

ASTRONOMICAL DISCOVERY

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Astronomical discovery by Herbert Hall Turner

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BY

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WITH PLATES

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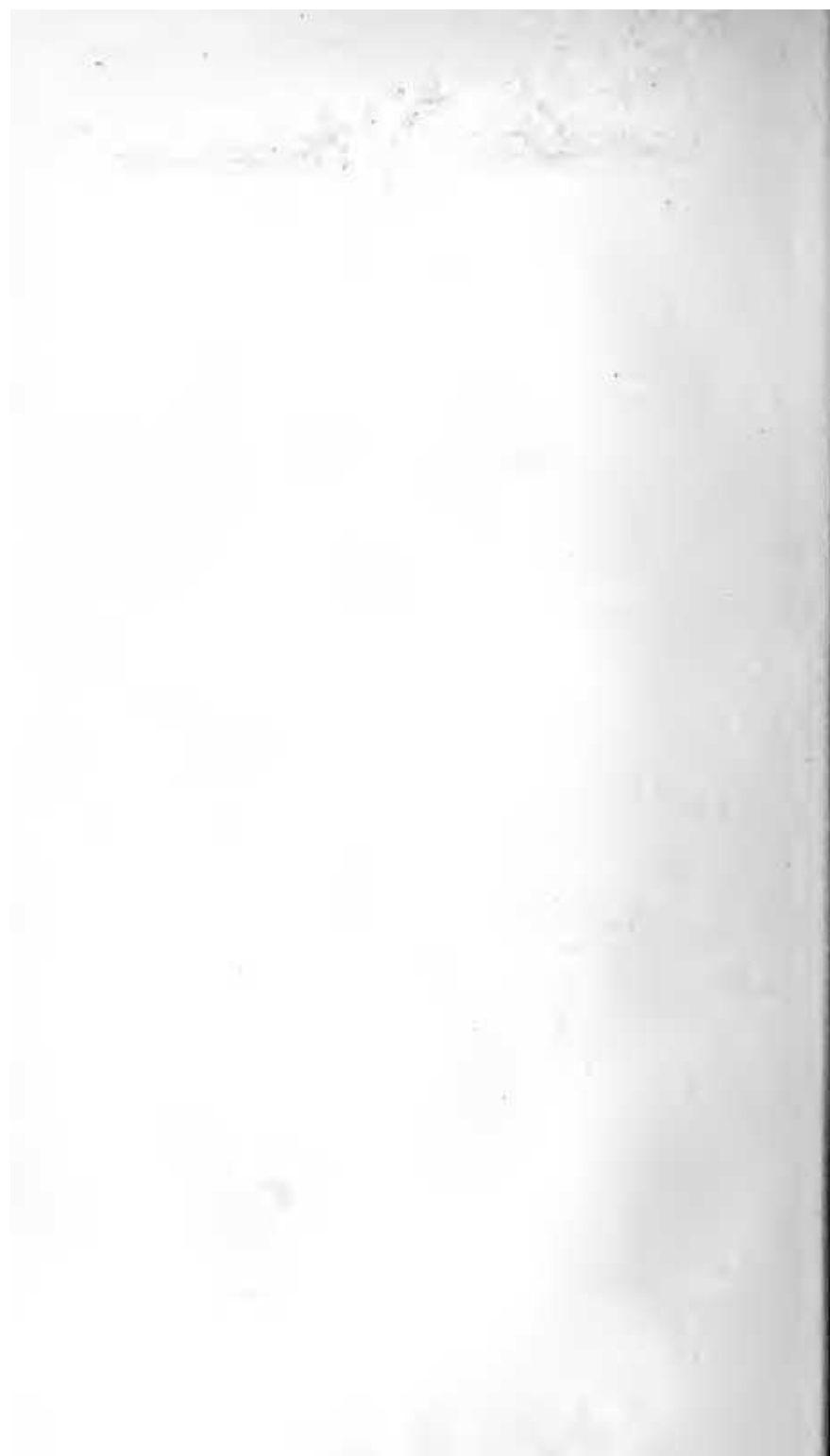
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TO
EDWARD EMERSON BARNARD
ASTRONOMICAL DISCOVERER

THESE PAGES ARE INSCRIBED IN MEMORY OF
NEVER-TO-BE-FORGOTTEN DAYS SPENT WITH HIM AT THE

YERKES OBSERVATORY
OF
THE UNIVERSITY OF CHICAGO



PREFACE

THE aim of the following pages is to illustrate, by the study of a few examples chosen almost at random, the variety in character of astronomical discoveries. An attempt has indeed been made to arrange the half-dozen examples, once selected, into a rough sequence according to the amount of "chance" associated with the discovery, though from this point of view Chapter IV. should come first; but I do not lay much stress upon it. There is undoubtedly an element of "luck" in most discoveries. "The biggest strokes are all luck," writes a brother astronomer who had done me the honour to glance at a few pages, "but a man must not drop his catches. Have you ever read Montaigne's essay 'Of Glory'? It is worth reading. Change war and glory to discovery and it is exactly the same theme. If you are looking for a motto you will find a score in it." Indeed even in cases such as those in Chapters V. and VI., where a discovery is made by turning over a heap of rubbish—declared such by experts and abandoned accordingly—we instinctively feel that the finding of something valuable was especially "fortunate." We should scarcely recommend such waste material as the best hunting ground for gems.

The chapters correspond approximately to a series of six lectures delivered at the University of Chicago in August 1904, at the hospitable invitation of President Harper. They afforded me the opportunity of seeing something of this wonderful University, only a dozen years old and yet so amazingly vigorous; and especially of its observatory (the Yerkes observatory, situated eighty miles away on Lake Geneva), which is only eight years old and yet has taken its place in the foremost rank. For these opportunities I venture here to put on record my grateful thanks.

In a portion of the first chapter it will be obvious that I am indebted to Miss Clerke's "History of Astronomy in the Nineteenth Century"; in the second to Professor R. A. Sampson's Memoir on the Adams MSS.; in the third to Rigaud's "Life of Bradley." There are other debts which I hope are duly acknowledged in the text. My grateful thanks are due to Mr. F. A. Bellamy for the care with which he has read the proofs; and I am indebted for permission to publish illustrations to the Royal Astronomical Society, the Astronomer Royal, the editors of *The Observatory*, the Cambridge University Press, the Harvard College Observatory, the Yerkes Observatory, and the living representatives of two portraits.

H. H. TURNER.

UNIVERSITY OBSERVATORY, OXFORD,
November 9, 1904.