



XXXVII. History of astronomy for the year 1801

Jerome Lalande

To cite this article: Jerome Lalande (1802) XXXVII. History of astronomy for the year 1801, Philosophical Magazine Series 1, 12:47, 203-211, DOI: [10.1080/14786440208676052](https://doi.org/10.1080/14786440208676052)

To link to this article: <http://dx.doi.org/10.1080/14786440208676052>



Published online: 18 May 2009.



Submit your article to this journal [↗](#)



Article views: 2



View related articles [↗](#)

the vitrid mass was minutely examined, but no metallic globule was visible. The mixture before fusion was magnetic, owing to the oxide. This property was now entirely lost.

The heat of this experiment was urged moderately, that time might be given for the exertion of any affinity, if such existed, betwixt the iron and the carbonic acid, or betwixt the oxide of iron and the carbonaceous part of the acid. No portion of metal being revived, I conceived this a most conclusive proof of the nondecomposition of the carbonic acid.

XXXVII. *History of Astronomy for the Year 1801.* By
JEROME LALANDE.

[Concluded from p. 121.]

M. BODE, of Berlin, has published the last part of his large Celestial Atlas in twenty sheets, which contains all the old constellations, with several new ones, and some thousands of stars, with which I furnished him; an immense labour, of which the astronomers had need. This beautiful work may be procured at the Collège de France.

On the 27th of September the Helvetic republic adopted the French measures. This is the first of the European states which has been sensible of the importance of this universal measure to the general good of civilized nations.

Guglielmini, of Bologna, has made three new experiments on the fall of bodies, to prove the rotation of the earth: he has found the same deviation from the south within a line, though it is not given by theory; but the deviation from the west he has found as it ought to be. Preparations are making for observations of the same kind at Hamburgh from the tower of St. Michael, at the height of 326 feet.

The observatory of Cadiz, during several years, has furnished us with a series of important observations; but for some time it has been neglected. General Mazzaredo has caused a new one to be built in the Isle-de-Leon, and he has attached to it four astronomers, officers in the navy—Rodrigo Armesto, Maximo-Lariva Agüero, Julian Canela, and Joseph Cuesta, who have resided there four years. For ten years past, a nautical almanac has been published in Spain. I hope navigation and astronomy will be benefited by it. The telescope 25 feet in length, made by Dr. Herschel for Spain, will be sent off in the month of January; and Dupont will go to Spain to mount it.

M. Travassos,

M. Travassos, secretary of the Academy of Lisbon, has sent me observations by M. Ciera, which have confirmed the longitude of that city; the Nautical Ephemerides published to 1803, and various works of the Portuguese Academy, of which we had no idea, and which the National Institute of France received with much interest. This negotiation was conducted by the chevalier d'Aranjo.

Astronomy was long in a languishing condition in the Batavian republic: M. Fokker has established, at his own expenses, an observatory at Middleburg; he has purchased instruments, and sent us several observations made between 1797 and 1801. M. Fokker, during the revolution of 1795, was member of the committee of public safety, and at that time obtained a tower in the abbey; but the revolution of the 12th of June 1796 interrupted his plans for the improvement of the observatory. He is now engaged in the finance department of Zealand; but his spare time is employed on astronomy, and he has sent me several interesting observations.

In Germany astronomy continues to be cultivated with great assiduity. Baron Von Zach's tour to Bremen and Lillenthal has produced new activity; and the society formed for the purpose of searching the heavens are still occupied with that object. He observes the moon with great diligence; and gives me reason to hope, that I shall see next summer a part of the German astronomers assemble in an astronomical congress at Gotha, as was the case in 1798. Amidst the horrors of war, the French astronomers signalized their zeal for astronomy. General Moreau, being at Cremsmunster, where there is a celebrated observatory, caused a bill to be posted up denouncing the punishment of death against every person who should be guilty there of any depredation; and neither the observatory nor the convent of the Benedictines sustained any injury. It is flattering to the French to have officers who distinguish themselves by a taste for the sciences. It will no longer be said that military men, in consequence of their situation, are ignorant and ferocious.

The Academy of Peterburgh has requested an observer, but Burg and Wurm have been retained by their sovereigns; and this beautiful observatory is still useless, notwithstanding the number of excellent instruments with which it is furnished.

C. Henry has had the satisfaction of erecting the large mural quadrant by Bird, and of making some observations with it.

The irregularity in the degrees of the earth hitherto measured,

fured, gave reason to suspect some error in that of Lapland measured in 1736. M. Melanderhielm, therefore, has obtained permission from the king of Sweden to undertake a new measurement. In the month of April Messrs. Ofverbom and Swamberg set out for Tornea, where they erected signals and built small observatories. When the ice on the river is thawed, they will measure a base with the rules sent them by the Institute. A multiplying circle, made at Paris by Lenoir, will serve them in the spring for measuring the angles; and next summer we shall have the solution of this old difficulty.

M. de Mendoza, a Spanish officer, has published two large collections of tables; one at Madrid, in 1800, entitled *Collección de Tablas*; and another at London, in the month of April 1801, which contains tables for the reduction of distances by the addition of five natural numbers: he has made a new use of the versed sines, which renders numerical operations shorter and easier. These tables consist of 407 pages quarto.

M. Garrard has published tables in thirteen pages only; but his method is neither shorter nor so accurate.

Mr. Vince, an able English astronomer, has published the second volume of a large treatise on astronomy.

The stereotype tables of logarithms, published by Firmin Didot in 1795, have been again corrected. M. Vega, who has caused to be printed in Germany the largest collection extant, has verified the French tables, and sent us several faults, which are going to be corrected: in all probability they will be the last, and we may depend in future on correct tables. This is a great benefit for calculators, who have sometimes lost whole days in revising calculations, which did not agree, in consequence of an erroneous figure.

But as the small manual tables are most frequently employed, I have caused them to be printed in stereotype: several persons have corrected them; and in three months I can give all calculators the most correct, most convenient, and most elegant edition that has ever appeared.

C. Verniquet has finished the engraving of his large plan of Paris in 72 sheets on a scale of half a line to the toise, which in correctness surpasses every thing of the kind.

A project was long ago formed and undertaken for making a lunar globe representing all the mountains and craters. Mr. Ruffel has accomplished this object in England: his lunar globe, mounted on an ingenious stand, expresses all the circumstances of the moon's libration, and shows that body as she ought to appear in the different positions of the earth

earth and moon, as well as the variations of the equator and orbit.

M. Philippides, born at Mount Pelion in Theffaly, who attended the course of astronomy at the Collège de France in 1794, and who is now at Jassi with the hospodar of Moldavia, proposes to publish in Greek the Abridgement of my *Astronomy*: he has already published various works, for the purpose of endeavouring to propagate instruction in his country.

Three-fourths of the two last volumes of Montucla's *History of the Mathematics* are printed. This work will contain the history of astronomy, optics, and navigation; to which I have been obliged to make great additions in consequence of the too premature death of the learned author.

M. Von Murr, of Nuremberg, who has manuscripts of Regiomontanus, the first restorer of astronomy before 1500, has caused a page to be engraven, an exact fac-simile of the character of the manuscript: he offers to sell these manuscripts for 2400 francs; they would be a treasure to a large library.

The astronomical poems of Ricard, Lemiere, and Fontanes, had before shown how far a view of the heavens is capable of exciting poetical enthusiasm. C. Gudín has again proved it by a poem, which contains both the history of astronomy and a description of the heavens, and which displays as much correctness as elegance.

This year geography also has made considerable progress. Tranchot is constructing a map of the four united departments on the scale of a line to 100 toises: a survey is taking of the country between the Adige and the Adda, Piedmont, Swabia, and Swisserland; and the minister at war caused the details to be inserted in the *Moniteur* of August 14.

C. Henry, who has been invited to Munich to construct the map of Bavaria, informs me in a letter that the topographical part is in great forwardness; a base of 21,649 metres or 11,108 toises has been measured: it is the longest ever measured. The large triangles around the capital are already in part closed. There are some the sides of which will be from 15 to 20 leagues, and even more. He has already swept the horizon several times with his circle, and with astonishing precision. The last sweep was composed of six angles; the sum of which when reduced was not in excess, but 8-10ths of a second in 360 degrees; and yet the circle he used was not very good. To make up as much as possible for what may be wanting in regard to precision, he multiplies his observations: he never makes less than 15 conjugate observations,

tions, and he often carries the number to 20. The triangles which Cassini assumed in the neighbourhood of Munich are badly chosen, and the measurement of them is very incorrect. Without employing his triangles, Henry has already disposed a series of 14 triangles, the measure of which will give us that of an arc of the meridian of somewhat more than a degree: he hopes that it will still be possible to prolong this arc, which will pass at a little distance from Ingoldstadt, and which will ascertain the positions of a part of Germany. The travels of baron Von Zach and several of his co-operators have also supplied us with new information and new positions, which will improve the geography of Germany. Colonel le Cocq continues his map of Westphalia.

Baron Von Ende, member of the supreme council of appeal at Cette, has published a volume on the determination of several places in Lower Saxony: it is filled with observations and calculations.

The geography of distant countries has assumed also a new activity. Captain Baudin, whose voyage of discovery $\frac{1}{2}$ before announced, left the Canaries on the 24th of November, and the Isle of France on the 22d of March. We have reason to hope that he has already made interesting discoveries in New Holland; the only country of the earth which is almost unknown to us, though it is 2000 leagues in circumference. Bernier, the astronomer who accompanies him on the expedition, a man of intelligence and courage, leaves nothing to be wished for on that head. In the month of June the French government granted passports to the English vessels, the Investigator, captain Flinders, on the point of proceeding on a voyage of discovery to the South Seas, and to the Lady Nelson, commanded by lieutenant Grant, who is to accompany the Investigator, in exploring the coasts of New Wales.

C. Deguignes jun., arrived from China, where he resided from 1784 to 1797, will, in all probability, when he publishes the journal of his voyage, give us some information respecting that beautiful part of the world.

Baron Humboldt, an enlightened and intrepid philosopher, has gone to South America, where he has travelled 1300 leagues in the deserts, with great labour and amidst terrible dangers, to make us acquainted with the geography and natural history of those countries which are still new to us.

M. Deferrer has sent me observations which give the position of Natchetz in Louisiana, and of Guaira in South America; for the former, lat. $31^{\circ} 33' 48''$, difference of meridian $6^{\text{h}} 15' 21''$; and for the latter $10^{\circ} 36' 40''$ N. and $4^{\text{h}} 37' 11''$.

C. Nouet

C. Nouet has sent us from Egypt an almanac calculated for that country, and several positions of cities even in Upper Egypt, notwithstanding the climate, the dangers, and inconceivable labour which such observations require. The value of the degree is 56,880 toises; the Egyptian stadium 711 feet; the Egyptian cubit 21·33 inches; the Greek stadium 487·543 feet, and the cubit 19·5017 inches. In a word, he has arrived himself, and brought us the continuation of his labours, accompanied with young Isaac Mechain, the son of one of our most celebrated astronomers, who was his companion and co-operator in Egypt. C. Fourier has brought us drawings of the zodiacs of Upper Egypt, which attest the high antiquity of astronomy; and he proves that the formation of the constellations goes back 14,000 years, as Dupuis presumed.

C. Marquis, prefect of La Meurthe, has sent to the Board of Longitude observations and manuscripts of P. Barlet; a jesuit of Nancy, which contain interesting things.

I must here say a word of meteorology. C. Lamarc has published a meteorological journal, in which he gives a great many observations, and indicates the variations of the seasons which may be supposed to take place in the course of the year. The minister of the interior has established a meteorological correspondence to multiply observations; and Lamarc, who solicited this establishment, will make it advantageous to the science, which is still in its infancy.

C. Burekhardt, also, has written a long and curious work on meteorology. He has examined 15,000 observations of the barometer, that he may be able to calculate the influence of the winds; and he has found that the south wind gives for mean height 27 inches 11·3 lines, while the east gives 28 inches 1·9 line. He has found also that the height on the borders of the Mediterranean sea is 28 inches 2·2 lines, and on those of the ocean 28 inches 2·8 lines.

Well placed weather-cocks are very rare at Paris. There is none at the observatory, though I requested one on being appointed director; and I have thanked, in name of all observers, C. Bois, tinman, who having built a house on the Quai des Augustins, has erected there a lofty and very moveable weather-cock, with letters indicating the four cardinal points, which will be on a line with a meridian I have traced out on the quay. Astronomers, when they go to the Institute or the Board of Longitude, will have an opportunity of seeing conveniently the direction of the wind; and the same advantage will be enjoyed by the inhabitants of that vast quay, of the Louvre, and the surrounding houses, which
had

had not a single weather-cock in their view, but a great many conductors, which are not very interesting.

On the 3d of November there was in the Baltic a terrible storm, which destroyed some vessels, and was felt even at Brest. On the 7th there was a storm in Provence, which produced 73 lines of water in $2\frac{1}{2}$ hours by a wind at S.S.E. It did very great damage at Marseilles; several persons perished in the neighbourhood, and the loss amounts to some millions. C. Thulis has found some memorandums of the storms of July 12, 1748; September 4, 1764; and September 15, 1772: but no person had any remembrance of a storm like that of the present year. The plain of the Po was exposed to an immense inundation.

The Class of the Physical and Mathematical Sciences on the 16th of April chose three astronomers, who were presented to the general assembly for the place of associate, vacant by the death of C. St. Jacques, viz. C. Vidal, Sepmanville, and Bernard.

The first is an uncommon observer, who has alone made more observations of Mercury than all the astronomers of the world since 2000 years. The section of astronomy had presented also C. Pictet of Geneva, Chabrol (de Riom), and Quenot, officers in the navy. I even made out a list of the astronomers known in France, which contained C. Henry, returned from Petersburg; Nouet and Beauchamp, returned from the Levant; C. Deratte and Poitevin, of Montpellier; Bernier and Biffy, who embarked with captain Baudin; Chevalier, in the department of foreign affairs; Kramp, of Cologne; Duvaucel, at Evreux; Guerin, at Amboise; Mongin, at la Grand-Combe-des-Bois; Maingon and Lancelin, at Brest; Jacotot, at Dijon; Planpain and Degrand, at Marseilles. If we add to these the six astronomers associated at the Institute, it will be seen that this science, the most unprofitable and the most neglected, still furnishes subjects in France. As soon as the happy event of peace exalted the hopes of literary men, I took advantage of it to solicit from all quarters, that astronomy might participate in the benefits of it.

The Academy of Petersburg has transmitted to me a small present, which it has been accustomed for thirty years to send me for the good of astronomy; and the emperor of Russia has approved the desire of the Academy in that respect.

The king of Etruria has promised to patronize astronomy at Florence. The observatory is already provided with excellent instruments, and Fabroni has assured me that an observer will be placed in it: he has requested one of my pu-

pils; and this circumstance makes me regret that I have not a greater number.

General Jourdan gives me reason to hope that the observatory of Turin will be put in a proper state; and C. Vassalli, president of the academy, affords me hopes also.

The minister of the marine has given orders that new observations shall be made at Brest on the tides, according to my request, in order to complete my *Traité du Flux et du Reflux de la Mer*, which I wrote to confirm the excellent theory of Laplace in his *Mécanique Céleste*, and to ascertain what influence the wind has on the tides.

We requested the first consul to procure us from Spain two thousand pounds weight of platina, to construct a telescope of 36 feet; and we have reason to hope for it. Our telescope will, perhaps, surpass that of Herschel.

The observatory of Paris has acquired C. Agoustene. The minister of the interior, C. Chaptal, has agreed that the Board of Longitude may increase its expenses for this new assistant; and I have obtained C. Giroult, whose youth and assiduity give me new aid, and leave me no other regret than that of not being able to procure a greater number.

In my History of Astronomy for 1800, I mentioned the loss which astronomy had sustained on the 5th of November that year by the death of Ramsden: to him we have been indebted, during the course of twenty years, for the best and largest instruments, the most perfect telescopes, and the most ingenious ideas. Troughton, at present, is the most celebrated artist in England, and is preparing to indemnify us for this loss. He has already made excellent instruments; and C. Piccet, of Geneva, lately brought us some of them.

On the 10th of February we lost C. St. Jacques de Sylvabelle, director of the observatory of Marseilles, who distinguished himself by theoretical researches in 1753, as may be seen in the Philosophical Transactions, and then by useful observations: he was 79 years of age, and was still usefully employed. His eulogy will appear in the journal of the Lycæum of his department.

He has been succeeded by Thulis, who has long been assistant director of the observatory. The latter made proselytes and pupils C. Planpain and C. Degrand; but they have both left us, to the great loss of astronomy.

In the month of December 1800, Matteucci died at Bologna: to him we are indebted for the last volumes of the Ephemerides of Bologna, which go as far as 1810. He has been succeeded by C. Ciccolini and Guglielmini, who promise new activity in the observatory, which Manfredi, Za-

notti, and Matteucci, have rendered interesting for a century past.

Chaligni died lately at Madrid; he had long made observations and calculations, by which he has been known with advantage as an astronomer.

M. Chevalier has died at Prague: he made useful observations at Lisbon in 1759, and at Brussels.

On the 8th of October, Gabriel de Bory died at Paris, aged 81: he undertook a journey to Spain in 1751, and in 1758 went to Portugal and Madeira to determine their position. His observations are in the *Mémoires* of 1768, p. 270, and in those of 1772, part ii. In the *Mémoires* of 1770 he gave a description of a portable observatory, and in the third volume of the *Savans Etrangers* an observation of the transit of Mercury in 1753. In 1751 he published a description of a marine octant: he diffused a taste for observations through the royal navy: being *chef d'escadre* and governor of the windward islands, he had means of contributing to excite emulation, and he always employed them. In 1765 he was therefore elected a free associate of the Academy of Sciences, and in 1798 member of the Institute.

The Academy and Institute have always been sensible how much need we have of enlightened fellow-labourers to improve our knowledge of navigation, the most difficult of all arts, and the most important of all sciences for the prosperity and greatness of states.

But the greatest loss sustained by astronomy is that of Joseph Beauchamp. He was born at Vezoul on the 29th of June 1752. His observations at Bagdad in Persia, and on the Black sea, were as laborious to him as they were important to us. He set out in 1795 as French consul for Mascate in Arabia; and he wrote to me on his departure as follows: "Remember my attachment to you and to astronomy." He left indeed, with some regret, a country and family who were dear to him: he is certainly one of the martyrs to astronomy. He set out for Constantinople on the 25th of September; we expected him with the greatest impatience, but he had scarcely arrived in Provence when he fell a prey to a malady of which he had not been properly cured. He died at Nice on the 19th of November 1801. Eight days before his death the section of astronomy had presented him to the vacant place in the Institute: I published a notice of his labours in the *Moniteur* of Dec. 15; 1801.