Billy, Jacques de | Encyclopedia.com

 (b. Compiègne, France, 18 March 1602; d. Dijon, France, 14 January 1679), *mathematics, astronomy*

A Jesuit, Billy spent his teaching career in the colleges of the society's administrative province of Champagne-Pont-à-Mousson, Rheims, and Dijon. He taught either theology or mathematics, depending on which was needed. In 1629–1630 he taught mathematics at Pont-à-Mousson while he was still a theology student and not yet ordained a priest. Billy taught mathematics at Rheims from 1631 to 1633. Around this time he became a close friend of Claude Gaspar Bachet de Méziriac, the commentator on Diophantus, who introduced him to indeterminate analysis

Billy became a master of studies and professor of theology at the Collège de Dijon, where one of his students was Jacques Ozanam, whom he taught privately because there was no chair of mathematics at the collège, and in whom he instilled a profound love for calculus. Finally, a professorship in mathematics had been created, and he taught his favorite subject from 1665 to 1668.

An active correspondence between Billy and Fermat began before 1659, of which one letter remains. Some of Billy's writings originated in this exchange, including parts of the *Doctrinae analyticae inventum novum*, through which his name is still known to many theorists. It is an elaborate study of the techniques of indeterminate analysis used by Fermat and, on the whole, it explains them correctly. From it, one can surmise Fermat's general line of activity in a field in which there are few pertinent documents

In astronomy, Billy published numerical tables applicable to the three important theories (Ptolemy, Brahe, Copernicus) of the time. There is also a study on comets and several critiques against forensic astrology.

BIBLIOGRAPHY

I. ORIGINAL WORKS.

Billy's works are *Abrégé des préceptes d'algèbre* (Rheims, 1637); *Le siège de Landrecy* (Paris, 1637); *Nova geometriae clavis algebra* (Paris, 1643); *Tabulae Lodoicae, seu eclipseon doctrina* (Dijon, 1656);

Tractatus de proportione harmonica (Paris, 1658); *Diophantus geometria, sive opus contextum ex arithmetica et geometria simul....* (Paris, 1660); *Opus astronomicum* (Dijon, 1661); *Discours de la comète qui a paru l'an* 1665 *au mois d'avril* (Paris, 1665); *Crisis astronomica de motu cometarum* (Dijon, 1666); *Diophanti redivivi pars prior... pars posterior* (Lyons, 1670); and "Doctrinae analyticae inventum novum, collectum a R. P. Jacobo de Billy ex variis epistolis quas ad eum diversis temporibus misit .," a study in Samuel Fermat, *Diophanti Alexandrini arithmeticorum libri sex* (Toulouse, 1670), Latin text and German trans. by P. von Schaewen

(Berlin, 1910), French trans. by Paul Tannery, in *Oeuvres de Fermat*, III (Paris, 1896). D. P. de Fermat.

The Dijon municipal library owns several of Billy's autograph manuscripts. Paul Tannery wished to publish the part of the correspondence concerned with indeterminate analysis, but he died before he could carry out the project.

II. SECONDARY LITERATURE.

There is a notice on Billy in R. P. Niceron, *Mémoires pour servir à l'histoire des hommes illustres dans la république des lettres*, XL (Paris, 1739), 232-244.

JEAN ITARD