Carnegie Institution of Washington

CONTRIBUTIONS FROM THE SOLAR OBSERVATORY
MT. WILSON, CALIFORNIA
NO. 4.

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BY
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Reprinted from the *Astrophysical Journal*, Vol. XXIII, pp. 6–10, January 1906.

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By GEORGE E. HALE

In *Contributions from the Solar Observatory*, No. 2, I have given a brief description of the Snow telescope and the house in which it is mounted on Mount Wilson. At the time that paper was written the telescope was not yet in working order, and it remained to be determined whether it would prove capable of giving the results expected from it. I am glad to say that it has since been completed and successfully used in a variety of work. It is believed that an account of the experience so far gained with this telescope may be of service to others who may intend to use similar instruments.

The cœlostat and second mirror are shown in Plate VI, a view taken from within the sliding shelter which covers these parts of the instrument when not in use. The cœlostat mirror is 30 inches (76 cm) in diameter, and the second (plane) mirror, which sends the beam from the cœlostat to the concave mirror in the north end of the telescope house, has a diameter of 24 inches (61 cm). The second mirror can be moved along rails, so as to receive the reflected beam from objects at different declinations. The cœlostat and second mirror stand on a stone pier 29 feet (8.8 m) high at its south end and 25 feet (7.6 m) high at its north end. A house, of steel construction covered with canvas louvres, surrounds the pier and affords space in the extension toward the north for the concave mirrors and the spectroheliographs and spectroscopes. The concave mirror, shown in Plate VII, has an aperture of 24 inches and a focal length of 60 feet (18.3 m). A second concave mirror of the same aperture and of 143 feet (43.6 m) focal length is under construction in our optical shop, and will soon be mounted in the long extension of the house which lies beyond the canvas partition now temporarily in place near the 60-foot mirror.[2]

[1] *Contribution from the Solar Observatory*, No. 4.

[2] For a plan and elevation of the Snow telescope house, together with photographs showing its manner of construction, and a further account of the instrument, see *Contributions from the Solar Observatory*, No. 2, and the *Report of the Director of the Solar Observatory for the Year Ending September 30, 1905*.