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Telescopic Work for Starlight Evenings

William F. Denning (1848–1931) was a British astronomer famous for his planetary observations and meteor studies. Elected president of the Liverpool Astronomical Society in 1887, he wrote a series of articles on telescopes for the society's journal, which were brought together and republished in 1891 under the title *Telescopic Work for Starlight Evenings*. Intended as a contribution to popular astronomy, this book provides a varied introduction to telescopes and their usage. The opening essay traces the development of the telescope from antiquity, through Galileo and Newton's contributions in the seventeenth century, to contemporary progress in astronomy. Other chapters provide practical advice for conducting planetary observation and detailed studies of particular planets, as well as facts and figures about meteors and how to compute their orbit. This book provides a fascinating insight into the evolution of astronomy and will be a valuable resource for historians of science and amateur astronomers.

Telescopic Work for Starlight Evenings

WILLIAM F. DENNING

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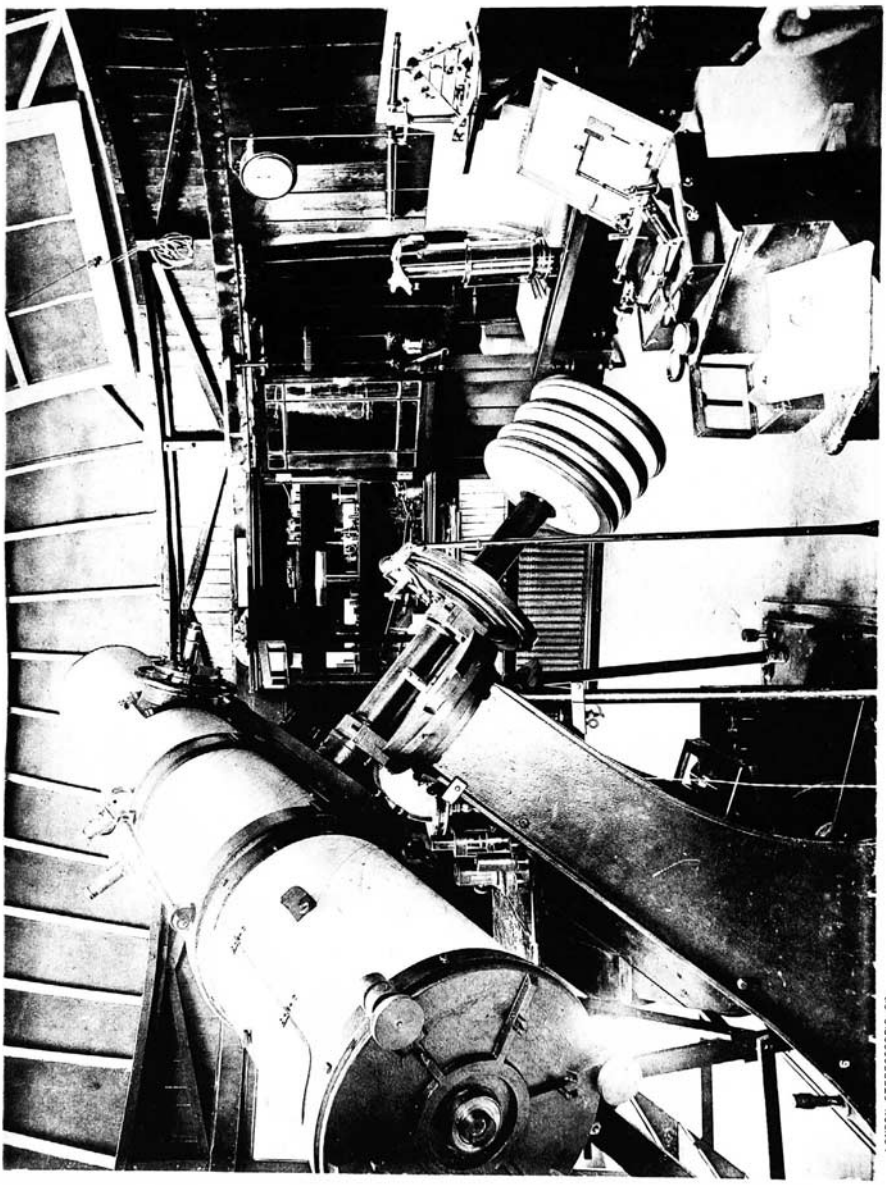


TELESCOPIC WORK

FOR

STARLIGHT EVENINGS.

BY

WILLIAM F. DENNING, F.R.A.S.

(FORMERLY PRESIDENT OF THE LIVERPOOL ASTRONOMICAL SOCIETY).

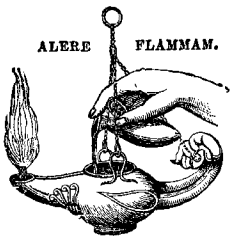
"To ask or search I blame thee not, for heaven
Is as the book of God before thee set,
Wherein to read his wondrous works."

MILTON.

LONDON:

TAYLOR AND FRANCIS, RED LION COURT, FLEET STREET.

1891.



PREFACE.

It having been suggested by some kind friends that a series of articles on "Telescopes and Telescopic Work," which I wrote for the 'Journal of the Liverpool Astronomical Society' in 1887–8, should be reprinted, I have undertaken the revision and re-arrangement of the papers alluded to. Certain other contributions on "Large and Small Telescopes," "Planetary Observations," and kindred subjects, which I furnished to 'The Observatory' and other scientific serials from time to time, have also been included, and the material so much altered and extended that it may be regarded as virtually new matter. The work has outgrown my original intention, but it proved so engrossing that it was found difficult to ensure greater brevity.

The combination of different papers has possibly had the effect of rendering the book more popular in some parts than in others. This is not altogether unintentional, for the aim has been to make the work intelligible to general readers, while also containing

facts and figures useful to amateur astronomers. It is merely intended as a contribution to popular astronomy, and asserts no rivalry with existing works, many of which are essentially different in plan. If any excuse were, however, needed for the issue of this volume it might be found in the rapid progress of astronomy, which requires that new or revised works should be published at short intervals in order to represent existing knowledge.

The methods explained are approximate, and technical points have been avoided with the view to engage the interest of beginners who may find it the stepping-stone to more advanced works and to more precise methods. The object will be realized if observers derive any encouragement from its descriptions or value from its references, and the author sincerely hopes that not a few of his readers will experience the same degree of pleasure in observation as he has done during many years.

No matter how humble the observer, or how paltry the telescope, astronomy is capable of furnishing an endless store of delight to its adherents. Its influences are elevating, and many of its features possess the charms of novelty as well as mystery. Whoever contemplates the heavens with the right spirit reaps both pleasure and profit, and many amateurs find a welcome relaxation to the cares of

business in the companionship of their telescopes on "starlight evenings."

The title chosen is not, perhaps, a comprehensive one, but it covers most of the ground, and no apology need be offered for dealing with one or two important objects not strictly within its scope.

For many of the illustrations I must express my indebtedness to the Editors of the 'Observatory,' to the Council of the R.A.S., to the proprietors of 'Nature,' to Messrs. Browning, Calver, Cooke & Sons, Elger, Gore, Horne Thornthwaite and Wood, Klein, and other friends.

The markings on Venus and Jupiter as represented on pages 150 and 180 have come out much darker than was intended, but these illustrations may have some value as showing the position and form of the features delineated. It is difficult to reproduce delicate planetary markings in precisely the same characters as they are displayed in a good telescope. The apparent orbits of the satellites of the planets, delineated in figs. 41, 44, &c., are liable to changes depending on their variable position relatively to the Earth, and the diagrams are merely intended to give a good idea of these satellite systems.

W. F. D.

Bishopston, Bristol,
1891.

Omission, p. 220.—A column giving the periods of the satellites of Uranus should be added to the table as follows :—

d	h	m
2	12	29
4	3	27
8	16	57
13	11	7

PLATES I. and II. are views of the Observatory and Instruments recently erected by Mr. Klein at Stanmore, Middlesex, lat. 51° 36′ 57″ N., long. 0° 18′ 22″ W. The height above sea-level is 262 feet. The telescope is a 20-inch reflector by Calver, of 92 inches focus ; the tube is, however, 152 inches long so as to cut off all extraneous rays. It is mounted equatoreally, and is provided with a finder of 6 inches aperture—one of Tulley's famous instruments a century ago. The large telescope is fixed on a pillar of masonry 37 feet high, and weighing 115 tons. Mr. Klein proposes to devote the resources of his establishment to astronomical photography, and it has been provided with all the best appliances for this purpose. The observatory is connected by telephone with Mr. Klein's private residence, and the time-pieces and recording instruments are all electrically connected with a centre of observation in his study.

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