

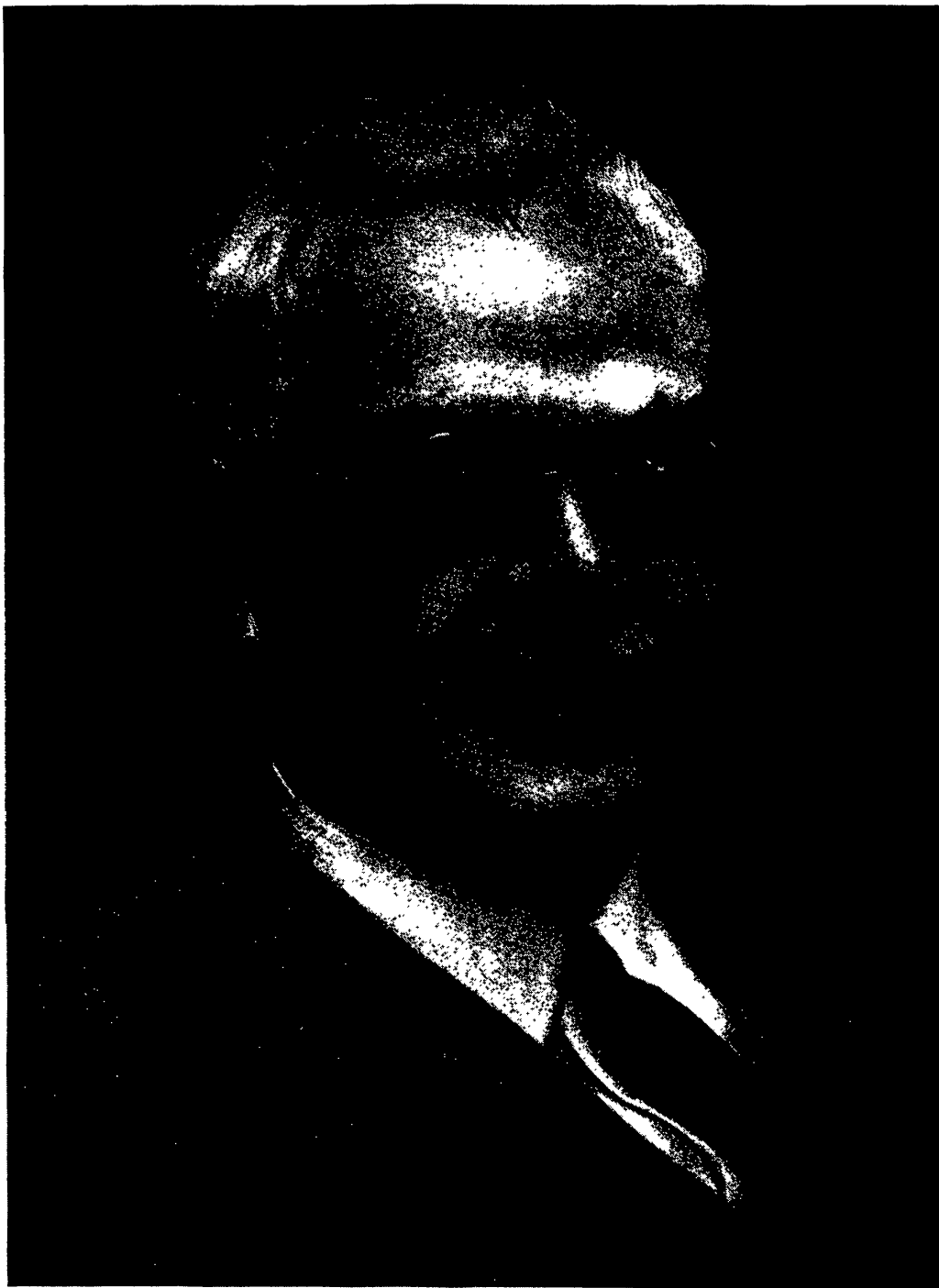
FRANCIS G. PEASE

BY WALTER S. ADAMS

After a brief illness culminating in the necessity for a severe abdominal operation, Dr. Francis G. Pease died in Pasadena on February 7. His death came as a great shock to his associates at the Observatory and to his many friends throughout the community both because of the rapid development of his sickness and his normal condition of rugged health and vigor.

Dr. Pease was born in Cambridge, Massachusetts, in 1881, but received his education in Illinois, attending the high school in Highland Park and the Armour Institute of Technology in Chicago. He was graduated from the Armour Institute in 1901; and the same institution gave him the honorary degree of Master of Science in 1924, and of Doctor of Science in 1927. On leaving Armour Institute he went to the Yerkes Observatory, where he studied methods of optical manufacture and design with Dr. G. W. Ritchey and carried on astronomical observations with the 24-inch reflector. In 1904 he came to Mount Wilson and, except for a single brief interruption, remained at the Observatory throughout the next thirty-four years.

To his training as a mechanical engineer Dr. Pease had added, during the years at the Yerkes Observatory, a knowledge of optical processes and instrumental design which, combined with experience in actual observing, proved of immense value, especially during the construction period at Mount Wilson. The design of portions of the Snow telescope, of the 60-foot and 150-foot tower telescopes, of the 60-inch and 100-inch reflectors, and of the 50-foot interferometer, together with the great number of auxiliary instruments used with them, was either wholly or in large part due to Pease. He also supervised much of the optical construction and testing of the larger mirrors of the telescopes. To all of this work he brought skill and resourcefulness fortified by steadily increasing experience and knowledge of instruments under observational conditions. The 100-inch telescope in particular remains as an illustration of a simple



FRANCIS G. PEASE

1881-1938

and efficient type of instrument constructed almost wholly in accordance with his design.

With the completion of the 60-inch telescope, Dr. Pease commenced a series of direct photographic observations of nebulae and star fields, which were among the finest obtained up to that time and which have proved of great value for comparison purposes in later years. He also undertook spectroscopic observations of faint stars and a few extragalactic nebulae, an investigation which at this period required very long exposure times. In 1919 he made an admirable series of lunar photographs with the 100-inch telescope, and his interest in lunar and planetary photography remained with him throughout the years.

The name of Dr. Pease will always be associated with two major investigations of great interest, in both of which he was closely associated with Dr. A. A. Michelson. In the first of these, he assisted in the earliest successful measurements of stellar diameters with the interferometer, and later extended the observations independently both with the 20-foot interferometer on the 100-inch telescope and with the 50-foot interferometer of later date. In this difficult work he showed much skill and a remarkable amount of patience and untiring devotion.

In 1926 Dr. Michelson began his redetermination of the velocity of light, and much assistance was afforded him by Pease in the design and use of the apparatus. At a later period, when the investigation was again undertaken with the aid of a mile-long pipe line exhausted of air, Pease, assisted by Mr. Pearson, carried much of the burden of these difficult and exacting observations, the failing health of Dr. Michelson preventing him from taking any extensive part in this portion of the work. The final results of this great investigation bear witness to the ability of Dr. Pease, both as an observer and as a manipulator of intricate optical apparatus.

During the last ten years of his life Pease devoted about one-half of his time to plans relating to the design of the 200-inch telescope. Large instruments had always interested him deeply, and his wide experience with mechanical and optical problems and in the practical operation of large telescopes made

him a valuable member of the small group having this project in charge.

As a personal friend, of unfailing helpfulness and goodwill, and an able investigator of unusual gifts, Francis G. Pease will be greatly missed by the members of the Mount Wilson staff, with whom he was associated during so many active years.

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