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M. Fisher Longstreth

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MIERS FISHER LONGSTRETH.

MIERS FISHER LONGSTRETH, only son of Samuel and Sarah Redwood Longstreth, was born in Philadelphia March 15, 1819. His maternal grandfather, Miers Fisher, was a distinguished Quaker lawyer of Revolutionary times. Deprived of both parents at the early age of eight years, he with his sisters made his home with near relatives. In the spring of 1828 he entered Clermont Academy, near Philadelphia, remaining until 1833, when he entered the Classical Academy of M. L. Hurlburt, and was advancing rapidly in Spanish, French, and especially Latin, when he left school to enter business. He was placed in a hardware store, where he remained for many years, becoming a member of the firm in 1840.

Throughout his business career he ever pursued his studies, and, having a strong desire for knowledge, as early as 1837 attended evening lectures on anatomy, and during one winter took a course in the College of Pharmacy of the University of Pennsylvania.

In 1843 he married Mary Tyson Clapp. Adjoining their home the Friends' Central School was established. The new building had an astronomical observatory, the use of which was offered to Dr. Longstreth. His guardian provided him with funds to purchase a telescope (made after Merz and Mahler pattern, 5-inch object glass), he already owned a transit instrument and a clock had been presented.

It was here that he made the discovery of the inaccuracies of the tabular longitude of the moon. The result of his labors is best given in a paper read by Professor Pierce at the American Association, Albany, 1851, entitled "An Account of Longstreth's Lunar Formula."

LONGSTRETH'S LUNAR FORMULA.*

Professor Pierce stated that the title of the paper was probably sufficient to tell what he meant to say. But he wished it

* From Annual of Scientific Discovery, Boston, 1852, pp. 380-381.

distinctly understood that he only intended to give an account of a discovery by a man who was as remarkable for his extreme modesty as for the eminence of the position which he occupied among the scientific benefactors of the age. The very modest manner in which Mr. Longstreth had announced his discovery was worthy of remark. He would read from the preface to the published tables all that Mr. Longstreth had himself said in relation to this great discovery. It was as follows: "The coefficients deduced from theory by Damoiseau, Plana, Pontecoulant, and those deduced from observation by Burckhardt (though differing considerably), give the moon's place with nearly the same accuracy."

Previous to this tabular formula prepared by Mr. Longstreth there was no method of testing the theory. All will remember the celebrated dispute between Newton and Flamsteed as to the investigation of the formulas for the longitude of the moon. Longstreth had obtained results which involved the true theory of variations of the moon's longitude. The results of observations, now that we had a tabular formula to compare them with, when spread over sufficient ground, would be sure to be confirmed by theory subsequently. Professor Pierce exhibited the tables themselves, showing where Damoiseau and Plana agreed and where they began to differ, and stating that Professor Airy, of England, had compared the results obtained by Longstreth.

By means of Longstreth's formula we are sent back to the theories of Damoiseau and Laplace. The difference had been ascertained to be greater between Plana and Laplace than between Laplace and Damoiseau. We are therefore traveling backward to the theory propounded by Laplace, while the supposed advances made by the later physical astronomers are assuming their true position.

Mr. Longstreth's observations are now to be used in the American Nautical Almanac. This alone renders that work of the utmost importance to navigators of every nation, as well as of this country.

In 1853 he withdrew from mercantile life and entered the Medical Department of the University of Pennsylvania, graduating in 1856. Dr. Longstreth continued to reside in Phila-

delphia for twelve years after his marriage, but, in 1855, he, with his family, moved to Sharon Hill, near Darby, Delaware County, Pennsylvania, which was his home during the remainder of his life. This afforded him an opportunity for the cultivation of the various branches of natural history in which he took especial pleasure. Here Dr. Longstreth quietly practiced his profession, but not to the extent which he might have done had he sought practice. The neighbors, far and near, rich and poor, knew they had a kind, sympathetic friend standing ready and willing to meet every need within his power.

His great interest in education was shown by his unfailing labor in Swarthmore College, established for the young men and women of the Society of Friends. He was a member of the Board of Trustees for nearly twenty years and served the college in many ways, one of the most important of which was by his wise and valuable counsel.

After laying aside his more active duties, true to the instincts of his earlier life, he continued his love of books and study. He took a great interest in Hebrew, Arabic, and Syriac, that he might become more familiar with the Scriptures, and was as enthusiastic a student in a class formed for the study of the former as those of one-half his years.

Continuing his interest in astronomy, he always referred with much pleasure to his observation, in 1869, near Bristol, Tennessee, of the total eclipse of the sun, and he had a very good opportunity to observe the Transit of Venus December 6, 1882, at his private observatory at Sharon Hill. In 1848 he was elected a member of the American Philosophical Society, at Philadelphia.

Dr. Longstreth was one of the founders of the National Academy of Sciences, in 1863. After some years he resigned from active membership and was placed on the list of honorary members.

During his last illness, which confined him to bed for many months, his cheerful and unselfish spirit was evinced even in the midst of severe suffering. Retaining all of his faculties until the close, he peacefully entered eternal life December 27, 1891.

Throughout his life he was a consistent and devoted member

of the religious Society of Friends, bearing his share of the responsibilities of its work. Always modest and unassuming, he lived a peaceful, quiet life, and his true worth became known to comparatively few. But those who knew him best esteemed him most, and he has left with them those precious memories of an unselfish life, devoted to increasing the happiness of all who came within the sphere of his influence.