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

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

PH0684163

FOR NPS USE ONLY
RECEIVED SEP 12 1978
DATE ENTERED DEC 22 1978

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

1 NAME

HISTORIC

AND/OR COMMON
McKim Observatory of DePauw University

LOCATION

STREET & NUMBER
~~Intersection of~~ DePauw ~~Avenue~~ and Highridge Ave ~~ue~~ NOT FOR PUBLICATION

CITY, TOWN
Greencastle ___ VICINITY OF

CONGRESSIONAL DISTRICT
Seventh

STATE	CODE	COUNTY	CODE
Indiana	18	Putnam	133

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	X EDUCATIONAL	___PRIVATE RESIDENCE
___SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	___ENTERTAINMENT	___RELIGIOUS
___OBJECT	___IN PROCESS	___YES: RESTRICTED	___GOVERNMENT	X SCIENTIFIC
	___BEING CONSIDERED	X YES: UNRESTRICTED	___INDUSTRIAL	___TRANSPORTATION
		___NO	___MILITARY	___OTHER:

OWNER OF PROPERTY

NAME
Board of Trustees of DePauw University ✓

STREET & NUMBER

CITY, TOWN
Greencastle ___ VICINITY OF

STATE
Indiana 46135

LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.
Office of the Recorder of Putnam County

STREET & NUMBER
Putnam County Courthouse

CITY, TOWN
Greencastle

STATE
Indiana 46135

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
none

DATE

___FEDERAL ___STATE ___COUNTY ___LOCAL

DEPOSITORY FOR SURVEY RECORDS

CITY, TOWN

STATE

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
__EXCELLENT	__DETERIORATED	__UNALTERED	X ORIGINAL SITE
__GOOD	__RUINS	X ALTERED	__MOVED DATE_____
X FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The McKim Observatory was built in 1884 for the purposes of astronomical observation and teaching. Its location on a small hill at elevation 262 meters on the northeast edge of Greencastle, Indiana, was chosen after an earlier attempt to create an on-campus observatory failed because of environmental disturbances. The structure has a stone foundation with a crawl space. The walls are made of brick one foot thick, but in 1918 the outside brick surface was stuccoed and it is now painted white. The roof is flat and was originally tin, though it is now covered with rolled roofing. The dome is a new aluminum one manufactured by the Ash Company of Illinois and purchased in the Spring of 1975. It is activated electrically and is eighteen and one half feet in diameter. The original 17-foot-diameter dome was iron and was activated by a hand pull. When the new dome was installed, four courses of brick and mortar were removed and a concrete cap was made to enlarge the rim of the building to accomodate the new dome. There is a blacony around the south and west sides of the dome for outside observation.

In 1890 a four-inch almucantar owned by S. C. Chandler, Jr., son of the inventor of the modern almucantar, was housed in a separate building not far from the Observatory. It was used for very accurate work. Early pictures show it as a small, octagonal, domed building made of wood. It is not known when the almucantar was razed.

The Observatory is an L-shaped, one-story building surmounted by the dome and consists of five rooms: the chronograph, clock, transit, and equatorial rooms and the library. The library forms the north point of the L and the transit room the east point. The chronograph room (also the entry room) is on the corner of the L. The clock room is an octagon-shaped protrusion from the corner of the L, and the equatorial room is directly above it. At the present time only the equatorial room is used, though the library will soon be renovated and used as well.

The equatorial room contains a 9.53 inch clear aperture refracting telescope made by Alvan Clark and Sons of Cambridge, Massachusets in 1885. At the time Clark was the most famous lens maker in the world, noted for grinding lenses which eliminated chromatic aberrations and color fringes. His grinding technique cannot be duplicated even today. The cast iron equatorial pier mounting of the telescope was done by Warner and Swasey of Cleveland, Ohio, and, since it is supported by a masonry pier resting on a special layer of clay, it provides an unshakable foundation for the telescope. The telescope was transported to Wilmot-Fleming Company of Philadelphia in October of 1970 for refurbishing and was returned in March of 1971.

The transit room has currently nonoperable sliding doors in the ceiling and a brass mercator transit with a sixteen-inch meridian circle manufactured by Fauth and Company of Washington, D. C. The original brass Warner and Swasey Chronograph and the glass slide library are still in the Observatory. The solar and siderial pendulum clocks made by E. Howard and Company of Boston, Massachusetts, have been moved to the Mathematics Department of DePauw University and are in perfect working order. Both the transit and the clocks were installed at the time the Observatory was built.

Some of the floor joists and the entire floor of the transit room have been replaced because of termite damage and rot. The inside walls are plastered and painted. Work is currently being done to repair damaged plaster and peeling paint. The eleven windows are the common double hung type, while the floors are oak,

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as is a four-foot high panel along the stairs.

Presently the library and chronograph rooms are heated by electric heaters though originally there was a wood-burning stove in the library, later converted to oil. It has now been removed, though the chimney remains. There is no plumbing of any kind in the building.

Of architectural interest are the curved oak staircase with its three porthole windows, the foot thick brick walls, the carved metal locks on the doors, the octagonal clock room, and the ornate cornices. Of historical interest are the pieces of teaching and research equipment dating back to 1885: the celestial globe and stand, lantern, cameras, star charts, sextant, and a hand-operated device to illustrate solar eclipses.

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	X EDUCATION	__MILITARY	__SOCIAL/HUMANITARIAN
__1700-1799	__ART	__ENGINEERING	__MUSIC	__THEATER
X 1800-1899	__COMMERCE	__EXPLORATION/SETTLEMENT	__PHILOSOPHY	__TRANSPORTATION
__1900-	__COMMUNICATIONS	__INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)
		__INVENTION		

SPECIFIC DATES Built 1884 BUILDER/ARCHITECT Joseph Marshall

STATEMENT OF SIGNIFICANCE

The McKim Observatory of DePauw University is a prime example of a late nineteenth century facility for teaching and research in astronomy. It has been in continuous use since 1885. McKim is distinguished as one of 355 optical observatories throughout the world and one of 107 in the United States listed in the annual American Ephemeris and Nautical Almanac. It is one of only 15 American observatories listed that are equipped with meridian transits. The lens of the telescope was made by Alvan Clark, the quality of whose work was unsurpassed in the nineteenth century. The one-meter lens made by Clark for the Yerkes Observatory in Williams Bay, Wisconsin, is still the largest one ever made and mounted.

In 1884 the Joint Board of Trustees and Visitors of Indiana Asbury University (the first Methodist College in Indiana) considered the building of the Observatory so important to raising the status of the University that it supplemented the $8000 gift of Robert McKim with $2000 in order to build the right kind of observatory. Indeed, it signaled the transformation of struggling Indiana Asbury University into the dynamic new DePauw University in January of 1884. In fact, Robert McKim and Washington C. DePauw made their gifts to the University interdependent, thus assuring the strong future and expansion of the University. We have detailed records of McKim Observatory's construction through this precarious period of the University's history and of its use during the ensuing 93 years. It still serves as a teaching facility and, though the nature of astronomical research has changed considerably over the last century, the Clark telescope is still a fine instrument valued not only by historians but by amateur astronomers as well. McKim Observatory is worthy of preservation not only for the record of its past usefulness but for its future promise as well.

Professor John P. D. John, the first Director of the Observatory (1885-1887), and Robert McKim visited nearly every prominent observatory in the United States when they were planning the McKim Observatory. In so doing they were able to design a facility well suited to both teaching and research, avoiding mistakes in design that would have detracted from its usefulness. It is telling of the care involved in the construction of the Observatory that so much interest was taken by both of these men. McKim, according to the daily journal of Joseph Marshall, the architect, was frequently on location checking the progress as well as the quality of the work and materials.

Dr. John became the President of DePauw in 1889, thus expanding his dynamic interest in the educational process to the total educational policy of the University. His inaugural address, titled "DePauw University: Its Opportunity and Its Duty," emphasized the greater freedom based on the increased resources of the modern university. Surely he spoke with the splendid new Observatory in mind as one of DePauw's finest resources.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

1. Irving Frederick Brown, Indiana University-DePauw University: A History, 1914.
2. Wilbur Vincent Brown, "McKim Observatory," The Sidereal Messenger, 4, 1885,p.305-307.
3. George B. Manhart, DePauw Through the Years, The Lakeside Press, Chicago, 1962.
4. William Warren Sweet, Indiana Asbury-DePauw University, 1837-1937, The Abingdon Press, Chicago, 1937.
5. Deborah Jean Warner, Alvan Clark and Sons, Artists in Optics, Smithsonian CON'T

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY less than one

UTM REFERENCES

	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
A	16	512660	4388220	B			
C				D			

VERBAL BOUNDARY DESCRIPTION

The McKim Observatory is marked as "Observatory" on the accompanying map and is marked by a red circle.

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

L.Charlotte Dudley/ Administrative Assistant, McKim Observatory

ORGANIZATION — DATE

DePauw University — October 1977

STREET & NUMBER — TELEPHONE

(Mathematics Dept.) 653-9721 ext. 264

CITY OR TOWN — STATE

Greencastle, Indiana 46135

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL ___ STATE X 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 — 9/1-78

TITLE Indiana State Historic Preservation Officer — DATE

FOR NPS USE ONLY

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

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION — DATE 12.22.78

ATTEST: KEEPER OF THE NATIONAL REGISTER — DATE 12/19/78

GPO 892-453

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Meanwhile, Wilbur Vincent Brown came to DePauw in 1885, beginning his 43-year association with McKim Observatory. He became Director in 1887. In his notebooks we have a reflection of the uses to which the Clark telescope was put during its first half century. His observations were dedicated largely to comet sweeping. He evidently hoped to discover a new comet, though there is no record of his ever having done so. Then, in decreasing order, his observations were nebular, solar, planetary, double-star, and lunar. In addition to the long hours of careful and detailed observations, recording of angles and declinations, and sketching of various formations of stars, W. V. Brown was also using the Observatory for its other designated purpose - the instruction of students in astronomy. During Brown's tenure, both General or Descriptive Astronomy and Practical or Spherical and Instrumental Astronomy were taught, the former emphasizing the use of the telescope for purposes of observation and the latter using all of the Observatory's instruments. With the death of Brown in 1928 a key link with the 19th century was lost and the continuity of research at McKim Observatory was broken.

R. W. Babcock assumed the Directorship in 1928 and was in charge for three seemingly undistinguished years, during which time both Descriptive and Practical Astronomy continued to be taught. Dr. Will Edington began his 25-year tenure as Director of the Observatory in 1930. During this period the Observatory was used for regular astronomy laboratories and for campus and community open houses. The open houses were dicontinued when it became apparent that students viewed open house night as an inexpensive date and as an occasion to exclaim in wonder rather than as a serious opportunity to learn skill with the telescope. During the World War II years Nautical Astronomy and Navigation was added to the curriculum.

Charles H. Johnson taught astronomy at DePauw from 1955-1967 and made extensive use of the Observatory. Also during this time an active Astronomy Club was formed in Greencastle, and the weekly meetings were generally held at the Observatory with Dr. Johnson and several employees of the local IBM plant in attendance. Joseph Corbett has regularly offered two courses in astronomy since 1968: Astronomy of the Solar System and Stellar Astronomy.

During the last several years interest in the Observatory has been renewed. The telescope has been refurbished and only recently has been used to view Pluto, a significant accomplishment for an instrument of its size. The dome has been replaced and a regular program of maintenance and repair has been begun. The Observatory and its equipment are presently valued at more than $150,000, nearly 20 times the original value. Plans are underway to create a small museum in the Observatory containing 19th century teaching equipment and explaining the uses of the equipment. Perhaps some of the early Observatory pictures and documents may be included. McKim Observatory will not only be available for use by serious amateur astronomers, but will also serve as a museum of early astronomy. Thus, just as astronomy has always had an esteemed place in the liberal arts curriculum, so McKim Observatory will be of enduring value as a university building.

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Institution Press, City of Washington, 1968.

6. The American Ephemeris and Nautical Almanac for the Year 1977, U.S. Government Printing Office, Washington, 1975.

7. The DePauw University Archives.