.

Images of the Bohr family visits to Oklahoma in 1937 and 1957 can now be seen at the Image

Galleries maintained by the University of

Oklahoma History of Science Collections:

<http://129.15.14.63/galleries//20thCentury/Nielsen/archive/>. Bohr's 1957 lecture has been restored to audibility by the curator of the History of Science Collection, Kerry Magruder, and can be found at: <http://ouhos.org/2010/08/25/physics-centennial-2-1957-ou-lecture-by-niels-bohr/>.



Jens Nielsen (left) and Niels Bohr at OU, 1937



*Alums, continued*

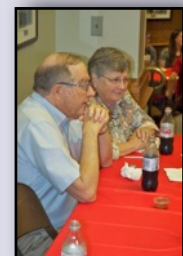
to see some of my old professors and to swap some old stories.

Finally, we really enjoyed the dinner, particularly the talks by former students and faculty. Much of that history I was unaware of. Perhaps a short introductory lecture for new students should be done each year to bring them up on the history of the department. Once again, it was good to meet some of the former and current students I had not met, as well as to see some old friends.

All in all, we had a fantastic time and once again, I would like to thank those involved in the planning and coordination of the events; they were wonderful and you should all be proud of a very successful celebration. My only hope for the future is that it isn't another 100 years before you put on another one. Perhaps a reunion every 10 years or so.



# Saturday



## Reflections On Copenhagen

by Director Susan Shaughnessy



When Kim Milton approached me with the idea of directing *Copenhagen* as part of the Centennial Celebration of the Homer L. Dodge Department of Physics, I was thrilled. I also



knew that it would be a challenge to find the right age-appropriate actors and the funding to produce the play. Over several months, Dr. Milton was able to secure funding, and my work began in earnest during the spring of 2010.

Michael Frayn's 1998 play about the meeting between Niels Bohr and Werner Heisenberg—dense not only with physics, but also with politics and the history of World War II—presented distinct challenges of research and analysis. Equally challenging is the play's structure: scenes glide seamlessly between the

afterlife, the first meeting between the two physicists and their later 1941 meeting in Copenhagen.



As development of the play progressed, I was able to secure both an excellent cast and a “dream team” of designers.



Tom Huston Orr played

Heisenberg, with guest actors Paul Austin as Niels Bohr and Ginger Gilmartin Smith as Margrethe Bohr. Set design was by Marie Cloud, lighting by Jerry Lewis and costumes by Chris Harris. The rehearsal process was intense and enriching. I recall clearly when I shifted my focus from the complex subject matter to the equally complex relationships among the three characters, using those relationships to create the dynamics of staging the play. I believe this shift in focus contributed to making the final production the welcome success it became, a production that illuminated the universe of the play through rich interpretations of its characters and through articulation of its intricate content.

An added component of the production was the symposium/discussion after the final performance in

September. This idea arose during fall 2009 when Dr. Milton and I began working toward the presentation of *Copenhagen*. Included as panel members were Dr. Milton from Physics, Peter Barker from History of Science, Tom Boyd and Zev Trachtenberg from



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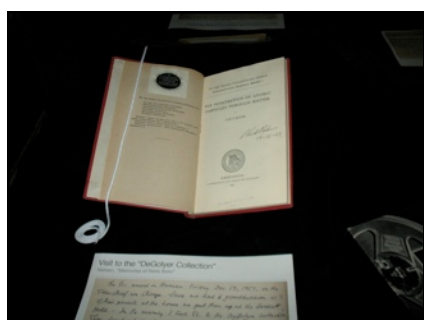
*Copenhagen, continued*

Religious Studies and Ethics, Zach Messitte from International and Area Studies and moderator Kae Koger from the School of Drama. This extraordinarily fruitful interdisciplinary event was very well attended by members of OU

communities and by many out-of-town visitors. The many-layered project Copenhagen will remain one of my most treasured experiences as a director.

## Special History of Science Centennial Exhibit

by Kerry V. Magruder, Curator, OU History of Science Collections



A new exhibit, “Jens Rud Nielsen and the 20th-century Revolution in Physics,” opened after Labor Day in

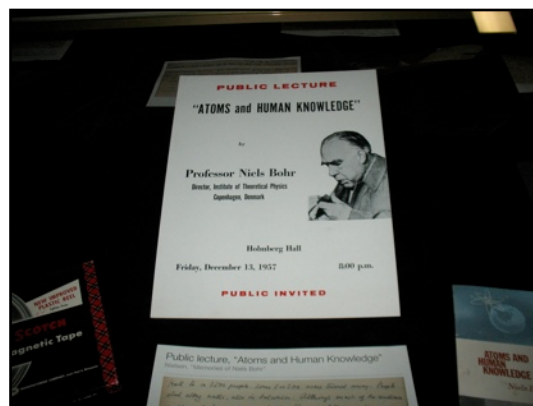
the lobby of the History of Science Collections, University of Oklahoma Libraries. Prepared as part of the 2010 Centennial Celebration for OU's Homer L. Dodge Department of Physics and Astronomy, the exhibit focused on key players in this history of physics and their involvement in the department and in other centennial events.

The exhibit featured original works by Bohr and Heisenberg, many of which relate to Michael Frayn's play *Copenhagen*, which was performed during the Centennial Celebration; first editions of many works by Albert Einstein (including a little-known Yiddish translation of Einstein's book on general relativity); and Nielsen's handwritten manuscript, “Memories of Niels Bohr,” which provides unique insights into many remarkable personalities and events of early 20th-century physics.

To illustrate the relationship between the founders of early 20th-century physics and the

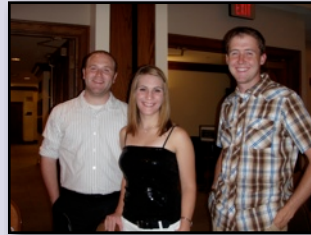
OU Physics program, the exhibit includes displays about the life-long friendship of Nielsen and his mentor Bohr, who visited the Norman campus at least twice: in 1937 and in 1957. Of special interest are a poster advertising Bohr's 1957 lecture; and photographs and excerpts from Nielsen's manuscript describing the visit. Finally the exhibit includes a wealth of items that attest to Nielsen's effectiveness as a teacher, mentor and major force in the early development of the department.

Although the exhibit is no longer on public display, you can view many of these items at the blog of the History of Science Collections, <http://ouhos.org>. This blog also contains a link to a restored recording of a lecture by Bohr, including an introduction by Nielsen.





## Saturday Evening



ALUMS AND FRIENDS OF THE DEPARTMENT

PLEASE LET US KNOW WHAT YOU'RE UP TO SO  
THAT WE CAN INCLUDE THE INFORMATION IN  
A FUTURE EDITION OF THE NEWSLETTER!

SEND YOUR NEWS TO DICK HENRY AT  
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Nielsen Hall, home of the Homer L. Dodge  
Department of Physics & Astronomy



Foucault pendulum, located in the Nielsen Hall atrium

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## The Terebesey Panels

by Stu Ryan



Students, faculty, and visitors entering Nielsen Hall through the north entrance foyer often pause to ponder two Art Deco bas-relief stone panels that feature pioneers in the history of physics. The panel on the east wall highlights the advance of knowledge about the physical universe. Starting with the cave man “Homo” busily crafting a stone tool, subsequent panels follow Euclid, Archimedes, Galileo, and Newton. Illuminating these figures, the sun filters through the scientific aphorism “Experience is the Foundation of Theory and the Test Thereof.” The west panel features Faraday,

Mme. Curie, and Pasteur along with two unnamed scientists, who are easily identified as Lise Meitner and Otto Hahn. There the sun illuminates a line from Shakespeare’s *Anthony and Cleopatra*: “In Nature’s Infinite Book of Secrecy A Little Can I Read.”

The creator of the bas-relief panels in the foyer was artist and sculptor Louis Terebesey. Construction of Nielsen Hall, which was originally called the Research Institute Building, began in 1946 and was finished by Christmas, 1948. The Research Institute occupied the first floor, and the faculty had moved into the second floor in March of 1946. According to his grandson Allen Terebesey, Louis carved the panels in his Tulsa studio and probably installed them in Nielsen Hall in 1949 or 1950.

Born in Transylvania in 1893, Louis Terebesey was a painter, sculptor, and architect. After immigrating to the US in 1921, he settled in Chicago. A WPA artist during the Depression, Terebesey sculpted stonework on several famous Art Deco buildings in Chicago including the WGN studio at the Tribune Tower. He was a friend of the Tribune owner, Col. McCormick; of architects Frank Lloyd Wright and Louis Sullivan; and of physicists Enrico Fermi and fellow Hungarian Émigre Edward Teller. Terebesey also designed props for movie sets and taught at the prestigious School of Design in Chicago.

During World War II, Terebesey worked for the US Corps of Engineers in Tulsa. After the war, he settled there and worked on many of Tulsa's Art Deco buildings including St. John’s Hospital, the Blue Cross building, the Daniel and Kewanee building, and the Memorial Park Cemetery. Admirers can also see his work at the Arkansas State Capitol complex; at the Universities of Chicago, Illinois, Northwestern, Oklahoma State, and Purdue; and at Mundelein College in Chicago. Terebesey died in Chicago in 1959.