

"All The v's That's Fit
To Print"

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A Surprise Visitor, a Different Name

On September 14, the Department of Physics and Astronomy formally became the Homer L. Dodge Department of Physics and Astronomy. After a few celebratory remarks, and in the presence of College of Arts and Sciences Dean Paul Bell and roughly 200 faculty, staff, and graduate and undergraduate students, Provost Nancy Mergler stepped around to the front of the podium to unveil the new department seal, one now bearing the revised name. It was a proud moment for the department.

The name change and the announcement by Mergler of the \$6 million gift by the Avenir Foundation to the department ushers in a transformational change. But the sudden transformation actually was the culmination of a chain of events that began with a casual and unanticipated summer visit from Mrs. Alice Dodge Wallace. Wallace is the daughter of the physicist who had worked diligently between his arrival in Norman in 1919 and his departure in 1942 to build a physics department from a faculty consisting only of himself to one with a respectable size of 15. In town for a reunion in summer, 2002, Wallace happened by Nielsen Hall and was reading the sign on the east side of the building describing Jens Nielsen and the department when she struck up a casual conversation with Bob Littel, who was taking a break from his work in the first-floor shop. Eventually, Wallace wandered into the building, viewed pictures of personalities (including one of her father)

and facilities from the department's past, and met Ryan Doezema, the current chair.

So, here we are, with a new banner and exciting prospects for the years ahead. In the next article, Doezema describes what the change means for us. Following that there are separate articles about Professor Dodge's personal and professional life as well as an interview with Wallace and her brother, Dr. Norton Dodge.



Professor Homer L. Dodge

A Stunning Opportunity

The announcement of the \$6 million gift by the Avenir Foundation was a unique event in the history of the Homer L. Dodge Department of Physics and Astronomy. Never before have we been presented with such a tremendous opportunity that will take us to the next level among physics and astronomy departments nationwide.

The gift will allow us (with additional university help) to complete the final phase of the Nielsen Hall expansion and renovation project. This phase will include a complete renovation of the original Nielsen Hall, the building for which Homer Dodge obtained funding just before World War II but was not completed until 1948, after his departure from OU. The renovation will give us expanded space for research laboratories on the third floor and create new teaching laboratories on the second floor. We also hope that this phase will include an expansion of the fourth floor as well as a move of the OU Observatory to the top of Nielsen Hall.

The gift also will allow us to increase our competitiveness in graduate recruiting by providing two Homer L. Dodge Graduate Fellowships funded from a permanent endowment. Successful recruiting has been a major focus of our attention, especially in the past few years, and these fellowships will be an enormous help.

Half the gift is creating three new endowed Homer L. Dodge chairs in astrophysics; atomic, molecular and chemical physics; and high-energy physics. Each will be matched by the state, thus providing three \$2 million endowments. Our aim in filling these three new faculty positions is to aggressively target mid-career researcher-teachers with international reputations and exceptional promise. These positions will increase the size of our faculty to 32, making us the fifth largest department in the Big 12.

Clearly, the impact of this overwhelming and fantastic gift both is transformational and long-term. It obligates us to use it wisely!

For the department to carry the name of Homer Dodge also obligates us. Homer Dodge is our "founding father," who built the faculty and set the direction during his long tenure as chair between the two world wars. Not only did he serve and strongly impact the University during this time, but he also was one of the pioneering figures nationally in the formative period of American physics. It could not be more appropriate for us to proudly bear the name Homer L. Dodge Department of Physics and Astronomy!

Ryan Doezema

Homer Levi Dodge

In the summer of 1919, President Stratton D. Brooks was looking for someone to head the Department of Physics at the University of Oklahoma. Some Oklahomans, who were temporarily in Washington, D.C., to help in the late war and its aftermath, called Brooks' attention to an impressive, 31 year-old physicist named Homer L. Dodge. He, too, was on temporary service in Washington, working at the National Research Council on aircraft detection. One of the Oklahomans, a professor of electrical engineering, told Brooks that Dodge was "a man whose personal and scholarly qualities eminently fit him for the position. He is ambitious, energetic and of pleasing personality. He impresses me with his executive ability and shows those traits essential to building up a department." Other reports, similarly complimentary, convinced President Brooks that Dodge was the person he wanted. The difficulty, Brooks knew, would be in persuading Dodge to come to Norman. It didn't help that Dodge was earning \$3,600 a year in Washington and that OU could offer no more than \$2,400.

After asking three of the Oklahomans who were in Washington to visit Dodge and talk to him about the advantages of the position, Brooks sat down and wrote the candidate a frank letter. The president emphasized the "very excellent opportunity for rapid and substantial growth" at OU. He readily admitted that "the department of physics at present cannot be ragged about very much," but he chose to stress that "the prospects for the future are certainly good." In fact, President Brooks wrote, "with the exception of the salary I feel that we have here one the best opportunities for a young man to make a record for rapid progress in the development of his department as can be found anywhere."

Dodge sent a telegram. "Can you give me 10 days to reach a decision? Of course if you will review my record and find grounds to increase the starting salary it would make (it) much easier to give up my salary of \$3,600 and come to Oklahoma." In the end, Dodge agreed to come, despite the cut in pay. It was, no doubt, an important decision in the lives of the young physicist and his wife, Margaret. It also was an important moment in the life of OU.

Dodge was born in Ogdensburg, N.Y., on October 21, 1887. His father taught Latin and Greek at the Ogdensburg Free Academy; his mother, a graduate of the Normal School at Potsdam, was a voracious reader and a lifelong believer in education. The family loved camping, canoeing, and the outdoors, and from the age of 5, the youngster explored the St. Lawrence River, the Thousand Island region of New York and the waterways from Lake Ontario to Montreal. Canoeing was a lifelong habit. The Ogdensburg newspaper, in August 1964, reported that Dodge retired and in his late sixties and seventies, had "logged more than 25,000 miles on America's rivers and lakes during the past 11 years."

From his earliest boyhood, Dodge was fascinated by the physical world. He constructed a battery from materials ordered for him through *The Youth's Companion* and invented a "fire lighter" attached to a clock so his mother would not have to get out of bed on cold mornings to light the coal stove. Probably it was inevitable that in college he would study physics, and particularly its practical applications. He went to Colgate in New York and graduated in 1910, having paid for his education by working for the U.S. Geological Survey as a topographer during the summers. His physics professor at Colgate, C.D. Child, recommended the new graduate to the University of Iowa, which hoped to acquire a part-time instructor and its first graduate student from outside the department. After assuring himself that the Iowa River was suitable for canoeing, Dodge agreed to come. At Iowa he earned his master of science degree (1912) and his doctoral degree (1914). Beginning as an assistant instructor (1910-12), and a demonstrator (1912-13), he rose at Iowa to instructor (1913-15) and then assistant professor (1915-1919). World War I, as we have seen, brought him to Washington.

Dodge arrived in Norman just days before the opening of the 1919-1920 school year, and he promptly discovered that he was the sole physicist at the university. The one full professor and two assistant professors all had suddenly resigned. The university's *Catalogue* boldly advertised an array of courses, 22 for undergraduates and five for graduate students, but who was to teach them? Dodge recruited a former colleague, William Schriever, from the University of Iowa, and they went to work. For the next 25 years, Homer Dodge devoted himself to the arduous work of building a respectable Department of Physics at OU. By the time he left the university, on leave in 1942 and permanently in 1944, his department was much more than respectable. He was to leave behind a staff of 15 professors and instructors and a curriculum that consisted of 35 undergraduate courses and 15 courses at the graduate level. At his departure, and largely through his efforts, the department was well positioned for the prominence and high reputation it has enjoyed since the end of World War II.

For nearly a quarter of a century, Dodge carried on the painstaking labor of making a reputable department. He hired talented faculty members, attracted able graduate students, saw to the equipment needs, staffed the office, designed the curriculum, constantly badgered the central administration for more money, more space. His campaign for a physics building began three years after his arrival. That dream was not fulfilled until four years after he had moved on. At the completion of the building, Professor Schriever reminisced: "It has been a long time since 1922 when President Brooks first talked about a physics building to Dr. Dodge and me. We should now have adequate space for research. Too bad Dr. Dodge is not here to have the pleasure of using this building." In addition to the grind of endless daily detail, Dodge was eager to move the study of physics in two important ways, and he will be remembered at the university, and beyond, for his visionary initiatives in these two directions.

First, he hoped to bring pure and applied physics closer together. Toward this end, Dodge, with the cooperation of the College of Engineering, developed the School of Engineering Physics and served as its director from the moment of its founding in 1924 until 1942. The mission of the school was to inculcate an understanding of the underlying principles of physics in those students who were going out into the world of engineering and private enterprise. And second, Dodge was vitally interested in the teaching of physics. He had the highest respect for those whom he sometimes called "research men," and he hired and enthusiastically supported the best researchers he could find, including Jens Rud Nielsen, who went on to become one of the university's most prominent researchers. But he felt that the profession's emphasis on pure research was in danger of overwhelming the responsibility to teach, and he insisted that classroom instruction, at all levels, remain equally at the center of attention. Dodge himself, throughout his career, taught an introductory course in physics. This concern had been with Dodge from the very start of his career (from 1916 to 1924, for example, he was the physics editor for the journal, *School Science and Mathematics*), and it went far beyond the OU campus.

His interest in teaching led him to found, together with his friend, Paul Klopsteg, the American Association of Physics Teachers. Dodge was the obvious choice to be the first president of the organization (1931-1932). By extraordinary diplomatic effort and by insisting that physicists with outstanding research records serve in high positions in the AAPT and follow him in the presidency, he was able to avoid a split among physicists into two rival camps-teachers and researchers. The AAPT was one of the organizations joining, in 1931, to form the American Institute of Physics, and Homer Dodge was a member of the governing board of the institute from 1932 to 1939. He certainly deserves much of the credit for so smoothly integrating, at the highest levels of the profession, the twin functions of teaching and research.

His years at OU were filled with many other important services to the institution. He joined with a handful of other socially active professors at OU to establish the Oklahoma School of Religion in 1927, and was the president of its board of trustees for his 17 remaining years at the university. He was one of the founding members of the local chapter of the American Association of University Professors and its president in 1924-1925. He eventually rose to national responsibility in the AAUP. He was the president of the Oklahoma Academy of Science. In addition to these and other activities, however, he made two particularly enduring contributions to the university. From 1926 until his departure, Dodge was the dean of the Graduate College. In that capacity, he regularized procedures, codified the college's regulations, raised its standards and democratized governance by establishing a faculty-elected graduate council. He vastly increased the importance and visibility of graduate work at the university. In 1929, he had the satisfaction of personally hooding Mary Jane Brown, OU's first Ph.D. Finally, Homer Dodge was the principal founder of the OU Research Institute. In the words of George Lynn Cross, the institute "was made a reality by Homer L. Dodge on March 29, 1941," when it was incorporated by the state. Dodge examined the practices at other universities, studied the legalities of non-profit incorporation and established the institute's governance constituencies and mechanisms. From its first day until his departure from the university, Dodge was its director.

Through all his years at the OU Dodge earned the respect and admiration of students, colleagues and administrators. By 1923, Stratton Brooks, the president who had employed him after that exchange of letters and telegrams four years earlier, was describing him as "unquestionably one of the ablest of younger men and in every way a superior individual." Brooks told one correspondent, "You could not find an abler or more likeable man anywhere." To another, Brooks wrote: "In preparation, in personality, in teaching ability and in general adaptability to professorial work he is not to be surpassed." William Bennett Bizzell, the president under whom Dodge served the longest, thought of him as "one of my most intimate associates and friends." To Bizzell, Dodge was "one of the most scholarly men connected with the University (And) not only a scholar, but a man of the finest ideals of scholarship."

In 1942, Homer Dodge was granted a leave of absence from the OU so that he could, once again, offer service to the country in a time of war. This time, he worked as director of the Office of Scientific Personnel of the National Research Council, where he supervised the effort to recruit and place scientific specialists in positions, including positions in atomic research, where they could best assist the war effort. In the summer of 1944, while he still was in Washington, he accepted the offer to become the 18th president of Norwich University in Northfield, VT, a liberal arts, engineering and military college 125 years old with an illustrious record of providing military officers to the nation. In 1950, he retired from the presidency but remained associated with the university another 10 years to establish and administer a growing aviation program.

His years after leaving Oklahoma were filled with activity and with honors too numerous to list in their entirety. No doubt, winning the Oersted Medal in 1944, "for notable contributions to the teaching of physics" meant much to him. He received honorary degrees from three universities. His

long interest in combining engineering and physics was recognized in 1951, when he was sent to Japan as part of the Engineering Education Mission set up by Douglas MacArthur. Four years later, he and his son, a Russian specialist, went to Russia to study the educational system, especially in areas of science and technology. Upon his return, he gave many lectures across the country on Russian education. His various scientific, academic and professional activities kept him well occupied into his seventies and eighties.

He also continued his life as an outdoorsman, a camper, a hiker, and above all, a canoeist. He undertook his last formal canoe race at the age of 87. He won his class. To celebrate their 60th wedding anniversary, in September 1977, Homer and Margaret Dodge paddled down Cremona Creek and into the Patuxent River. Today, his canoes reside in the Homer Dodge room of the Antique boat Museum in Clayton, N.Y., an hour's drive from the place where he was born.

Margaret Wing Dodge died in 1981. The couple had two children, Alice Dodge Wallace, born in October 1920, and Norton Townshend Dodge, born in June 1927. Dr. Dodge died at his home on his son's farm in Mechanicsville, MD, on June 29, 1983. He was 95. The obituary notice in *Physics Today*, a journal he had helped to found a half-century before, put it succinctly. He was, the editors said, "a great statesman of science."

An Interview with Alice Dodge Wallace and Norton Dodge

I usually spend my Wednesday mornings this fall semester preparing for my 11:30am class. But the morning of September 14 was different, as the daughter and son of Homer Dodge, Alice Dodge Wallace and Norton Dodge, had agreed to meet with David Levy, OU's historian, and me for an hour of conversation about their father. Little time elapsed before Alice and Norton were deep into interesting stories about the man who had served as chair from 1919 to 1942, 23 years during which a department of one grew to be a department of 15 faculty with labs and offices in Evans Hall, and offering dozens of courses.

Bad roads between Norman and Oklahoma City at the time caused Alice's mother, Margaret, to return temporarily to her native Ohio, where Alice was born. But Alice grew up in Norman and eventually attended OU. At the interview she recounted anecdotes about her childhood during the first half of the 1900s, including roller skating on the campus, an area she regarded as her playground. Norton, younger than Alice and born in Norman, punctuated Alice's remarks but had his own stories to tell, too. Together, the sister and brother wove an interesting composite picture of the professor, his family and a young university.

Homer and Margaret Dodge had met at the University of Iowa, where Homer was a graduate student and instructor in physics. In the latter capacity, Homer developed a physics course for home economics majors, a field in which Margaret, then an undergraduate, was a major. It turns out that Margaret desired to purchase a canoe, and friends recommended that she seek advice from Homer, an accomplished and dedicated canoeist. Apparently, this sparked the friendship which ended in marriage for the two.

The Dodge family resided at 523 Chautauqua Avenue, a location close enough to campus that Homer could walk to work each day. The Dodges were a close family. Not religious or political to any great extent, they were relatively conservative in their beliefs and lifestyle; Homer, for example, was opposed to the consumption of alcohol.

The four enjoyed dinner together each evening, and on many occasions other faculty and friends joined them as guests. Two neighbors in particular, Professor Charles Perry of the Philosophy Department and his wife, were close friends of the Dodges.

That Homer was a devoted father to both Alice and Norton became apparent as they each told their stories of camping and canoeing trips they had taken individually with him. Alice, for example, recalls numerous trips as a child, often to the west and southwest. In particular, she recalled visiting archaeological sites such as Mesa Verde, as well as other places like Rocky Mountain National Park and the Grand Tetons. Norton's memories of travel with his father include a trip to northern Europe in which they stopped in Copenhagen to visit Niels Bohr. While there, they attended a dinner with Bohr and guests, and then were invited back the next evening for another such affair.

At the end of the interview, I asked Alice and Norton what their father would be most proud about today regarding his accomplishments while serving as department chair as well as graduate dean. They mentioned two things in particular: building up a physics department of national distinction and founding the Research Institute.

With pressing schedules, we all finally had to go off in different directions to take care of other duties. Alice and Norton had a long day ahead of them, with an appointment with President Boren and the formal dedication ceremony late in the afternoon still ahead. They were an interesting pair to speak with, and they provided me with a personal view of what the man responsible for setting the original course of the department was like as a person and a father.

Dick Henry

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