

Biographical Encyclopedia of Astronomers

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Ross, Frank Elmore

Born San Francisco, California, USA, April 2, 1874

Died Pasadena, California, USA, September 21, 1960

Frank Ross is known for the Ross correcting lens and his lists of new proper-motion stars. His father, Daniel Ross, a building contractor, lost a fortune during the California gold-mining boom. In 1882, the family moved to San Rafael, California, where Ross attended grammar school and cultivated an interest in mathematics. He entered the University of California at Berkeley and received his BS degree in 1896. He got his Ph.D. from the same institution in 1901

Ross was appointed as an assistant at the Nautical Almanac Office, Washington, District of Columbia (1902), research assistant at the Carnegie Institution (1903–1905), and director of the International Latitude Station at Gaithersburg, Maryland (1905–1915). He joined the Eastman Kodak Company (1915) and carried out important investigations on the physics of the photographic process until 1924, when he joined the Yerkes Observatory of the University of Chicago as Associate Professor. Promoted to professor in 1928, Ross retired to Pasadena, California, in 1939.

To increase the size of the usable field of large reflectors, Ross invented a correcting lens system still in use. At the telescope himself, he discovered many stars with large proper motions and numerous variable stars. Ross also built upon William Wright's pioneering work at the Lick Observatory by photographing Mars in the light of five different colors during the opposition of 1926

In 1927, Ross imaged Venus in the ultraviolet with the 60- and 100-inch reflectors of the Mount Wilson Observatory in order to register dusky markings that he interpreted as atmospheric disturbances.

No detail was visible in the red and infrared, and he concluded the upper atmosphere of Venus is composed of thin cirrus-like cloud, while the lower part is exceedingly dense and yellowish. Thirty years elapsed before astronomers finally took note of this important revelation and understood what it signified.

Ross photographed large-scale structures not previously recognised in the Milky Way. This study culminated in 1934 with the publication of the *Atlas of the Northern Milky Way* with Mary Calvert, Edward Barnard's niece, and Kenneth Newman.

Richard Baum

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