Rousdon Observatory, Lyme Regis. (Mr. Peek.)

The establishment continues in good working order, and observations have been made on 160 nights, this being about the average number.

The 6·4-inch Merz achromatic telescope has been regularly employed on long period variable stars, and 511 determinations of magnitude have been secured. Special attention has been given to S *Coronæ*, S *Herculis*, and R *Cygni*. Each of these stars when passing the minimum phase has exhibited the phenomenon of a very minute stellar point, disappearing, and leaving its position occupied by a very faint bluish nebulous haze. Since the work commenced in 1885 December, thirty long-period variables have been observed, and 141 maxima and 121 minima have been determined.

All variables on the working list are observed at least twice monthly throughout the whole of their periods, and not merely at maximum and minimum.

Transit observations have been taken as often as required.

Gale's Comet was observed on twelve nights between May 4 and July 14; for the first week it was distinctly visible to the naked eye. Encke's Comet was viewed on November 25, when it was excessively faint: it has since become easily visible in small telescopes.

The ingress of *Mercury* at the transit on November 10 was observed under most favourable conditions, and the times of external and internal contact at ingress noted. There was no trace of any white spot, nor of any ring or halo round the planet, and during the twenty-five minutes it could be observed it appeared as a very black, circular, well-defined disc.

Dr. Isaac Roberts' Observatory, Crowborough Hill, Sussex.

The photographic work at this observatory has been maintained during 1894 on the same plan as in preceding years, but the number of really first-class nights has been somewhat below the average.

The following list of photographs of nebulæ and clusters shows the longer exposures taken, and is in continuation of that published in the *Monthly Notices*, vol. liv. pp. 229, 230.

	R.A. h m	Decl. ° ′	Expos. m
Great Nebula in Andromeda	0 36	+40 30	90 (2 photos)
Neb. H I. 112 Arietis	1 53	+18 30	90
Neb. H I. 101 Ceti	1 54	− 6 29	38 90
Neb. H I. 154 Persei	2 24	+36 40	90
Neb. H I. 63 Eridani	2 36	− 8 41	39
Nebulæ in Pleiades (On 1893 Dec. 30, 1894 Jan. 2, 6, and 7)	3 40	+23 46	720

	R.A. h m	Decl. ° ′	Expos. m
Neb. H I. 217 Aurigæ	4 23	+35 3	180
Great Nebula in Orion	5 30	− 5 27	60 (2 photos)
„ „ (on Feb. 3 and 8)			455
Neb. M. 78 Orionis	5 41	+ 0 1	44 and 3h
Cl. M. 46 and Neb. H IV. 39 Argûs	7 37	−14 30	90
Cl. H VI. 37 Argûs	7 55	−10 20	90
Neb. M. 65, 66 and H V. 8 Leonis	11 14	+13 50	220
Neb. H I. 19 Comæ Berenicis	12 4	+19 8	110
Neb. M. 98 Virginis	12 8	+15 29	240
Neb. H I. 75, 89, 90 Comæ Ber.	12 14	+29 30	90
Neb. H I. 77 Comæ Berenicis	12 21	+31 48	65
Neb. H I. 31 Virginis	12 28	+ 8 17	90
Neb. H I. 83 and V. 24 Comæ B.	12 28	+26 28	90
Neb. H V. 2 Virginis	12 29	+ 2 46	90 and 180m
Neb. H V. 24 Comæ Ber.	12 31	+26 34	180
Neb. H I. 92 Comæ Ber.	12 31	+28 43	105 and 120m
Neb. H I. 178, 179 Canum V.	12 36	+41 44	90
Neb. H V. 42 & I. 176, 177 Comæ B.	12 38	+32 55	90 and 3h
Neb. H I. 39 Virginis	12 43	− 5 14	90
Neb. H I. 129 Virginis	12 43	− 8 8	65
Neb. H I. 84 Comæ Berenicis	12 45	+26 5	90
Neb. H I. 143 Virginis	12 55	+ 3 4	90 and 3h
Neb. H I. 130 Virginis	13 0	− 7 27	90
Neb. H I. 190, 191 Boötis	13 54	+37 57	54
Neb. H I. 99 Boötis	14 14	+37 0	90
Neb. H I. 144, 146 Virginis	14 15	+ 4 6	90
Neb. H I. 182 Virginis	14 34	+ 0 10	90
Neb. H I. 126 Virginis	14 39	+ 2 24	54
Neb. H I. 127, 128 Libræ	14 58	+ 2 4	77
Neb. H II. 751, 752 Boötis	15 2	+20 0	56
Neb. H I. 148 Serpentis	15 16	+ 5 27	90
Cl. M. 16 Clypei	18 13	−13 50	60
Cl. *h* 2017 Aquilæ	18 36	− 4 52	60
Cl. *h* 2018 Aquilæ	18 36	− 6 20	60
Stars in Cygnus	19 45	+35 30	60 (2 photos)
Cl. H VIII. 20 Cygni	20 7	+26 11	50
Cl. H VI. 42 & Neb. H IV. 76 Cephei	20 31	+60 3	60
Cl. H VII. 53 Lacertæ	22 1	+45 57	60
Cls. *h* 2159, 2161 Cephei	22 19	+57 26	60

Beside the foregoing a number of shorter exposures have been taken, including such objects as Denning's Comet (exp. 45^m), March 29; Gale's Comet (exp. 15^m), May 7; Encke's Comet (exp. 30^m), December 18; occultation of *Spica*, March 22, &c. Enlarged copies of some nebulæ and clusters named in the list have been presented to the Society, and lantern slides of the same exhibited at the meetings.

The work entitled "A Selection of Photographs of Stars, Star-clusters, and Nebulæ," which was alluded to in the preceding report as being in preparation, has been published by Messrs. Witherby & Co., and is now available to those interested in the study of celestial photography.

Some considerable portion of the autumn months was occupied in testing the new triple objective of 6-inch aperture, made by Messrs. T. Cooke & Sons. The lens proved to be *perfectly* "achromatic," no trace of secondary colour being visible around even the brightest objects. The visual and photographic foci were found, from a great number of careful experiments, to be exactly coincident, as in a reflector.

Mr. Wilson's Observatory, Streete, Westmeath.

During the past year the 24-inch reflector was principally used for photographic purposes, and some very satisfactory negatives of clusters and nebulæ were taken. The large heliostat was used in the experiments on the radiation from sun-spots, and the results will shortly be published. The weather has been very cloudy, and the number of good nights very few and far between. A 4-inch photographic telescope was ordered from Sir H. Grubb for taking solar photographs, but it arrived too late in the year to do any work with it.

Hongkong Observatory.

The time service and transit observations of the Moon and planets have been continued as usual. Absolute magnetic observations have been made regularly. Hourly meteorological observations have been continued without interruption. The main object of this observatory is marine meteorology, investigations of typhoons, and storm-warnings. During the absence of the Director in summer and autumn Mr. Plummer took charge of the astronomical observations, Mr. Figg took charge of meteorological work and storm-warnings, and Miss Doberck attended to marine meteorology. During his leave of absence the Director was engaged in a redetermination of the orbit of the first comet, of 1824, observed by Sir T. M. Brisbane in Queensland. The Lee equatorial was remounted on granite piers last spring, but unfortunately the dome