

Astronomy in Mexico during the first years of the IAU

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Abstract. In 1918 the only Mexican institution dedicated professionally to astronomical work was the National Astronomical Observatory, which had begun operations in 1878. In that year of the 20th century, Mexico was immersed in the armed movement known as the Mexican Revolution, which strongly affected the social and economic structure of the country. The Mexican astronomers saw their group drastically reduced and their infrastructure limited; however, they made great efforts to continue their participation in the international project of the *Carte du Ciel*, since they were part of the 18 observatories that originally participated in it. Despite the limitations they suffered, they soon joined the group of seven nations that in 1919 formed the IAU, and two members of that observatory actively participated in the first general assembly held in Rome in May 1922.

Keywords. Mexican Revolution, *Carte du Ciel*, IAU, general assembly

1. Introduction – early astronomical research in Mexico at Tacubaya Observatory

The National Astronomical Observatory of Mexico was founded in 1878. Three years later, its director initiated international contacts by visiting various European observatories, among which was that of the University of Vienna, Austria, which impressed him so much, that it served as a model for building the facilities of the Mexican observatory in Tacubaya ([Anguiano 1882](#)), a town close to Mexico City. Since then, collaboration with other countries has taken place through various astronomical research projects. In 1886 the Mexican astronomers were invited to be part of the project of the *Carte du Ciel*, assigning them the observation of the firmament comprised between 10 and 16 degrees of southern declination. These international contacts were reinforced with the study of the asteroid Eros in 1900 and that of Comet Halley in 1909–1910. Between that year and 1920, Mexico was immersed in the violent process of the Mexican Revolution, which greatly hindered the work of its astronomers, who also had to suspend the main work of the Observatory; because of World War I, the photographic material necessary for the *Carte du Ciel* did not arrive from Europe.

Despite these difficulties, the Observatory members continued their investigations. When in June 1918 Nova Aquilae appeared, which became almost as bright as Sirius, they made spectroscopic observations, as well as measures to determine its position. Among the most notable lines in its spectrum, they found those of the hydrogen series and numerous others of iron and helium, the evolution of their spectra having been truly interesting ([Gallo 1919](#)). They also observed and recorded a partial solar eclipse, seen from Tacubaya, where it reached magnitude 0.577. The Observatory staff began that year to study the climatologic records of the visibility strip, where the total solar eclipse of September 10, 1923 would be visible over Mexican territory.



Figure 1. Tacubaya, Observatorio Astronómico Nacional

2. Mexico and the IAU

In 1919 the members of the National Astronomical Observatory, which was then the only group of professional astronomers in Mexico, learned that in Brussels, Belgium had joined the International Astronomical Union. Hence they took the necessary steps to join it, being, together with Italy, the first ones that were added to the original group of seven founding countries (Blaauw 1994). Since then, Mexico has been part of the IAU. In May 1922 the first General Assembly of the IAU was held in Rome, Italy. As representatives of Mexico, Joaquín Gallo attended, who was the director of the Observatory, as well as the mathematician Sotero Prieto, the geodesist Pedro C. Sánchez, and the meteorologist José C. Gómez.

Gallo and Prieto attended the meetings of the Star and Variable Star Commissions, and showed great interest in the Relativity Commission, which was chaired by Ludwik Silberstein. During their participation they proposed that Albert Einstein be invited, and they offered to pay the expenses that this would cause, but policies that had isolated the nations that lost the war prevented that offer of the Mexicans from being realized (Gallo Sarlat 1982). Gallo's participation in the commission of Ephemerides was to inform the preparations that were being made in Mexico for the observation of the solar eclipse of September 10, 1923. His work was important, because the following year commissions of American and German astronomers traveled to this country to observe that eclipse from different places in the Mexican territory (Miller & Marriot 1925).

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