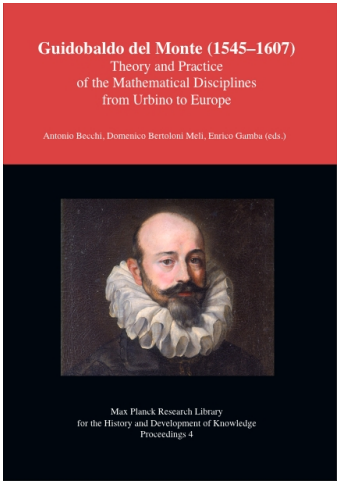
Max Planck Research Library for the History and Development of Knowledge

Proceedings 4

William R. Shea:

Guidobaldo del Monte: Galileo's Patron, Mentor and Friend



In: Antonio Becchi, Domenico Bertoloni Meli and Enrico Gamba (eds.): *Guidobaldo del Monte (1545–1607) : Theory and Practice of the Mathematical Disciplines from Urbino to Europe*
Online version at `http://edition-open-access.de/proceedings/4/`

ISBN 9783844242836

Printed and distributed by:
Neopubli GmbH, Berlin
`http://www.epubli.de/shop/buch/27498`

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at `http://dnb.d-nb.de`

Chapter 4
Guidobaldo del Monte: Galileo's Patron, Mentor and Friend

William R. Shea

4.1 Introduction

There was a time when everyone in the scientific community knew who Guidobaldo del Monte was and no one had heard of Galileo. This is not meant as a trivial comment on the fact that when Galileo was born in 1564, Guidobaldo was already nineteen years old and was about to matriculate at the University of Padua where Galileo was later to arrive in 1592. The point is that when Guidobaldo met Galileo in 1588, he was a prominent if not the leading scientist in Italy whereas Galileo was an unemployed drop-out from the University of Pisa.[1] Meeting Guidobaldo and corresponding with him was a decisive event in Galileo's life as we shall see. But first let us say a few words about Guidobaldo and his family.

4.2 The Marchese del Monte

In the sixteenth century, you could rise socially through the Church or the Army. Money helped of course, but it was less decisive than religious or military connections. Guidobaldo's father, Ranieri, who came from a wealthy Urbino family, acquired notoriety as an officer and the author of two books on military architecture.[2] The Duke of Urbino, Guidobaldo II, impressed by his achievements, conferred upon him the title of Marchese del Monte. When he died in 1587, Guidobaldo inherited his father's title and the family estate of Mombaroccio.[3]

A man of many parts, Guidobaldo befriended the poet Torquato Tasso, who was almost an exact contemporary and attended the University of Padua at the

[1] Galileo left the University of Pisa without taking a degree in 1585. This practice was not uncommon, and was not held against him when he applied for a post at the same university four years later.

[2] Galileo also wrote a treatise on military architecture that he sold to young noblemen who attended his private lectures on the topic in Padua, but I have been unable to find whether he used or was at least aware of the works of Guidobaldo's father.

[3] Guidobaldo signed himself indifferently "dal Monte" or "del Monte." I shall use the second more common form.

same time. When Emperor Maximilian II waged a campaign against the Turks in Hungary, Guidobaldo joined the army and fought against the Ottomans until 1568 when the Emperor had to sign a peace treaty that left the Turks in control of most of the territory. Upon his return to Urbino, which was then a lively intellectual center, Guidobaldo studied mathematics under Federico Commandino (1506–1575), who had edited and translated Archimedes into Latin and was preparing a Latin version of Euclid's *Elements* and other Greek classics, which he published with extended commentaries. Guidobaldo became a friend of Bernardino Baldi (1553–1617), who was also a student of Commandino, and later became his own pupil.

Guidobaldo published his first book, *Mechanics*, in 1577, followed in 1579 by a work on the planisphere, and in 1580 by a book on the topical question of the reform of the ecclesiastical calendar.[4] In 1588, he was appointed Inspector of the fortifications of Tuscany but he continued to reside at Montebaroccio, and he published that year his second major work in mechanics, a paraphrase of Archimedes's *On the Equilibrium of Planes* (Monte 1588). With the help of Baldi he edited Commandino's Latin translation and commentary of the *Collections* of Pappus, which also appeared in the same year (Pappus 1588).[5] In 1600 he published an important work on perspective that includes a discussion of scenography (Monte 1600). He left several manuscripts when he died in 1607 but only a few were posthumously published (Monte 1609 and 1615).

Guidobaldo had a younger brother, Francesco Maria, who was born in 1549 and was educated at court in Florence with the future Granduke Francesco and his younger brother, Ferdinando, who entered the Church and was created Cardinal at the age of fourteen by Pope Pius IV. When Francesco died without male heir in 1587, Ferdinando resigned from the Church and became Granduke. Meanwhile Francesco Maria del Monte had also joined the clergy, and the new Granduke arranged for him to succeed him as Cardinal. Francesco Maria's exalted position was to prove useful to Galileo. Another member of the family, who was to be of service, was a cousin, Giovanni Battista del Monte (1541–1614), who went into the Army, fought against the Turks and rose to become a General in the Spanish troops. In 1587 he was appointed Commander of the Infantry of the Venetian Republic and Inspector of the Venetian strongholds in Italy and the Middle East. He resided in Padua and was not without influence on the appointment of University professors.

[4] See (Monte 1577, reprinted Venice, Evangelista Deuchino 1615). The work was translated into Italian by Filippo Pigafetta under Guidobaldo's close supervision (Monte 1581). Selections from this translation are rendered into English in (Drake and Drabkin 1969, 239–328). Del Monte (1579) has recently been made available in Italian with the Latin on facing pages by Rocco Sinisgalli and Salvatore Vastola (Sinisgalli and Vastola 1994). See also (Monte 1580).

[5] Neither Baldi nor Guidobaldo put their names on the title page.

4.3 The Would-be Mathematician and His Master

Writing to a friend in Paris in 1633, Galileo declared that "at the age of twenty-one, after studying geometry for two years he worked out a number of propositions about the center of gravity of solids."[6] Galileo had become acquainted with Commandino's *Liber de centro gravitatis solidorum* that had been published in 1565 and had opened, or rather reopened, a new field of research but suffered from what Galileo called "some imperfections."[7] These he sought to set right by following the example of "that very great mathematician," Guidobaldo del Monte, to whom he sent his demonstrations. Galileo also sent a copy to other mathematicians, and the first to acknowledge receipt was Gioseppe Moleto, the incumbent of the Paduan Chair of Mathematics, who wrote in flattering terms that he had read Galileo's theorems and that he considered the author "a good and experienced geometer."[8] Another recipient was the Flemish mathematician and geographer, Abraham Ortelius, who gave his copy to Michel Coignet, who wrote from Antwerp to congratulate Galileo and discuss one of his propositions.[9] But the most influential person, along with Guidobaldo, to receive the essay was Christopher Clavius, who taught at the Roman College, the prestigious Jesuit center of higher learning in Rome. When Galileo went to Rome at the end of 1587, he called on Clavius to give him a copy of his work and ask for his comments. On 8 January 1588 he sent the Jesuit the corrections of a couple of minor errors in one of the demonstrations that he had left him, and said how eagerly he awaited his comments.[10] Clavius replied on 16 January and promised to examine the proofs as soon as possible. On the same day, Guidobaldo wrote to Galileo for the same reason, thanking him for the demonstrations and praising him in a way that only a generous senior professor knows how to do, namely by asking him for more material:

[6] Letter to Elia Diodati, 6th December 1633, in (Galilei 1890–1909, vol. XVII, 524). This would take us back to 1585 but the essay that he distributed to advertise his skill and to apply for a job was not ready before 1587. It is entitled *Theoremata circa centrum gravitatis solidorum* and was still topical enough in 1638 to be published as an appendix to Galileo's *Two New Sciences*. The text is printed in (Galilei 1890–1909, vol. I,187–208), and an English translation is available in (Galilei 1974, 261–280).

[7] Galilei, *Two New Sciences* in (Galilei 1890–1909, vol. VIII, 313), translated by Drake (Galilei 1974, 259).

[8] Testimonial dated 29 December in 1587 in (Galilei 1890–1909, vol. I, 183). On 12 December 1587, Giovanni Bardi de' Conti di Vernio, Giovanni Battista Strozzi, Piero Alamanni and Giovanni Battista Ricasoli Baroni had vouched for the originality of Galileo's demonstrations (*ibidem*). These were prominent members of the Florentine upper class but not mathematicians.

[9] Letter of Michael Coignet to Galileo, 31 March 1588, in (Galilei 1890–1909, vol. X, 31–33).

[10] Letter to Christopher Clavius, 8 January 1588, in (Galilei 1890–1909, vol. X, 23).

> I shall consider it a favour to receive whatever you have written on the center of gravity. In the light of the essay that you sent me, it can only be excellent. I know that I will learn a lot, having found in your essay depth and rigour, and a way of going about that is as beautiful as it is brief and concise.[11]

Guidobaldo also informed Galileo that his paraphrase and commentary of Archimedes' *On the Equilibrium of Planes* would be out in a few days, and that he would gladly send him a copy if Galileo would provide him with his address. Galileo complied but the book only came out at the end of March. In the covering letter, Guidobaldo declares that he wrote for beginners and not for someone like Galileo, and he stresses that he tried "to follow Archimedes as much as I could."[12] This was important for Guidobaldo saw himself as restoring the ideal of mathematical rigour that earlier writers such as Jordanus Nemorarius and Niccolò Tartaglia had forsaken. He had already made the point in his first letter to Galileo by explicitly commending him for following Archimedes in the two last propositions of his essay.[13] Guidobaldo's reaction against the earlier medieval approach was so great that he rejected the correct theorem of Nemorarius on the equilibrium on inclined planes and adopted the incorrect theorem of Pappus in its place. This misplaced homage to the Ancients and the ideal of absolute mathematical rigour in mechanics blinded Guidobaldo to the possibility of important advances that he would have been technically able to make. For instance, he insisted that, strictly speaking, the lines of descent of suspended weights at the ends of a balance are never mathematically parallel but converge toward the center of the Earth. This led him into an interminable discussion in what turned out to be an illusory quest for mathematical precision. We can contrast this with Galileo's curt dismissal of these theoretical considerations in the treatise of mechanics that he composed in 1593, and elaborated on in successive versions. Galileo was aware of the fact that he was departing from Guidobaldo's practice. He writes:

> Now I am not unaware that someone may object that for the purpose of these proofs I am assuming as true the proposition that weights suspended from a balance make right angles with the balance—a proposition that is false, since the weights, directed as they are to the center of the universe, are convergent.[14]

[11] Letter to Galileo, 16 January 1588, in (Galilei 1890–1909, vol. X, 25). The commendation for conciseness is particularly interesting in view of the fact that Guidobaldo was anything but succinct in his own writings.

[12] Letter to Galileo of 24 March 1588, in (Galilei 1890–1909, vol. X, 31).

[13] Letter of 16 January 1588, in (Galilei 1890–1909, vol. X, 25). On this issue, see (Bertoloni Meli 1992; Micheli 1992).

[14] See (Galilei 1890–1909, vol. I, 300), translated by Drabkin (1960, 67).

Galileo may have departed from Guidobaldo (whom he does not mention), but he was anxious to explain at great length that it was because he followed Archimedes:

> To such objectors, I would answer that I cover myself with the protecting wings of the superhuman Archimedes, whose name I never mention without a feeling of awe. For he made the same assumption in his *Quadrature of the Parabola*. And he did so perhaps to show that he was so far ahead of others that he could draw true conclusions even from false assumptions. Yet we must not suppose, in a moment of doubt, that his conclusion is false, since he had earlier demonstrated the same conclusion by another geometric proof. Therefore we must say either that suspended weights actually make right angles with the balance, or that it is of no importance whether they make right angles, but that it is enough that the angles be equal. The latter would perhaps be sounder, unless we wish to say rather that this is a case of geometric license, as when Archimedes assumes that surfaces have weight, and that one surface is heavier than another, whereas, in point of fact, they are entirely without weight.[15]

Guidobaldo also missed a crucial point that Galileo made a general principle of his own enquiry, namely that the products of the force and virtual displacements at the ends of any system in equilibrium are equal. This escaped Guidobaldo for it seemed to him that, even in rigidly connected systems, the force required to sustain a weight is less than the force required to move it. In his own *Mechanics*, Galileo took the bold step of declaring that since it would take only a minimal, insensible surplus of heaviness to move a weight on the balance over the weight necessary to maintain it in equilibrium, he did not "take into account this insensible amount," and did not "make any distinction between the power to sustain the weight and the power to move it."[16] Whether we are dealing with balances in equilibrium or machines in motion, Galileo realized that the same proportionality of weights and distances applies.

It is to Guidobaldo's credit that in spite of these profound differences in outlook, he continued to value and praise Galileo. He had recognized a first-class mind and was eager to discuss with him on an equal footing. An instance of this open-mindedness is Guidobaldo's willingness to acknowledge his own mistakes. He had initially voiced his opinion that Galileo "begged the question" in one of his proofs,[17] but upon rereading it he saw that this was not the case and

[15] *Ibidem*.

[16] See (Galilei 1890–1909, vol. II, 164) translated by Drake and Drabkin (1960, note 17, 156).

[17] Letter to Galileo, 28 May 1588, in (Galilei 1890–1909, vol. X, 74). The objection concerns the demonstration of Galileo's first proposition, which deals with the distribution of similar weights on

he handsomely apologized: "A couple of days after writing to you about your demonstration, I discovered where I had gone wrong."[18]

4.4 A Patron at Work

After leaving the University of Pisa Galileo gave private lessons in mathematics in Florence and Siena as he mentioned in 1588 when applying for a position at the University of Bologna where he had heard that they were considering creating a second position in mathematics. This would have been in addition to the Chair of Mathematics that was held by Pietro Antonio Cataldi, something rarely done. The post was eventually created but it went to Antonio Magini, who was already teaching at Bologna.

In March 1588 Galileo wrote to Guidobaldo to say that he would be passing through Pesaro in the near future, and Guidobaldo immediately invited him to spend a few days at his home. "Consider my house as your own," he wrote on 24 March.[19] If Galileo made the trip, this would have been his first opportunity to meet Guidobaldo. During their conversations they must have talked about an eventual opening for a job at Pisa for shortly thereafter Guidobaldo wrote a letter of recommendation to his brother, Francesco Maria, who was at the Florentine Court, in order to enlist his help. This letter was sent to Galileo who, according to custom, was to present it to Francesco Maria del Monte when he called on him. Unfortunately, Galileo was soon informed that the position in Pisa would not be immediately opened and he wrote to Guidobaldo on 16 July to request another letter from his brother, this time recommending him in general terms for a "teaching position in mathematics" in Florence.[20] By return of post, Guidobaldo informed Galileo that he had immediately written to Francesco Maria, and that he would use any influence he had to help Galileo succeed. "Tell me candidly what I should do," he added, "and I will act accordingly."[21] When things dragged on, Guidobaldo wrote once more to Galileo on 16 September: "I am sorry that the business is so drawn out, but I shall be very glad when it comes to a happy end.

different balances (Galilei 1890–1909, vol. I, 187–188). Galilei, *Two New Sciences*, translated by Drake (Galilei 1974, 261–263). The same objection had been raised by Clavius (letter to Galileo, 16 January 1588, in Galilei 1890–1909, vol. X, 24), to whom Galileo replied on 25 February defending his demonstration (Galilei 1890–1909, vol. X, 27–28). Clavius was not convinced and restated his objection by return of post (letter of 5 March 1588, in Galilei 1890–1909, vol. X, 29–35).

[18] Letter to Galileo, 17 June 1588, in (Galilei 1890–1909, vol. X, 34–35).

[19] Letter to Galileo, 28 March 1588, in (Galilei 1890–1909, vol. X, 33).

[20] Letter to Guidobaldo del Monte, 16 July 1588, in (Galilei 1890–1909, vol. X, 36).

[21] Letter to Galileo, 22 July 1588, in (Galilei 1890–1909, vol. X, 37).

If you think that I should do something else, just let me know and I shall do my very best as far as my modest influence extends."[22]

Francesco Maria del Monte was created a cardinal on 14 December, and Galileo immediately wrote to Guidobaldo to congratulate him and his family on this honour. Guidobaldo thanked him for the affection that was evident from "the joy that you express at the elevation of my brother."[23] The new Cardinal set to work and Galileo was duly appointed professor of mathematics at Pisa in November 1589. But the pay was mediocre and he kept an eye on possible openings elsewhere. The professor of mathematics in Padua, Gioseppe Moleto, had died in March 1588, but his post had not been filled, and Galileo thought of going to Padua to introduce himself and offer his services. Guidobaldo was informed and wrote to Galileo: "I would like to see you happier and paid better according to your deserts. I have no news from Venice [concerning the professorship at Padua] but I will make enquiries and let you know."[24] Guidobaldo nourished the hope, which he expressed in the same letter to Galileo, that Magini would not be confirmed in Bologna when he came up for renewal in a year and a half, and that Galileo could take his place. But Magini was eventually confirmed in his post, and Galileo grew restive. Once again, he appealed to Guidobaldo who replied on 21 February 1592:

> I am sorry to hear that you are not treated as you deserve, and even more unhappy that you have little hope of improvement. If you plan to go to Venice this summer, I invite you to come this way. For my part, I will not fail to do what I can to help you. I cannot leave you in this state, and although my means are modest I will use them all in your service.[25]

In the same letter Guidobaldo laments the fact that several of Galileo's letters went astray including the one in which Galileo wrote that his father had died (on 2 July 1591), and Guidobaldo expresses his condolences in warm and friendly terms.

Guidobaldo was again true to his word and he got in touch with his cousin, Giovanni Battista del Monte, the Commanding Officer of the Venetian Infantry and an important figure in Padua where he resided. The outcome was that Galileo was appointed Professor of Mathematics at the University of Padua. He delivered

[22] Letter to Galileo, 16 September 1588, in (Galilei 1890–1909, vol. X, 37).
[23] Letter to Galileo, 30 December 1588, in (Galilei 1890–1909, vol. X, 39). In this letter, Guidobaldo signs himself, for the first time, "come fratello" (as a brother). Before this date, he signed himself, more formally, as "Ser.^{re}," an abridged form of "Servitore" (Your servant).
[24] Letter to Galileo, 10 April 1590, in (Galilei 1890–1909, vol. X, 42).
[25] Letter to Galileo, 21 February 1592, in (Galilei 1890–1909, vol. X, 47).

his inaugural lecture on 7 December 1592, and promptly wrote Guidobaldo to thank him for his assistance. To which Guidobaldo replied: "You say that you are much obliged to me for your post in Padua. I really did nothing, and I do not want you to feel under any obligation whatsoever. You got it on your merit and your great knowledge."[26] A reference to his cousin, Giovanni Battista del Monte, makes it clear however that he had been contacted.

Guidobaldo kept a lively interest in Galileo's career and informed him about publications by other mathematicians, for instance, a new book by the Dutch mathematician, Adrian van Roomen.[27] His high and abiding esteem for Galileo is further confirmed by the fact that he sent his son, Orazio, to study in Padua where he also trained as a military officer under his uncle, Giovanni Battista del Monte. On 17 December 1597, Guidobaldo wrote to Galileo that his son had a good grounding in mathematics but that he is "to turn to you if he has any difficulty since I know that you will do me the favour of teaching him occasionally."[28] This is the same Orazio to whom Galileo was later to send one of the first complimentary copies of his *Sidereus nuncius*. Acknowledging receipt, Orazio writes: "To have discovered four new planets is a marvelous thing. It's like discovering a new world, and you now have excellent grounds to compete in fame with Columbus."[29]

4.5 Guidobaldo's Influence on Galileo's Mechanics

As we have seen Galileo called on Guidobaldo perhaps as early as 1588 but no later than 1592. When the two met they discussed mathematics and more specifically the center of gravity of solids, but there is evidence that Guidobaldo also told Galileo about his investigation of projectile motion. Evidence is provided by an experiment that Guidobaldo carried out, perhaps repeatedly, between 1587 and 1592. In a surviving manuscript he states that if a ball is thrown upward with a catapult, a piece of artillery, or by hand, it will trace out the same path in falling as in rising, and the shape will be similar to the one that a rope, loosely attached at both ends, makes with the horizontal line. The shape, he declares, has the form of a parabola or a hyperbola and is better seen with a chain than with

[26] Letter to Galileo, 10 January 1593, in (Galilei 1890–1909, vol. X, 54).

[27] Letter to Galileo, 3 September 1593, in (Galilei 1890–1909, vol. X, 62). The reference is to Adrianus Romanus, *Ideae mathematicae pars prima sive methodus polygonorum*, Louvain, Johannes Masius 1593. The work is dedicated to Clavius.

[28] Letter to Galileo, 17 December 1597, in (Galilei 1890–1909, vol. X, 72).

[29] Letter to Galileo, 16 June 1610, in (Galilei 1890–1909, vol. X, 372). The comparison of Galileo with Columbus is also found in Kepler's letter to Galileo of 19 April 1610 (Galilei 1890–1909, vol. X, 324 and 325), and the one that he was sent by Campanella on 13 January 1611 (Galilei 1890–1909, vol. XI, 24).

a rope. Guidobaldo also adds that projectile motion can be studied to advantage by dipping a ball in ink and throwing it along the surface of an inclined surface so the ball can roll up and down. How far Guidobaldo went in his study of this motion is not known, but we can only be struck by the similarity of his method with Galileo's description of two ways of producing a parabola in the Third Day of his *Two New Sciences* of 1638. The first reads:

> I use an exquisitely round bronze ball, no larger than a nut, which is rolled on a metal mirror that is not held vertically but somewhat tilted, so that the ball rolls over it and presses it lightly. As it travels it leaves a very thin and smoothly traced parabolic line, which is wider or narrower, according as the ball is rolled higher or lower.

The second way consists in driving two nails into a wall at the same horizontal level and at a distance that is twice the width of the rectangle in which we want to draw a semiparabola. From these two nails we hang a fine chain that is long enough for the depth of its sagging to cover the whole expanse.[30]

Of course, it cannot be excluded that those passages in Guidobaldo's manuscripts were due to Galileo's influence. Setting aside the issue of authorship, however, it remains true that without Guidobaldo Galileo would have gone far, but he would not have moved as fast. He was indeed blessed with a gifted and generous patron.

References

Bertoloni Meli, D. (1992). Guidobaldo dal Monte and the Archimedean Revival. *Nuncius* 7:3–34.

Damerow, P., J. Renn, and S. Rieger (2001). Hunting the White Elephant: When and How Did Galileo Discover the Law of Fall? In: *Galileo in Context*. Ed. by J. Renn. Cambridge University Press, 21–149.

Drabkin, I. E. and S. Drake (1960). *Galileo Galilei On Motion and On Mechanics*. Madison: University of Wisconsin Press.

Drake, S. and I. E. Drabkin (1969). *Mechanics in Sixteenth-Century Italy*. Madison: University of Wisconsin Press.

Galilei, G. (1890–1909). *Galileo Galilei, Opere*. Ed. by A. Favaro. Firenze: Barbèra.

[30] See (Galilei 1890–1909, vol. VIII, 186–187); English translation in Galilei, *Two New Sciences*, by Drake (Galilei 1974, 142–143). See (Galilei 1890–1909, vol. VIII, 313); English translation in Galileo, *Two New Sciences* by Drake (Galilei 1974, 142–143). See the discussion in (Naylor 1974; Damerow, Renn, and Rieger 2001).

Galilei, G. (1974). *Two New Sciences, Including Centers of Gravity and Force of Percussion. Translated, with Introduction and Notes, by Stillman Drake*. Ed. by S. Drake. Madison: University of Wisconsin Press.

Micheli, G. (1992). Guidobaldo del Monte e la Meccanica. In: *La matematizzazione dell'universo*. Ed. by L. Conti. Assisi: Edizione Porziuncola, 87–104.

Monte, Guidobaldo del (1577). *Mechanicorum liber*. Pesaro: Hieronymum Concordiam.

— (1579). *Planisphaeriorum universalium theorica*. Pesaro: Girolamo Concordia.

— (1580). *De ecclesiastici calendarii restitutione opusculum*. Pesaro: Girolamo Concordia.

— (1581). *Le mechaniche dell'illustriss. sig. Guido Ubaldo de' Marchesi del Monte: Tradotte in volgare dal sig. Filippo Pigafetta*. Venezia: Francesco di Franceschi Sanese.

— (1588). *In duos Archimedis aequeponderantium libros paraphrasis scholijs illustrata*. Pesaro: Hieronymum Concordiam.

— (1600). *Perspectivae libri sex*. Pesaro: Girolamo Concordia.

— (1609). *Problematum astronomicorum libri septem*. Venezia: Bernardo Giunti, Giovanni Battista Ciotti e soci.

— (1615). *De Cochlea*. Venezia: Evangelista Deuchino.

Naylor, R. (1974). The Evolution of an Experiment: Guidobaldo del Monte and Galileo's Discorsi demonstration of Parabolis Trajectory. *Physis* 16(4):232–346.

Pappus (1588). *Pappi Alexandrini mathematicae collectiones a Federico Commandino Urbinate, in latinum conversae, et commentariis illustratae*. Pesaro: Girolamo Concordia.

Sinisgalli, R. and S. Vastola, eds. (1994). *La teoria sui Planisferi universali di Guidobaldo del Monte*. Firenze: Edizioni Cadmo.