

ASTRONOMICAL ESSAYS

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Astronomical Essays by George V. Leahy

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GEORGE V. LEAHY

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BY THE

REV. GEORGE V. LEAHY, S. T. L.

OF

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THIS VOLUME
IS
RESPECTFULLY DEDICATED
TO THE
MOST REV. WILLIAM H. O'CONNELL, D. D.,
ARCHBISHOP OF BOSTON,
UNDER WHOSE
KINDLY AUSPICES AND ENCOURAGEMENT
IT WAS
INITIATED AND BROUGHT TO COMPLETION

"Why did not somebody teach me the constellations, and make me at home in the starry heavens, which are always overhead, and which I don't half know even to this day?"

THOMAS CARLYLE.

FOREWORD.

This volume of astronomical essays has been compiled from a series of articles originally published in the *Boston Pilot* over the pen-name of Catholicus. The series is here presented connectedly at the request of the Most Reverend Archbishop of Boston, who has graciously written the author, "I highly commend your articles on astronomy for publication in book form."

A new book on the science of the heavens needs no apology. There will always be found many, like Carlyle, eager to learn more and more concerning the occupants of the sky. Even to persons only moderately interested in nature, must occur from time to time certain pertinent questions. Some will be curious to learn of the distance of the heavenly bodies. How far from us are those gleaming lights? Are they our near neighbors, as they appear to be, or are they, on the contrary, many miles away? Again, what of their size? Are they but shining disks and points, or are they perhaps globes comparable to our great earth? Others will ask of their physical condition, whether it is like or unlike that of the earth? What is the purpose of their being? And, above all, do they show signs of possessing living occupants? These, and kindred questions, will find an answer in the following chapters, especial emphasis being given to the important subject of the habitability of the heavenly bodies.

As will be observed, the series begins with a chapter on the shape of the earth. Some, reading the chapter,

may experience surprise that so much space has been allotted to a subject so simple and familiar. The topic has, however, been expanded advisedly, not only because it forms the starting-point of all astronomical inquiry, but because the fact of the earth's spherical shape is the initial wonder of the universe. Once we have realized that this great earth of ours is a globe set apart in space and suspended in mid-ether without support, with all that this signifies, we are prepared to accept the later affirmations that the earth is spinning on an axis and coursing through space about the sun. These and other cardinal truths of astronomy have undoubtedly long since become familiar. If the arguments in their favor are here set forth at considerable length, it is that the reader may know how firm are the foundations on which the science of astronomy rests.

Besides the purely scientific chapters, drawn from systematic astronomy, there are others of a more apologetic trend. Their general purpose is to prove that neither the Christian religion nor the Catholic Church is in any way opposed to the science of astronomy or to its progress. In this vein, are the chapters on the Astronomy of the Bible, that of the Fathers, and that of the Middle Ages, subjects not often treated, and seldom, if ever, gathered into the same volume. The modern era is even richer in material of apologetic interest. That Catholics have done their full share for the advancement of astronomy is set beyond doubt in the chapters on Copernicus, the Reform of the Calendar, and Recent Catholic Astronomers.

The most important portions of the book are those

that deal with the Case of Galileo and the Nebular Hypothesis. Not only popularly, but apologetically, these topics are among all that have been selected the chief in interest. They are rocks of offense on which the faith of many has suffered shipwreck. Special care has therefore been given to the handling of these two themes. The effect of the presentation will be, it is hoped, to remove misconceptions, to confirm the strong in faith, and to reassure the wavering.

Text-books on astronomy already abound. No better could be recommended to the interested reader than Newcomb's short *Elements of Astronomy*, published by the American Book Company. With this work and others of like character the present volume does not presume to enter into competition. It is meant rather as a book for general reading, for use in the library of one's home rather than for the school-room. Even as such, it has its limitations, of which the author is only too keenly conscious. He bespeaks it favor, nevertheless, because of the purpose it is intended to serve, the honor of God through the reverent study of the works of His creation.

The author wishes to acknowledge gratefully his indebtedness to Mr. James P. Sherry, a student at the Boston Seminary, for the chapter on Galileo as a Physicist.

Feast of the Resurrection, 1910.