# Biographical Encyclopedia of Astronomers



## Wallis, John

Born Ashford, Kent, England, 23 November 1616

Died Oxford, England, 28 October 1703

Aristarchus expert John Wallis was primarily a mathematician and should be considered one of the inventors of analytic geometry. He lived during the English Revolution, and Oxford fell into the portion of England that sided with the Parliamentarians. Wallis decoded some messages from Royalists that came into the hands of the Parliamentarians. He was later accused of having decoded the personal letters of King Charles himself, a charge that Wallis adamantly denied. In his old age, Wallis taught what he knew of cryptography to his grandson, William Blencowe, though by then, Wallis admitted, the new French methods of encryption were too complicated to break by the means used by Wallis.

In 1649, Wallis became Savilian Professor of Geometry at Oxford, more likely because of his support for the Parliamentarians than for his mathematical ability. However, he soon proved that, political appointment or not, he well deserved the chair. In 1663, he was elected a Fellow of the Royal Society

Through the use of conjecture and interpolation, he was able to obtain an infinite product expansion for $\pi$ and had a considerable influence on Isaac Newton's mathematical development. Wallis also played an important role in the development of analytic geometry and was among the first to consider curves defined purely by an algebraic equation.

Wallis's main contribution to astronomy was his publication and annotation of the Greek text *On the Sizes and Distances of the Sun and Moon* by Aristarchus. Aristarchus was the first to put forward a heliocentric model of the planetary system, and Nicolaus Copernicus used Aristarchus's work to support his own. Latin and Arabic translations of Aristarchus's writings were widely available, but Wallis's 1688 version was the first printed edition of the Greek text. Wallis based his work on two copies: one made by Henry Savile from a copy in the Vatican, and the second a Greek manuscript in the possession of Edward Bernard, the Savilian Professor of Astronomy at Oxford

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**Selected References**

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Scott, J. F. (1938). *The Mathematical Work of John Wallis*. London: Taylor and Francis.