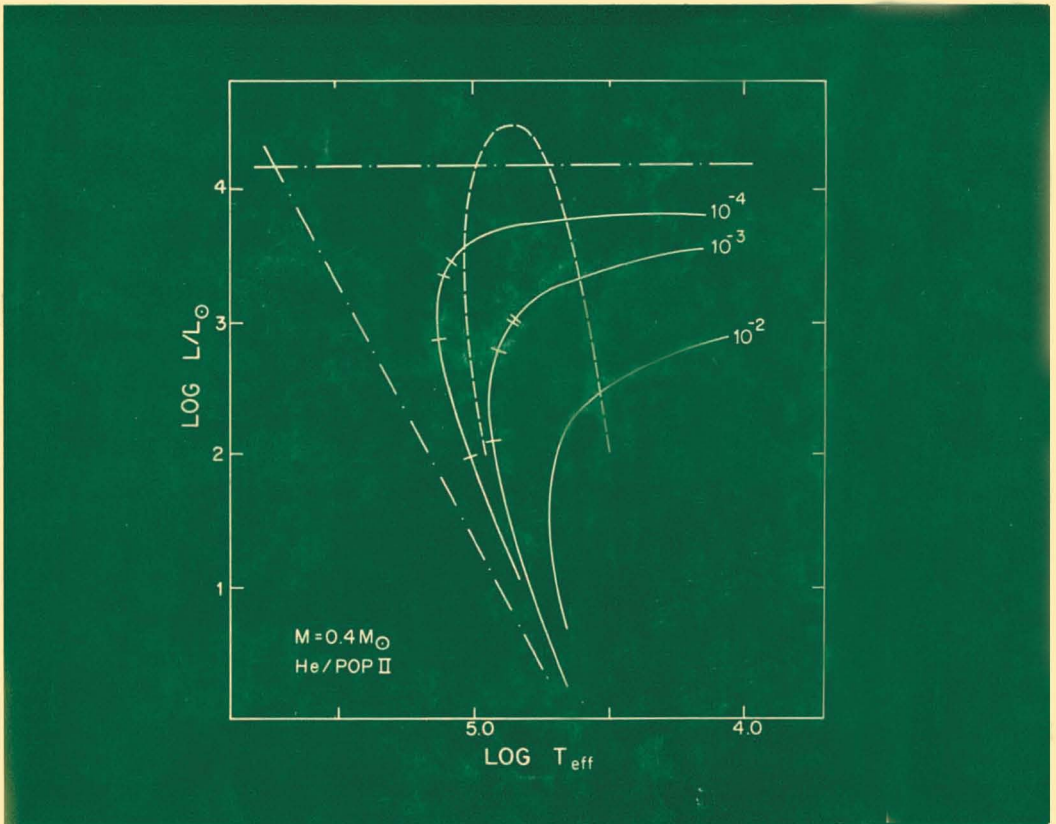


INTERNATIONAL ASTRONOMICAL UNION

SYMPOSIUM No. 34

PLANETARY NEBULAE

Edited by D. E. OSTERBROCK and C. R. O'DELL



INTERNATIONAL ASTRONOMICAL UNION

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PLANETARY NEBULAE

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This symposium, held in Tatranská Lomnica, Czechoslovakia, September 4-8, 1967, was devoted to all phases of research on planetary nebulae and their central stars. Over 100 research workers from throughout the world participated in the symposium and reported their most recent results. Successive sections treat the basic data, observations in all spectral regions (including ultraviolet, optical, infrared and radio regions), physical processes, structure and dynamics of the nebulae, spectra and atmospheres of the central stars, and the origin of planetary nebulae and the internal structure and evolution of their stars. Each section begins with an introductory review article, summarizing the present state of knowledge and the unsolved problems in that particular field. This is followed by research papers and discussions of many of the papers, as well as summarizing discussions and comments linking the various ideas together. Many reproductions of spectrograms and direct photographs of planetary nebulae, as well as tables of important physical parameters (such as transition probabilities, collision strengths, etc.) and measurements (such as radio-frequency flux densities, total optical extinctions, etc.) make this volume a complete and useful synopsis of our present knowledge of these highly interesting objects.

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NGC 1501, a planetary nebula exhibiting an axis of symmetry, many condensations, and sharp outer edges. Photograph in the light of $H\alpha$ by Dr R. Minkowski, 200-inch telescope, Mount Wilson and Palomar Observatories photograph. Scale 1".6/mm. See also Minkowski's paper, below, p. 456.

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PLANETARY NEBULAE

EDITED BY

D. E. OSTERBROCK AND C. R. O'DELL

WITH THE EDITORIAL ASSISTANCE OF

E. F. SWAN



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