

FIG. 2.1 The cone of Hell. O is the earth's center, r its radius, J Jerusalem; arc $AJB = 3245$ miles.

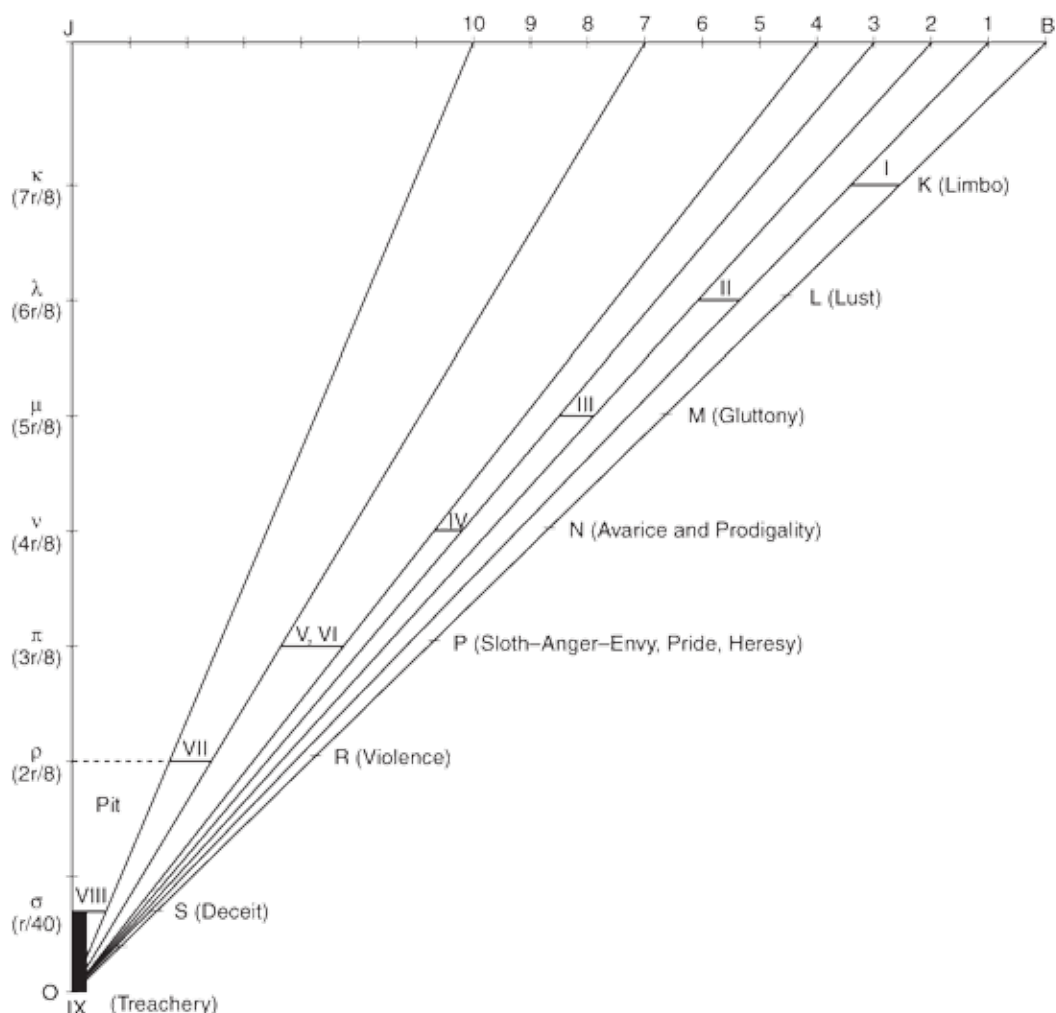


FIG. 2.2 The mathematics of Hell. The horizontal lines I, II... indicate the widths of the levels; the divisions along JB, intervals of 100 miles; σO is the Well of the Giants, not drawn to scale.

or circle of Limbo. The veriest tyro in geometry then could work out that the width of I is 87.5 miles. Galileo made a fuss of it and attributed the principle of the calculation to Archimedes. The width of the second circle, home of the Lustful, is the piece of λL cut off between O_1 and O_2 ; it comes to 75 miles. The third circle, of the Greedy, and the fourth, of the Avaricious, are made in the same way: III = 62.5 miles, IV = 50 miles.

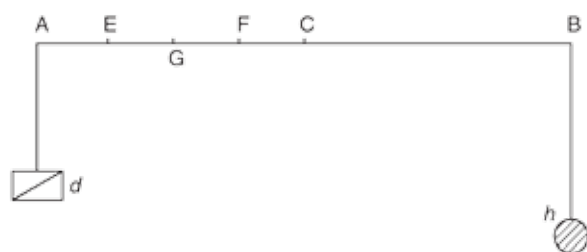


FIG. 2.3 Schematic of Galileo's *bilancetta*.

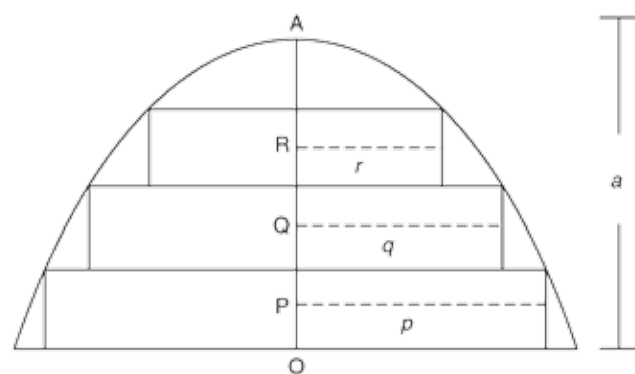


FIG. 2.4 Archimedes' method of exhaustion of a paraboloid.

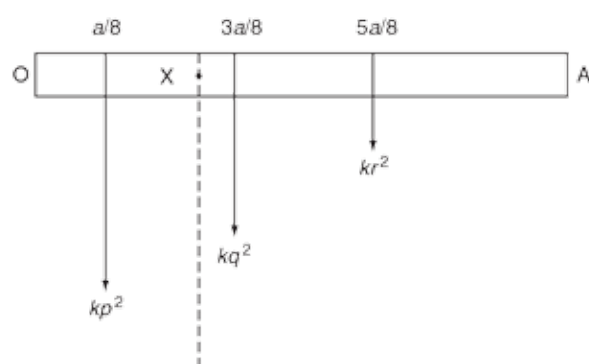


FIG. 2.5 The center of gravity X of the disks of Fig. 2.4.

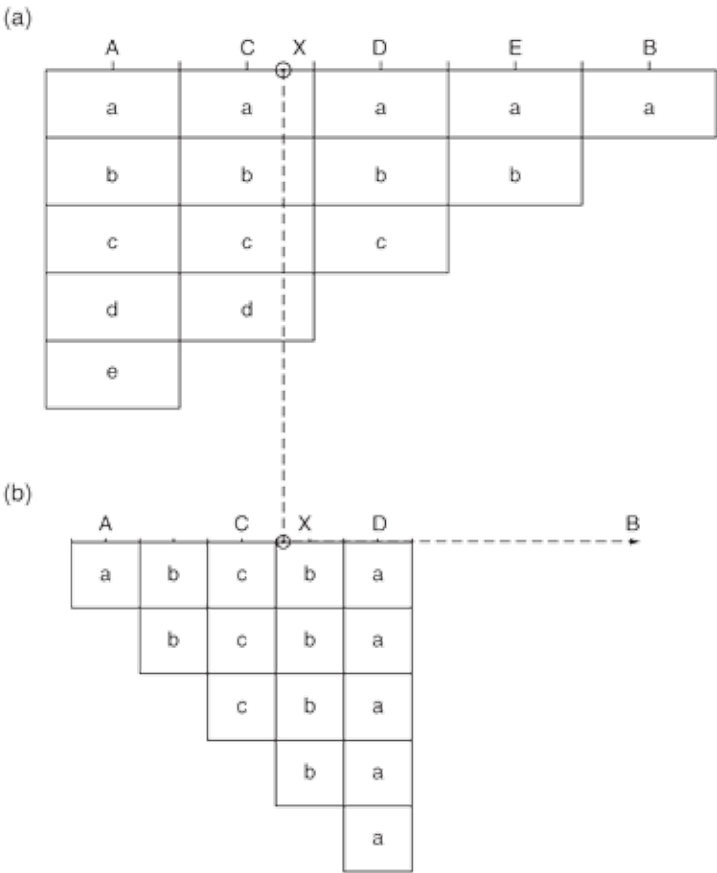


FIG. 2.6 Galileo's lemma on centers of gravity.

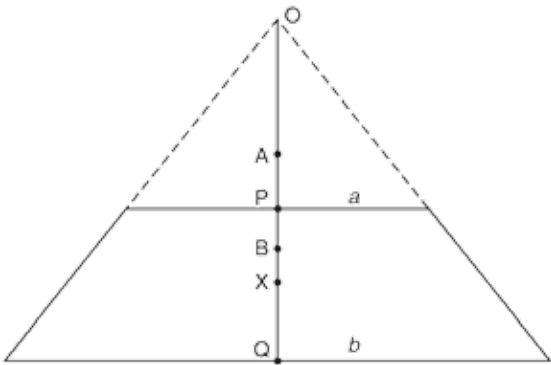


FIG. 2.7 The center of gravity of a truncated cone.

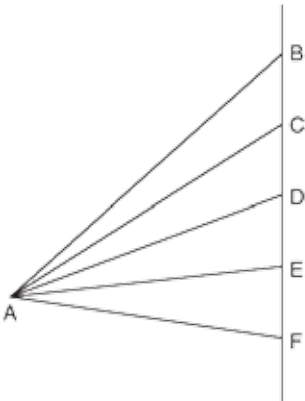


FIG. 2.8 Apparent acceleration of a body moving at constant speed.

FIG. 2.9 Continuity of motion at change of direction.

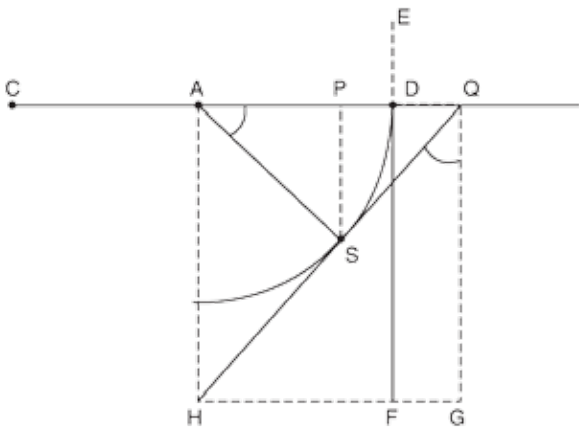
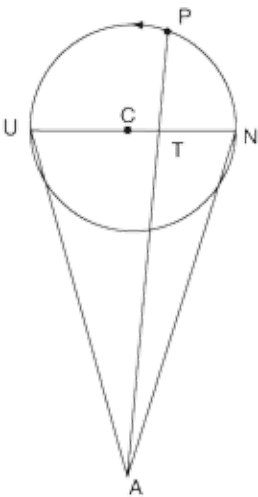


FIG. 2.10 Relative velocities of free fall and motion along an inclined plane.

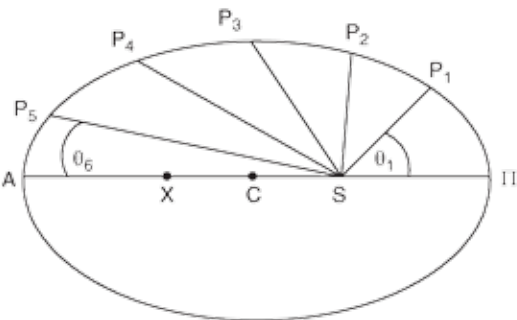


FIG. 3.1 Motion in a Kepler ellipse (S the sun, P a planet).

FIG. 3.2 Motion in an eccentric circle
(S the sun, P the planet, X the equant point).

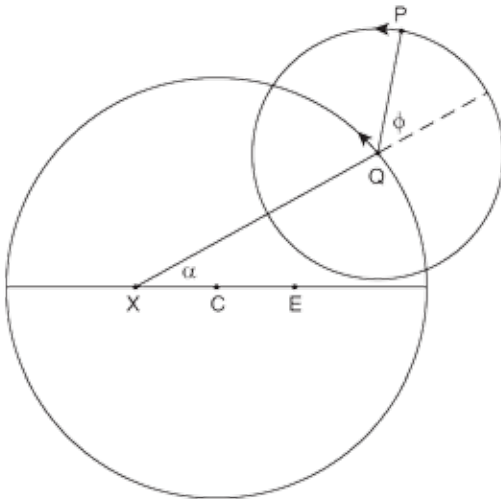
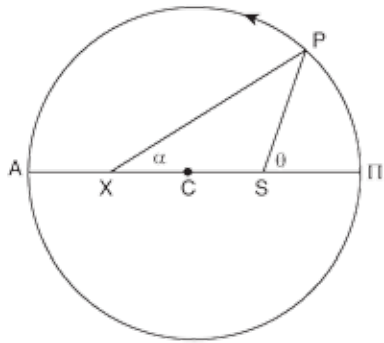


FIG. 3.3 Geocentric (*recte* geostatic) motion with epicycle (E the earth, P the planet, X the equant point).

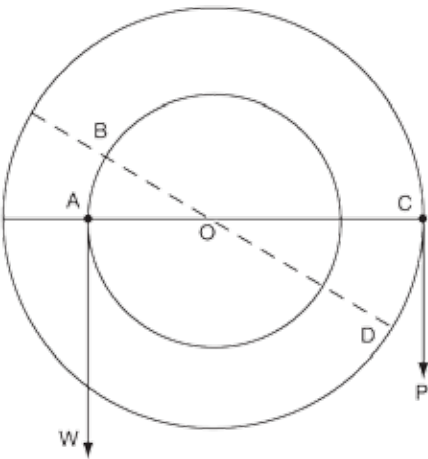


FIG. 3.4 Pseudo-Aristotle's wheel and axle, by which the lesser power P raises the greater weight W.

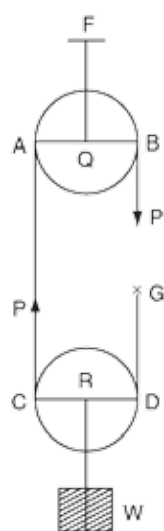


FIG. 3.5 Pulley with a mechanical advantage of 2.

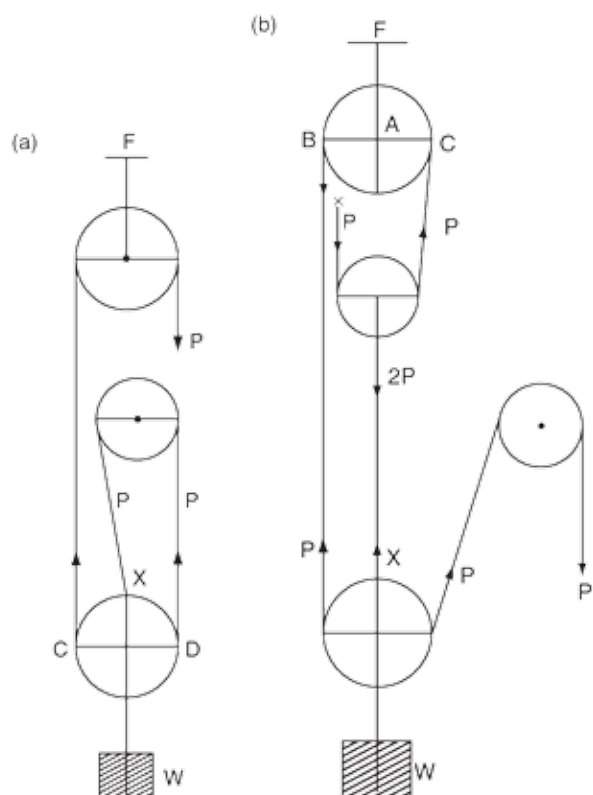


FIG. 3.6a and 3.6b Pulleys with mechanical advantages of 3 and 4.

FIG. 3.7 An Archimedean screw as deployed in Galileo's time. After Ramelli, *Machines* (1976), 151, 564.

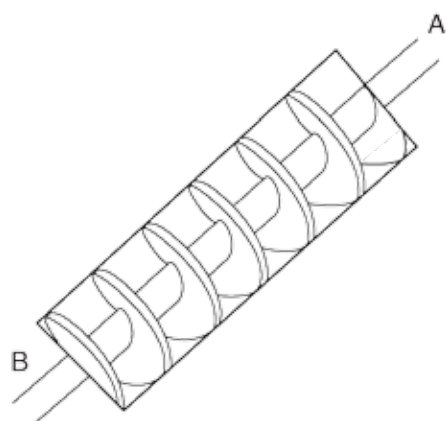


FIG. 3.8 The change in angle of dip δ when a magnetic needle moves from the equator (M_1) to a latitude ϕ (M_2) on a spherical lodestone centered at C.

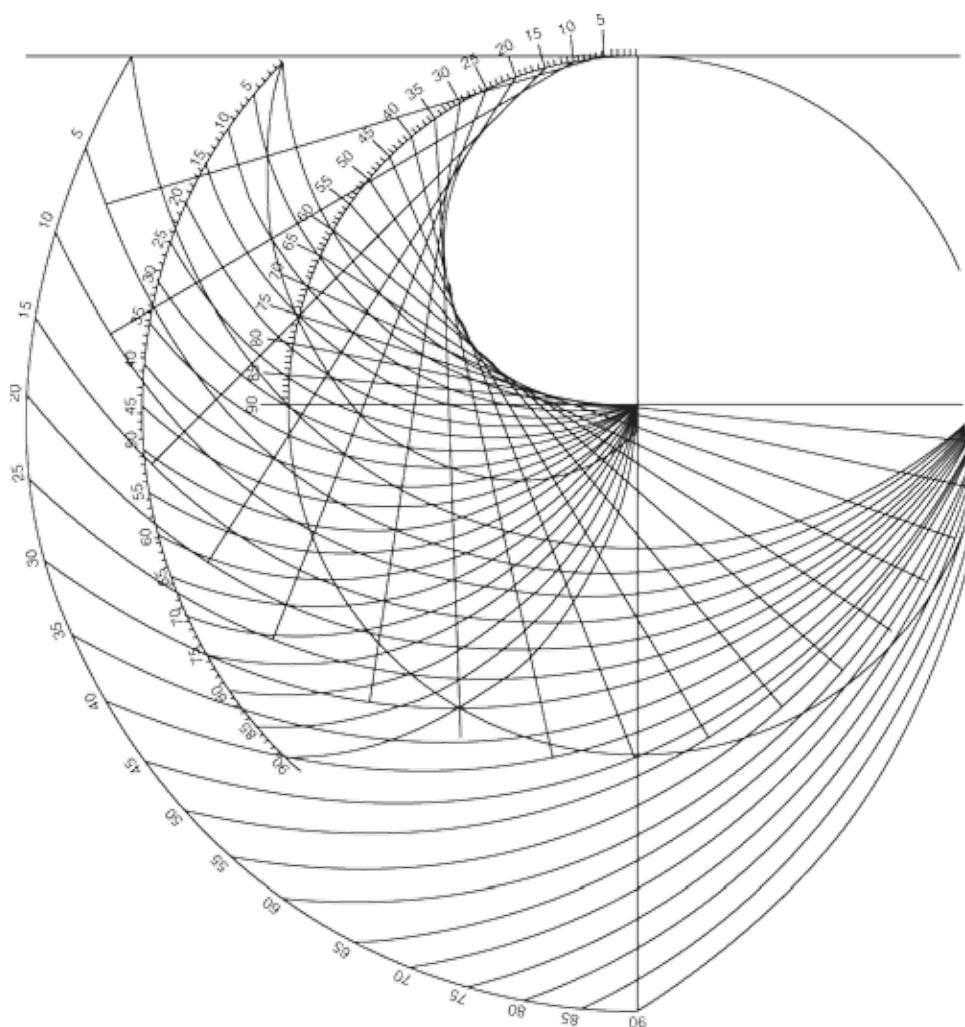
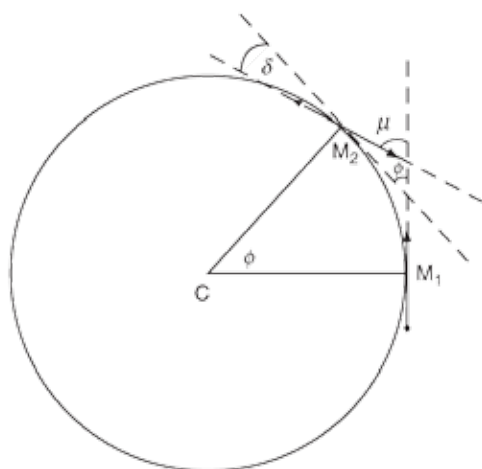


FIG. 3.9 A display that defeated Sarpi. The innermost circle is the earth; the straight lines (apart from the vertical) dip, and the figures latitude. The construction divides μ into ϕ and δ , or would if μ were known. From Gilbert, *De magnete* (1600), 201.

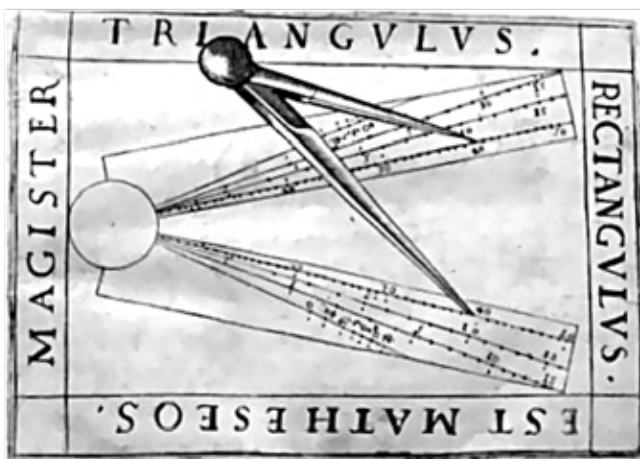


FIG. 3.10 Galileo's proportional compass showing crosswise fitting. From Capra, *Usus* (1607). Courtesy of the Museum of the History of Science, Oxford.

FIG. 3.11 Galileo's compass opened to find $x = ab/c$ using the "arithmetic" (linear) scales.

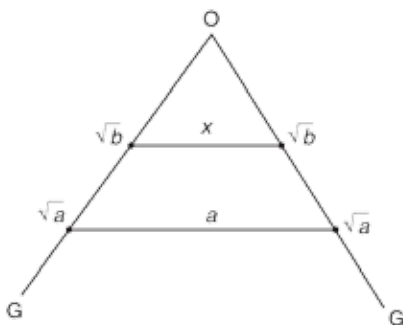
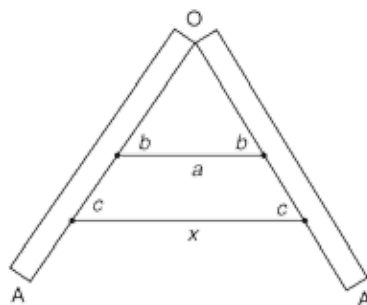
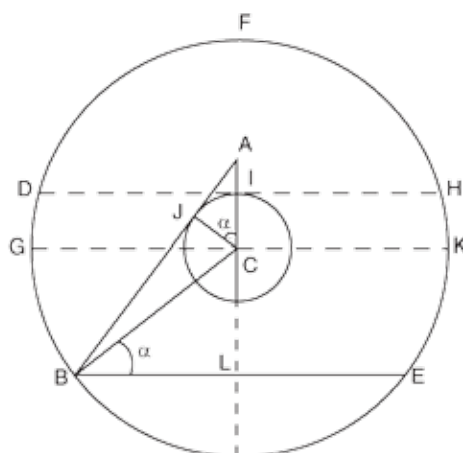


FIG. 3.12 The compass opened to find $x = \sqrt{ab}$ using the "geometrical" (square-root) scales.

FIG. 4.1 Last light on Mount Caucasus (AI) from the set sun at B; $\alpha = \angle GCB = 60^\circ = \angle GCK/3$ or one-third of the sun's nocturnal path.



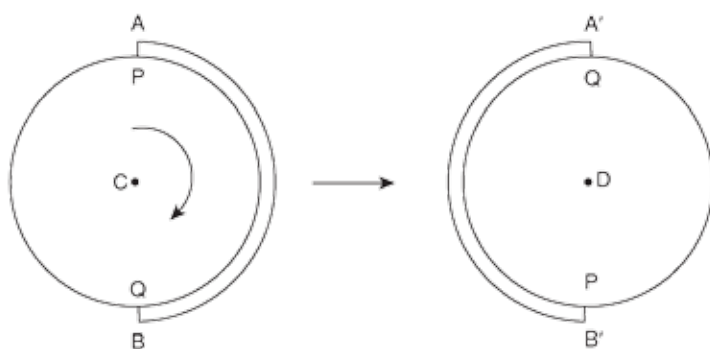


FIG. 4.2 Sarpi's tidal theory (1595), which moves the waters by a combination of the earth's diurnal and annual motions.

FIG. 4.3 The semi-annual parallax χ of the comet supposed to move from N_1 to N_2 as the earth moves from E_1 to E_2 .

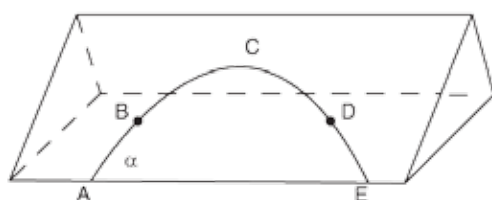
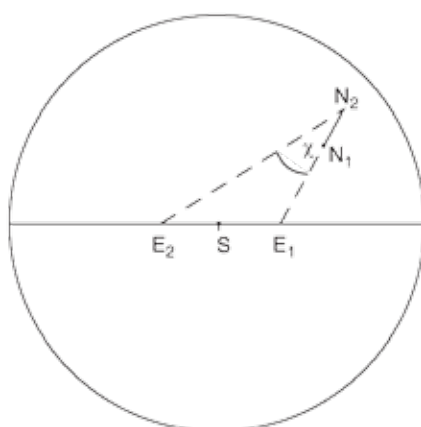
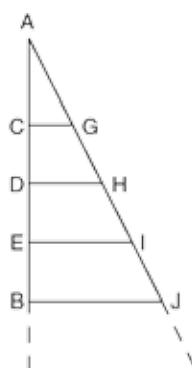


FIG. 4.4 The inked-ball trajectory as it may have been observed by Galileo and del Monte.

FIG. 4.5 A useful but misleading diagram of velocity against distance in free fall.



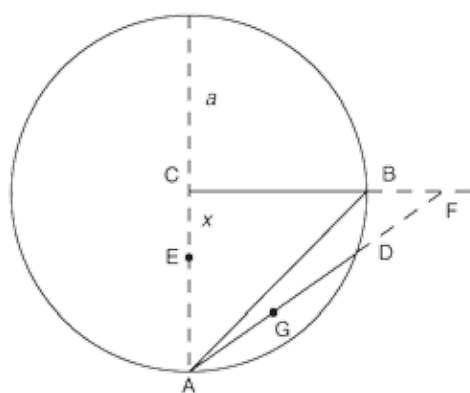


FIG. 4.6 Galileo's very beautiful proposition (VBP).

FIG. 4.7 First step in an Archimedean exhaustion of motion along an arc of a vertical circle.

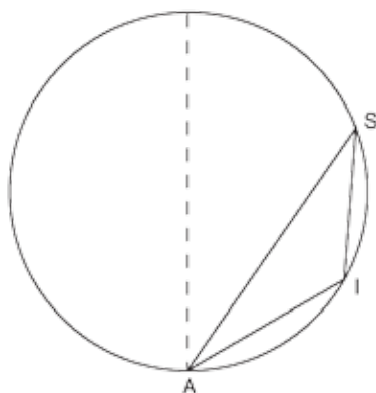


FIG. 4.8 A roll down an inclined plane GA turned into a reversed gun shot ABC.

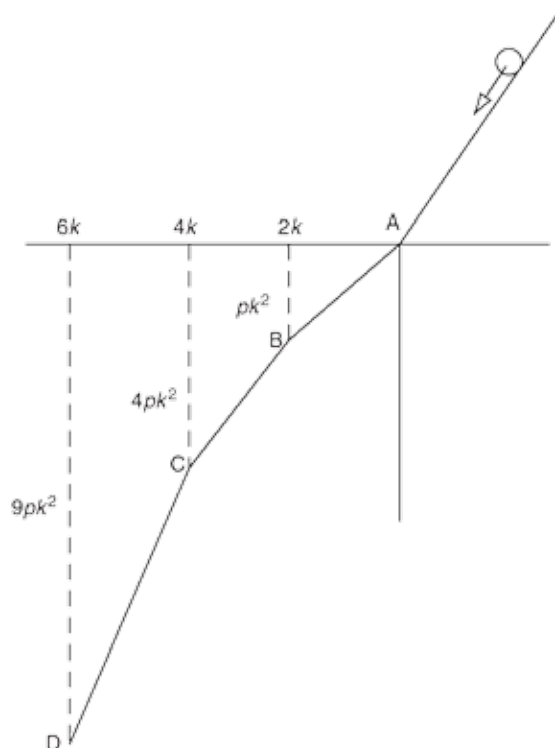


FIG. 4.9 Construction of the parabolic path of a projectile launched horizontally at A.

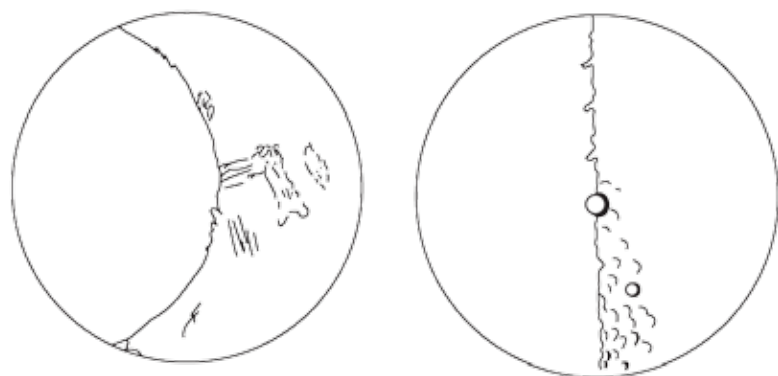


FIG. 5.1 A surveyor's moon. Harriot's depictions before (5.1a) and after (5.1b) seeing Galileo's *Sidereus nuncius*. After Bredekamp, *Galileo* (2007), Abb. 214, 215.

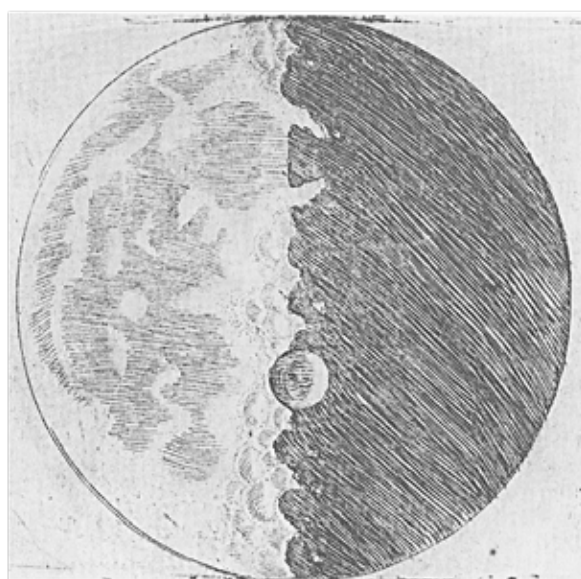
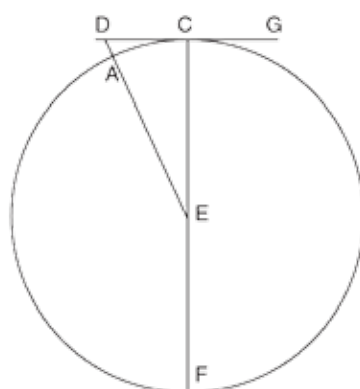


FIG. 5.2 The half-moon featuring an exaggerated crater along the terminator. Galileo, *Sidereus nuncius* (1610). After SN, 45.

FIG. 5.3 Galileo's method for determining the height AD of a moon mountain. Galileo, *Sidereus nuncius* (1610). After SN, 52.



a.	7 Jan	E	* * 24 *	W
b.	8 Jan	E	24 * * *	W
c.	10 Jan	E	* * 24	W
d.	13 Jan	E	* 24 * * *	W

FIG. 5.4 Jupiter's starlets as they appeared to Galileo early in January 1610.

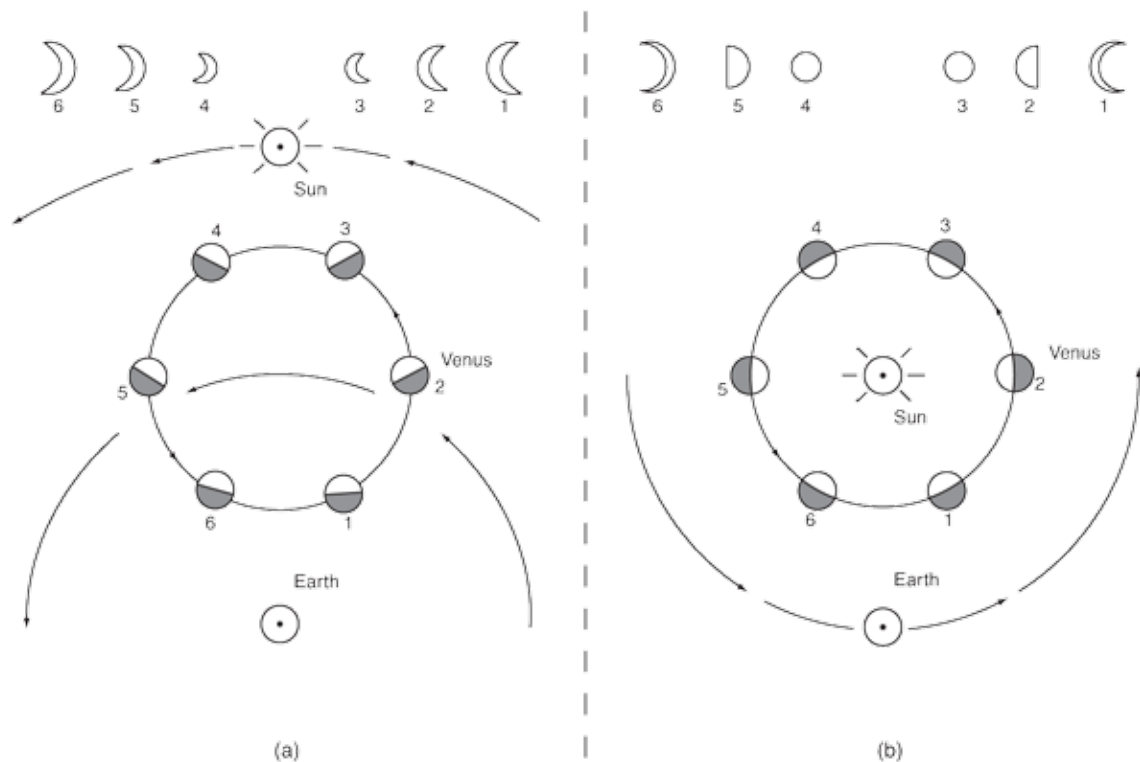


FIG. 5.5 The phases of Venus on the Ptolemaic (a) and Copernican (b) systems. After Van Helden, in SN, 108.

FIG. 5.6 A prism in free float in a basin with rectangular cross-section AB.

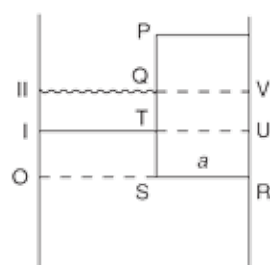
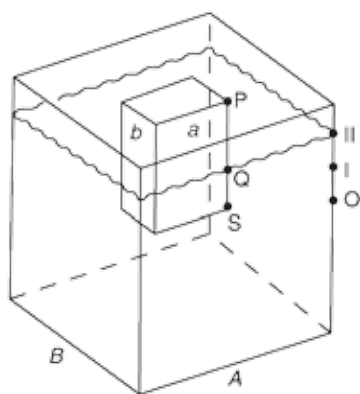


FIG. 5.7 A prism constrained to float against the side of the basin of Fig. 5.6.

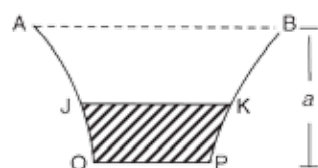


FIG. 5.8 An ebony chip JKOP lying in a water cradle of height a ; air occupies the space ABKJ.

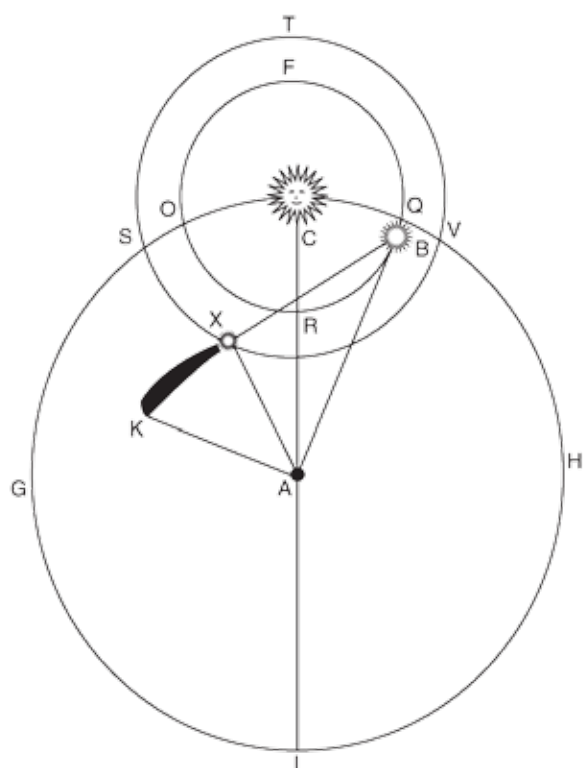


FIG. 6.1 A typical cometary orbit according to Tycho Brahe. After BH, *Disc.*, 438.

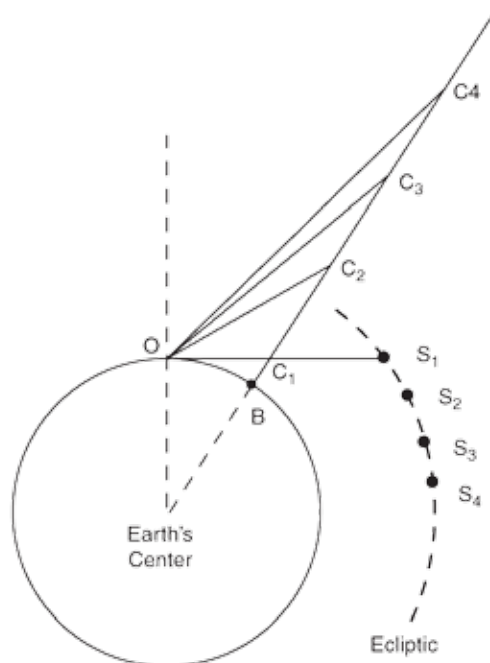


FIG. 6.2 A cometary path according to Galileo-Guiducci. B is the origin of the exhalation, O the observer, C the comet, S the sun. The subscripts indicate positions at the same time on successive sidereal days.

FIG. 6.3 Tycho's "error." Tycho did not err in analyzing this elementary drawing but in identifying the star with zenith distance $\angle ZAD$.

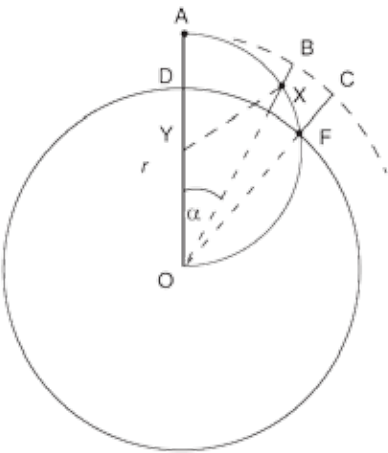
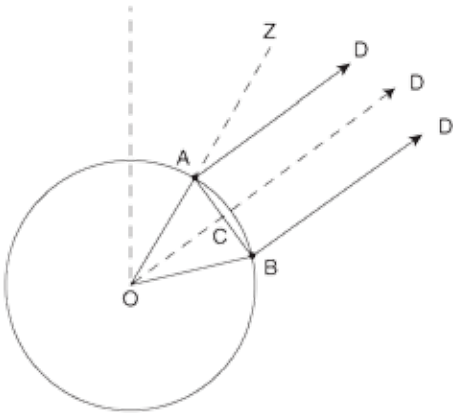


FIG. 7.1 Galileo's *bizzarria*. A weight released from the tower at A reaches the earth's center by the semi-circle AXFO.

FIG. 7.2 Diagram to show that an unattached body cannot be extruded from the earth no matter how fast the earth spins.

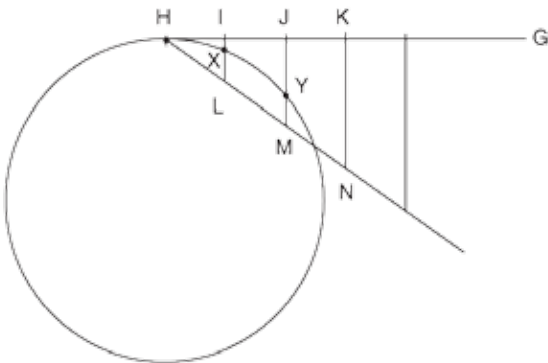
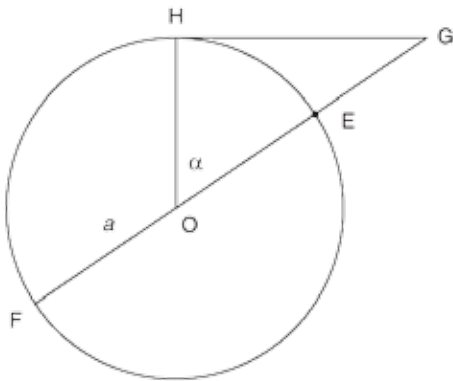


FIG. 7.3 A confusion of space and time: the horizontal segments represent time or velocity, the vertical ones space or acceleration.

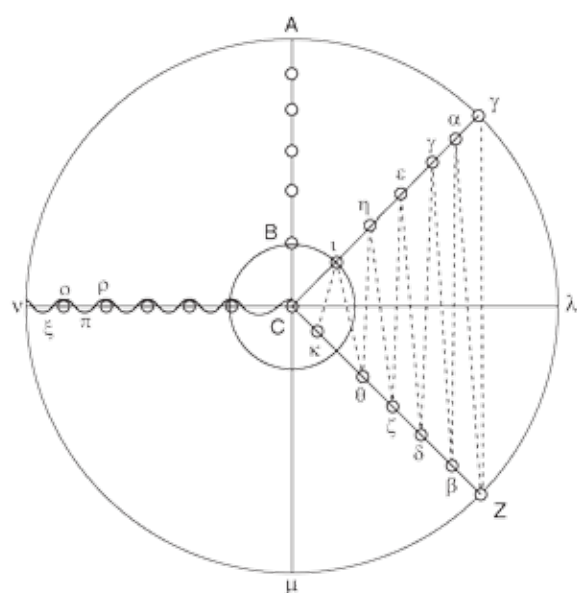


FIG. 7.4 The Scheiner-Locher argument against the diurnal motion. All points above the earth's center C rotate around the axis $v\lambda$ in 24 hours. A ball let fall from the pole v would reach the earth along a straight line; from A , on a spiral in the plane of the equator; from Y , along a spiral on the surface of a cone. After Koyré, *APS, Trans.*, 45:4 (1955), 332, a simplification of the diagram in Scheiner-Locher, *Disquisitiones mathematicae* (1614), 30.

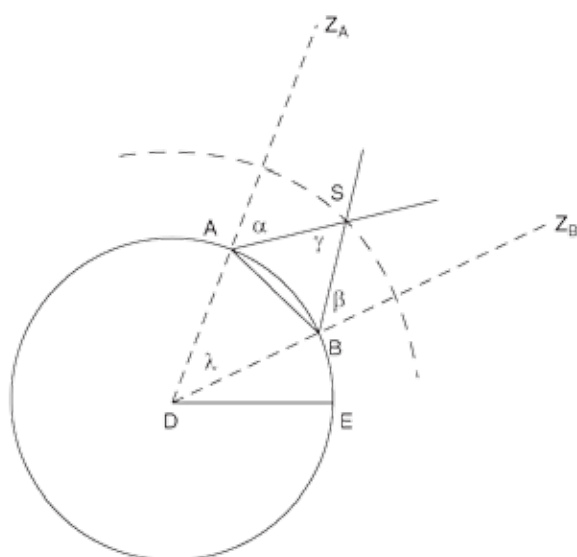


FIG. 7.5 The parallax γ of an object S as determined by observers at A and B for whom it has zenith distances α and β .

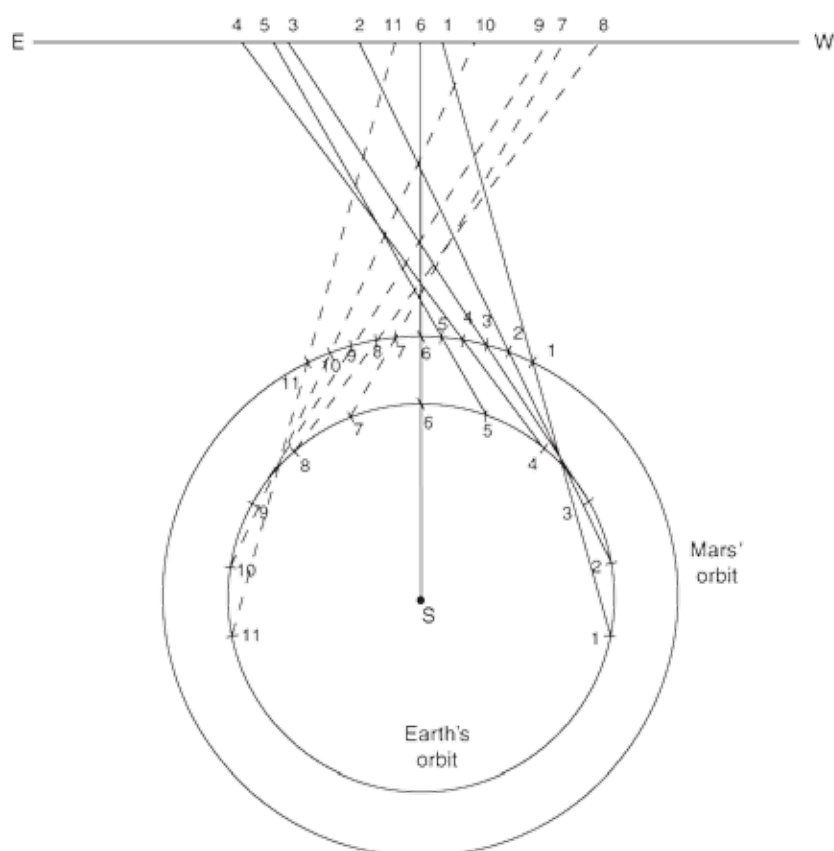


FIG. 7.6 Retrograde motion of a superior planet. As seen from the moving earth between positions 1 and 4, Mars appears to move "directly," from west to east; between 4 to 8, including opposition (6), "in retrograde," from east to west; and between 8 and 11, again directly.

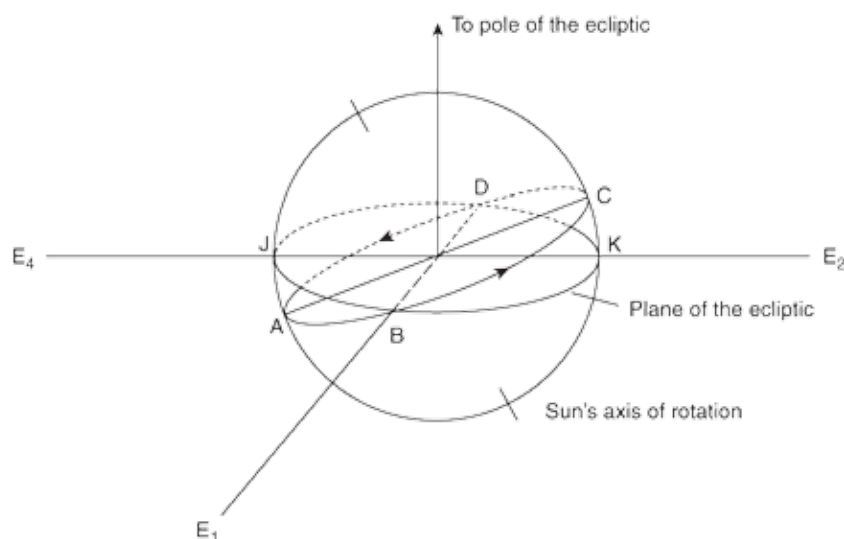


FIG. 7.7 Sunspot trajectories. Let the spot lie on the solar equator ABCD, which meets the plane of the ecliptic at B and D. Seen from E_1 ($E_1 B$ is perpendicular to the plane of the paper), the spot moves along the straight line AC; seen from E_2 , along a path curving up toward C and down toward D; seen from E_3 (not shown) beyond D on the line $E_1 B D$, along CA; and seen from E_4 , along a path curving down toward A and up toward B.

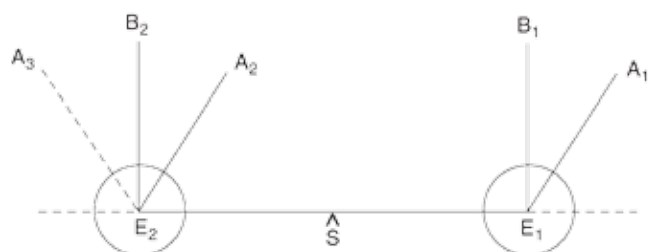


FIG. 7.8 Copernicus' third motion. If the earth went around the sun like a rock in a sling, its axis would change direction, as from E_1A_1 to E_2A_2 . The axis would have to rotate back through 180° to E_2A_3 to remain parallel to itself.

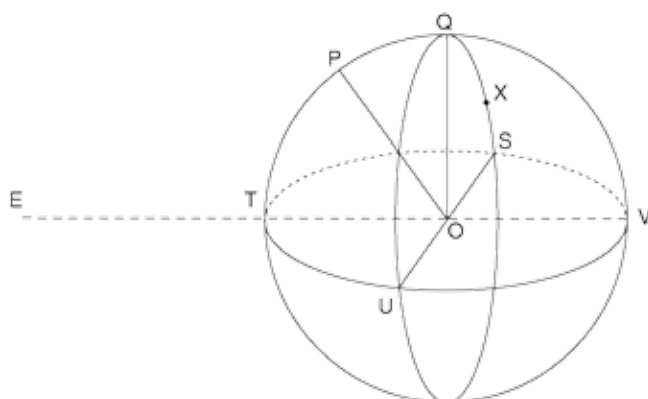


FIG. 7.9 A spot that appears at X on the sun's eastern limb would appear near its center at noon (when SXQU is in the meridian) and on its western limb at sunset if the sun circled the earth and its axis remained parallel to itself.

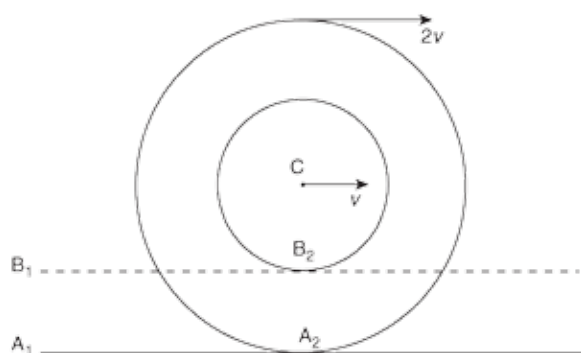


FIG. 8.1 Aristotle's wheel, which presents several puzzles of the infinite.

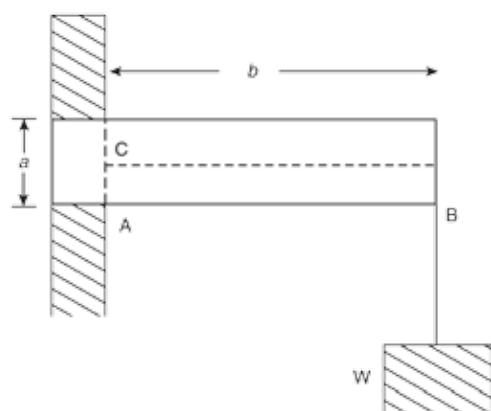


FIG. 8.2 Galileo's beam, which assimilates the strength of materials to the law of the lever.

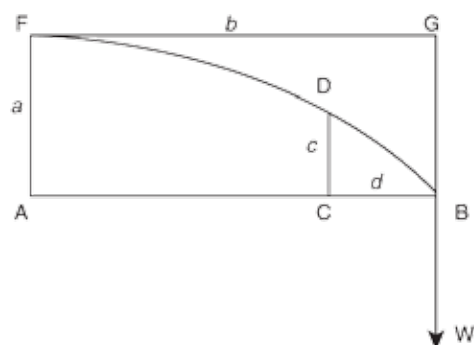


FIG. 8.3 Statics of a parabolic beam.

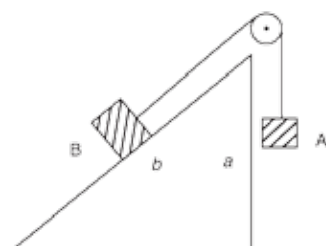


FIG. 8.4 Galileo's final demonstration that the weight of a body on an inclined plane of height a and length b is (a/b) times its weight when suspended freely. Cf. Fig. 2.10.

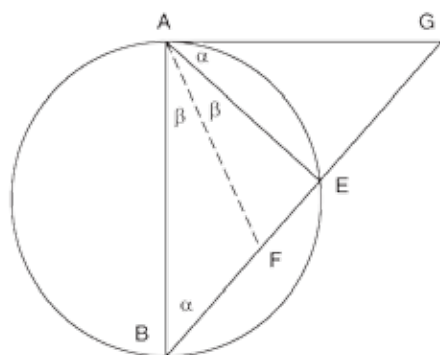


FIG. 8.5 Diagram to relate the time of fall along the broken path $AE + EB$ to that for fall along the vertical AB .

FIG. 8.6 Salviati's definition of a parabola.

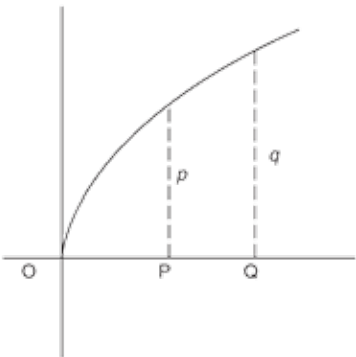


FIG. 8.7 Generation of a parabola from uniform horizontal motion and accelerated natural fall.

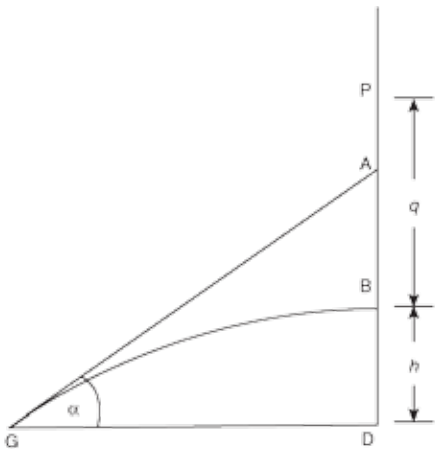
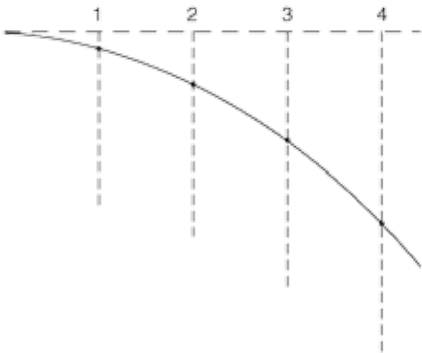
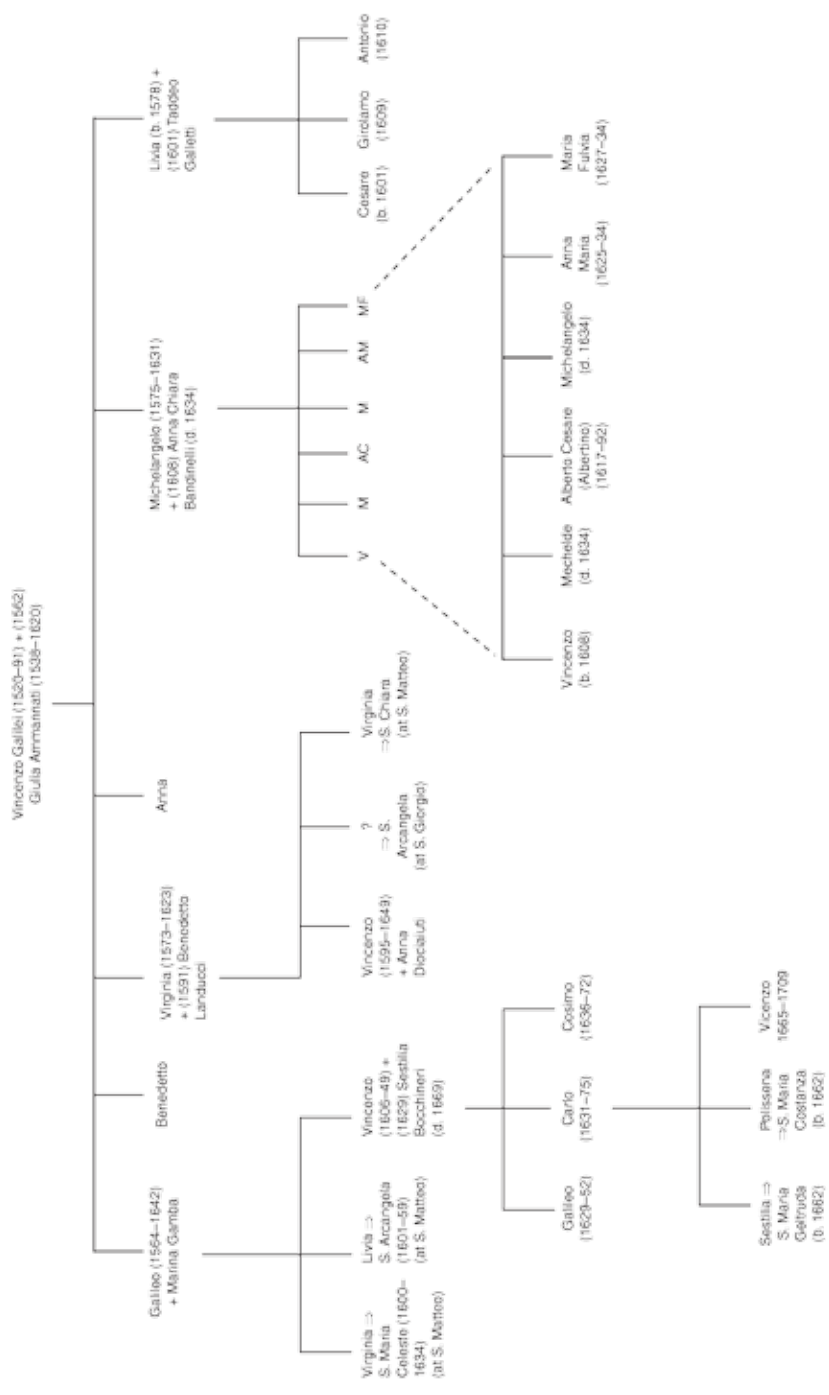


FIG. 8.8 The tangent to the trajectory of a shot at α° above the horizon cuts the vertical at twice the height h to which the shot rises.

The problem now is to calculate the range for each degree of elevation under the relations $\tan \alpha = \sqrt{h/q}$, $h + q = \text{constant}$, $R = 2\sqrt{hq}$. This formulation displays immediately the maximum at 45° : it comes to asking for the rectangle hq with the greatest area of all rectangles with the same perimeter ($h + q = \text{const.}$). Everyone knows the answer: the square $h = q = R/2$. It also indicates that for values of α equidistant from 45° the range is the same. For whether h exceeds or falls short of $R/2$ by an amount x , q must do exactly the reverse, and $R = 2\sqrt{[(R^2/4) - x^2]}$ for both cases.⁸⁸ So we have for the relative ranges $R(\alpha):R(45^\circ)$ for balls shot with the same charge,

$$R(\alpha):R(45^\circ) = \sqrt{qh}:R/2 = h \cot \alpha:R/2 = \sin 2\alpha.$$

The last two steps come from $h = q \tan^2 \alpha$ and $h + q = R$.



GLOSSARY OF NAMES

The Glossary contains names of Galileo's contemporaries mentioned in the text, of people real and imaginary whose writings or escapades engaged him, and of principal actors in the resolution of the "Galileo Affair." Where birth and/or death dates do not appear, they eluded the author, who does not guarantee all those he did find.

Real people

ACERENZA, Cosimo d' (?–1601), Neapolitan patrician and bibliophile, whose library formed the basis of the Ambrosiana Library in Milan.

ACQUAPENDENTE, Fabrizio d' (1533–1619), Paduan surgeon and anatomist, discovered the valves of the veins.

ACQUASPARTA, Federico, Marquese di Monticelli (1562–1630), father of Federico Cesi, founder of the Accademia dei Lincei.

ACQUAVIVA, Claudius (1543–1615), fifth general of the Society of Jesus, who solidified its position as the leading teaching order in Europe.

AGGIUNTI, Niccolò (1600–1635), student of Castelli, professor of mathematics at Pisa.

ALAMANNI, Luigi di Piero (1558–1609), Florentine poet, certified the originality of Galileo's Archimedean theorems.

ALDOBRANDINI, Pietro, Cardinal from 1593 (1571–1621), nephew of Pope Clement VIII, patron of Torquato Tasso.

ALLACCI, Leone (1586–1669), teacher of Greek, librarian, close to the Barberini.

ALTOBELLO, Ilario (1560–1637), Veronese, Minorite monk, poet, mathematician, astronomer.

AMBROGETTI, Marco, Florentine priest, translated Galileo's shorter works into Latin.

ANFOSSI, Filippo (?–1825), Dominican, Master of the Sacred Palace in 1820, central figure in the Settele affair.

ANTONINI, Daniele (1588–1616), military man, Galileo's student at Padua, killed in Venetian campaigns against Austria.

APELLES. See Scheiner.

APROINO, Paolo (c.1584–1638), canon of the cathedral at Treviso, Galileo's student at Padua, interlocutor in the fifth day of *Two new sciences*.

ARCHIMEDES (c.287–212 BCE), Greek mathematician, celebrated for his inventions both pure and applied.

ARIAS MONTANA, Benito (1527–1598), head of the Escorial Library, editor of the polyglot bible sponsored by Philip II of Spain.

ARIOSTO, Ludovico (1474–1533), Italian poet, author of *Orlando furioso* (1516, 1532).

ARISTOTLE (383–322 BCE), "The philosopher," still "The master of those who know."

ATTAVANTI, Giannozzo (c.1582–1657), cleric, accused by Tommaso Caccini of heretical views allegedly learned from Galileo.

BADOVERE, Giacomo (Jacques) (c.1580–c.1620), student of Galileo who supplied information about the Dutch forerunner of the telescope.

BALIANI, Giovanni Battista (1582–1666), official of the Republic of Genoa, mathematician, correspondent of Galileo and Grassi.

BANDINI, Ottavio, Cardinal from 1596 (1558–1629), uncle of Galileo's informant in Rome, Pietro Dini.

BARBERINI, Antonio (the elder), Cardinal from 1624 (1569–1646), younger brother of Urban VIII, member of the Order of Capuchins.

BARBERINI, Antonio (the younger), Cardinal from 1627 (1607–1671), nephew of Urban VIII, younger brother of Francesco Barberini.

BARBERINI, Carlo, Duca di Monterotondo (1562–1630), older brother of Urban VIII.

BARBERINI, Francesco, Cardinal from 1623 (1597–1679), cardinal nephew of Urban VIII, Vatican Secretary of State, lynx, sometime protector of Galileo.

BARBERINI, Maffeo. See Urban VIII.

BARDI, Giovanni de', Conte di Vernio (1534–1612), Florentine, composer, patron of Vincenzo Galilei.

BARDINELLI, Baccio (1488–1560), Florentine painter and sculptor, worked on the choir and altar of the cathedral of Florence.

BARONIO, Cesare, Cardinal from 1596 (1538–1607), became Superior of the Oratorians in 1593, author of the official church history, *Annales ecclesiastici* (1588–1607).

BARTOLI, Giovanni, Florentine agent in Venice when Galileo invented the telescope.

BELLARMINE, Robert (Roberto Bellarmino), Cardinal from 1599 (1542–1621), S.J., chief theologian of the Holy Office, canonized in 1930.

- BELLONI, Camillo (?–c.1633), professor of moral philosophy at Padua, founding member of the Accademia dei Ricovrati in 1599.
- BENEDETTI, Giovanni Battista (1530–1590), mathematician to the Duke of Savoy.
- BENEDICT XIV, Prospero Lambertini, Pope from 1740 (1675–1758).
- BENIVIENI, Girolamo (1453–1542), Florentine man of letters.
- BENTIVOGLIO, Guido, Cardinal from 1621 (1579–1644), Galileo's student at Padua, one of the ten cardinal-inquisitors who tried Galileo in 1633.
- BERNEGGER, Matthias (1582–1640), Lutheran professor of history at Strasbourg and a friend of Kepler, translator of Galileo's *Dialogue* into Latin.
- BERNI, Francesco (1497–1536), Florentine poet who wrote mocking or burlesque poems.
- BERNINI, Gian Lorenzo (1598–1680), Urban VIII's favorite architect and sculptor.
- BIANCANI, Giuseppe (1566–1624), Jesuit mathematician and astronomer.
- BIANCHINI, Francesco (1662–1729), astronomer, antiquary, cultural advisor of Pope Clement XI.
- BOCCHINERI, Sestilia di Carlo, wife of Galileo's son Vincenzo.
- BOCCHINERI, Geri (c.1590–1650), brother of Sestilia, secretary to Grand Duke Ferdinando II of Tuscany.
- BOETHIUS, Ancius Manlius Severinus (c.480–524), translator and commentator of Greek philosophical works, whose *Consolations of philosophy* was widely read during the Renaissance.
- BORGHESE CAFFARELLI, Scipione, Cardinal from 1605 (1576–1633), cardinal nephew of Paul V.
- BORGHINI, Jacopo, Galileo's first teacher.
- BORGIA, Gaspar de (Gaspar Borja y de Velasco), Cardinal from 1611 (1580–1645), Spanish ambassador to the Holy See, hostile to Urban VIII.
- BORRO (or Borri), Girolamo (1512–1592), professor of philosophy at Pisa, taught Galileo physics.
- BORROMEO, Federico, Cardinal from 1587 (1564–1631), a religious in the style of Baronio and Bellarmine, Archbishop of Milan in 1595, patron of Ciampoli.
- BOSAGLIA, Cosimo (c.1550–1621), professor of philosophy at Pisa, 1600–1621, poet, specialist in Greek literature.
- BRAHE, Tycho (1546–1601), Danish astronomer.
- BRANDMÜLLER, Walter (1929–), S.J., president (1998–2009) of the Pontifical Committee for Historical Sciences, founded in 1954 by Pope Pius XII.
- BRENGGER, Johann Georg, physician from Augsburg, friend of Welser, challenged Galileo over the height of moon mountains.

- BRENZONI, Ottavio (c.1575–1630), physician and astrologer from Verona.
- BRUCE, Edmund, a Scot in Pinelli's circle, later in Kepler's.
- BRUNELLESCHI, Filippo (1377–1446), Florentine architect, builder of the dome of the cathedral of Florence.
- BRUNO, Giordano (1548–1600), Dominican, philosopher, mathematician and astronomer, condemned by the Inquisition as a heretic and burned at the stake in Rome.
- BUONAMICI, Francesco (?–1603), professor of philosophy at Pisa, member of the Florentine Academy, taught Galileo physics.
- BUONARROTI, Michelangelo (1475–1564), considered by some to be the greatest of Italian artists.
- BUONARROTI, Michelangelo the younger (1568–1646), grand nephew of the artist, friend of Galileo and Maffeo Barberini.
- BUONTALENTI, Bernardo (c.1536–1608), architect, stage designer, and military engineer, friend and collaborator of Vincenzo Galilei's patron Bardi.
- BURTON, Robert (1577–1640), English scholar and clergyman, author of the *Anatomy of melancholy* (1621), a vast, witty, and learned compendium of madness.
- CACCINI, Matteo (1573–1640), Florentine, brother of the Dominican preacher Tommaso.
- CACCINI, Tommaso (Cosimo) (1574–1648), Florentine Dominican who preached against Galileo and denounced him to the Inquisition.
- CAETANI, Bonifazio, Cardinal from 1606 (1567–1617), nephew of Enrico Caetani, helped moderate the decision of the Congregation of the Index against Copernican books.
- CAETANI, Enrico, Cardinal from 1585 (1550–1599), supporter of Galileo's candidacy for a chair of mathematics in Bologna, where he was legate 1585–87.
- CAMPAILLA, Tommaso (1668–1740), Sicilian poet who versified Cartesian philosophy.
- CAMPANELLA, Tommaso (1568–1639), Dominican philosopher, theologian, astrologer and poet from Calabria, imprisoned from 1599 to 1626 for heresy and conspiracy against Spanish rule, subsequently astrological advisor to Urban VIII.
- CAPPONI, Luigi, Cardinal from 1608 (1582–1659), Vatican librarian from 1649.
- CAPRA, Baldassar (c.1580–1626), a student who plagiarized his teacher.
- CARAFFA, Vincenzo (1585–1649), Neapolitan, succeeded Vittelleschi as Jesuit general in 1645.

- CARDANO, Girolamo (1501–1576), astrologer, mathematician, naturalist, gambler.
- CASTELLI, Benedetto (1578–1643), Benedictine from Brescia, Galileo's closest disciple, professor of mathematics in Pisa (1613), entered the service of the Barberinis in 1626.
- CASTRAVILLA, Ridolfo (pseudonym), attacked Dante's *Divine comedy* for violating Aristotelian poetic norms.
- CATALDI, Pietro Antonio (1548–1626), professor of mathematics at Bologna when Galileo applied for the junior professorship there.
- CAVALIERI, Bonaventura (c.1598–1647), Jesuat (not Jesuit!) mathematician trained at Pisa by Castelli, elected professor of mathematics at Bologna (1629) with Ciampoli's help.
- CECCO DI RONCHITTI, the name under which Galileo, Querenghi, Spinelli, and Castelli lampooned Lorenzini and Cremonini.
- CERVANTES, Miguel de (1547–1616), creator of Don Quijote, an ardent reader of *Orlando furioso*.
- CESALPINO, Andreas (1519–1603), professor of medicine at Pisa, philosopher with unusual ideas about motion.
- CESARINI, Virginio (1596–1624), Federico Cesi's cousin, lynx, chamberlain to Urban VIII, editor and addressee of the *Assayer*.
- CESI, Federico, Prince (1585–1630), founder of the Accademia dei Lincei, patron and publisher of Galileo.
- CEVA, Tommaso (1648–1737), professor of mathematics at the Jesuit College in Milan, author of a physics text in the form of a Latin poem.
- CHIARAMONTI, Scipione (1565–1652), professor of philosophy at Pisa, 1627–36, antagonist and target of Galileo.
- CHRISTINA OF LORRAINE (Chrétienne de Lorraine), Grand Duchess of Tuscany (1565–1637), wife of Grand Duke Ferdinando I de' Medici, mother of Cosimo II, addressee of Galileo's "Letter to the Grand Duchess."
- CIAMPOLI, Giovanni (c.1590–1643), childhood friend of Cosimo II de' Medici, poet, opportunist, lynx, devoted friend of Cesarini, Urban VIII's correspondence secretary.
- CIGOLI, Lodovico Cardi, known as (1559–1613), Florentine painter of the late Mannerist/early Baroque style, close friend of Galileo.
- CIOLI, Andrea (1573–1641), Tuscan Secretary of State.
- CLAVIUS, Christoph (1537–1612), professor of mathematics at the Roman College from 1565, implementer of the Gregorian calendar reform, authoritative Ptolemaic astronomer.

- CLEMENT VIII, Ippolito Aldobrandini, Pope from 1592 (1536–1605), austere, pious, strengthened the Inquisition and issued, in 1596, an enlarged and stricter Index of Prohibited Books.
- CLEMENT XI, Giovanni Francesco Albani, Pope from 1700 (1649–1721).
- CLEMENT XIV, Giovanni Vincenzo Antonio Ganganelli, Pope from 1769 (1705–1774), suppressed the Society of Jesus in 1773.
- COIGNET (or Cognet), Michel (1549–1623), from Antwerp, mathematician and military engineer to Archduke Albert of Austria (1598–1621).
- COMMANDINO, Federico (1509–1575), Italian humanist from Urbino, editor and translator of Archimedes and other Greek mathematicians.
- CONTARINI, Giacomo (1536–1596), Venetian patron of the arts and sciences, superintendent of the Venice Arsenal.
- CONTARINI, Niccolò (1553–1631), Venetian patron of Galileo, Doge 1630–31.
- CONTARINI, Simone (1563–1633), Venetian ambassador to Rome in 1616.
- CONTI, Carlo, Cardinal from 1604 (1556–1615), advised Galileo on theological aspects of Copernican ideas.
- CONTI, Ingolfo de' (1565–1615), first lecturer in mathematics at the Accademia Delia in Padua, a military school, for which Galileo drew up a study-plan.
- COPERNICUS, Nicholas (1473–1543), canon of the cathedral in Frombork, Poland, his *De Revolutionibus orbium coelestium* (1543), demonstrating the technical merits of a sun-centered universe, provoked the reform of astronomy and the crusade of Galileo.
- COPPOLA, Giovanni Carlo (?–1652), poet who visited Galileo at Arcetri, author of a play performed at the wedding of Grand Duke Ferdinando II to Vittoria delle Rovere in 1637.
- CORESIO, Giorgio (1554–1641), professor of Greek at Pisa, 1609–15.
- CORNARO, Federico Balissera Bartolomeo, Cardinal from 1626 (1579–1653), Venetian patrician, founded the Accademia dei Ricovrati in Padua in 1599, Patriarch of Venice, 1632–44.
- CORNARO, Giacomo Alvisi (1539–1608), monsignore, Galileo's neighbor in Padua, testified on his behalf concerning Capra's plagiarism.
- CREMONINI, Cesare (1550–1631), popular professor of philosophy at Padua, friend of Galileo, constantly in trouble with the Inquisition for his faithful teaching of Aristotle.
- DAL POZZO, Cassiano (1588–1657), lynx, an editor of the *Assayer*, botanist, collector, and antiquary, he served as private secretary and chief gardener to Cardinal Francesco Barberini.
- DA MULA, Agostino (1561–c.1620), Venetian patrician and friend of Galileo, specialist in optics, member of Sarpi's group of telescopic observers.

- DANTE Alighieri (1265–1321), Florentine poet, subject of a great debate in the 1580s to which Galileo contributed a correct map of the Inferno.
- DE DOMINIS, Marco Antonio (1566–1624), Croatian mathematician, Dean of Windsor between stints as a Catholic archbishop, instrumental in publishing Sarpi's *History of the Council of Trent*.
- DELLA PORTA, Giambattista (c.1535–1615), Neapolitan playwright and natural magician, founded the Accademia dei Segreti, frequently of interest to the Inquisition, lynx.
- DELLA ROVERE, Francesco Maria II, Duke of Urbino (1549–1631), willed his duchy to the Papal States.
- DELLA ROVERE, Vittoria (1612–1694), betrothed in infancy to the boy who became Grand Duke Ferdinando II, in the hope of obtaining the inheritance of Urbino for Tuscany.
- DELLE COLOMBE, Ludovico (Lodovico) (1565–c.1615), Florentine philosopher, eponymous member of the "pigeon league" that opposed Galileo in Florence.
- DELLE COLOMBE, Raffaello (1563–1627), brother of Ludovico, Dominican preacher who thundered against Galileo from the pulpit in Florence.
- DEL MONTE, Francesco Maria, Cardinal from 1588 (1549–1627), Venetian diplomat and connoisseur, brother of Guidobaldo, an important and steady patron of Galileo.
- DEL MONTE, Guidobaldo (1545–1607), mathematician, philosopher and astronomer, a student of Commandino and friend of Tasso, he helped Galileo materially and intellectually.
- DEMISIANI, John (?–1614), Greek, mathematician to the Duke of Gonzaga, proposed in 1611 the name "telescope" for Galileo's invention.
- DETI, Giovanni Battista, Cardinal from 1599 (1580–1630) patron of an important Roman literary academy.
- DIETRICHSTEIN, Franz Seraph von, Cardinal from 1599 (1570–1636).
- DINI, Piero (c.1570–1625), Florentine, monsignore, who, when secretary to his cardinal uncle, Ottavio Bandini in the 1610s, acted as a confidential agent for Galileo in Rome.
- DIOCIAIUTI, Anna di Cosimo (–1633), maintained in a convent by Galileo, whose nephew, Vincenzo Landucci, she later married.
- DIODATI, Elia (1576–1661), Genevan, parliamentary lawyer in Paris, fan of Sarpi and Galileo, whose works he helped to publish outside Italy.
- DONÀ, Leonardo (1536–1612), Doge during the Venetian interdict of 1606–07, received Galileo's gift of the telescope to the Venetian Senate in 1609.
- DORIA, Giovanni, Archbishop of Palermo, Cardinal from 1623 (1573–1642).

- DUODO, Pietro (1554–1610), Venetian patrician, ambassador, friend of Galileo, he founded the military school, the Accademia Delia, in Padua.
- EGIDI DA MONTEFALCO, Clemente (1571–c.1639), Dominican preacher and theologian, Inquisitor General of Florence (1626–36), approved Galileo's *Dialogue* for publication.
- EITEL VON ZOLLERN, Frederick (Eitel Friedrich von Hohenzollern-Sigmaringen), Cardinal from 1621 (1582–1625).
- ELSEVIER, Louis (1604–1670), Leyden publisher of Galileo's work outside of Italy.
- ERNEST of Bavaria, Elector-Archbishop of Cologne (1554–1612), recipient of one of Galileo's first telescopes.
- FABER, Johann (Giovanni) (1574–1629), lynx, papal doctor, botanist, and art collector.
- FABRI, Honoré (1607–1688), prominent Jesuit natural philosopher whose eclecticism had a place for Descartes.
- FABRI DE PEIRESC, Nicolas-Claude (1580–1637), French polymath, studied in Padua, published Maffeo Barberini's poems, tried to gain Galileo's release from Arcetri.
- FARNESE, Odoardo, Cardinal from 1591 (1573–1626), son of Alessandro Farnese, Duke of Parma, and Maria of Portugal, known for his patronage of the arts.
- FAVARO, Antonio (1847–1922), professor at Padua, patron saint of Galileo studies.
- FOSCARINI, Paolo Antonio (c.1565–1616), Venetian, Carmelite monk, theologian, attempted to bring scripture into line with the Copernican system.
- FRANCINI, Ippolito (1593–1653), accomplished lens maker employed in the Medici glass factory in Florence.
- FRANCO, Veronica (1546–1591), Venetian, famous *cortigiana onesta* and poet, whose clients included men Galileo knew.
- FRISI, Paolo (1728–1784), Barnabite, professor of mathematics at Pisa, 1756–64.
- GALEN, Claudius (c.130–c.201), Greek imperial physician whose writings were still the canon in medicine when Galileo studied them 1600 years after their composition.
- GALILEI, Alberto Cesare (1617–1692), son of Galileo's brother, Michelangelo.
- GALILEI, Galileo (1564–1642), the subject of this book.
- GALILEI, Giulia, born Ammannati (1538–1620), Galileo's mother, who came from a family of cloth merchants in Pisa.

- GALILEI, Livia I (1578–?), Galileo's sister, who married (in 1601) Taddeo di Cesare Galletti.
- GALILEI, Livia II (Suor Arcangela from 1617) (1601–1659), Galileo's younger daughter, by Marina Gamba, lived her religious life in the Convent of the Poor Clares at San Matteo d'Arcetri near Florence.
- GALILEI, Mechilde (?–1634), daughter of Michelangelo Galilei.
- GALILEI, Michelangelo (1575–1631), Galileo's only brother to survive infancy, made his career as musician to the Elector of Bavaria, married Anna Bandinelli c. 1608.
- GALILEI, Vincenzo I (1520–1591), Galileo's father, a professional musician (lutanist) and musical theorist, married Giulia di Cosimo Ammannati at Pisa in 1562.
- GALILEI, Vincenzo II (1606–1649), Galileo's only son, by Marina Gamba, legitimized in 1619, studied at Pisa, married Sestilia di Carlo Bocchinieri in 1629.
- GALILEI, Vincenzo III (1608–?), son of Michelangelo Galilei.
- GALILEI, Virginia I (1573–1623), Galileo's sister, married Benedetto di Luca Landucci in 1591.
- GALILEI, Virginia II (Suor Maria Celeste from 1616) (1600–1634), Galileo's elder and favorite daughter, by Marina Gamba, lived her religious life in the Convent of the Poor Clares at San Matteo d'Arcetri near Florence.
- GALLANZONI, Gallanzone, secretary to Cardinal François de Joyeuse.
- GALLETTI, Taddeo di Cesare, husband of Galileo's younger sister Livia.
- GALLUZZI, Tarquinio (1574–1649), professor of rhetoric at the Jesuit Roman College, teacher of Mario Guiducci.
- GAMBA, Marina (c.1570–1612), Galileo's Venetian mistress and the mother of his three children.
- GHETALDI, Marino (1568–1626), mathematician from Ragusa (Dubrovnik), student of Clavius, Coignet, and Viète.
- GIACOMINI, Lorenzo (1552–1598), poet, uncle of Giambattista Ricasoli.
- GILBERT, William (1544–1603), physician to Queen Elizabeth I of England and author of *De magnete* (1600).
- GIAMBULLARI, Pier Francesco (1495–1555), Florentine literary man, wrote on the geography of Dante's *Inferno*.
- GIOVANNA D'AUSTRIA, Grand Duchess of Tuscany (1547–1578), the first wife of Grand Duke Francesco I and an actor in Borro's dialogue on the tides.
- GLORIOSO, Giovanni Camillo (1572–1643), Galileo's successor as professor of mathematics at Padua in 1613.

- GONZAGA, Ferdinando, Duke of Mantua and Montferrat, Cardinal from 1605 (1587–1626), surrendered his cardinalate in 1612 to become a procreating duke.
- GONZAGA, Vincenzo I, Duke of Mantua and Montferrat (1562–1612), a major patron of the arts, sciences, and theater, with whom Galileo negotiated for a position in 1603–4.
- GRASSI, Orazio (c.1590–1654), professor of mathematics at the Jesuit Roman College, architect of St. Ignatius (church of the Roman College), and, through his quarrel with Galileo over comets, a main actor in Galileo's life.
- GREGORY XV, Alessandro Ludovisi, Pope from 1621 (1554–1623), Bolognese, founded the Congregation for the Propagation of the Faith and canonized Teresa of Avila, Ignatius Loyola, Philip Neri, and Francis Xavier.
- GRIENBERGER, Christoph (1561–1636), born in the Tyrol, Clavius' successor as professor of mathematics at the Roman College, an early supporter of Galileo.
- GUALDO, Paolo (1553–1621), close to the Jesuits and also to Galileo, settled in Padua in 1591, became archpriest of San Antonio (Padua Cathedral) in 1609.
- GUALTEROTTI, Raffaello (1548–1639), Florentine astronomer and astrologer.
- GUEVARA, Giovanni di (1561–1641), Neapolitan, mathematician, General of the Minor Regular Clerics, client of Francesco Cardinal Barberini and supporter of Galileo.
- GUICCIARDINI, Piero (1560–1626), Tuscan ambassador to Rome from 1611, replacing Giovanni Niccolini.
- GUIDUCCI, Mario (1585–1646), Florentine man of letters, student of Castelli, lynx, member of the Florentine academy, to which he presented Galileo's theory of comets.
- GUSTAVUS ADOLPHUS, Gustav II Adolph Vasa (1594–1632), King of Sweden, scourge of Catholic forces during the Thirty Years War until his death at the Battle of Lützen.
- HABSBURG, Karl I, Archduke of Austria (1590–1624), brother of Ferdinand II, Holy Roman Emperor, and of Maria Maddalena, Grand Duchess of Tuscany.
- HABSBURG, Leopold V, Archduke of Austria-Tyrol (1586–1632), brother of Karl I Habsburg, correspondent of Galileo and patron of Scheiner.
- HABSBURG, Rudolf II, Holy Roman Emperor from 1576 (1552–1612), a great patron of the arts and sciences, the more occult the better.
- HARRIOT (HARIOT), Thomas (c.1560–1621), English mathematician and astronomer, who anticipated several of Galileo's telescopic discoveries.

- HEECK, Johannes van (Johannes van Eck) (1579–?), unstable Dutch physician, alchemist and astronomer, one of the founding lynxes, expelled from the group in 1616.
- HENRI III, King of France (1551–1589), a client of Veronica Franco's.
- HENRI IV, King of France from 1589 (1553–1610), assassinated in 1610, desired that Galileo discover a star or two to name after him.
- HOMBERG, Paul (1559/60–1634), music teacher at the Lutheran secondary school in Catholic Austria where Kepler also taught.
- HORKY, Martin (c.1590–after 1650?), born in Bohemia, Magini's assistant in Bologna, friend of Capra, foe of Galileo.
- HORTENSIVS, Martinus (Maarten van den Hove) (1605–1639), professor of mathematics in Holland, examined Galileo's means of determining longitude for the Dutch authorities.
- HULSIUS, Levinus (1546–1606), mathematician, student of Galileo, instrument maker and printer, published books on instruments like Galileo's proportional compass.
- INCHOFER, Melchior (c.1584–1648), Hungarian Jesuit, friend of Riccardi, played an important role in Galileo's trial of 1633.
- INGOLI, Francesco (1578–1649), drew up "corrections" to Copernicus for the Congregation of the Index, first secretary of Gregory XV's Congregation for the Propagation of the Faith.
- INNOCENT XII, Antonio Pignatelli, Pope from 1691 (1615–1700).
- JAMES I, King of England and Ireland from 1603, and, as James VI, King of Scots from 1567 (1566–1625).
- JOHN XXIII, Angelo Giuseppe Roncalli, Pope from 1958 (1881–1963), convened the Second Vatican Council, 1962–65.
- JOHN PAUL II, Karol Józef Wojtyła, Pope from 1978 (1920–2005), the first non-Italian pope in 450 years, inaugurated a multidisciplinary enquiry into the Galileo Affair in 1979.
- JOYEUSE, François de, Cardinal from 1584 (1562–1615), Cardinal Protector of France in 1587, interested in astronomy, received one of Galileo's first telescopes.
- KAPSBURGER, Johannes Hieronymus (Giovanni Geronimo) (c.1580–1651), Venetian, a favorite performer and composer in Rome, wrote the music for Grassi's Jesuit opera.
- KEPLER, Johannes (1571–1630), a most original mathematician, astronomer to Emperor Rudolf II, abetted acceptance of Galileo's telescopic discoveries.
- LADISLAV IV, King of Poland (1595–1648), King of the Polish-Lithuanian Commonwealth from 1632.

- LANDUCCI, Benedetto di Luca, husband of Galileo's sister Virginia.
- LANDUCCI, Vincenzo (1595–1649), son of Galileo's sister Virginia.
- LANDUCCI, Virginia, Galileo's great-niece, who became Suor Olimpia in the Convent of San Giorgio in Florence.
- LEMBO, Giovanni Paolo (1570–1618), S.J., a member of the Clavius group in Rome.
- LEO XIII, Gioacchino Vincenzo Pecci, Pope from 1878 (1810–1903), a cautious modernizer.
- LIBRI, Giulio (c.1550–1610), professor of philosophy at Pisa, and, from 1595 to 1600, at Padua.
- LICETI, Fortunio (1577–1657), professor of philosophy at Padua, 1609–37, and of medical theory, 1645–57, after a period in Bologna, 1637–45.
- LOCHER, Johann Georg, a student of Scheiner, whose dissertation of 1614 included original arguments against Galileo's version of Copernicanism.
- LORENZINI, Antonio (c.1540–?), Aristotelian philosopher ridiculed by Cecco di Ronchitti.
- LORINI, Niccolò (1544–c.1617), Florentine Dominican favored by Grand Duke Ferdinando I and Grand Duchess Christina, attached to the "pigeon league."
- LOWER, Sir William (c.1570–1615), collaborator of Thomas Harriot.
- LOYOLA, Ignatius (1491–1556), Spanish soldier and co-founder of the Society of Jesus (1534) with Francis Xavier, canonized in 1622 by Gregory XV.
- LUDOVISI, Ludovico, Cardinal from 1621 (1595–1632), cardinal nephew of Pope Gregory XV, close to the Jesuits, leader of the Spanish faction in the curia.
- MACULANO, Vincenzo, Cardinal from 1642 (1578–1667), Dominican, Commissary General of the Holy Office in charge of Galileo's trial in 1633.
- MAELCOTE, Odo van (1572–1615), S.J., born in Brussels, professor of mathematics and Hebrew at the Roman College, gave an oration there in praise of Galileo.
- MAGALOTTI, Filippo (1558–?), friend of Galileo and Mario Guiducci, relative of the Barberinis.
- MAGINI, Giovanni Antonio (1555–1617), chosen over Galileo for a professorship of mathematics at Bologna, competent astrologer, astronomer, and instrument maker.
- MANETTI, Antonio (1423–1497), Florentine mathematician and architect, biographer of Brunelleschi, devised a geography of Dante's *Inferno* later defended by Galileo.
- MARCHETTI, Angelo, Galileo's successor (several times removed) in the chair of mathematics at Pisa.

- MARIA MADDALENA OF AUSTRIA, Grand Duchess of Tuscany from 1609 (1589–1631), sister of Ferdinand II, Holy Roman Emperor, married Cosimo II of Tuscany in 1608.
- MARINO, Giambattista (Giovann Battista) (1569–1625), Neapolitan poet, famous for his long epic, *L'Adone*, published in Paris in 1623 and soon banned in Rome.
- MARSILI, Cesare (1592–1633), Bolognese patrician, natural philosopher, lynx (1625).
- MARZI-MEDICI, Alessandro (1563–1630), Archbishop of Florence from 1605, a member of the “pigeon league.”
- MÄSTLIN, Michael (1550–1631), professor of mathematics and astronomy at Tübingen, Kepler’s teacher, an early Copernican.
- MAURI, Alimberto (a pseudonym, perhaps of Galileo), replied to Ludovico delle Colombe’s *Discourse on the new star of 1604*.
- MAXIMILIAN I, Duke/Elector of Bavaria (1573–1651), employer of Michelangelo Galilei.
- MAYR, Simon (1573–1624), tutor of Baldassar Capra, from 1605 mathematician to the Margrave of Ansbach, whose name he conferred on Jupiter’s satellites in 1614.
- MAZZOLENI, Marcantonio (?–1632), coppersmith from the Venetian Arsenal, became Galileo’s instrument maker in 1597.
- MAZZONI, Jacopo (1548–1598), famous philosopher and literary man, defender of Dante, friend of Tasso, and, as professor at Pisa, Galileo’s closest colleague.
- MEDICI, Antonio de’ (1576–1621), natural son of Grand Duke Francesco I and his mistress, Bianca Capello, took a great interest in Galileo’s scientific work and dabbled with alchemy.
- MEDICI, Cosimo I de’, first Grand Duke of Tuscany from 1569 (1519–1574).
- MEDICI, Cosimo II de’, Grand Duke of Tuscany from 1609 (1590–1621), son of Ferdinando I and Christina of Lorraine, Galileo’s tutee and employer.
- MEDICI, Ferdinando I de’, Grand Duke of Tuscany from 1587 (1549–1609), son of Cosimo I, resigned his cardinalate in 1589 to succeed his elder brother Francesco I.
- MEDICI, Ferdinando II de’, Grand Duke of Tuscany from 1621 (1610–1670), eldest son of Cosimo II and Maria Maddalena of Austria, whose reign began under the regency of his grandmother, Christina, and his mother, continued Cosimo II’s generosity to Galileo.
- MEDICI, Francesco I de’, Grand Duke of Tuscany from 1574 (1541–1587), married Johanna of Austria in 1565, and, in 1578, after her death, Bianca Cappello.

- MEDICI, Giovanni de', Don (1563 or 1567–1621), gifted natural son of Cosimo I, engineer, alchemist, philosopher, and bibliophile.
- MEDICI, Giuliano de' (1574–1636), Florentine ambassador to Prague, 1608–18, later Archbishop of Pisa.
- MEDICI, Jacopo de', one of Galileo's gambling associates.
- MEDICI, Marie de', Queen of France, wife of Henri IV (1573–1642), daughter of Francesco I de' Medici.
- MEI, Girolamo (1519–1594), Florentine patrician who taught Vincenzo Galilei enough about ancient music to write a dialogue about it.
- MERCURIALE, Girolamo (1530–1606), professor of medicine at Padua and then at Pisa, physician to Grand Duke Ferdinando I.
- MICANZIO, Fulgenzio (1570–1654), Servite monk, Sarpi's disciple, biographer, and successor as theologian to the Venetian Republic in 1623, loyal friend to Galileo.
- MICHELANGELO. *See* Buonarroti
- MILTON, John (1608–1674), English poet and pamphleteer, probably visited Galileo in Florence in 1638.
- MOLETTI, Giuseppe (1531–1588), Galileo's predecessor at Padua.
- MONTAIGNE, Michel Eyquem de (1533–1592), French essayist and lawyer, who knew the pleasures of Paris and Venice.
- MORANDI, Orazio (c.1570–1630), Galileo's boyhood friend, Abbot-General of the Vallombrosan order, passionate astrologer, involved in predicting the death of Urban VIII.
- MOROSINI, Andrea (1558–1618), Venetian patrician and historian, host with his brother Niccolò of a salon in Venice that brought politicians and intellectuals together.
- MOROSINI, Niccolò, brother of Andrea Morosini.
- MUTI, Tiberio, Cardinal from 1615 (1574–1636).
- MUZZARELLI DA FANANO, Giovanni, Florentine Inquisitor General who oversaw, usually leniently, Galileo's detention at Arcetri.
- NAUDÉ, Gabriel (1600–1653), Parisian, student at Padua under Cremonini, librarian of Cardinal Francesco Barberini (1641–42), then of Cardinals Richelieu and Mazarin.
- NICCOLINI, Catarina Riccardi (1598–1676), wife of the Florentine ambassador to Rome, Francesco Niccolini, and cousin of Niccolò Riccardi ("Father Monster").
- NICCOLINI, Francesco (1584–1650), Florentine ambassador to Rome, 1621–43, close friend of Galileo.

- NICCOLINI, Pietro (?–1651), Archbishop of Florence.
- NOAILLES, François de, Comte (1584–1645), studied with Galileo at Padua in 1603, served as French ambassador to Rome 1634–36, dedicatee of *Two new sciences*.
- OREGGI, Agostino, Cardinal from 1633 (1577–1635), Tuscan, long-time theological advisor to Maffeo Barberini, played an important role in Galileo's trial in 1633.
- ORSINI, Alessandro, Cardinal from 1615 (1593–1626), nephew of Ferdinando I and patron of Galileo, who dedicated his work on the tides to him (1616), later joined the Jesuits.
- ORSINI, Paolo Giordano II, Duke of Bracciano (1591–1656), Roman collector and prominent patron of the arts, published Scheiner's *Rosa ursina* (1630), "the Orsini rose."
- ORTELIUS, Abraham (1527–1598), Flemish geographer and cartographer, creator of the first modern atlas.
- PAGNONI, Silvestro, disaffected employee of Galileo, denounced him to the Inquisition in Padua in 1604.
- PAPAZZONI, Flaminio (c.1550–1614), Bolognese, appointed professor of philosophy at Pisa on Galileo's recommendation.
- PARMIGIANINO, Girolamo Francesco Maria Mazzola, known as (1503–1540), prominent Mannerist painter and printmaker.
- PASCHINI, Pio (1878–1962), historian whose biography of Galileo commissioned by Pope Pius XII was corrected by the Jesuits (whom it criticized) before publication.
- PASQUALIGO, Zaccaria (1600–1664), Veronese, Theatine theologian who served on the special committee set up by Urban VIII to examine Galileo's *Dialogue*.
- PAUL III, Alessandro Farnese, Pope from 1534 (1468–1549), convened the Council of Trent in 1545, dedicatee of Copernicus' *De revolutionibus orbium coelestium*.
- PAUL V, Camillo Borghese, Pope from 1605 (1552–1621), Tuscan, precipitated the Venetian interdict and authorized the condemnation of Copernican books in 1616.
- PAUL VI, Giovanni Battista Enrico Antonio Maria Montini, Pope from 1663 (1897–1978).
- PAZZI, Maria Maddalena de', (1566–1607), visionary Carmelite nun from a noble Florentine family, sanctified in 1669.
- PERETTI DI MONTALTO, Alessandro Damasceni, Cardinal from 1585 (1571–1623), cardinal nephew of Sixtus V.

- PERI, Jacopo (1561–1633), composer of the first opera whose score has survived (*Erudice*, 1600).
- PETRARCH, Francesco Petrarca (1304–74), son of a Florentine notary exiled with Dante, known for his *Rime* inspired by unrequited passion.
- PHILIP III, King of Spain and Portugal (1578–1621).
- PICCHENA, Curzio (1553–1626), Secretary of State to Grand Duke Cosimo II.
- PICCOLOMINI, Ascanio II (c.1590–1671), Archbishop of Siena from 1628, in whose palace Galileo began to serve his sentence in the fall of 1633.
- PICCOLOMINI, Francesco (1574–1651), theologian, Jesuit General, 1649–51.
- PICCOLOMINI, Girolamo, professor of philosophy at the Roman College.
- PICCOLOMINI, Ottavio (1599–1656), general in the armies of the Holy Roman Empire, elder brother of Ascanio Piccolomini, insured that Kepler's prediction of the death of Wallenstein in March 1634 came true.
- PIERONI, Giovanni (1586–1653), Italian architect in the service of the Holy Roman Emperor, tried to find a publisher for *Two new sciences*.
- PIERSANTI, Alessandro, Galileo's servant and godfather to Galileo's son.
- PIGNORIA, Lorenzo, Paduan priest and archeologist who acted as a conduit for the care of Galileo's son.
- PINELLI, Giovanni Vincenzo (1535–1601), Neapolitan owner of a rich library that functioned as the literary center of Padua around 1600.
- PIUS VII, Luigi Barnabà Chiaramonte, Pope from 1800 (1742–1823), re-established the Jesuit Order following the defeat of Napoleon, presided over the Settele affair.
- PIUS XII, Eugenio Maria Giuseppe Giovanni Pacelli, Pope from 1939 (1876–1958).
- PLATO (c.428–c.348 BCE), Greek philosopher praised and criticized in Galileo's time for his mystical-mathematical abstractions as opposed to the common-sense, empirical philosophy of his student Aristotle.
- POSSEVINO, Antonio (1534–1611), founder of Jesuit colleges in northern Europe, papal legate to Moscow, author of a guide to good books (*Bibliotheca selecta*) for Catholics.
- POUPARD, Paul, Cardinal from 1985 (1930–), served on the Pontifical Council for Culture since its inception in 1982, prominent on Pope John Paul's committee on the Galileo affair.
- PRIMI, Annibale, superintendent of the Medici villa in Rome when Galileo stayed there in 1615/16.
- PULCARELLI, Costanzo (1568–1610), Neapolitan Jesuit who praised Galileo's *Sidereus nuncius*.

- PTOLEMY, Claudius (c.90–168), Alexandrian mathematician whose geocentric model of the solar system dominated western astronomy until the time of Galileo.
- QUERENGHI, Antonio (1546–1633), Paduan patrician, priest, patron, poet, diplomat, and admirer of Galileo.
- REAEL, Lorenzo (Lorenzo Realio) Admiral (?–1637), Italian-speaking Dutch commissioner assigned to evaluate Galileo's method of determining longitude.
- RENIER, Vincenzio (1606–1647), professor of mathematics at Pisa, whom Galileo asked to update and improve his astronomical tables of Jupiter's moons.
- RICASOLI, Giovanni, the disputed heir to Giovanni Battista Ricasoli's estate.
- RICASOLI BARONI, Giovanni Battista (?–1589), friend of Galileo, whose will was the subject of a law suit in which Galileo testified.
- RICCARDI, Niccolò ("Father Monster") (1585–1639), Dominican, who acquired his nickname from Philip III of Spain for his size and his preaching, Master of the Sacred Palace (the chief censor of Rome) from 1629.
- RICCI, Ostilio (1540–1603), Galileo's mathematics teacher, lecturer in mathematics at the Accademia del Disegno in Florence, mathematician to Grand Duke Ferdinando II.
- RICCIOLI, Giovambattista (1598–1671), S.J., author of the best compendium of astronomy of his day, the *Almagestum novum* (1651).
- RIDOLFI, Niccolò (1578–1650), Master of the Sacred Palace in 1622, Dominican General in 1629, consulted Morandi about astrological indications of the fate of Urban VIII.
- RINUCCINI, Francesco (1603–1678), Tuscan agent in Venice from 1637, later Bishop of Pistoia and Prato (1652).
- ROCCO, Antonio (1586–1652), libertine student of Cremonini, taught philosophy at the Benedictine monastery of San Giorgio Maggiore in Venice.
- RUZZANTE, Angelo Beolco, known as (1502–1542), comic actor and playwright whose pieces in the Paduan dialect inspired the work of Cecco di Ronchitti.
- SACROBOSCO, Johannes de (John of Hollywood, c. 1195–c. 1256), author of the basic introductory text of geocentric astronomy used in the Middle Ages and the Renaissance.
- SAGREDO, Giovanfrancesco (Gianfrancesco) (1571–1620), Venetian nobleman almost a brother to Galileo, immortalized in Galileo's dialogues.
- SALVIATI, Filippo (1582–1614), rich Florentine noble, natural philosopher, friend and patron of Galileo, immortalized as Galileo's alter ego in Galileo's dialogues.

- SALVIATI, Giovanni, Cardinal from 1517 (1490–1553), nephew of Pope Leo X, friend of Macchiavelli.
- SANTI, Leone (1585–c.1651/2), professor at the Roman College and successful dramatist.
- SANTINI, Antonio, Venetian merchant who, in 1610, saw the Medici stars through his home-made telescope.
- SANTORIO, Santorio (1561–1636), physician, close to the Morosini and Sarpi, professor of medical theory at Padua from 1611.
- SARPI, Paolo (1552–1623), Venetian Servite monk and polymath, theological advisor to the Venetian Senate, advisor and sounding board to Galileo, author of the anti-Roman *History of the Council of Trent*.
- SARROCCHI, Margherita (1560–1617), poet and mathematician, friend of Luca Valerio and Galileo.
- SARSI, Lothario, anagram and pseudonym of Orazio Grassi.
- SCAGLIA, Desiderio, Cardinal from 1621 (1567–1639), Dominican theologian and preacher, prominent member of the Congregation of the Inquisition that sentenced Galileo in 1633.
- SCHEINER, Christoph (c.1573–1650), professor of mathematics at the Jesuit College in Ingolstadt, fought with Galileo over priority in the discovery of sun-spots and other matters.
- SCHRECK, Johann(es) (1576–1630), S.J., German astronomer and botanist, who resigned from the lynxes to join the Jesuits and go on mission to China.
- SEGETH, Thomas (?–1627), a Scot from Edinburgh, Pinelli's librarian around 1600, subsequently a collaborator of Kepler.
- SEGHIZZI, Michelangelo (1585–1625), Dominican, Commissary General of the Holy Office during its deliberations over Copernicanism in 1615–16.
- SERRISTORI, Ludovico (?–1656), consultor to the Holy Office, Bishop of Cortona in 1624.
- SETTELE, Giuseppe (?–1841), professor of mathematics at the University of Rome whose astronomy text precipitated the removal of books defending heliocentrism from the Index.
- SETTIMI, Clemente (1612–?), Piarist (Scolopian) monk who sometimes served as Galileo's secretary after Galileo lost his sight.
- SFRONDATI, Paolo Camillo, Cardinal from 1590 (1560–1618), nephew of Pope Gregory XIV, Dominican prefect of the Congregation of the Index.
- SIXTUS V, Felice Peretti di Montalto, Pope from 1585 (1520–90), champion of papal prerogatives over princes.

- SIZZI, Francesco (c.1585–1618), Florentine, client of Don Giovanni de' Medici, opponent of Galileo, executed for supporting Catherine de' Medici against Louis XIII.
- SPINELLI, Girolamo (c.1580–1647), Benedictine monk in Galileo's circle, collaborator on the works of Cecco di Ronchitti.
- STAY, Benedict (Benedetto) (1714–1801), S.J., author of a long poem on Newtonian physics.
- STEFANI, Giacinto (1577–1633), Dominican theologian and preacher who read Galileo's *Dialogue* for the Florentine censorship.
- STELLUTTI, Francesco (1577–1646), founding member of the Accademia dei Lincei and the most faithful of Cesi's associates.
- STRADANO, Giovanni (Jan Van der Straet) (1523–1605), Flemish artist who made his career in Italy.
- STROZZI, Giovan(ni) Battista (Giambattista), the younger (1551–1634), Florentine aristocrat, poet, patron of Galileo and Ciampoli.
- STROZZI, Giulio (1583–1652), Venetian poet, man of letters, and opera librettist.
- STROZZI, Piero (1550–1609), Florentine patrician and composer, member of Bardi's *Camerata* and friend of Galileo's father.
- TASSO, Torquato (1544–1595), Italian poet, author of *La Gerusalemme liberata* (1580).
- TAVERNA, Ferdinando, Cardinal from 1604 (1558–1619), Governor of Rome, 1599–1604.
- TEDALDI, Muzio, an in-law of Vincenzo Galilei, he took care of Galileo in Pisa while Vincenzo was in Florence or elsewhere.
- TENGNAGEL, Franz (1576–1622), student and son-in-law of Tycho Brahe.
- TERRENTIUS. See Schreck, Johann
- TOALDO, Giuseppe (1719–1797), editor of Galileo's *Opere* (1744), professor of astronomy at Padua.
- TORRICELLI, Evangelista (1608–1647), mathematician trained at Pisa by Castelli, stayed with Galileo in 1641, succeeded him as mathematician to Ferdinando II.
- URBAN VIII, Maffeo Barberini, Pope from 1623 (1568–1644).
- VALERIO, Luca (1552–1618), the last great representative of the school of Commandino, close friend of Margherita Sarrochi, lynx.
- VELLUTELLO, Alessandro (1473–?), a literary critic from Lucca, devised an alternative to the Florentine version of Hell.

- VENIER, Domenico (1517–1582), Venetian patrician and poet, patron of Veronica Franco.
- VENIER, Sebastiano, Venetian patrician, friend and patron of Galileo.
- VIÈTE, François (1540–1603), lawyer and mathematician, renowned as an algebraist.
- VINTA, Belisario (1542–1613), Tuscan State Secretary under Ferdinando I and Cosimo II.
- VISCONTI, Raffaello, Dominican, mathematician and astrologer, read Galileo's *Dialogue* for the Roman censorship, banished to Viterbo for involvement in the Orandi affair.
- VITELLESCHI, Muzio (1563–1645), Venetian, Jesuit General, 1615–45.
- VITRUVIUS POLLIO, Marcus (first century CE), author of the standard (and only extant) Roman treatise on architecture, which includes astronomy, gnomonics, and hygiene.
- VIVIANI, Vincenzo (1622–1703), mathematician, student of Castelli, Galileo's assistant at Arcetri, last disciple, and first biographer.
- WALLENSTEIN, Albrecht von, Duke of Friedland (1583–1634), supreme commander of the Habsburg armies under the Holy Roman Emperor, Ferdinand II.
- WELSER, Mark (1558–1614), Augsburg banker close to the Jesuits, helped to circulate Galileo's ideas, made a lynx in 1612.
- XAVIER, Francis (1506–1552), Spanish missionary, co-founder of the Society of Jesus (1534), canonized by Gregory XV in 1622.
- XIMENES, Ferdinando (1580–1630), Dominican friar called to testify before the Inquisition in consequence of Caccini's denunciation of Galileo.
- ZARLINO, Gioseffè (1517–1590), musical theorist and composer who contributed to the theory and practice of counterpoint, teacher of Vincenzo Galilei.
- ZIECKMESSER (or ZUGMEISSER), Jan Eutel (c.1575–?), Dutch mathematician who studied at Padua and produced a compass similar to Galileo's, became mathematician to the Archbishop of Cologne.
- ZUCCARI, Federico (1542/3–1609), mannerist painter and architect who worked on the Florentine cathedral.

Fictional characters

- AGRAMANTE, King of Africa in *OF*, commander of the Saracen armies against Charlemagne.
- ALCINA, sorceress in *OF*, seductress of Astolfo and Ruggiero.

- ALEXANDER, Galileo's alter ego in his dialogue "De motu" (c.1590).
- ANGELICA, daughter of the Emperor of Cathay in *OF* whose jilting of Orlando caused his madness.
- ARGANTE, Circassian warrior in Egyptian cause in *GL*, scourge of Godfrey's Christians, killed in a dual by Tancredi.
- ARMIDA, Syrian sorceress in *GL*, energetic seductress of crusaders, notably Rinaldo, whose eventual return to Charlemagne's service caused her to convert to Christianity.
- ASTOLFO, son of King of England in *OF*, cousin of Orlando, another crusader ensnared by Alcina.
- BRADAMANTE, Christian warrior maiden in *OF*, destined to marry Ruggiero and found the Este line.
- CHARLEMAGNE (747–814), Emperor of the West, whose expedition against the Moors in Spain in 778 gave rise to the heroic literature played with in *OF*.
- CHARON, the boatman who ferries dead souls across the river Styx in Dante's *Inferno*.
- CLORINDA, Muslim warrior maiden in *GL*, who beguiled Tancredi, wreaked havoc among the crusaders, and was killed unwittingly by Tancredi.
- DOMINICUS, Alexander's fellow student and foil in Galileo's dialogue "De motu" (c.1590).
- DON QUIJOTE DE LA MANCHA, like Galileo an addicted reader of *Orlando furioso*.
- DORALICE, daughter of King of Granada in *OF*, jilted Rodomonte for Mandricardo.
- ERMINIA, pagan princess in *GL*, tended Tancredi's wounds to mutual benefit.
- GABRINA, a perfect witch in *OF*, punished by Mandricardo, hanged by Odoric of Biscay, identified by Galileo with his mother Giulia.
- GODFREY OF BOUILLON, commander-in-chief of the Christian armies besieging Jerusalem in *GL*.
- MANDRICARDO, King of the Tartars in *OF*, constantly pursuing duels with Orlando and Rodomonte when not making love to Doralice, killed by Ruggiero.
- MERLIN, wizard of King Arthur's court, an occasional character in *OF*.
- ORLANDO, nephew and chief warrior of Charlemagne in *OF*, driven mad by Angelica, restored to his trade of Christian champion by Astolfo.
- RINALDO, Christian champion in *GL*, like Ruggiero in *OF* an ancestor of the Este, detained in Armida's love nest until recalled to his duty to slaughter Saracens.

RODOMONTE, African King in *OF*, greatest of Agramante's champions, almost destroyed Paris single-handed, killed by Ruggiero.

RUGGIERO, Saracen champion in *OF*, converted to Christianity for love of Bradmante after adventures with Alcina and others.

SIMPLICIO, the gentle, innumerate, Aristotelian philosopher harried by Salviati and Sagredo in Galileo's masterworks.

TANCREDI, Norman prince in fact, and in *GL* besotted with Clorinda, almost killed by Argante, and nursed back to health by Erminia.

TIPHYS, navigator of the Argo on its voyage to pilfer the golden fleece.

TURPIN or Tilpinus (died c.794), French ecclesiastic, pseudepigraphic author of a version of the story of Roland written in the twelfth century by another French cleric.

VIRGIL, Publius Virgilius Maro (70-19 BCE), in life the author of the adventures of Aeneas and other enduring classics, in fiction Dante's guide through the underworld.



"Retombera-t-il?" (Will it fall back?), Varignon, *Conjectures* (1690).

NOTES

References to Galileo, *Opere* (see below) are given in the form "Op. x:y," or, if following a letter or document, "(x:y)," in both cases x being the volume and y the page(s). When no ambiguity results, the century dates are omitted, that is, 12 August 1616 appears as 12 Aug. 16. In addition, the following abbreviations are used:

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| Assayer | Galileo Galilei, <i>The assayer</i> [Il saggiaiore, 1623]. In Stillman Drake and C.D. O'Malley (eds.), <i>The controversy on the comets of 1618</i> . Philadelphia: University of Pennsylvania Press, 1960, pp. 151–336. |
| BH, Dial. | Galileo Galilei, <i>Dialogo sopra i due massimi sistemi del mondo tolemaico e copernicano</i> [1632]. Edizione critica e commento, 2 vols., eds. Ottavio Besomi and Mario Helbing. Padua: Antenore, 1998. |
| BH, Disc. | Galileo Galilei and Mario Guiducci, <i>Discorso delle comete</i> [1619]. Edizione critica e commento, eds. Ottavio Besomi and Mario Helbing. Padua: Antenore, 2002. |
| BH, Sagg. | Galileo Galilei, <i>Il saggiaiore</i> [1623]. Edizione critica e commento, eds. Ottavio Besomi and Mario Helbing. Padua: Antenore, 2005. |
| Camerota | Michele Camerota, <i>Galileo Galilei e la cultura scientifica nell'età della Controriforma</i> . Rome: Salerno, 2004. |
| Chiari | Galileo Galilei, <i>Scritti letterari</i> , ed. Alberto Chiari. Florence: Le Monnier, 1970. |
| DBI | <i>Dizionario biografico degli italiani</i> . |
| DSB | Charles C. Gillispie (gen. ed.), <i>Dictionary of scientific biography</i> , 16 vols. New York: Charles Scribner's Sons, 1970–80. |
| FA | Maurice A. Finocchiaro, <i>The Galileo affair</i> . Berkeley: University of California Press, 1989. |
| GG | Galileo Galilei. |
| GL | Torquato Tasso, <i>Gerusalemme liberata</i> [1581]. |
| IMSS | [Museo Galileo] Istituto e Museo di Storia della Scienza, Florence. |

- JHA *Journal for the history of astronomy* (1970–).
- LCF José Montesinos and Carlos Solís (eds.), *Largo campo de filosofare: Eurosymposium Galileo 2001*. La Orotava: Fundación canaria Orotava de historia de la ciencia, 2001.
- NCCS Paolo Galluzzi (ed.), *Novità celesti e crisi del sapere*. Florence: IMSS, 1983.
- OF Lodovico Ariosto, *Orlando furioso* [1516, 1532].
- Op. Galileo Galilei, *Opere*, 20 vols., ed. Antonio Favaro. Florence: Giunti-Barbera, 1890–1909.
- OS Eileen Reeves and Albert Van Helden, tr. *On Sunspots: Galileo Galilei and Christoph Scheiner*. Chicago: University of Chicago Press, 2010.
- Pagano Sergio Pagano (ed.), *I documenti vaticani del processo di Galileo Galilei (1611–1741)*, 2nd ed. Vatican City: Archivio segreto vaticano, 2009.
- RG Maurice A. Finocchiaro, *Retrying Galileo, 1633–1992*. Berkeley: University of California Press, 2005.
- SN Galileo Galilei, *Sidereus nuncius* [1610]. *The sideral messenger*, tr. Albert van Helden. Chicago: University of Chicago Press, 1989.
- TCWS Galileo Galilei, *Dialogue concerning the two chief world systems*, tr. Stillman Drake. Berkeley: University of California Press, 1953.
- TNS Galileo Galilei, *Discourses and mathematical demonstrations concerning two new sciences pertaining to mechanics and local motions* [1638], tr. Stillman Drake. Madison: University of Wisconsin Press, 1974.