

Biographical Encyclopedia of Astronomers

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Lalande, Joseph-Jérôme

Born Bourg-en-Bresse, (Ain), France, 11 July 1732

Died Paris, France, 4 April 1807

Lalande organized and reduced observations from the 1769 French transit-of-Venus expeditions, prepared a great star catalog and important astronomical bibliography, and taught many astronomers

Lalande's father was Pierre Lefrançois, director of a tobacco warehouse, who married Marie-Anne-Gabrielle Monchinet. Their son was educated by the Jesuits at Bourg and then at Lyons. Sent to Paris to study law, he frequented the observatory of Joseph Delisle at the Hôtel de Cluny and attended his lectures and those of Pierre-Charles Le Monnier at the Collège royal (now Collège de France). He then named himself Lalande. A bachelor, in his 50s he adopted his nephew Michel Lefrançois, who married Amélie Harlay, whom he considered both niece and daughter

In 1751, Nicolas de La Caille was at the Cape of Good Hope to measure the lunar parallax, which required simultaneous measurements. The most advantageous other site being in Berlin, Le Monnier proposed himself as an observer but had his young pupil Lalande carry it out. At Berlin, Lalande was well received by Frederick II. He observed the Moon from 29 November 1751 to 1 September 1752, studied analysis with Leonhard Euler, and met the philosophers of the King of Prussia. He became a member of the Berlin Academy of Sciences, and, upon his return to Paris, a member of the Academy of Sciences there as astronome adjoint on 4 February 1753. In 1772, Lalande was named pensionnaire. He published three memoirs on the lunar parallax in *Mémoires de l'Académie* for 1752, 1753, and 1756

Delisle sent instructions to his numerous correspondents for observing the transit of Mercury on 6 May 1753. Lalande observed it with Le Monnier at the Château de Meudon (future observatory of Jules Janssen) and used a heliometer designed by Pierre Bouguer. On Lacaille's return, Lalande adopted his methods rather than those of Le Monnier, leading to a quarrel and a falling out. Lalande remained a friend of Delisle, who offered him in 1754 the dome of the Luxembourg Palace where he used his heliometer to determine the diameters of the Moon and the Sun. Lalande observed there for 10 years.

In 1758, Alexis Clairaut calculated the date of the return of the comet of 1682 (IP/Halley) with the help of Lalande and Nicole Lepaute. Lalande published (1759) a series of tables of Halley's Comet and the history of this comet

Delisle sent out instructions again for observations of the 6 June 1761 transit of Venus, which Lalande observed at the Luxembourg Palace.

Lalande obtained the editorship of the *Connaissance des Temps*, which he revamped, including information useful for navigation. Lalande composed 16 volumes from 1760 to 1775. After

becoming a pensioner of the Academy, he left the journal, but he resumed it in 1794 until his death

In 1762, Delisle, who wished to retire, handed over his astronomy courses at the Collège royal to Lalande, who was named to the chair upon Delisle's death in 1768. In 1764, Lalande published his influential *Astronomie*, which served to instruct astronomers for many years. For his pupils and his own work, he made several observatories available: his own at the Collège Mazarin (now Institut de France) from 1764 to 1806; at his home, Palais Royal, from 1770 to 1775; at the Collège Royal, where he settled in 1775; and later at the École militaire

At the Collège de France, Lalande became a famous teacher, instructing Jean-Baptiste Delambre, Pierre Méchain, and Giuseppe Piazzi. He also taught navigational astronomy and published (1793) navigational time tables calculated by his niece/daughter. She inspired him to write *Astronomie des Dames*, published in 1785

For the transit of Venus on June 3, 1769, Lalande developed Del-isle's method of computing solar parallax and sent instructions and maps. He refused to travel, reserving for himself the analysis of the observations he hoped to receive from his correspondents. In 1770, he deduced a solar parallax of 8.5" to 8.7.

With his observations and those of his correspondents and pupils, Lalande established orbits and tables of planets from 1755 to 1796. In 1789, he observed the Sun at the solstice, just as La Caille had done 40 years earlier at the same observatory with the same instrument; Lalande calculated that the obliquity of the ecliptic is decreasing by 38' each century

In 1783, Lalande began his last great project: to establish a catalog of 50,000 stars down to the ninth magnitude. Observations were made until 1785 at the observatory of the École militaire by his pupil Dagelet, now a teacher at this school. After the observatory's destruction, Lalande achieved its reconstruction in 1788, when his nephew Michel Lefrançois-Lalande became its main observer. Lalande published his catalog in *Histoire céleste* (1801), which Heinrich Olbers declared one of the most important works of the 18th century

Lalande often expressed interest in the history of astronomy. In *Connaissance des Temps*, he published the astronomical history of the past year, and gathered those articles in 1803 in *Bibliographie astronomique avec histoire de l'astronomie de 1781-1802*. This huge volume, the printing of which was funded by the government, is an important bibliographical source

On 10 August 1792, Lalande saved the lives of several nobles and priests by hiding them in his observatory of the Collège Mazarin. In August 1793, during the Revolution, the academies were suppressed in France. In 1795, after the Terror, the Convention created the Bureau des Longitudes and reestablished the Paris academies gathered in the Institut National. Lalande was the first astronomer named at the Bureau, of which he became the secretary; he was also the delegated director of the Paris Observatory until the return of Méchain. In February 1793, when the Republican calendar was established, Lalande had to adopt it in *Connaissance des Temps*, but by 1801, he publicly desired the return of the Gregorian calendar, which was reestablished in France on 1 January 1806

Lalande liked to travel. In France, he visited many of his correspondents and spent a few months in Bourg nearly every year. He traveled to England, Switzerland, Holland, Germany, and Italy and published a volume on his travels in Italy. He ascended balloons to study the scintillation of stars and hoped to reach Gotha by such means. In 1798, in Gotha, Lalande presented the newly devised metric system to German astronomers gathered by János von Zach.

Lalande became a Freemason, probably in Bourg-en-Bresse, around 1770. In 1776, he founded the Lodge of the Nine Sisters, which received Voltaire in 1778 and of which Benjamin Franklin was a member. In the 1805 supplement to Sylvain Maréchal's *Dictionnaire des Athées*, Lalande attacked those who bloodied the Earth by war. This attracted the attention of Napoleon, who ordered the Academy of Sciences to forbid him from publishing

Lalande updated the astronomical articles for the new *Encyclopédie méthodique*, published more than 150 memoirs, and helped publish the work of French and foreign scientists, including LaCaille, Bouguer, Jean Montucla, John Flamsteed, Jesse Ramsden, and others. He was a member of the academies of London, Berlin, St. Petersburg, Stockholm, and Bologna.

Lalande was both impatient and generous with correspondents and pupils. He enjoyed attention and glory, receiving it in life and in death; his statue is displayed with one of Giovanni Cassini among the 86 illustrious men installed in the middle of the 19th century on the Louvre's façade in the court of Napoléon.

Simone Dumont

Alternate names

de la Lande, Joseph-Jérôme Lefrançois de la Lande, Joseph-Jérôme

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