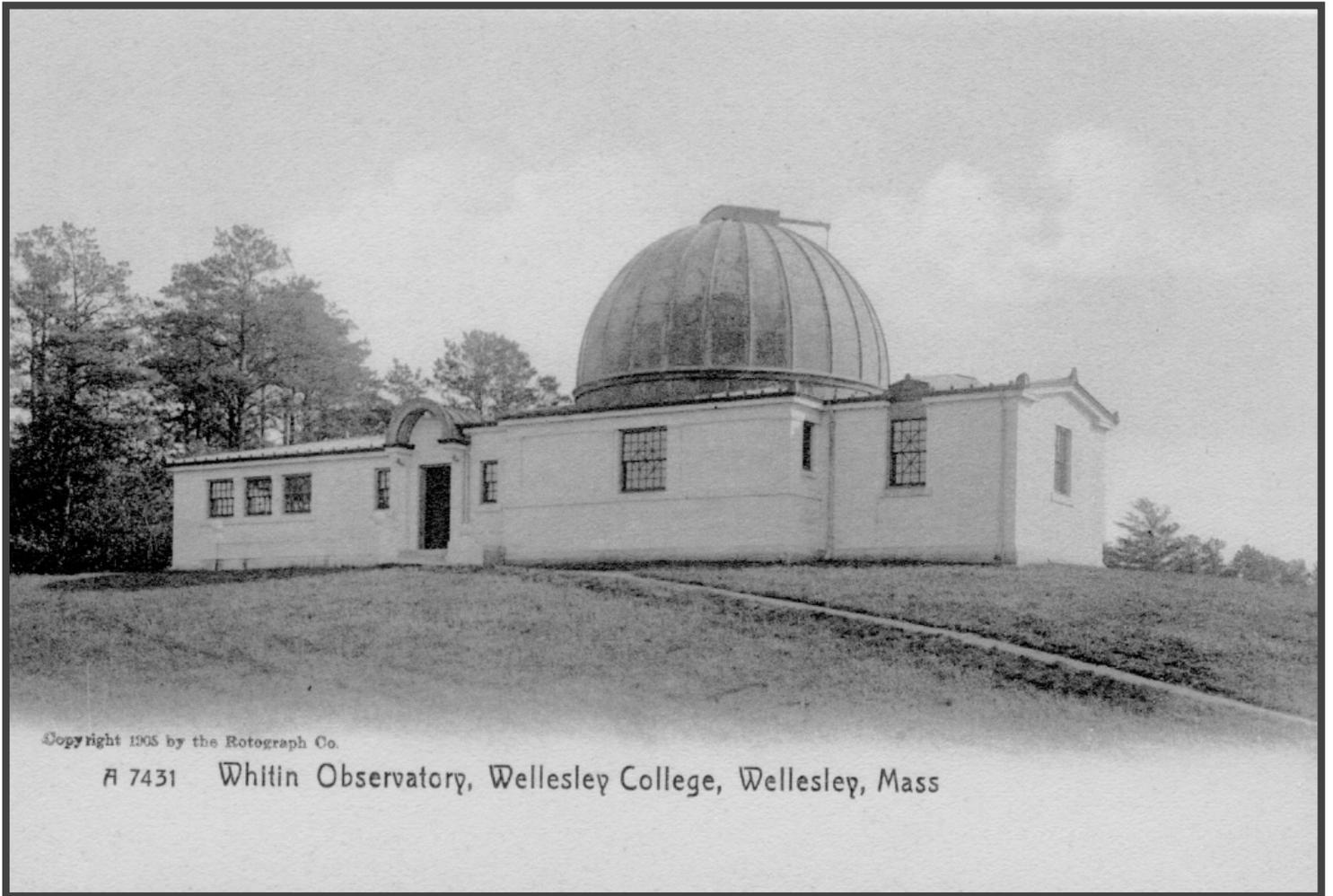


*The Whitin Observatory Construction Project:*



*Links to the Past and a Vision for the Future*

## The Whitin Observatory Construction Project: Links to the Past and a Vision for the Future

Richard G. French  
Director of the Whitin Observatory



In June 2001, the Wellesley College Astronomy Department hosted a celebration of the 100<sup>th</sup> anniversary of the Whitin Observatory, the spiritual home of generations of astronomy students. Nearly a hundred alumnae and former faculty, journeying from as far away as Brazil and Germany, returned to campus to join in the festivities. Everyone had a different tale to tell, but the common thread was of affection for our beloved Observatory on the hill. In lectures, panel discussions, and personal stories, we shared the rich history of this special place, the generous gift of Mrs. Sarah Whitin.

We recreated the fire-lighting ceremony of the original dedication of the Observatory, and sang the hymn written a century ago by President Hazard. We learned of the pioneering efforts of Sarah Frances Whiting, Wellesley's first astronomy professor, to have students learn by doing, rather than listening, who wrote in 1912:

*“In these days when colleges are receiving students taught by the new methods, which expect all work to be turned into play, and nature studies and all other studies to be prepared in predigested form by the teacher, there is need of a new era of the glorification of ‘dead work’. Students who elect astronomy.... must not find it a snap course and be relieved from dead work – this all the more, because some take the subject with a vague longing to solve the problems of the Universe and very little desire to take the necessary steps to do it.”*



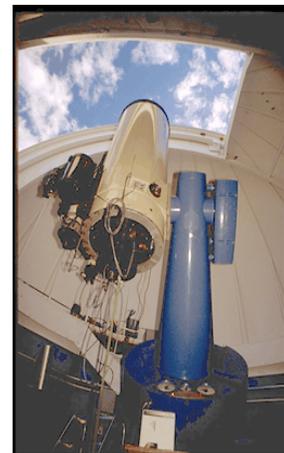
We learned about the high academic standards of Wellesley's early faculty, such as Ellen Hayes, a formidable mathematics professor, a radical socialist, and fierce advocate of mandatory science courses for every student. One of her students later recalled:

*“A group of us were attracted by her reputation for severity, charm, and originality, and anticipated our course with mingled feelings of dread and ambition. I shall never forget the day when our first papers were returned. We had done our usual slipshod work which had hitherto brought us passing and even good marks. But here was a teacher different from any we had known. Our papers must be rewritten. Statements had to be supported by evidence. We were college juniors; we should show scholarship. Excellence and not mediocrity was the standard.”*

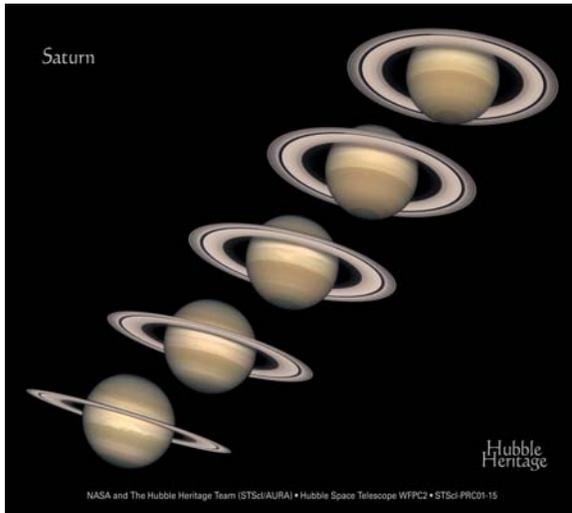
We saw pictures of the Observatory in its early days, with its 19<sup>th</sup> century charm, complete celestial globes, brass telescopes, a sand-filled hour-glass and an India carpet on the floor. Our reflections about the past reminded us of the rich history of astronomy at Wellesley College, and careful stewardship of the Observatory by our predecessors.



At the same time, we had gathered not just to reminisce, but also to look ahead to the next century, the first century of a new millennium. The revolutions in science and technology of the recent decades have transformed the Whitin Observatory from a teaching laboratory to a true 21<sup>st</sup> century research facility. The modern instrumentation on our 24” telescope, the generous gift of Margaret Sawyer, has made it possible for our students to carry out cutting-edge research projects from on campus, just walking distance from their dormitories. With support provided by the Birney-Wilson Fund, our students now have the opportunity to travel to professional conferences to present their results. We have revised our curriculum to enable our advanced students to learn research techniques that they will use in their graduate studies in astrophysics. Our students regularly make use of a nearby 100 foot radio telescope run by the National Science Foundation.



Introductory students learn to use our fleet of small but powerful computer-driven telescopes, carrying on Sarah Whiting's approach of hands-on learning. Advanced students routinely use our 24" telescope to take breathtaking images of the distant galaxies, the remains of violent supernova explosions, and clusters of ancient stars.



Our faculty, together with our students, have traveled around the world to observe with the world's biggest and best telescopes, from Chile to Hawaii to Puerto Rico to Arizona. Every faculty member in our department has made observations with the Hubble Space Telescope, and our students have been involved in the detailed investigation of these world-class results. Looking to the future, we have a close connection with the international Cassini-Huygens mission to Saturn, set to arrive at Saturn in July of 2004 at the start of a four-year orbital tour of the ringed planet.

The next decade of students will have the opportunity to be involved in every aspect of modern interplanetary exploration. We are proud of the legacy established by our predecessors, and eager to match their high standards for academic excellence. We ask a great deal of our students and of ourselves, both in the classroom and in advanced research. Our goal is to make the Wellesley College Astronomy Department a model for liberal arts science education in the 21<sup>st</sup> century.

To achieve this goal, we need to transform the venerable Whiting Observatory into a modern center for scientific teaching and learning, while restoring and preserving its historical character. As much as we love the Observatory, it is not adequate for our present or future needs. Our faculty and staff have expanded over the past decades, well beyond our office spaces. The main room in the Observatory is now a library, computing center, homework room, and thoroughfare, serving none of these purposes well. Half of our library holdings are in the unfinished basement, under bare pipes, stone walls, and cobwebs. We have an observatory engineer, but no shop facilities for the repair and maintenance of existing equipment or the construction of new instrumentation. There is no handicapped-accessible rest room. There is no space for quiet study or analysis of modern astronomical data. We lack an appropriate classroom for our many intermediate-level small courses.



In order to remedy these deficiencies, we have worked with the College to develop a plan for the renovation and new construction of the Whitin Observatory. The key goals are:

- An astronomical multi-media center, serving as a modern library, computational facility, and research space for students and faculty
- A modern seminar room for upper-level classes and student research
- Office space for our faculty, observatory engineer, and post-doctoral research associates
- Restoration of the main room of the Observatory to its original historical character, adding display space for both historical and modern research findings
- Renovation of the existing structure to bring the building up to code
- Flexibility in design so that the new construction will be able to accommodate evolving technology and pedagogical approach.

Over the past three years we have reached an agreement with the Dean's Office that the cost of the astronomy construction project will not exceed \$2,000,000. Estimates from the architects indicate that just bringing the existing structure up to code will require close to \$600,000. The Astronomy Department has committed to using \$400,000 of its present and future endowment. The balance must come from Campaign funds and from donors.

At its 200<sup>th</sup> Anniversary, we hope that our successors will feel that we have prepared the way for them in the same spirit of the original founders, as expressed by Ellen Hayes in her description of the first dedication ceremony, just over 100 years ago:

*“One’s imagination is taxed in trying to picture the long procession of young women whose lives are going to be made richer and nobler by this far-reaching benefaction, due to Mrs. Whitin. We shall one by one close our eyes on the stars; but the beautiful observatory will remain. Those who come after us will take up the work, watch the skies, and go on with the records in our stead; for the astronomer never dies.”*

