

Biographical Encyclopedia of Astronomers

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Bigourdan, Camille Guillaume

Born Sistels, Tarn-et-Garonne, France, 6 April 1851

Died Paris, France, 28 January 1932

French astrometrist Guillaume Bigourdan specialized in problems of precise measurement and dissemination of time and directed the Bureau international de l'heure [BIH] for the first decade of its existence. Bigourdan was the son of Pierre Bigourdan and Jeanne Carrière, part of a peasant family whose name derives from a 7th-century association with land owned by the Comté de Bigorre. He began school in the town of Valence d'Agen and continued in Toulouse, where his aptitude drew the attention of François Tisserand, then professor of astronomy and director of the Toulouse Observatory. Bigourdan joined the Toulouse staff in 1877 and went on to Paris in 1879 when Tisserand moved there, marrying Sophie, the eldest daughter of Admiral Ernest Mouchez, with whom he had nine children

Bigourdan completed a doctoral thesis with Tisserand on the effects of the "personal equation" (errors in determining the times of astronomical events like meridian crossings, which vary systematically from one observer to another) on measurements of double stars. He also compiled a catalog of nebulae and used meridian-circle telescopes for time determinations. France adopted "zone time" in 1891, and in 1911 switched from zones centered on Paris to ones centered on the Greenwich, England meridian defined by George Airy. Bigourdan participated in defining the new time zones and longitudes, and, with Gustave Ferrié (1868–1932), pioneered the dissemination of wireless telegraphy time signals from the Eiffel Tower over a distance of 5,000 km

During World War I, with the support of Benjamin Baillaud, then director of the Paris Observatory, Bigourdan unofficially took over the operation of the time service. The BIH was officially established in 1919 during the first organizational meeting of the International Astronomical Union in Brussels, in which both Baillaud and Bigourdan participated. Bigourdan was appointed its first director, holding the job until 1929. In addition to his work in timekeeping, he carried out a variety of research in the history of astronomy, publishing on the history of the Bureau des longitudes, the Observatoire de Paris, the metric system, and French observatories and astronomers, particularly Alexandre Pingré.

Bigourdan was elected to the Académie des Sciences in 1904 and served as both its vice president and president (1924). He received the Gold Medal of the Royal Astronomical Society, the *Légion d'honneur*, and several other honors for his work on time standards.

Jacques Lévy

Selected Reference

Anon. (1993). "Bigourdan, Guillaume." *Monthly Notices of the Royal Astronomical Society*. 93: 233