Form No. 10-300 (Rev. 10-74)

PH0358461

DATA SHEET

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

# NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY
RECEIVED MAR 3 1977
DATE ENTERED NOV 7 1977

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

## 1 NAME

HISTORIC **

Stellafane Observatory

AND/OR COMMON

## 2 LOCATION

STREET & NUMBER

Off Breezy Hill Road

__NOT FOR PUBLICATION

CITY, TOWN

Springfield vicinity

__ VICINITY OF

CONGRESSIONAL DISTRICT

Vermont

| STATE | CODE | COUNTY | CODE |
|---|---|---|---|
| Vermont | 50 | Windsor | 027 |

## 3 CLASSIFICATION

| CATEGORY | OWNERSHIP | STATUS | PRESENT USE | |
|---|---|---|---|---|
| __DISTRICT | __PUBLIC | X OCCUPIED | __AGRICULTURE | __MUSEUM |
| X BUILDING(S) | X PRIVATE | __UNOCCUPIED | __COMMERCIAL | __PARK |
| __STRUCTURE | __BOTH | __WORK IN PROGRESS | __EDUCATIONAL | __PRIVATE RESIDENCE |
| __SITE | **PUBLIC ACQUISITION** | **ACCESSIBLE** | __ENTERTAINMENT | __RELIGIOUS |
| __OBJECT | __IN PROCESS | X YES: RESTRICTED | __GOVERNMENT | X SCIENTIFIC |
| | __BEING CONSIDERED | __YES: UNRESTRICTED | __INDUSTRIAL | __TRANSPORTATION |
| | | __NO | __MILITARY | __OTHER: |

## 4 OWNER OF PROPERTY

NAME

Springfield Telescope Makers, Inc.

STREET & NUMBER

c/o Ernest V. Flanders, Secretary 12 Hillcrest Road

CITY, TOWN

Springfield __ VICINITY OF

STATE

Vermont

## 5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.

Office of the Town Clerk

STREET & NUMBER

96 Main Street

CITY, TOWN

Springfield

STATE

Vermont

## 6 REPRESENTATION IN EXISTING SURVEYS

TITLE

Vermont State Register of Historic Places

DATE

1973 __FEDERAL X STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS

Vermont Division for Historic Preservation

CITY, TOWN

Montpelier

STATE

Vermont

## 7 DESCRIPTION

| CONDITION | | CHECK ONE | CHECK ONE |
|---|---|---|---|
| X EXCELLENT | __DETERIORATED | X UNALTERED | X ORIGINAL SITE |
| __GOOD | __RUINS | __ALTERED | __MOVED DATE_____ |
| __FAIR | __UNEXPOSED | | |

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Stellafane Observatory stands at an elevation of about 1270 feet on an exposed shoulder of a hill about one-quarter mile southeast of the Breezy Hill Road in Springfield, Vermont. 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 16-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 surrounded by mixed forest; 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 Mt. Ascutney (3150 feet) on the visible horizon.

The clubhouse of the Springfield Telescope Makers consists of a $1\frac{1}{2}$-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 by 24 feet; a one-story, 11 by 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, Tuscan 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 bargeboards 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; from its lower end hangs a wood ox yoke, the symbol of the Springfield Telescope Makers.

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

The observatory building, which was constructed on an outcrop of bedrock in 1930-31, consists of a one-story, 8 by 10-foot, wood frame section attached at its north end to a one-story, 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

# 8 SIGNIFICANCE

| PERIOD | AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW | | | | |
|---|---|---|---|---|---|
| __PREHISTORIC | __ARCHEOLOGY-PREHISTORIC | __COMMUNITY PLANNING | __LANDSCAPE ARCHITECTURE | __RELIGION | |
| __1400-1499 | __ARCHEOLOGY-HISTORIC | __CONSERVATION | __LAW | X SCIENCE | |
| __1500-1599 | __AGRICULTURE | __ECONOMICS | __LITERATURE | __SCULPTURE | |
| __1600-1699 | __ARCHITECTURE | __EDUCATION | __MILITARY | __SOCIAL/HUMANITARIAN | |
| __1700-1799 | __ART | __ENGINEERING | __MUSIC | __THEATER | |
| __1800-1899 | __COMMERCE | __EXPLORATION/SETTLEMENT | __PHILOSOPHY | __TRANSPORTATION | |
| X 1900- | __COMMUNICATIONS | __INDUSTRY | __POLITICS/GOVERNMENT | __OTHER (SPECIFY) | |
| | | __INVENTION | | | |

SPECIFIC DATES 1924/1930 BUILDER/ARCHITECT Russell W. Porter

STATEMENT OF SIGNIFICANCE

The Stellafane Observatory in Springfield, Vermont possesses national significance 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 hundreds of amateur telescope makers and astronomers to annual conventions held on the site.

The origin of the Stellafane Observatory derives pre-eminently from the efforts of one person, Russell W. Porter (1871-1949), an arctic explorer, artist, astronomer, architect, and engineer.[1] Porter aroused the initial interest in telescope making and then taught the techniques of same 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. For nearly a decade (1920-28), Porter provided intellectual stimulus and practical leadership to the group (he left Springfield 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, sixteen persons 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.

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.

## 9 MAJOR BIBLIOGRAPHICAL REFERENCES


1. 'Half a Century of Stellafane Celebrated.' Sky and Telescope, 47 (February, 1974), 101-4.
2. Lindberg, Edward. 'Stellafane - A Dream Come True.' Modern Astronomy, 5 (January-February, 1974), 4-7.
3. McLaughlin, Gerald E. 'Stellafane - Birthplace of Amateur Telescope Making.' Vermont Life, 10 (Summer, 1956), 2-5.


## 10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 3

UTM REFERENCES

| | ZONE | EASTING | NORTHING |
|---|---|---|---|
| A | 18 | 701290 | 4794460 |
| B | | | |
| C | | | |
| D | | | |

VERBAL BOUNDARY DESCRIPTION

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

| STATE | CODE | COUNTY | CODE |
|---|---|---|---|
| | | | |
| STATE | CODE | COUNTY | CODE |
| | | | |

## 11 FORM PREPARED BY

NAME / TITLE

Hugh H. Henry, Historic Sites Researcher

ORGANIZATION — DATE

Vermont Division for Historic Preservation — February 15, 1977

STREET & NUMBER — TELEPHONE

Pavilion Building — 802-828-3226

CITY OR TOWN — STATE

Montpelier — Vermont

## 12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL X STATE ____ LOCAL ____

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE William B. Pinney

TITLE William B. Pinney, State Historic Preservation Officer — DATE 2-25-77

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE 4/7/77

~~DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION~~ KEEPER OF THE NATIONAL REGISTER

ATTEST: ~~KEEPER OF THE NATIONAL REGISTER~~ DATE 4-2-77

GPO 892-453

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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 functions generally in the following manner. Light from a celestial body strikes a circular glass flat 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, in turn, reflects the light back through a central hole in the flat 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. Owing to the latitude of Stellafane (43° 16' 41.30" North), the telescope has an observing range limited mostly to the northern celestial hemisphere.

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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 the periodical Scientific American, visited the site to gather information for an article, which appeared in the November 1925 issue. That article generated enthusiastic response from 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 telescope making 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."[2] Porter returned to Springfield the following summer to direct construction of the observatory, which was finally completed in 1931. The resulting sixteen-inch Porter Turret Telescope at Stellafane and a smaller turret telescope with refractive optics also in Springfield are, according to Alan B. Rohwer, current 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 1000 persons from throughout the United States, Canada,

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and numerous 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 optical performance, and to observe under the still relatively clear and dark Vermont sky. Among amateur telescope makers and astronomers generally, Stellafane is now considered a shrine to Russell W. Porter and the founding of their movement, and a trip to Stellafane is considered a kind of pilgrimage.

1) Most of the information given in this text is taken from a biography of Russell W. Porter by Berton C. Willard, entitled Russell W. Porter - Arctic Explorer, Artist, Telescope Maker, published by The Bond Wheelwright Co., Freeport, Maine in 1976.

2) Willard, op. cit., p. 232.

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4. Pierce, Enid Crawford. 'Springfield Man Father of Amateur Telescope Making.' Springfield (Vt.) Reporter, 175th Historical Supplement (21 August 1936), 7-8.
5. Willard, Berton C. Russell W. Porter - Arctic Explorer, Artist, Telescope Maker. Freeport, Maine: The Bond Wheelwright Co., 1976.
6. Personal interview of Ernest V. Flanders, Secretary of Springfield Telescope Makers, Inc., Springfield, Vermont by Hugh H. Henry on 11 February 1977.