THE WHITIN OBSERVATORY OF WELLESLEY COLLEGE.

S. F. WHITING.

The opening of a new Observatory, whether it be primarily for research or primarily for teaching, or primarily to obtain the data for the practical work of the navigator or geodetic engineer is always a matter of importance in the astronomical world. In astronomy, as in every other science, the three classes of workshops and workers are always needed; the investigator and his research Observatory, the teacher and his students' Observatory, the government staff and their naval and geodetic stations. All contribute to the advancement of science, and notably, the teaching Observatory must do something of the work of each to accomplish the best results.

An Observatory, primarily for students' laboratory work in astronomy, has just been opened at Wellesley College, built and equipped by the enlightened liberality of one of the Trustees, Mrs. John C. Whitin.

In the building, the problem of harmonizing beauty of proportion and ornament with adaptation to special functions, has been happily worked out by the architect and director together, and equipment has not been sacrificed to costly material. The plan is that of a dome twenty-three feet in diameter, flanked by wings to the east and west. The smaller one, west, is the transit room, the larger one, east, contains spectroscope and photographic rooms, library and vestibule. A well finished basement affords place for a workshop.

The material is white marble from Georgia quaries with granite base course, and ribbed copper roof, adorned with acroteria with honeysuckle ornament. A brick paved terrace with marble walls leads up to the hooded entrance, above which is carved the seal of the college enclosed in a wreath, bearing the dates 1875, the founding of the college, and 1900, the completion of the Observatory.

The initial equipment consists of a 12-inch Clark equatorial refractor, a three-inch transit, a sidereal clock and chronograph, and a six-foot focus Rowland concave grating spectroscope, with heliostat. The telescope is furnished with spectroscope for solar work, polarizing photometer, micrometer, and small star spectroscope, all with electric illumination. Other minor instruments are already purchased, and it is intended to provide less costly

apparatus in duplicate for the elementary practice of laboratory divisions.

The opening exercises were in the beautiful new Houghton Chapel. After the entrance of the academic procession led by the vested choir of the college, and an organ voluntary by the professor of music, Professor Hazard introduced Professor E. C. Pickering, who gave the address. He chose for his subject, "The New Planet Eros," and treated it most happily. He spoke of the discovery of the Asteroids, of the early patient work done upon them, of their late embarrassing number, so that Asteroid hunting seemed a doubtful reward, until this little object was found coming periodically into our near neighborhood, so that observations for its exact position might throw light upon vexed astronomical questions. He related the story of the computation of its orbit by Professor Chandler, based upon positions obtained from photographic plates by the patient scrutiny of Mrs. Fleming, and he told of the plans for observation at the coming approach. The usual note of inspiration for genuine work for which the speaker is well known, pervaded the address, and may wisely set the standard for the new Observatory.

Professor David P. Todd of Amherst spoke by request on "Laboratory Work in Astronomy," a work which he has already done much to promote. He claims that it is the method by which that healthful interest in the science so essential to its future development, may be created. He criticised the method of teaching astronomy which has up to this time prevailed, as in direct antagonism to the fundamental principles of scientific education. He expressed the belief that students should be given apparatus by means of which they could test great principles, since rightness of principle in this work at first should take precedence of display of mere precision of result. This suggestive address held the close attention of the audience.

Letters of greeting were read from foreign women of eminence in astronomy: from Lady Huggins, Miss Agnes Clerke and Miss Dorothea Klumpke. The singing by the choir and audience of Addison's great hymn of nature, "The glorious firmament on high," concluded the academic exercises.

The guests followed by the students, crossed the meadow to the new building. The whole company gathered about the front entrance, where the key was presented by the donor to the president of the college with the words: "It gives me great pleasure to present this building to Wellesley College and the keys to you, her president. I do it in the hope that the telescope and other instruments may inspire a love of astronomy and the Observatory become a factor in the higher education of the young women who come to Wellesley College." As Mrs. Whitin threw open the door the musical notes of the Wellesley cheer rose from the students crowding the hillside, and her name rang out at the end.

The guests next assembled in the library where the fire was lighted upon the hearth by a symbolic torch handed to the donor by President Hazard. In the torch, as was explained, were the simples of the field which stood for health of body, the fern for grace and beauty, the leaf of the oak and elm for peace and civic virtues, the laurel for the breath of fame, the pine for hope of immortality. To these were added rosemary for remembrance and pansies for thoughts. "With these holy associations we light this fire, that from this place where Sun and stars are to be observed, true life may ever aspire with the flame to the Author of this light." As the torch, lighted from a silver lamp fed with aqua vitæ, kindled the fire, the chorus burst into song, rendering verses written for the occasion to the tune Hendon:

Stars above that shine and glow Have their image here below, Flames that from the earth arise, Still aspiring, seek the skies.

Upward with the flame we soar, Learning ever more and more; Light and love descend till we, Heaven reflected here shall see.

The visiting astronomers then inscribed their names in the Observatory book, and all proceeded to an inspection of the building. Refreshments were served in the dome.

In the circle south of the building, upon a granite shaft, is a sundial, the gift of an English friend of one of the professors. It bears the inscription which is upon the sundial in the garden of Sir William and Lady Huggins, "Nil nisi caelesti radio." The motto on the stone course beneath the dome is "Night unto night showeth knowledge."

Classes in physical astronomy and mathematical astronomy are already proving the priceless value of these new facilities.

A FAITHFUL WORKER.

P. S. YENDELL.

Mr. David Flanery, a notice of whose death appears on page 400 of the Popular Astronomy for September, was born in