

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

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1. Name of Property

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historic name: Vassar College Observatory

other name/site number: _____

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2. Location

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street & number: Raymond Avenue

not for publication: N/A

city/town: Poughkeepsie

vicinity: N/A

state: NY county: Dutchess

code: 027

zip code: 12603

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3. Classification

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Ownership of Property: private

Category of Property: building

Number of Resources within Property:

Contributing	Noncontributing	
1	0	buildings
0	0	sites
0	0	structures
0	0	objects
1	0	Total

Number of contributing resources previously listed in the National Register: 0

Name of related multiple property listing: _____

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4. State/Federal Agency Certification
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As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this _____ nomination _____ request for determination of eligibility meets the documentation _____ standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property _____ meets _____ does not meet the National Register Criteria. _____ See continuation sheet.

Signature of certifying official _____ Date

State or Federal agency and bureau

In my opinion, the property _____ meets _____ does not meet the National Register criteria. _____ See continuation sheet.

Signature of commenting or other official _____ Date

State or Federal agency and bureau

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5. National Park Service Certification
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I, hereby certify that this property is:

- _____ entered in the National Register _____
_____ See continuation sheet.
- _____ determined eligible for the _____
_____ National Register _____
_____ See continuation sheet.
- _____ determined not eligible for the _____
_____ National Register _____
- _____ removed from the National Register _____

_____ other (explain): _____

Signature of Keeper _____ Date
of Action

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6. Function or Use
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Historic: Education Sub: Research Facility
Observatory
Professor's residence

Current : Education Sub: Class rooms

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7. Description
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Architectural Classification:

Observatory

Other Description: _____

Materials: foundation: limestone roof: pine, tin
5 stone piers
walls: brick other

Describe present and historic physical appearance. X See continuation sheet.

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8. Statement of Significance
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Certifying official has considered the significance of this property in relation to other properties: national

Applicable National Register Criteria: A,B

Criteria Considerations (Exceptions) : _____

Areas of Significance: Education
Science
Social History

Period(s) of Significance: 1865 to 1889

Significant Dates : 1865

Significant Person(s): Maria Mitchell

Cultural Affiliation: N/A

Architect/Builder: Charles S. Farrar, scientific design
William Harloe, Builder

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.
 See continuation sheet.

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9. Major Bibliographical References

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See continuation sheet.

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested.
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

Primary Location of Additional Data:

- State historic preservation office
- Other state agency
- Federal agency
- Local government
- University
- Other -- Specify Repository: Vassar College Archives

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10. Geographical Data

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Acreage of Property: less than one acre

UTM References: Zone Easting Northing Zone Easting Northing

A	18	591920	4 ⁶ 15200	B	_____	_____	_____
C	_____	_____	_____	D	_____	_____	_____

See continuation sheet.

Verbal Boundary Description: ___ See continuation sheet.

All that tract of parcel of land situated in the Town of Poughkeepsie, County of Dutchess, and State of New York more particularly bounded and described as follows:

Beginning at a point 5.0 feet north of the extreme north wall of the Vassar College Observatory and 14.0 feet west of the west fact of the main west wall of said building; running thence due east 70.0 feet to a point, said point being 5.0 feet north of the extreme north wall of the building and 5.0 feet east of the east face of the easterly most wall of the building; thence due south 90.0 feet to a point which is 5.0 feet south of the southern most wall of the building and 5.0 feet east of the easterly most wall of the building; thence due west 70.0 feet to a point, said point being 5.0 feet south of the southern most wall of the building and 14.0 feet west of the main west wall of the building; thence due north 90.0 feet to the point and place of beginning.

Said parcel lying wholly within the lands of Vassar College as recorded in the Dutchess County Clerks Office in liber 118 page 310 and 311.

The point and place of beginning of the here-in described parcel is approximately 1450 feet due east of a point in the center line of Raymond Ave. said point also being south 10 degrees west 691 feet from the intersection of the center lines of college Avenue and Raymond Avenue in the town of Pougkeepsie, Dutchess County, New York.

Boundary Justification: ___ See continuation sheet.

The basis for determining each boundary is equal to the measurements of the building.

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11. Form Prepared By
=====

Name/Title: Dr. Page Putnam Miller, Director, NCC

Organization - National Coordinating Date - September 25, 1989
Committee for the Promotion of History

Street & Number 400 A Street, SE Telephone (202) 544-2422

City or Town Washington State - DC ZIP - 20003

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DESCRIPTION OF SITE:

The Vassar College Observatory built for Maria Mitchell is located on the Vassar College campus in Poughkeepsie, New York. The structure is situated about 800 feet northeast of the Main Building, on the top of a hill in order to provide proper elevation.

The observatory faces west, and includes an octagonal center 26 feet in diameter surmounted by a dome 27 feet, 7 inches in diameter. Three additional two story wings, each 21-by-28-feet and containing various functional rooms extend to the north, east, and south. It is here that the clock, chronograph, transit and prime vertical rooms are all located. The basement of the wings, originally unfinished, has a nine foot high ceiling, and the floor of the observatory is four and one-half feet above the floors of the wings.

The primary material used in construction is brick. The walls of the observatory are of solid brick, whereas the walls of the wings are hollow. The dome, weighing one and a half tons was built with ribs of pine, and then covered with sheet-tin. Sixteen cast-iron pulleys, nine inches in diameter and running on an iron track revolve the dome.

Five stone piers, spanning the basement and the principle floors, are uniformly disconnected from the walls and the floors of the building so as to be "immovable by wind or any mechanical force."¹ A granite shaft rests on the most massive pier to hold the equatorial, with similar shafts for the transit and meridian circle of Onondaga limestone, and for the prime vertical of white Westchester marble. The bases of the clock and chronograph are Dover marble.

The north wing and portions of the basement served as the residence for Maria Mitchell and her father. Just a few years after the observatory was built, there were some renovations to enlarge the living quarters.

Today the original telescope is in the American History Musuem of the Smithsonian Institution and the observatory is no longer used for teaching astronomy. City lights and electronic disturbances interfere with observation and measurement. Astronomy courses are now taught in the Sanders Physics Building and the Observatory serves as a general academic building with some rooms used as a college resource center.

The Observatory has remained essentially the same since its construction in 1865. While it is true that the Henry Fitz telescope was given to the Smithsonian institution in the 1950s, the sidereal clock and the five stone pillars remain as

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Matthew Vassar built the Vassar College Observatory on the campus of his new college in 1865 exclusively for Maria Mitchell, astronomer, professor, and first woman elected to both the American Academy of Arts and Sciences and the American Philosophical Society. Vassar lured Mitchell, an established scientist, as a professor despite her lack of a graduate degree. Mitchell made many important observations in this custom-designed building, but serving as a crusader for women's higher education became her most important role. Within the context of the National Historic Landmarks program thematic framework, Maria Mitchell's Observatory has national significance under theme: XIII. Science (A) Physical Science 1. Astronomy, and Theme: XXVII. Education (C) Higher Education (H) Special Populations 3. Women's Education.

Although Mitchell's home on Nantucket reveals much about her early life and her initial work as an astronomer, the observatory at Vassar best represents her significant and unprecedented support of women in the sciences and her efforts towards the cause of women's education and professional advancement. Within a few years of her arrival at Vassar, Mitchell had established herself as a thorough and inspiring teacher, and her principle goals gradually shifted from her own scientific research to the quality and necessity of rigorous and scholarly education for women. As her sister Phebe Mitchell Kendall later wrote : "...She was so much interested in the movement for the higher education of women, an interest which deepened as her work went on, that she gave up, in a great measure, her scientific life, and threw herself heart and soul into this work."¹

Mitchell's devotion to a role for women in the sciences took her into the public realm where she offered her own experience as a scientist and an educator as evidence of women's potential for significant academic achievement. The obstacles in the nineteenth century facing women who sought careers in the sciences were enormous. Sally Gregory Kohlstedt, the President of the History of Science Society, has noted that "it is significant that Maria Mitchell, having to some extent surmounted these obstacles, chose to work directly with women rather than to defy male hegemony."² Mitchell became a symbol, Kohlstedt stated, of the contributions women were able to make to science. With an unswerving commitment to women's education, Mitchell directed her energies to the Association for the Advancement of Women (AAW) in the 1870s. As a member and as president of this organization, Mitchell was instrumental in promoting women's professional involvement in the sciences. Among the members of the AAW were former students of Mitchell's; astronomer Mary Whitney, Ellen Swallow Richards, the first woman to study chemistry at the Massachusetts Institute of Technology, psychologist and logician Christine Ladd-Franklin. Twenty-five of her former students are listed in "Who's Who in America" in their respective professions. Her emphasis on high scientific standards, feminist ideals, and "the worthiness of remunerative labor" made Maria Mitchell a role model for both the women she taught and those who followed her in the struggle for women's equality.³

Maria Mitchell was born in 1818 on Nantucket, and her early interest in science

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and in the stars came from her father who worked as a cooper, a bank officer, and as an educator. William Mitchell became interested in astronomy, and along with his other professions, rated chronometers for use in celestial navigation by the Nantucket whaling fleet. Through a combination of working closely with her father, and teaching herself, Mitchell developed her knowledge and experience in sciences and astronomy. When she was twelve she assisted her father in recording the time of an eclipse. And at the age 17, she created her own school for girls training them especially in the fields of Science and Mathematics, and by age twenty she became the librarian for the Nantucket Atheneum. During her years as the Atheneum librarian, she spent evenings in an observatory her father had built on top of the Pacific Bank where he was a principle officer.

The childhood home of Maria Mitchell and her residence during her initial scientific work, 1 Vestal Street in Nantucket, reflects Mitchell's origins, the development of her independence in a unique place that fostered independent women during the long periods of time their men were at sea.⁴ It was also the location of her intellectual development, where she first pursued her love of mathematics and astronomy, and gained exposure to important literary and scientific personages at the Atheneum. Her home on Nantucket is a museum and contains many family heirlooms. Attached to the house is a domed observatory, however this was added after her death. In addition to the observatory, a library and research center for young scientists is attached to the house. Although her home on Nantucket reveals much about Mitchell, the observatory at Vassar best represents her professional life as the first woman professor of astronomy in the country and as one of this nation's strongest advocates of women's access to the study of science.

Life changed dramatically for Mitchell, when on October 1, 1847, she sighted a comet telescopically, the first comet sighting recorded in America. Standing on the roof of Pacific Bank building, near her Nantucket home, and using her father's two-inch telescope, she sighted the comet that was eventually named for her. In a short time she garnered the attention and awards of the international scientific community. In recognition of this achievement, the King of Denmark awarded her a gold medal, and other honors soon followed.

In 1848, she became the first woman elected to the American Academy of Arts and Sciences. In 1850, sponsored by the famous naturalist Louis Agassiz, she was elected to the American Association for the Advancement of Science. In 1853 she received an honorary LL.D from Hanover College in Indiana, one of the first of such degrees to be awarded to a woman. In 1857-58, she went to Europe, met many of the more renowned astronomers and scientists of the time, and became the first woman to see the Vatican observatory.

In the early 1860s, Maria Mitchell's mother died and she and her father moved

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from Nantucket to Lynn, Massachusetts. It was while the Mitchells were living there that Matthew Vassar approached Mitchell about teaching at the women's college he was opening in Poughkeepsie, NY. Originally, Mitchell was reluctant, professing her lack of college degree and her lack of teaching experience as reasons for declining, but she finally agreed to come.⁵

In recognition of Mitchell's place in the scientific community, as well as the serious intent of the Vassar College program, Matthew Vassar built and equipped an observatory with the advanced equipment and furnishings necessary for both research and teaching. The telescope, built by Henry Fitz, a celebrated telescope-maker in New York, had an object-glass, 12" in diameter. Secured through special negotiations for less than the customary price, the glass was held in the college's safe, until the observatory was completed.⁶ At the time, Maria Mitchell's telescope at Vassar was the third largest in the country. A telegraph line was also installed, "thus affording at small expense, an opportunity to connect with observatories at Washington, Albany, Cambridge and elsewhere."⁷ While there were observatories in the United States equally and more advanced in their technology, the Vassar Laboratory "took precedence over all others in being designed for the practical use of students."⁸

Mitchell was a faculty member and researcher at Vassar College from 1865 to 1888. During this time, she did pioneering research in astronomy, specializing in studies of Jupiter and Saturn, and constructing a photographic apparatus to record information on the sun. Although there was no foundation money for faculty research, she printed her observations at her own expense in Silliman's Journal.⁹

While astronomy and science were her primary focus and expertise, during the years that she taught at Vassar she became a crusader for the higher education of women. She was, by all accounts, an excellent and unorthodox teacher, inspiring students in not just science, but in all their studies. Mitchell, contrary to the attitudes of the day, challenged the young women in her classes to question critically what they read and learned, and not to accept information without analytical examination. She would question her students: "Did you learn that from a book, or did you observe it yourself?"¹⁰ Mitchell did not put much stock in the traditional grading system, and she stated that "You cannot mark the human mind, because there is no intellectual unit."¹¹

In her evaluations to the college president, Mitchell expressed her philosophy about teaching students to observe for themselves. She wrote: "small telescopes and a transit instrument were put into their hands and they were allowed to practice with the meridian circle."¹² With the advanced training she provided, Mitchell motivated many of her pupils to pursue professional careers in science. One of Mitchell's many disciples, Mary Whitney, became her successor to the Astronomy chair at Vassar.

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Along with her teaching and research responsibilities, she was elected to the American Philosophical Society, became Vice-President of the American Social Science Foundation, and she was one of the founders of the American Association for the Advancement of Women. Her progressive feminism led her to actively campaign for the women's vote, and to fight discrimination against female faculty who were paid less than men even if they had more education and training. In her later years, she worked increasingly on the lecture circuit promoting the education of women, raising money for endowments, and accepting honorary degrees. She was instrumental in the founding of Radcliffe College. Mitchell strongly believed that women could make key contributions toward solving the problems of the world, saying once " I wish we could give to every woman who has a novel theory dear to her soul for the improvement of the world, a chance to work out her theory in real life."¹³

Mitchell has been described as "an educator of importance to her generation, an idealist, a stoic philosopher, a famous woman astronomer, a leader in the feminist movement for higher education of women, and a woman of strong character."¹⁴ The Observatory at Vassar best represents Maria Mitchell's professional contributions. The observatory was her home, her laboratory, and her classroom for the last 20 years of her life, and it was there that she inspired young women to think for themselves. Throughout her tenure at Vassar, Mitchell fought for funds to keep the observatory current with the latest technical equipment and in the forefront of scientific experimentation. Her progressive views on women's abilities and women's rights profoundly affected generations of women, and her observatory, located on a prestigious women's college campus reflects her influence.

¹Kendall, Phebe Mitchell. Life and Letters of Maria Mitchell (Freeport, NY, 1971) p. 172.

²Kohlstedt, Sally Gregory, "Maria Mitchell and Women in Science," in Abir-Am, Pnina G. and Dorinda Outram, eds. Uneasy Careers and Intimate Lives, Women in Science, 1789-1979 (New Brunswick, NJ, 1987) p. 134-135.

³Belserene, Emilia Pisani. "Maria Mitchell; Nineteenth Century Astronomer" The Astronomy Quarterly 5 (1986) p. 146-147.

⁴Torjesen, Elizabeth Frances. Comet Over Nantucket, Maria Mitchell and her Island, The Story of America's First Woman Astronomer (Richmond, Indiana, 1984), p. 30.

⁵Edward T. James, Ed. Notable American Women 1607-1950 Vol. II (Cambridge, MA, London, England, 1971), p. 555

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⁶Daniels, Elizabeth A. Main to Mudd An Informal History of Vassar College Buildings (Poughkeepsie, NY, 1987) p. 18

⁷Ibid. p. 18

⁸Ibid. p. 18

⁹Ibid. p. 18

¹⁰Babbitt, Mary King. Maria Mitchell as her Students Knew Her (Poughkeepsie, NY, 1912)p. 12

¹¹Ibid. p. 21.

¹²Daniels, p. 18.

¹³Flexner, Eleanor. Century of Struggle: The Woman's Rights Movement in the United States. (New York, 1972) p. 115

¹⁴ Priestley, Alice E. Maria Mitchell as an Educator (Doctoral dissertation, New York University, 1947) p. 4.

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