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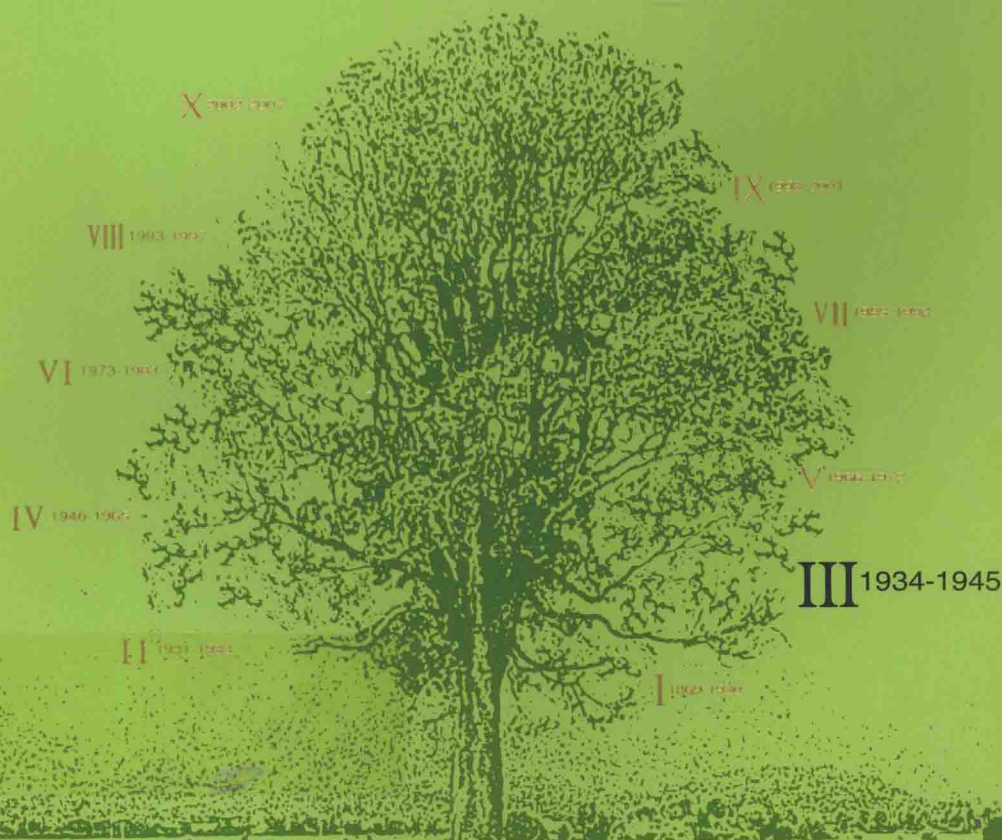
The Living Record of Science 《自然》百年科学经典

英汉对照版 (平装本)

第三卷 (上)

总顾问: 李政道 (Tsung-Dao Lee)

英方主编: Sir John Maddox 中方主编: 路甬祥
Philip Campbell



外语教学与研究出版社 · 麦克米伦教育 · 自然科研

FOREIGN LANGUAGE TEACHING AND RESEARCH PRESS · MACMILLAN EDUCATION · NATURE RESEARCH

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Volume III
(1934 - 1945)

Planetary Photography*

V. M. Slipher

Editor's Note

Vesto Slipher was director of the Lowell Observatory in Flagstaff, Arizona, when he wrote this review of planetary imaging carried out there. The observatory was founded by American astronomer Percival Lowell in 1894, and in subsequent decades it offered some of the clearest direct views of the planets. Slipher's description of Mars, thought to have a substantial atmosphere of oxygen and water vapour, makes it clear why many regarded the seasonal colour changes as being due to vegetation. Lowell himself believed there were even signs of intelligent life. Slipher has been under-rated as an astronomer, having understood the recession-induced redshift of galaxies before Edwin Hubble, and overseeing the observations that led to the discovery of Pluto in 1930.

THE Lowell Observatory was founded in 1894, by the late Percival Lowell, who maintained and directed it during his lifetime and endowed it by his will, that it might permanently continue astronomical research and in particular that of the planets. For nearly four decades now, it has been occupied with planetary investigations. It is situated at Flagstaff, Arizona, because, of the numerous places he had tested, it was here that Lowell found the conditions best for planetary studies. The major instruments of the Observatory are: (1) 24-inch aperture Clark refractor of 32 feet focus, (2) 42-inch Clark reflecting telescope, (3) a new 13-inch photographic telescope, (4) 15-inch Petzoldt reflector, and in addition several smaller instruments, together with a number of spectrographs, special cameras for photographing the planets, radiometric apparatus for use with the 42-inch reflector, for measuring the heat of the planets, and such laboratory equipment as is needed in the work carried on.

During the first decade, the work at the Observatory was mainly visual observations of the planets, then it was extended to include their spectrographic study, and during the second decade direct photography of the planets was added and has been continued since, giving a permanent record of them to the present time. During the past decade, their heat measurement has also been made a regular part of the observational programme. In short, whenever it has been possible to apply new means, they have been made use of in order that the planets be studied from every possible point of view.

During the early years of the Observatory, Lowell was able to observe Mercury and to confirm Schiaparelli's conclusion that the planet constantly keeps its same face to the

* From a discourse entitled "Planet Studies at the Lowell observatory", delivered at the Royal Institution on Friday, May 19.