



ANNAPOLIS OBSERVATORY.

cessitates the removal of the observatory, we trust that Congress will promptly enable the director to locate it in a position free from all disturbing influences, and with an outfit of the best instruments of every form; and that a *personnel* may be detailed from year to year sufficient in number to accomplish what the head of the department desires to attain in astronomical pursuits.

#### IV.—ANNAPOLIS OBSERVATORY.

We can not complete this sketch of our government observatories without a just, though necessarily very brief, notice of the observatory used in the instruction of midshipmen at Annapolis. Our picture gives a correct view of the building, having near it the monument erected to the memory of several passed midshipmen who were lost in the ill-fated brig *Somers*.

The Department of Astronomy was created in 1853, and until 1865 was in charge successively of Professors Chauvenet and Coffin. Since that time a graduate of the academy has from time to time been in charge. The course in astronomy is of necessity limited, most of the midshipman's time in this department being required for the study of practical navigation. We learn from the report of Lieutenant-Commander R. L. Phythian to Admiral Porter in 1869 the following facts: "The instruments used in this department are the chronometer, the sextant, the artificial horizon, the azimuth compass, the surveyor's chain and compass, the theodolite, and the plane-table. The observatory is supplied with a sidereal clock, an equatorially mounted telescope, and a su-

perior meridian circle. These instruments are used in instruction only to show the midshipmen the principles of them. There is not sufficient time for them to acquire a practical knowledge of their use by observing with them."

The equatorial referred to by Lieutenant-Commander Phythian is a refractor constructed in 1857 by Alvan Clark. It has an object-glass of 7.75 inches clear aperture, and nine feet six inches focal length. The tube is mounted equatorially in the German style on a solid cast iron pier, provided with a spring governor driving clock. The finder is a small telescope with an object-glass of 1.7 inches clear aperture, and 20.25 inches focal length. This instrument, loaned by Admiral Porter to one of the parties which observed the solar eclipse of 1869, under Professor Harkness, U.S.N., and Dr. Curtis, U.S.A., is reported by them as having been of most valuable service in the expedition. The meridian circle in this little observatory has also a high reputation.

It is not unlikely that in proportion as the course of study at the Naval Academy advances, by the means now used in requiring a better preparation on the part of students before entering the institution, there will be ample time and a more hearty disposition for the use of these fine instruments, though here, as at West Point, the astronomical work must remain mostly educational. At the great institution at Pulkova a number of army and navy officers reside to perfect themselves for geodetic and astronomical work to be carried on through the empire. Will it be thus in the United States?