National Historic Landmark Documentation for:

STELLAFANE OBSERVATORY

Springfield, VT

Date of NHL Designation:

12/20/1989

NRIS:

77000107

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Stellafane Observatory
other names/site number

2. Location

street & number Off Breezy Road ☐ not for publication
city, town Springfield ☐ vicinity
state Vermont code VT county Windsor code 027 zip code 05413

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
		Contributing	Noncontributing
☒ private	☒ building(s)	2	____ buildings
☐ public-local	☐ district	____	____ sites
☐ public-State	☐ site	____	____ structures
☐ public-Federal	☐ structure	____	____ objects
	☐ object	2	____ Total

Name of related multiple property listing:
____

Number of contributing resources previously listed in the National Register 2

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, 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

5. National Park Service Certification

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 the Keeper — Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)
Social, Education

Current Functions (enter categories from instructions)
Social, Education

7. Description

Architectural Classification (enter categories from instructions)
Vernacular

Materials (enter categories from instructions)
foundation rubblestone
walls wood, shingles
woodframe, woodshingles
roof concrete
other

Describe present and historic physical appearance.

The Stellafane Observatory stands at an elevation of 1270 feet on an exposed shoulder of a hill one-quarter mile southeast of the Breezy Hill Road in Springfield, Vermont.[1] the observatory complex consists of two buildings designed by Russell W. Porter: the clubhouse of the Springfield Telescope Makers, Inc., and the observatory proper containing a 12-inch reflecting turret telescope also designed by Porter. Both the clubhouse and the observatory remain essentially in original condition. The clubhouse occupies the crest of a rocky knoll in an opening of 2.5 acres; the smaller observatory stands about 60 feet to the north at a slightly lower elevation. Oriented toward the north, the buildings face the dominant feature of Mount Ascutney (3150 feet elevation) on the visible horizon.

The clubhouse of the Springfield Telescope Makers consists of a 1-1/2-story, wood frame building set on a rubblestone foundation. The original main section of the building was erected in 1924 on a rectangular plan of 20 x 24 feet; a one-story, 11 x 13-foot ell was added to its southwest corner in 1926. The entire building is sheathed with tongue-and-groove wood siding hung vertically. The gable roofs over both sections are covered with asphalt shingles and show exposed rafter tails at the eaves.

The main (north) facade of the clubhouse displays considerable ornamentation in contrast to the simplicity of the rest of the building. The central main entrance is flanked by two wood Doric columns which support a full entablature. The columns, in turn, are flanked by paired hooded windows. The gable end is distinguished by exposed vertical ribs and by wide barge-boards which are incised with the phrase, "The Heavens Declare The Glory of God." A wood flag mast rises from the doorway entablature upward through the gable peak. A small metal trade sign depicting a man with a telescope and the inscription "Stellafane" hangs over the doorway.

At the southeast corner of the clubhouse, a secondary entrance opens onto a small recessed porch. The slightly flared extension of the roof over the porch is carried by two rough peeled log columns; a simple balustrade connects the columns. On the south wall of the building, between a hooded double window

☐ See continuation sheet

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties:
[X] nationally [ ] statewide [ ] locally

Applicable National Register Criteria [X] A [X] B [ ] C [ ] D NHL Criteria 1,2

Criteria Considerations (Exceptions) [ ] A [ ] B [ ] C [ ] D [ ] E [ ] F [ ] G

Areas of Significance (enter categories from instructions)	Period of Significance	Significant Dates
National Register Significance	1924	
Education, Invention, Science		
National Historic Landmark,		
Science, Subtheme: Physical Science,		
Facet: Astronomy Theme: Technology,		
Subtheme: Tools and Machine		

Cultural Affiliation

Significant Person
Russell W. Porter

Architect/Builder
Russell W. Porter

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

Summary

The Stellafane Observatory in Springfield, Vermont is significant for its pioneering role in the development of amateur telescope making and popular astronomy in the United States. The Stellafane complex contains both the original clubhouse of the first organized group of amateur telescope makers in the country, the Springfield Telescope Makers, Inc., and the first large optical telescope built and owned by that kind of amateur society. Since their construction in 1924 and 1930, respectively, the clubhouse and observatory have remained in continuous use by the Springfield Telescope Makers, and have been preserved essentially in original condition. Stellafane now holds an international reputation which attracts thousands of amateur telescope makers and astronomers to annual conventions held on the site.

History

The origin of the Stellafane Observatory derives from the efforts of one person, Russell W. Porter (1871-1949), an arctic explorer, artist, astronomer, architect, and engineer. Porter aroused the initial interest in telescope making and then taught the techniques of that subject to a group mostly of skilled craftsmen who worked for the machine tool industry in Springfield. Subsequently, Porter designed for the group both the clubhouse and observatory at Stellafane. From 1920 to 1928 Porter provided intellectual stimulus and practical leadership to the group until he left for California to work on the giant Palomar telescope. Owing to his pioneering work at Springfield, Porter is now respected internationally as the founder of the amateur telescope-making movement.

The first meeting of the amateur telescope makers occurred in August 1920 at the Jones and Lamson Machine Company in Springfield. Instructed and inspired by Russell Porter, 16 people began the highly precise and challenging task of building their own telescopes. During succeeding months, Porter expanded the activity of the group to astronomical observation, taking field trips to local hilltops for all-night sessions.

[ ] See continuation sheet

9. Major Bibliographical References

See Continuation Sheet

☐ 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: _____

10. Geographical Data

Acreage of property 2.5

UTM References

	Zone	Easting	Northing
A	18	701290	4794604
B			
C			
D			

☐ See continuation sheet

Verbal Boundary Description : Beginning at a bolt in the ledge 100 ft. Easterly of the center of the building known as "Stellafane" and now used and occupied by grantees; thence north 16° east 166 ft. to a bolt in the ledge; thence north 74° west 200 ft. to a bolt in the ledge; thence south 16° east 134 ft. to the point of beginning. Meaning and intending to convey a rectangular plot of land 200 by 300 ft.

☐ See continuation sheet

Boundary Justification

This is the legal boundary for the Stellafane Observatory.

☐ See continuation sheet

11. Form Prepared By

name/title Harry Butowsky
organization National Park Service date May 1, 1989
street & number 1100 L Street, N.W. telephone (202) 343-8155
city or town Washington state DC zip code 20013

★U.S.GPO:1988-0-223-918

and the corner of the entrance porch, a large sundial is painted onto the sheathing in contrasting colors.

The observatory building, constructed on an outcrop of bedrock in 1930-31, consists of a one-story, 8 x 10-foot wood frame section attached at its north end to a circular reinforced concrete structure supporting the telescope. The wood frame section is sheathed with flush boards hung vertically; its gable roof is covered with wood shingles. The concrete structure has a diameter of 7.5 feet and is capped with a reinforced concrete dome, or turret, mounted at an oblique angle on a steel equatorial ring. From one side of the rotating turret, a 17-foot truncated pyramidal boom constructed of steel pipe and rod extends outward to support the parabolic mirror. On the opposite side of the turret, a single steel pipe extends outward to serve as a counterweight to the boom.

The telescope operates in the following manner: light from a celestial body strikes a 12-inch circular glass flat mirror mounted on the exterior of the turret from which it passes to the parabolic mirror mounted at the outer end of the boom. The mirror reflects the light back through a central hole in the flat mirror to the focal point at the eyepiece of the telescope inside the turret. This design enables the observer to remain inside a sheltered space which can be heated for comfortable observation during cold winter nights without distorting the optical performance of the glass flat and parabolic mirror.

During the fall of 1923 the group undertook construction of the building on Breezy Hill which became its clubhouse; Porter contributed the plot of land, the architectural design, and the cost of some building materials. In December of the same year, the group established itself formally as the Springfield Telescope Makers, Inc., and elected Porter president. The basic requirement for membership consisted of making one's own mirror suitable for mounting in a telescope. At a meeting in January 1924 Porter suggested the name "Stellar Fane"--meaning "shrine to the stars"--for the new clubhouse; it was adopted but soon shortened to Stellafane. Here the members brought their telescopes for evenings of lectures and discussions on telescope making and astronomy followed by nights of observing.

Interest in the activities of the telescope makers soon began to spread beyond Springfield. The first articles about Stellafane appeared in national magazines later in 1924. Then in June 1925 Albert G. Ingalls, an editor of Scientific American, visited the site to gather information for an article which appeared in the November 1925 issue. That article generated enthusiastic response throughout the United States and around the world. Other articles about Stellafane and telescope making by Ingalls and Porter followed in the same journal and brought an ever-increasing response. Soon John M. Pierce, the vice-president of the club, began to ship instructions and materials for making telescopes to meet requests from all over the world.

In July 1926 the tradition of the summer convention of amateur telescope makers at Stellafane was inaugurated with the first gathering of twenty persons, mostly from New England and New York. The following summer, three times that number came to the second Stellafane convention. Meanwhile, Ingalls had edited a new book on telescope making, including articles by Porter; the first printing was sold out by 1928. In May of that year, Ingalls started a regular column in Scientific American devoted to telescope making.

The popular movement in telescopy and astronomy was expanding rapidly from the nucleus at Springfield into an international phenomenon.

The relationship between Porter and the Springfield Telescope Makers changed abruptly late in 1928 when Porter moved to California to join the work then beginning on the 200-inch Palomar telescope, the largest in the world. Nevertheless he continued to communicate frequently with, and assist, the Springfield group and he returned for the annual conventions. Indeed, perhaps his greatest single contribution to the Springfield group was still to come: in the fall of 1929 Porter presented to the group his plans for a large telescope for the Stellafane site --"the first reflecting turret telescope in

the world." Porter returned to Springfield the following summer to direct construction of the observatory, which was finally completed in 1931. The resulting Porter Turret Telescope at Stellafane and a smaller turret telescope with refractive optics also in Springfield are, according to Alan B. Rohwer, a former President of the Springfield Telescope Makers, the "only two turret-type telescopes known currently to exist."

Porter attended the summer convention at Stellafane for the last time in 1946; he died in California three years later. Since then, the membership of the Springfield Telescope Makers has expanded into other states, and the activity at Stellafane continues to flourish, especially at the annual conventions. Nearly 3000 people from throughout the United States, Canada, and many other countries now gather at Stellafane every summer to share ideas and experiences in a strictly non-commercial milieu, to display their increasingly sophisticated telescopes, for judging of mechanical design and operation under the dark Vermont sky. Among amateur telescope makers and astronomers Stellafane is now considered a shrine to Russell W. Porter and the founding of their movement: a trip to Stellafane is considered a pilgrimage.

Footnotes

1. The material for this nomination was taken primarily from the following source.

   Hugh H. Henry, "National Register of Historic Places Inventory-Nomination form--Stellafane Observatory." (Montpelier, Vermont: Vermont Division for Historic Preservation, 1977).

Bibliography

Henry, Hugh H. "National Register of Historic Places-Nomination Form--Stellafane Observatory." Montpelier, Vermont: Vermont Division of Historic Preservation, 1977.

Marshall, Oscar Seth. journeyman machinist: en route to the stars: Stellafane to Palomar. Taunton, Massachusetts: W. S. Sullwold Publishing, Inc., 1979.

Sinnott, Roger W. "Stellafane: A First Visit," Sky and Telescope, November 1986, pp. 527-529.

Willard, Berton C. Russell W. Porter: Arctic Explorer, Artist, Telescope Maker. Freeport, Maine: The Bond Wheelwright Company, 1976.


1930

Stellafane Observatory
Springfield, Vermont
Front View of Clubhouse and Turret
Telescope, 1988
Photo Credit: Stellafane Observatory


1930

Stellafane Observatory
Springfield, Vermont
Turret Telescope, 1988
Photo Credit: Stellafane Observatory

Stellafane Observatory
Springfield, Vermont
Rear View of Turret Telescope, 1988
Photo Credit: Stellafane Observatory

Stellafane Observatory
Springfield, Vermont
Front View of Clubhouse, 1988
Photo Credit: Stellafane Observatory


STELLAFANE

Stellafane Observatory
Springfield, Vermont
Trade Sign on the Clubhouse, 1988
Photo Credit: Stellafane Observatory


U.S. GEOLOGICAL SURVEY
COOPERATION WITH THE STATE
LAT.
43° 16. 41.30
ELEVATION
ABOVE SEA
1290 FEET
LONG.
72° 31 10.11
250 DOLLARS FINE
FOR DISTURBING THIS MARK

Stellafane Observatory
Springfield, Vermont
U.S.G.S. Survey Marker, 1988
Photo Credit: Stellafane Observatory

ASTEROID
3140 STELLAFANE

NAMED IN HONOR OF THE ANNUAL VERMONT MEETING OF AMATEUR TELESCOPE MAKERS WHERE ASTRONOMICAL IDEAS ARE EXCHANGED, IMPROVED PERFORMANCE OF ASTRONOMICAL INSTRUMENTS IS DEVELOPED, AND GOOD CONTACT BETWEEN AMATEUR AND PROFESSIONAL ASTRONOMERS IS FOSTERED

Asteroid Discovered
And Donated By Brian Skiff
Asteroid Name And Citation
Provided By Phil Dombrowski

AUGUST, 1988

Stellafane Observatory
Springfield, Vermont
Plaque located in the Clubhouse, 1988
Photo Credit: Stellafane Observatory