



Comisión Nacional de
Actividades Espaciales

Secretaría de Innovación,
Ciencia y Tecnología



Jefatura de Gabinete
de Ministros
República Argentina

Dark and Quiet Skies: regulatory initiatives in Argentina

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Outline



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- Argentina Astronomical Facilities
- Provincial and National Regulatory Initiatives
- National Space Law
- Conclusions

Astronomical Observatories



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Centro Astronómico Macón (2020)



OFA: Felix Aguilar Observatory
(1953)

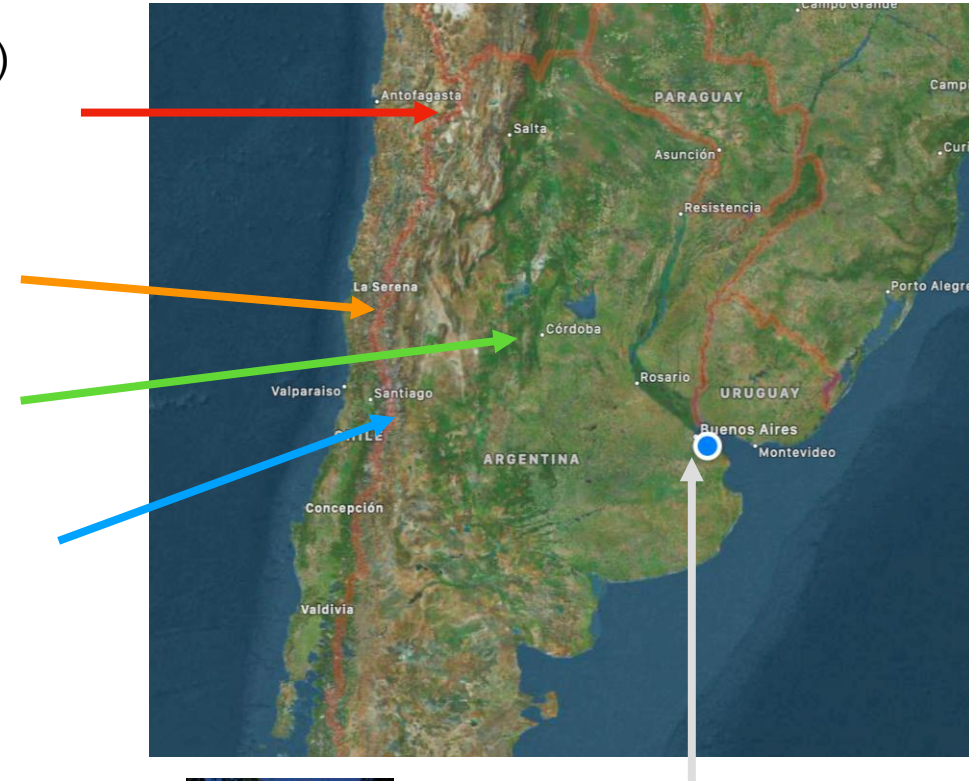
CASLEO: Complejo
Astronómico El Leoncito (1983)



Córdoba: First National
Observatory (1871)



Pierre Auger Cosmic Rays
Observatory (2000)



La Plata Astronomical Observatory
(1883)

Radiotelescopes and DSA



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IAR – CONICET – CIC - UNLP
(1962)
30 m (2) - 1420 MHz

DSA 3 ESA – CONAE (2012)
35 m – 8, 26 & 32 GHz

CLTC-CONAE-NEUQUEN (2018)
35 m – 2 & 8 GHz

Project

CART – CHINA – ARGENTINA
40 m – 1 to 45 GHz

LLAMA – ARGENTINA – BRAZIL
12 m – 50 to 900 GHz



Provincial Regulations



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Córdoba

- The province of Córdoba is a pioneer in legislation against light pollution to protect the Bosque Alegre Observatory and other astronomical sites.
- Municipal ordinances have been promoted in nearby towns to regulate the use of lighting, imposing limits on light intensity and orientation.
- Córdoba also promotes astro-tourism as an economic activity, reinforcing the need to preserve dark skies.

San Juan

- San Juan is home to the El Leoncito Astronomical Complex (CASLEO), one of the most important in the country.
- The province has specific light protection regulations around the observatory, restricting the installation of public and private lighting that affects the quality of the sky.
- In addition, areas have been declared “dark sky reserves” to ensure the continuity of scientific research.

Mendoza

- Mendoza, with observatories in Malargüe and links to the Pierre Auger project, has worked on local regulations to limit light pollution.
- Compatibility between urban development and astronomical protection is promoted, especially in rural areas where observations are made.

Other provinces

- Provinces such as La Rioja, Neuquén, Misiones and Jujuy have begun to include dark sky protection in their astronomical tourism plans.
- These regulations are often linked to national programs such as “La Ruta Natural” (The Natural Route), which promotes astro-tourism and the preservation of natural environments.

ENACOM (National Communications Agency) assigns and controls radio frequencies throughout the country. Some bands are internationally reserved for radio astronomy (according to the International Telecommunication Union - ITU).

- Protection against interference

ENACOM may impose broadcasting restrictions in areas where radio telescopes operate (e.g., Villa Elisa in Buenos Aires, LLAMA project in Salta).

The installation of antennas, transmitters, or equipment that generate electromagnetic noise at critical frequencies is restricted.

- Exclusion or buffer zones

Although there is no national law declaring “astronomical protection zones,” ENACOM can establish radio exclusion areas around scientific facilities, in coordination with the provinces.

These measures seek to preserve the quality of observations.

- Compliance with international standards

Argentina adheres to ITU recommendations, which define protected bands for radio astronomy (e.g., 1400–1427 MHz for neutral hydrogen).

ENACOM applies these standards in the country to ensure that Argentine radio telescopes operate without interference.

A National Space Law



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Presidential Decree No. 995 of May 28, 1991, ratified by the National Congress through Law 24,061 creating the NATIONAL COMMISSION FOR SPACE ACTIVITIES (CONAE), established that CONAE would be the only national government agency responsible for understanding, designing, executing, controlling, managing, and administering space-related projects and ventures with the capacity to act publicly and privately in scientific, technical, industrial, commercial, administrative, and financial matters, with full administrative and financial autonomy, and reporting directly and exclusively to the President of the Nation.

Within this framework, CONAE was assigned the role of National Authority, with the main function of “proposing the National Space Plan for the use and exploitation of Space Science and Technology for peaceful purposes,” which is approved by the National Executive Branch, as well as the functions of “centralizing, organizing, administering, and executing the National Space Plan.”

Promote a new legal framework for the expansion of Argentina's New Space Economy and its associated activities, with international reach and strong private sector participation.

Conclusions



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- Historical Legacy

Argentina has over 150 years of astronomical tradition, starting with the Córdoba Observatory in 1871. Significant contributions include stellar catalogs, galaxy discoveries, and cosmic ray research.

- Legal and Regulatory Framework

Provincial laws protect astronomical reserves (e.g., El Leoncito National Park). Regulations aim to minimize light and radio interference for observatories. A wide national space law is part of the objectives of the national space plan

- Science, Society, and Tourism

Astronomical sites serve as hubs for sustainable tourism and education. Integration of scientific goals with socio-economic benefits for local communities.

- International Cooperation

Argentina hosts international observatories and deep space stations. Aligns with Outer Space Treaty principles and global sustainability initiatives.





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Thank you!