



Official Statement

Santiago, 21st January 2025

Chile has consolidated itself as a global epicenter of astronomy thanks to the unique conditions of its dark and quiet skies. The Atacama Desert hosts some of the most advanced observatories on the planet, attracting significant scientific investments and fostering the development of an active Chilean astronomical community in over 20 universities spread across the country. This vigorous cutting-edge scientific research and the development of high-level human capital contribute to Chile's international reputation.

The astronomy made possible by Chilean skies has allowed for numerous world-class milestones. The first direct image of an exoplanet (2004) or the observations of the supermassive black hole at the center of our galaxy, which led to the Nobel Prize in Physics in 2020, are just two examples of this. The interest sparked by such discoveries drives new generations to engage with science and technology, promoting the development of Chile in various fields. The curiosity to experience firsthand the natural conditions that enable these advances positions Chile as a unique scientific and touristic destination in the world.

This favorable situation for Chile is possible because, for several decades, we have managed to preserve the exceptional natural conditions of the northern skies, although this has not been the global trend. Falci and collaborators showed in their 2023 study that more than two-thirds of the world's best astronomical observation sites have surpassed the artificial sky brightness limit recommended by the International Astronomical Union in the 1970s. The same study identifies the Paranal Observatory, in the Antofagasta Region, as one of the few that remains under the most stringent limit, achieving the best results. Chile has the darkest site on the planet.

However, this situation is at risk. A large-scale industrial project, INNA by the company AES Andes, recently presented for environmental evaluation, threatens to alter these conditions. Proposed to be built very close to the Paranal, Armazones, and CTA-South observatories, this project could significantly increase light pollution and particulate matter, making it more

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difficult to apply the delicate technique of adaptive optics, which removes atmospheric effects to obtain images as if they had been taken in space. Furthermore, the arrival of such a large-scale project, which also proposes to create a new port, could lead to the creation of a new industrial hub. This prospect poses a serious risk to the astronomical potential of the area and introduces uncertainty regarding the success of scientific efforts that have been designed and executed for decades with a focus on this location, aimed at answering fundamental questions for humanity.

Losing global leadership in the quality of night skies would be a significant blow with far-reaching effects. Beyond international observatories, Chilean universities that train astronomers also depend on these unique conditions to continue their work and attract new talent. Universities in the Antofagasta Region, as well as the Regional Government of Antofagasta, have publicly announced their plans to develop astronomical projects in the area potentially affected.

The Chilean Society of Astronomy calls for the protection of the astronomical area where this singular concentration of scientific interests occurs and for careful planning of the future use of national territory around those sites in the Atacama Desert, and other regions, that have such extraordinary potential. The astronomical community does not oppose the advancement of projects that contribute to Chile's economic development and encourages active dialogue among the various stakeholders regarding the orderly use of national territory, so that projects of different nature, important for the country, can coexist.

We propose that the authorities and the company reconsider the location of the project to ensure that Chile remains a leader in global astronomy. Furthermore, since the environmental evaluation process of this project includes listening to the legitimate concerns that natural and legal persons may express, we invite public participation through the mechanisms established by law to exercise this right.

We hope that joint work across various sectors will provide assurances of the long-term sustainability of the exceptional conditions Chile offers to explore the Universe

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