Women in the Argentine astronomical observatories

by **Santiago Paolantonio**

Although there are numerous references to women linked to astronomy, both in ancient times and in these days, as well as in the various observatories of the world, little is known and has been written about those who practiced in this field in our country.

This article describes the work of women in Argentine astronomical observatories. As expected, women can be found in the pioneering institution, the Argentine National Observatory. For this reason, the role of women at this observatory is addressed between 1871, years of its foundation, and approximately the middle of the 20th century. A second part is pending, dedicated to the La Plata Observatory and to complete the study until times closer to our days.

The author hopes that this writing will generate interest in those who have information and wish to share it to fill in the many gaps in this story.

Women in the Argentine National Observatory

Directors' wives

In the beginning, the employees of the National Observatory were all men: the director, Dr. Benjamin Gould, and four assistants. At that time in the world, women related to astronomy were not many and the observatory did not escape the rule.

Mary A. Quincy Adams , the director's wife, and her children lived on the grounds of the observatory in the house located east of the headquarters. She was born on August 27, 1834 in the United States, she was the daughter of Josiah Quincy - 11th mayor of Boston -, granddaughter of Senator Josiah Quincy and in her ancestry she had two American presidents, John Adams and John Quincy Adams. A highly educated woman, she sympathized and greatly influenced the work of Dr. Gould. While in the US, she gave her husband a small observatory equipped with a meridian circle.

Mary A. Quincy Adams (*OAC Archive - Astronomical Museum*)

Already in Córdoba, Mary helped Gould in various tasks at the observatory, especially those related to Argentine Uranometry. The director summarizes his wife's participation as follows:

"I cannot speak of another assistant, whose name does not appear in the books of the Observatory, and without whose tireless and incessant help, my work could hardly have been carried out **. "** **(Gould BA 1874,** *Reception in Boston for Dr. Benjamin A. Gould director of the Argentine National Observatory by his compatriots from that city and its surroundings* **, June 22, 1874.)**

Another reference is found in the newspaper article written by Domingo F. Sarmiento on the occasion of announcing the death of Mary:

Those who were close to the studious and indefatigable sage **(Gould)** *always heard him attribute to his companion the most laborious part of his astronomical work; But the ladies who frequented the friendship of Mme de Gould in Cordoba saw only in her the accomplished lady of the salon, the unhappy(?) mother of her daughters, lost in a catastrophe, or happy in the education of those she*

kept. Very late they learned that she was, in addition to being a wise one, a lady of illustrious character... ". **(Sarmiento 1883, El Nacional - Nº 11.059)**

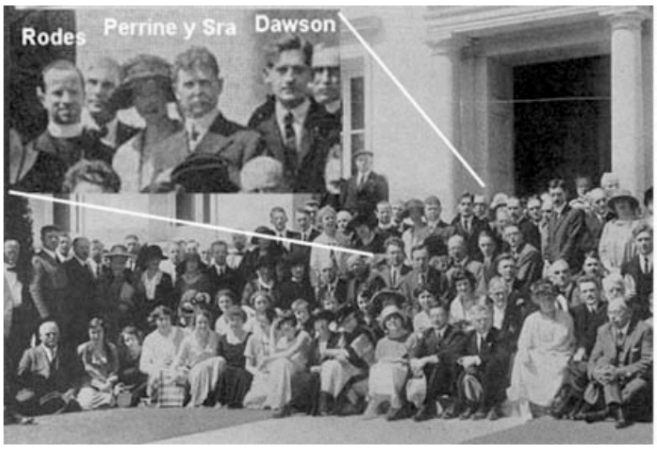
When in 1885 Dr. Gould resigned as director of the National Observatory, his disciple Dr. Juan (John) Thome assumed it.

A few months later, Thome married **Frances Angeline Wall** , one of the famous "Sarmiento teachers", who had arrived in Córdoba the previous year from Catamarca. She worked as deputy director at the newly formed Escuela Normal de Maestros - today Escuela Normal Superior Dr. A. Carbó -, together with Frances Armstrong. When Frances got married, she had to resign her position, as the contract signed by teachers at that time stipulated that they had to be single.

Frances Angelina Wall. On the left with her husband J. Thome in 1885 on the occasion of their marriage (*National Academy of Sciences Archive , digitized and identified by the author*). On the right, portrait (*Houston Luiggi, A. (1959). Sixty Five Brave, Sarmiento and the North American Teachers* , Torfano Graphic Workshops, Bs As, p. 211).

Wall is involved in the work of the institution, particularly with the famous Córdoba Durchmusterung catalog and atlas. In fact, when her husband died in 1908, she managed the continuation of the work, even contacting the director of the Chilean National Observatory, Dr. Friedrich Ristenpart, to analyze the possibility of finishing it in Santiago. This initiative was cut short with the arrival in 1909 of the new director of the institution, Charles D. Perrine.

Perrine's wife, **Bell Smith** - who had been a librarian at the Lick Observatory -, like her predecessors, also helps the director in his tasks, for example, with the annotations of observations of Halley's Comet made between 1910 and 1911.



Left, Bell Smith in 1923 with her husband CD Perrine at the meeting of the American Astronomical Society at the Mount Wilson Observatory. In the detail can be identified L. Rodes director of the Ebro Observatory and BH Dawson astronomer of the La Plata Observatory. On the right B. Smith and D. Perrine at the National Observatory (*Courtesy Diana Merlo Perrine*).

There are also references that some of the observatory's astronomers' wives helped them with their tasks, such as **Agnes Stephens Zimmer** :

"It only remains to record the collaboration contributed by my wife, Agnes Stephens Zimmer, in carrying out this great work. Not only was her boundless optimism an inexhaustible source of encouragement, propelling me to ever-increasing efforts in my attempt to produce a truly useful work, but during the execution of one of the most painful subdivisions of the main program of observations, she was voluntarily my sole helper, also cooperating efficiently in the reductions of the observations. Without her help, I doubt that the work could have been so successful. " (Textual. Zimmer, Meade L. 1941. *General Fundamental Catalog* . Results of the Argentine National Observatory, Volume 37, Coni Printing House and Publishing House, Buenos Aires)

The first observations made by a woman

During the administration of Dr. Thome, a unique case occurred with **Alice Lamb** , wife of the astronomer Milton Updegraff, an employee of the institution between 1887 and 1890. Lamb, who had worked at the Washburn Observatory, carried out for a few months between 1887 and 1888 , 830 observations with the Repsold meridian circle, also making the necessary reductions. Although she was not an employee of the institution, Alice Lamb should be considered the first woman to perform similar tasks in astronomy as men.

Alice Lamb (*legis.wisconsin.gov/lrb/bb/09bb/images / Feature / GalleryImages / pages / 19 Lamb_tif.htm - Wisconsin Legislature)*

At the time, EC Pickering, director of the Harvard Observatory, hires women to carry out tasks related to the cataloging of photographic spectra - Henry Draper Catalog -. It puts W. Fleming in charge and under his supervision they perform classifications and data reductions. Importantly, the decision to hire female staff was influenced not only by confidence that they would perform the tasks well, but also - and perhaps most importantly - the fact that they were paid less than their male counterparts.

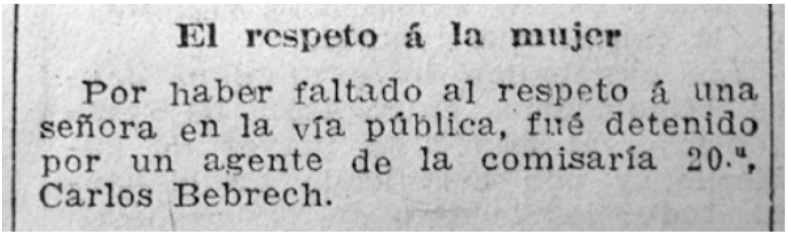
The first astronomer, Anna Estelle Glancy

In January 1911, Marie Sklodowska-Curie, a Nobel laureate and professor at the Sorbonne University, lost by one vote her nomination to be a member of the French Academy of Sciences. An immediate subsequent vote imposed an absolute ban on the entry of women to that institution.

Only two years later, at the University of California, USA , the first women in astronomy received their doctorates, including **Anna Estelle Glancy** . She had joined the Berkeley Astronomical Department of that University, to which the Lick Observatory was closely linked.

Given the limited possibilities of being hired in their country due to their gender, Glancy and one of her fellow students, **Emma Phoebe Waterman** , offer their services to the Argentine National Observatory. They do so knowing that it’s director, in addition to being a compatriot, had worked at the Lick Observatory.

They promptly received Perrine's acceptance, so they immediately embarked for Argentina. During the journey, Waterman developed a relationship with a young man, so her stay in the country was limited to just three months.



El respeto á la mujer

Por haber faltado al respeto á una señora en la vía pública, fué detenido por un agente de la comisaría 20.ª, Carlos Bebrech.

(La Prensa, 12/19/1913)

Anna Glancy settled in Córdoba and worked at the observatory between 1913 and 1918. She stayed in a small house located on one side of the southern entrance to the observatory site, which still exists today.

The new astronomer is paid less than her male colleagues. Her starting salary was 237.5 pesos a month, identical to that received by a male computer. For comparison, third-rate astronomers charged 256.5 pesos and first-class astronomers 475 pesos - several of which also included accommodation. It should be noted that although recently received, her training was superior to that of all her co-workers, except for the director. This situation continued until her resignation.

Glancy is dedicated to observing and determining the orbits of various comets and asteroids. She uses the 30-centimeter equatorial telescope and the Saegmüller - Brashear camera, together with the astronomer Enrique Chaudet, to determine the positions of various comets and to search for periodic comets. The most important work is done on Comet Mellish 1915a.

Left, Anna Estelle Glancy in 1918 with the Lick Observatory staff. They can be identified: in the first row, first on the right, Sebastián Albrecht who worked at the National Observatory between 1910 and 1912; second row, second from left William J. Hussey, director of the Astronomical Observatory of La Plata between 1911 and 1915 (*Popular Astronomy, Vol. 27, 1918 pp. 666-667*). Right Glancy in 1919 (*Arbor1919*)

When she leaves the observatory, she returns to her homeland where she is employed in the American Optical Company, where she specializes in the design of lenses, mainly ophthalmic and for telescopes. Her work received 13 patents.

Glancy was born in Waltham, (Massachusetts), USA , on October 29, 1883 and died in that country in 1975 at the age of 91.

She is the only woman employed as an astronomer at the Argentine National Observatory, between its foundation and at least 1941.

Monseñor de Andrea y los trajes de las damas

DECLARACIONES DEL ILUSTRE PRELADO EN UN REPORTAJE QUE LE ATRIBUYE EL DIARIO "CRITICA"

BUENOS AIRES, 3. — En un reportaje que el diaro "Crítica" atribuye a monseñor de Andrea, el distinguido prelado manifiesta que es muy censurable que la mujer asista a los templos con los mismos trajes que usa en los salones sociales, y estima que ello no es efecto de corrupción moral como se dice, sino de un criticable aturdimiento social que no permite a las damas ver el peligro de esta lamentable confusión.

(Córdoba, 4/1/1927)

LAS MUJERES NO DIRIGIRAN AUTOMOVILES

La municipalidad les retirará los permisos, para concedérselos una vez que rindan examen de competencia

POR LOS ACCIDENTES

BUENOS AIRES, 3. — En vista de los frecuentes accidentes automovilísticos debidos a la impericia de quienes manejan los vehículos, generalmente señoras y señoritas, se ha dispuesto retirarles los permisos para manejar automóviles; volverán a concedérseles sólamente que rindan examen de competencia de acuerdo a las ordenanzas respectivas.

(The Principles, 1/5/1927)

Employees of the Argentine National Observatory

At the beginning of the 20th century, the hiring of women was already common in the observatory. They fulfilled functions in the secretariat, in the library and in particular in methodical tasks, such as the measurement of the position of stars in photographic plates or as computers, for the realization of the numerous and tedious calculations necessary for the reductions of the observations.
These women include numerous relatives of the institution's astronomers:

Frances Evelyn Winter , daughter of photographer Robert Winter, born on February 14, 1906. She works as a calculator in the Astrographic Catalog, between April 2, 1928 and December 3, 1930. She was an English teacher and worked at IICANA where she has an outstanding career.

Ana Longe , sister-in-law of the astronomer Luis Guerín. She has been a computer since 1920. In 1930 she performed calculations related to observations made with the Meridian Circle. She also participates in the preparation of the publication of the results of the First Fundamental Catalog. She resigned in 1943.

Hilda and Phylis Symonds , relatives of photographer Federico Symonds, carried out tasks between 1909 and 1921.

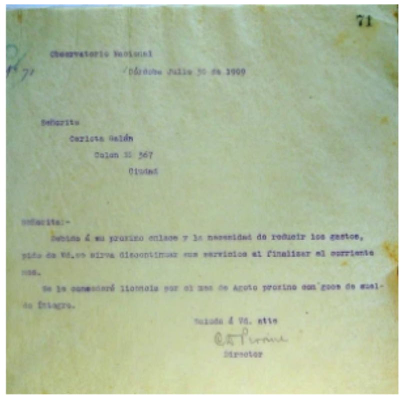
Agnes Stephens Zimmer , mentioned above, works as a second-rate astronomer for a few months in 1926.

Other employees that may be mentioned are:

Nelida Keller , who is hired as a supernumerary computer on 28 October 1929. She had a long career in the institution until her retirement on 1 January 1974. Born in Cordoba on August 2, 1909.

Violeta Flora Kirk worked as secretary, librarian and measurer from January 1931 with a salary of 150 pesos, replacing Frances E. Winter. She married the well-known astronomer Jorge Bobone. She resigned in 1936. She was born in Córdoba on October 24, 1907.

Elena Constancia Ogilvie , since 1906 has done various jobs for the observatory. Measure plates from the Astrographic Catalog and perform related calculations.She also participates in the calculations for the First Fundamental Catalog. She retired as a computer on November 28, 1940.



71

Observatorio Nacional

Córdoba Julio 30 de 1909

Señorita
Carlota Galán
Colon N 567
Ciudad

Señorita:-

Debido á su proximo enlace y la necesidad de reducir los gastos, pido de Vd. se sirva discontinuar sus servicios al finalizar el corriente mes.

Se le concederá licencia por el mes de Agosto proximo con goce de sueldo íntegro.

Saludo á Vd. atte

Director

Unemployment of Carlota Galán 1909 (*Copy book D, p. 71, OAC Archive-Astronomical Museum*)

These women also worked in the institution: **Nellie Auchtertonie** (secretary in 1913 and 1914), María **Isolana Elena** (between 1917 and 1922), **Carlota Galán** (works during the administration of J. Thome and until 1909), **Carolina Risso** (secretary in 1913 and 1914), **Hilda E. Wilkinson** (between 1915 and 1920) and **Williams Nellie** (computer between 1910 and 1921).

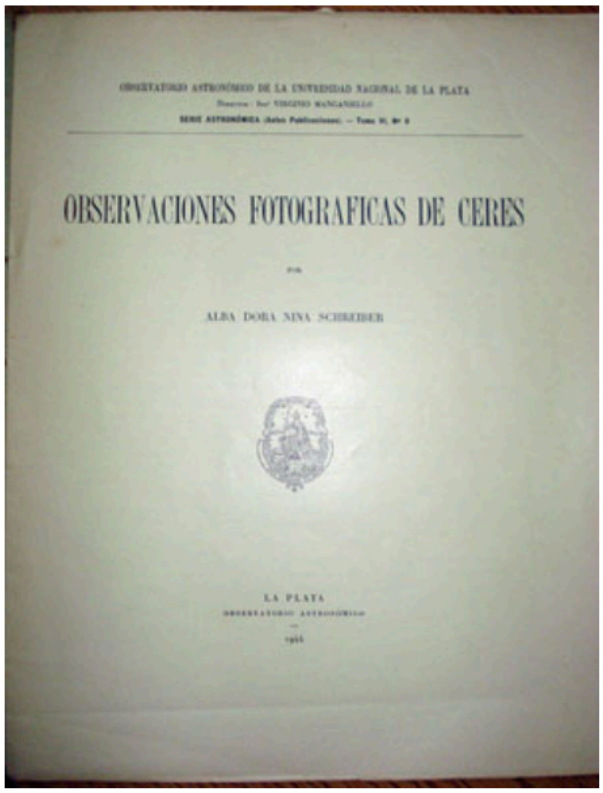
From left to right: Nélida Keller (calculator), Fany Gómez Santillán (secretary), Ignacia Guzmán (assistant) and Elena C. Ogilvie (calculator) in 1940 (*OAC Archive - Astronomical Museum*)

Farewell to Elena C. Ogilvie (second from right) for her retirement, held in Córdoba at the “Del Plata” confectionery. First on the right Nélida Keller and on the left Fany Gómez Santillán. Among the women, Dr. E. Gaviola (Director), sitting first on the left Jorge Bobone and standing first on the right Meade Zimmer (*Los Principios, 1/21/1941*).

The first women astronomers trained in Argentina

In April 1935 the Higher School of Astronomical and Related Sciences was inaugurated in La Plata, the first in Latin America, being director of the Félix Aguilar observatory. The second graduate of the school - after the well-known Carlos Ulrico Cesco - was **Alba Dora Nina Schreiber** , who in 1941 became the first Argentine woman to obtain a doctorate in astronomy. Among the first students there was also **M. Guillermina Martín** , typist at the Observatorio de La Plata, who dropped out of school when she married CU Cesco. Born in Salta, she passed away on 9/22/1998.

From left to right M. Guillermina Martín (typist - later wife of CU Cesco) and María del C. Guillén (assistant). In the middle F. Aguilar director of the La Plata Observatory. Taken 24/9/1936 (*Astronomical Magazine, T.8, N ° 6, 1936, p. 389*)



One of the works published by the first doctor in astronomy, Alba Dora Nina

Schreiber (*Author's photograph*).

In particular, **Elsa G. Rodríguez Pardina** , born in 1921, works from 1952 to 1956 at the La Plata Observatory and since the 1970s at the Córdoba Observatory, in the field of Celestial Mechanics, should be mentioned . Asteroid 4914 discovered in El Leoncito in 1969 bears her name.
Belatedly in 1957, the Institute of Mathematics, Astronomy and Physics (IMAF) was inaugurated at the National University of Córdoba - since 1983 FaMAF -, whose first graduates - in Physics - are from 1962.

The first doctorate in astronomy in Córdoba was **Marta Elena Castore** , who on October 27, 1972 defended the thesis entitled " *Spectrophotometry of Stars F* ", under the direction of Dr. Jorge Landi Dessy. He was followed in 1973 by **Miriam Griselda Pastoriza** , whose thesis supervisor was José L. Sersic, with the work " *Spectrophotometry and Morphology of Galaxies with Peculiar Nucleus* "; in 1982 it was done by **Estela Laura Agüero** , with " *Study of Ionized Gas and Mass-Luminosity Relationship in Spiral Galaxies* " with the direction of Dr. Gustavo Carranza; and the following year **Silvia Margarita Fernández Martín** , with *" Resonances 3: 1 and 5: 3"*Directed by Dr. Elsa Rodríguez Pardina. In 1992, Mónica Villada received her doctorate, with the thesis " *Determination of Oscillator Forces in Solar Spectrum Lines* " directed by Dr. Luis Milone [1] .

From this time many more remain to be mentioned, which, as indicated, is expected to be included in a future work.

Left : 1: EG Rodríguez Pardina, 2: ME Castore, 3: MG Pastoriza, 4: EL Agüero and 5: SM Fernández Martín (*detail group photograph OAC 1973, the author thanks SM Fernández Martín for the identification*). Right : 1: EL Agüero, 2: SM Fernández Martín and 3: MM Villada (*detail group photograph OAC 1990, OAC Archive*).

Today more than a third of professionals in this branch in Argentina are women, compared to 13% worldwide. It cannot be emphasized that until now no director of the large observatories has been a woman. But times are changing, just as an example we can mention Dr. **Elisa Felicitas Arias,** head of the Time, Frequencies and Gravimetry Section of the International Office of Weights and Measures

(Sevres, France), a position assumed after leaving the Directorate of the Naval Observatory of Buenos Aires; to Dr. **Catherine Jeanne Gattegno Cesarsky** , who studied in Argentina and in 2006 was elected as the first president of the International Union of Astronomy and to Dr. **Marta Rovira**, who in 2008 was appointed to head CONICET, becoming the first woman to do so in her more than 50 years of life. Rovira had directed the Institute for Astronomy and Space Physics for seven years.

In 2007, Dr. Carolina Scotto became the first rector of the National University of Córdoba - on which the Astronomical Observatory currently depends -, where more than half of its students are women.
[1] ← Website, Faculty of Mathematics, Astronomy and Physics, National University of Córdoba, History, Graduates .

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