

Supplement.

1726.

E1 According to Euler's notes, this essay appears to have already been composed in 1725.

1728.

E4 According to Euler's notes, this treatise was finished in August 1726.

E4a There are examples of the second volume of the *Recueil* with M.DCC.LII given as the publication year.

1732.

E9 The manuscript of this treatise is held by the St. Petersburg Academy. "Novemb. d. 9. 1728" is written at the top of the manuscript, but this remark is dubious.

E10 The manuscript of this treatise is held by the St. Petersburg Academy.

1735.

E12, E13 Abstracts [Euler's?] of these two treatises are held by the St. Petersburg Academy.

1736.

E16 Instead of "*Mèm. de Trévoux* 1740, p. 1407 – 1442," read "*Mèm. de Trévoux* 1740, p. 1407 – 1422."

1738.

E19-31 Abstracts [Euler's?] of these 13 treatises are held by the St. Petersburg Academy.

E21 The manuscript of this treatise is held by the St. Petersburg Academy.

E32 It is indicated in the following statement from G. F. Müller, that Euler really is the author of this treatise: "Für die Anmerkungen zu den zeitungen lieferte Herr Euler [1738] eine abhandlung von der gestalt der erde, welche im 27 bis 32 und 103 und 104 stücke der gedachten Anmerkungen gedruckt ist"¹ (see Материалы для истории императорской академии наукъ 6, St. Petersburg 1890, p. 473).

1739.

E34 The manuscript of this treatise is held by the St. Petersburg Academy.

¹ "[In 1738], Euler made a treatise on the shape of the earth available, with his notes printed in the journal under numbers 27-32 and 103 and 104." – G. P.

1740.

E42, E43 The manuscripts of these treatises are held by the St. Petersburg Academy.

E44 The manuscript of this treatise is held by the St. Petersburg Academy. According to a note on the first page of this manuscript, the treatise was presented on May 10, 1734.

E45 The manuscript of this treatise is held by the St. Petersburg Academy.

1741.

E48 The manuscript of this treatise is held by the St. Petersburg Academy.

E49 The manuscript of this treatise is held by the St. Petersburg Academy. According to a note on the first page of this manuscript, the treatise was presented to the Academy on October 21, 1734, and it is indicated in the log that on that day Euler let a “Dissertatio de oscillationibus catenae” go ahead of him.

E50 The manuscript of this treatise is held by the St. Petersburg Academy. According to a note on the first page of this manuscript, the treatise was presented to the Academy on January 31, 1735.

E51, E54, E56 The manuscripts of these treatises are held by the St. Petersburg Academy.

E57 Reprinted in I. Newton, *Philosophiae naturalis principia mathematica* 3, ed. Lesseur and Jaquier, editio nova, Glasgow 1833, p. 247-341 [E57e].

1744.

E65A₁ Von den elastischen Kurven. Additamentum I zum Methodus inveniendi lineas curvas maximi minimive proprietate gaudentes.

Kgl. Library in Berlin
Example Used: G. E.

Klassiker der exakten Wissenschaften 175, Leipzig 1910, p.18-99. Translated by H. Linsenbarth. Notes by K. Heun and H. Linsenbarth are found on p. 112-124.

E68 Reviewed in *Berlinische Bibliothek* 2, 1748, p. 377-383.

E69, E71 The manuscripts of these treatises are held by the St. Petersburg Academy.

1747.

E92B A French translation had already appeared in the *Bibliothèque impartiale* 11, 1755, p. 394-410; 12, 1755, p. 288-303.

1748.

E101 A loose French translation of chapters 9-11 (p. 107-161) was published by L. Bertrand in the second volume of *Développement nouveau de la partie élémentaire des mathématiques, prise dans toute son étendue*, (Geneva 1778, p. 523-576) [E101b]. In the foreword of the first volume (p. XVIII), Bertrand himself says: “Les sections III, IV & V ne sont guere qu’une traduction des chap. IX, X, & XI de la premiere partie de l’ouvrage de M. Euler qui a por titre *Introductio in Analysin infinitorum*,” but in reality it is dealt with by Betrand in chapters II, III, and IV.

E109 The beginning of the print in the *Opuscula* (E109b) reads: “Dissertatio de magnete ab Illustr. Academia Regia Paris. Scient. praemio condecorata. A. 1744,” and because of that it is usually said that the treatise was finished in 1744. Alone this statement is incorrect, since Euler wrote to Goldbach on July 4, 1744 (see Fuss, *Corr.* I, p. 290) “Die Akademie in Paris hat dieses Jahr das praemium gar nicht angegeben, sondern eben dieselbe Quaestion vom Magneten wiederum auf A. 1746 proponirt.”² (see *a. a. O. S.* p. 297).

1749.

E113 Instead of “on July 8, 1747,” read “on September 21, 1747.”

1750.

E123 The manuscript of this treatise is held by the St. Petersburg Academy.

E142 A handwritten German translation of this treatise (“Von dem aus der letzten Sonnenfinsterniss erwiesenen Lufft-Craiss des Mondes”) is found in the library of the observatory in Pulkova (see O. Struve, *Librorum in bibliotheca speculae Pulcovensis anno 1858 exeunte contentorum catalogus systematicus*, St. Petersburg 1860, p. 471).

E149 Reviewed in *Berl. Bibl.* 4, 1750, p. 455-459.

1752.

E176 Instead of “*Bibliothèque impartiale* 6, 1752, p. 116-140,” read “*Bibliothèque impartiale* 6, 1752, p. 116-140, 216-247, 348-370.”

1753.

E205* [Extract of a letter from Euler to H. Kühn on February 1741 about a fairly exact rectification of the circle.]

G. W. Krafft, *Institiones geometriae sublimioris*, Tubingen 1753, p. 133-134.

1755.

E212 Reviewed in *Bibliothèque impartiale* 12, 1755, p. 315-329.

² “The Academy in Paris has not stated the competition question for this year, instead they proposed exactly the same question about magnets again for the beginning of 1746.” – G. P.

Also see the entry in the supplement for 1747 (E92B).

1756.

E222A Translated into German: Vollständigere Theorie der Maschinen, die durch Reaktion des Wassers in Bewegung versetzt werden von L. Euler (Histoire de l'Académie Royale des Sciences et Belles Lettres. Mém. T. 10. 1754. Berlin 1756. Classe de Philosophie expérimentale p. 227-295.)

Kgl. Library in Berlin.

Example used: G. E.

Klassiker der exakten Wissenschaften 182, Leipzig 1911, p. 3-70 + 1 diagram. Translated by M. Winkelmann and E. A. Brauer. Notes from M. Winkelmann are found on p. 80-94.

1758.

E228 The manuscript of this treatise is held by the St. Petersburg Academy. According to notes on the first page of this manuscript, the treatise was presented to the Academy on March 29, 1751. The abstract of this treatise, as well as the four following ones were written by Euler himself, and their manuscripts are also held by the St. Petersburg Academy. On the other hand, the reports on the Russian translation of the *Summariun dissertationum* must have been finished by another member of the Academy, since the translation appeared in 1754, and Euler wrote to G. F. Müller on November 22, 1757, saying “Die mathematische Class des IV Tomi Nov. Comment. ... habe ich erst vor 4 Tagen erhalten, und darüber sogleich beyliegenden Aufsatz verfertigt, wobey ich mich insonderheit nach Dero mir gütigst gemeldeten Absichten zu richten getrachtet. Dahero habe ich das Vertrauen, dass die Kaiserl. Academie mit dieser Arbeit vollkommen zu freiden seyn werde.”³

E229-232 See the above note for E228.

1760.

E241-249 The abstracts for these nine treatises are written by Euler himself, and the manuscripts are held by the St. Petersburg Academy.

1761.

E250-260 The abstracts for these eleven treatises are written by Euler himself, and the manuscripts are held by the St. Petersburg Academy.

E258 “Pars prior” should be stricken.

E261-265 The abstracts for these five treatises are written by Euler himself, and the manuscripts are held by the St. Petersburg Academy.

³ “ I have received the mathematical part of the fourth volume of the Nov. Comment. four days ago, and immediately composed supplementary essays, whereby I particularly aspired to act upon the best intentions, therefore I have confidence that the Academy will be completely satisfied with this work.” – G. P.

E265* [Reports on treatises by Segner, Zeiher, Kotelnikoff, Äpinus, Heinsius, and Grischow.] *Novi. comment. acad. sc. Petrop.* 7, (1758/9), 1761; *Summarium dissertationum* p. 13-15, 15-16, 18-20, 20-22, 24-26, 26-27, 35-36, 37-38. The treatises of the 7th volume of the *Novi commentarii*, which Euler reports on here, are: “Enumeratio modorum, quibus figurae planae rectilineae per diagonales dividuntur in triangula” (by J. A. Segner); “Methodus simplex et universalis, omnes omnium aequationum radices detegendi (by J. A. Segner); “Dissertatio de quibusdam circa lentes causticas et specula ustoria emendatis et noviter inventis” (by J. E. Zeiher); “Phaenomenorum iridis seu arcus coelestis disquisitio (by S. Kotelnikoff); “Observatio optica de mutabilitate diametri apparentis foraminis angusti, oculo propinqui” (by F. U. T. Äpinus); “Acus novae declinatoriae descriptio” (by J. E. Zeiher); “De refractionibus in oris septentrionalibus” (by G. Heinsius); “Relatio observationum et experimentorum, quorum instituendorum iter anno MDCCLVII. in insulam Osiliam susceptum occasionem praebuit” (by A. N. Grischow). The manuscripts of the abstracts are held by the St. Petersburg Academy. Euler wrote about this report to G. F. Müller on September 5, 1761: “[Ich habe] alle Arbeit beyseits gesetzt, um den VII Tom. mit aller Aufmerksamkeit durchzulesen und aus den darinn enthaltenen Schrifften die Historiam naturalem ausgenommen, die verlangten Auszüge zu machen. Ich habe also die Ehre dieselben hiermit Ew. Hochdelgeb. zu übersenden, mit gehorsamter Bitte diese meine Fertigkeit als einen Bewegungs-Grund anzuwenden, um mein bewusstes Ansuchen zu unter stützen. Ich glaube auch diese Auszüge dergestalt ausgearbeitet zu haben, dass dieselben mehr Aufmerksamkeit als sonst verdienen werden. Bey Anlass der Electricischen Experimenten habe ich die so genannte Theorie des Fränklines (!) genauer untersucht, und gezeigt, was von den darinn angenommenen Atractionen und Repulsionen zu halten sey. Hernach habe zu einer Schrifft des H. G. R. von Segner wichtige Zusätze [it deals with the number of decompositions of a polygon into triangles by using diagonals] gemacht, und einige im Rechnen eingeschlichene Fehler verbessert.”⁴ This indicates that Euler also composed abstracts for the two treatises “De problematis quibusdam isoperimetricis” by P. Frisi and “Descriptio ac explicatio novorum quorundam experimentorum electricorum” by F. U. T. Äpinus, and in fact the St. Petersburg Academy posses these abstracts from Euler’s hand, but these are not the ones printed in the *Summarium dissertationum*. One can see from the above letter why Euler took the trouble to compose these reports; I don’t know for certain why these same reports were not printed.

1763.

E269-278 The abstracts for these treatises appear to be written by Euler himself, since on September 21, 1762 he wrote to G. F. Müller: “Hiermit habe die Ehre Ew. Hochedelgeb. meine Auszüge aus dem VIII Tom. Nov. Comment. zu überschicken wovon einige als besondere Abhandlungen angesehen, und in den Conferenzen vorgelesen werden könnten, wann Dieselben

⁴ “[I have] set aside all work in order to read through the 7th volume with all attentiveness, and taken out the writings of the Historiam naturalem contained therein, in order to make the required extracts. I therefore have the honor of enclosing these same things, with most dutiful pleas to use this, my skill, as a motivation to support my known request. I also believe these extracts to have been formulated in such a manner that they will earn more attention than usual. By means of electrical experiments, I have closely examined the so-called Franklin Theory, and shown what the attraction and repulsion contained therein could consist of. Afterwards I have made important additions to a piece by H. G. R. von Segner, and corrected several errors which had snuck into the calculation.” – G. P.

solches für nöthig erachten.”⁵ Euler adds: “zum wenigsten wünschte ich dass die H. Verfasser, der[en] Arbeit ich mich zu beurtheilen unterstanden, damit zu frieden seyn möchten.”⁶ One may also be certain that Euler composed additional reports about several treatises in the volume that he was not the author of. Whether these reports were published in the *Summarium dissertationum* can not be decided, since the manuscripts mentioned do not appear to be available in the archive of the St. Petersburg Academy. Of all these reports of Euler’s, only the abstract for E274 (see below) was recovered by the St. Petersburg Academy.

E273 The treatise “De usu novi algorithmi in problemate Pelliano solvendo” [E323] was originally printed on pages 129-149, instead of the treatise “Consideratio formularum, quarum integratio per arcus sectionum conicarum absolvi potest.” The following letter from Euler to G. F. Müller from July 27, 1762 gives information about the reason for this alteration: “Pag. 129 fängt an *de Usu novi Algorithmi* etc. und die Abhandlung selbst *de Novo Algorithmo* [E281] ist nicht vorhanden, welche doch nothwendig vorhergehen sollte, und ohne welche diese nicht kan verstehen werden; ich weiss gewiss dass ich beyde zusammen überschickt, und also wollte erstlich vernehmen, ob diese hier vermisste Schrift verlohren gegangen oder etwan auf den künftigen Tomum verspahret worden, um meinen Auszug darnach einrichten zu können. Allein in der Piece: *De usu novi Algorithmi* ist noch ein weit verdrüsslicher Umstand, wodurch meine Arbeit gänzlich unterbrochen wird. Pag. 137 wird die Solution probl. §13 plötzlich abgebrochen, ungeacht dieselbe noch nicht zu Ende ist und pag. 138 fängt gleich mit §42 an, woraus ich schliessen muss dass von meinem Mspt. wohl gantze Bogen verlohren gegangen, welches doch so wohl der Setzer als der Corrector sogleich hätte merken müssen; dieser Mangel ist so wichtig dass nun niemand das geringste davon verstehen kan. Ich habe keine Abschrift davon behalten und ausser dem, dass es mir ziemlich saur werden würde, diese Materie von neuem aufzusetzen, so würde doch alles gantz anderst ausfallen.”⁷

E274 The manuscript of the abstract, which was written by Euler himself, is found in the archive of the St. Petersburg Academy. Euler wrote to G. F. Müller on July 27, 1762 about the printing of the treatise itself in the *Novi commentarii*: “Die Piece, so pag. 156 aufhört ist auch noch lang nicht zu Ende und es muss auch wohl ein Bogen von meinem Mspt. oder mehr weggekommen oder verlegt worden seyn. Ich kan nicht begreifen, wie solches in der Correctur die sonst noch ziemlich gerathen, nicht ist bemerkt worden, und ich weiss mir darinn gar nicht zu rathen. Ew. Hochdelgeb. wollte also zuvörderst gehorsamst ersuchen, diese Defecten mit aller möglichen Sorgfalt aufsuchen zu lassen.”⁸

⁵ “I have the honor to enclose my extracts from the 8th volume of the *Nov. comment.*, several of which can be seen as special treatises, and could be read aloud in the conference if that is considered necessary.” – G. P.

⁶ “I could at least wish that the publisher, whose work I find myself to be subject to, would like to be at peace with it.” – G. P.

⁷ “Page 129 begins *de Usu novi Algorithmi* etc., and the treatise *de Novo Algorithmo* itself, which should necessarily precede it, and without which it cannot be understood, is not available; I know for certain that I sent them both together, and therefore first want to know whether this writing missing here could have gotten lost or was delayed until a future volume in order to prepare for my later extract. In the piece *de Usu novi Algorithmi* alone is yet a further unpleasant occurrence, which will completely break up my work. Page 137. suddenly cuts off the solution to problem §13, and despite that not being finished, page 138 begins with §42, from which I must conclude that whole pages of my manuscript have gone missing, which the publisher as well as the corrector must have noticed; this absence is so important that now no one can understand the least of it. I have kept no copy of it, and aside from the fact that it will make me somewhat sour to draft this material from scratch, everything will also turn out entirely differently.” – G. P.

1764.

E279-288 The manuscripts of the abstracts, which were written by Euler himself, are found in the archive of the St. Petersburg Academy.

E282A₀ Translated into German: Von Auflösung der Gleichungen, von welchen Graden sie immer sind, verfaßt von Hrn. Leonhard Euler.

Abhandlungen der böhmischen Gesellschaft der Wissenschaften 1, Prague 1785, p. 180-207. Translated by Franz Schafgotsch.

E288* [Reports on treatises by Zeiher and Äpinus.]

Novi. comment. acad. sc. Petrop. 9, (1762/3), 1764; *Summarium dissertationum* p. 30-32, 32-33, 33-34, 35-36. Euler reports on the following treatises of the 9th volume of the *Novi Comentariorum*: “Thermometri metallici descriptio” (by J. E. Zeiher); “Thermometrorum, punctis constantibus gaudentium, emendatio” (by J. E. Zeiher); “Emendatio microscopii solaris” (by F. U. T. Äpinus); “Dissertatio de experimento quodam magnetico celeberr. domini du Fay, descripto in Commentariis Acad. scient. Paris. a. MDCCXXX” as well as the “Additamentum” (by F. U. T. Äpinus). The manuscripts of the abstracts are held by the St. Petersburg Academy. Euler wrote to G. F. Müller about this report as well as about E279-288 on February 12, 1763: “Hiebey habe ich die Ehre Ew. Hochdelgeb. die Auszüge aus dem IX Tomo Nov. Comment. zu überschicken, welche ich mich beflissen durch neue Zusätze und Erläuterungen der abgehandelten Materien noch wichtiger zu machen; weswegen, da dieselben gleichsam als besondere Abhandlungen angesehen werden können, ich wünschte, dass sie vorher in den Confrenzen abgelesen würden.”⁹

1765.

E289 Reviewed in *Jen. Zeit. v. gel. Sachen* 1765, p. 467-470.

1766.

E295-304 According to the letters from Euler to G. F. Müller on February 25 and March 13, 1764, the reports on these ten treatises had been sent to St. Petersburg. Whether the reports were really used for the *Summarium dissertationum*, can not be decided, since Euler’s manuscripts of the reports do not appear to be available in the archive of the St. Petersburg Academy.¹⁰ That the abstract for E304, at least, does *not* come from Euler, but rather from S. Rumoffski, appears to be indicated in the record of the session on February 3, 1766 (*Procès-verbaux des séances de l’académie impériale des sciences* II, St. Petersburg 1899, p. 558).

⁸ “The piece which stops on p. 156 is also still far from the end and it must have been that a whole page of my manuscript or even more disappeared or got misplaced. I can not understand how this is not noticed during the correction, which is still usually advised, and I know nothing myself to advise about it. I would like to most obediently request that these defects be seen to with all possible care.” – G. P.

⁹ “I have the honor of sending the extracts from volume IX of the *Novi comentarii*, which I industriously made more important by means of additions and comments on the material they covered; since they can be regarded in the same way as special treatises, I wish that they would be read beforehand in the conference.” – G. P.

¹⁰ Euler also sent a report to Petersburg on the treatise by S. Kotelnikoff in the 10th volume of the *Novi comentarii* (p. 199-204) according to the letter cited above from March 13, 1764. Whether this report is identical to the abstract published on pages 23-25 of the *Summarium dissertationum* also can not be decided.

1767.

E323 About the first pulp edition of this treatise see E273 above.

E325 A version translated into French: *Nouv. ann. de math.* 1, 1842, p. 79-87 (O. Terquem) [E325b].

E333, 334, 337, 338 The manuscripts of these treatises are held by the St. Petersburg Academy.

1768.

E343B Reviewed in *Jen. Zeit. v. gel. Sachen* 1769, p. 436-439.

E343G¹⁰ Translated into English: Letters of Euler on different subjects in natural philosophy addressed to a German princess ... Vol. I. New York, Harper & Brothers 1872.

University library in Ann Arbor.

Report by L. C. Karpinski.

8⁰, 386 pages + 1 diagram. Complete title the same as E343G⁴.

Continued in E344G¹⁰ of the supplement.

E344B- Reviewed in *Jen. Zeit. v. gel. Sachen* 1769, p. 737-743.

E344G¹⁰ Translated into English: Letters of Euler on different subjects in natural philosophy addressed to a German princess ... Vol. II. New York, Harper & Brothers 1872.

University library in Ann Arbor.

Report by L. C. Karpinski.

8⁰, 436 pages. Complete title the same as E344G⁴.

Also see E343G¹⁰ of the supplement.

E351, 361 The manuscripts of these treatises are held by the St. Petersburg Academy.

E364 The manuscript of the letter is held by the St. Petersburg Academy.

1769.

E367 Reviewed in *Nova acta erud.* 1774, p. 147-158; see E404 below.

E382 The manuscript of this treatise is held by the St. Petersburg Academy.

1770.

E386 Reviewed in *Nova acta erud.* 1774, p. 316-334; see E404 below.

E387 Instead of “since the two parts of the Russian translation appeared in 1768,” read, “since the first part of the Russian translation appeared in 1768 and the second part in 1769.”

E400, 402 The manuscripts of these treatises are held by the St. Petersburg Academy.

E403 Instead of, “L. Eulers” read: “Des Herrn Leonhard Eulers.” The manuscript of this treatise is held by the St. Petersburg Academy.

1771.

E404 The review in *Nova acta erud.* 1774 relates to the first two parts of “*Dioptrica*.”

E415 This competition essay appears to be revised by Albrecht Euler according to the instructions of his father. In particular, Leonhard Euler writes: “J’avois fait travailler mon fils pour le prix de l’an 1757 ... j’ai vu ... que l’Académie de Paris venoit de partager son prix parmi deux pièces, et je fus bien surpris que l’une étoit marquée de la même devise que portoit celle de mon fils pour l’an 1757,” in his letter to Maupertuis on July 9, 1759 (*Le Sueur, Maupertuis et ses correspondants*, Paris 1896, p. 178).

1772.

E417B The translation comes from J. C. Lodern.

E417G¹⁰ Translated into English: Letters of Euler on different subjects in natural philosophy addressed to a German princess ... New York, Harper & Brothers 1872.

See 1768 of the supplement (E344G¹⁰).

1773.

E426² Instead of “(4) + 268 pages,” read, “(6) + 268 + (2) pages.”

1774.

E446 Instead of “83 pages,” read, “(10) +83 pages.”

1776.

E484* [Several lines of a letter from Euler to Th. Spleiss, 1752.]

M. Habicht, *Nachricht von dem Leben des Herrn Thomas Spleiss*, Schaffhausen 1776, p. 20-21. The letter appears to have been written in April 1752.

1778.

See 1748 in the supplement (E101b).

1782.

E530* [Two letter from Euler to J. Stepling 1748, 1755.]

J. Stepling, *Litterearum commercium eruditi in primum argumenti*, Breslau 1782, p. 273-275 (letter from August 31, 1748), 420-426 (letter from May 20, 1755).

1783.

E560 Instead of “Sums of the negative powers of roots,” read, “Sums of the positive powers of roots.”

1785.

See 1764 in the supplement (E282A₀).

1805.

E723* [Three letters from Euler to G. L. Lesage, 1761-1765].

P. Prevost, *Notice de la vie et des écrits de Georges Louis Le Sage de Genève*, Geneva 1805, p. 381-382 (letter from October 13, 1761), 382-386 (letter from April 16, 1763), 389-390 (letter from September 8, 1765).

1822.

See 1741 of the supplement (E57d).

1833.

See 1741 of the supplement (E57e).

1842.

See 1767 of the supplement (E325b).

1843.

E788 Instead of “The originals of the letters are found in the Archive of the St. Petersburg Academy,” read, “The originals of the letters are presumably still kept in the Russian central archive in Moscow (see Fuss, *Corr.* I, p. XXII).”

1849.

E792-799 The manuscripts of these treatises are held by the St. Petersburg Academy.

1862.

E806-819, 823-856 The manuscripts of these treatises are held by the St. Petersburg Academy.

1865.

E857* [French translation of a German letter from Euler to M. Lomonosoff, 1755.]

П. Билярскій, Матеріали біографіи Ломоносовъ, St. Petersburg 1865, p. 784-785. The letter is dated January 11, 1755.

1872.

See 1768 and 1772 of the supplement (E343G¹⁰, 344G¹⁰, 417G¹⁰: English translation of the “Lettres à une princesse d’Allemagne”).