



China-Latin America Space Cooperation – An Update



Illustration/Diálogo

BY R. EVAN ELLIS
FEBRUARY 21, 2024

This article was originally published in *The Diplomat* on February 16, 2024.

In September 2023, during a visit to China, Venezuela’s Nicolás Maduro announced an agreement in which China **would transport Venezuelans** to a research base it plans to **build on the moon**, the **International Lunar Research Station** (ILRS) project. As illustrated by the deal, China’s expanding space capabilities create imperatives for associated engagement around the globe, from initiatives to build international coalitions such as ILRS, to the search for access to ground stations and other space communication sites to support China’s expanding constellation of satellites, **currently 700**, as well as beyond-earth missions. Deepening rivalry with the United States

also makes China's access to space from points in both hemispheres and the polar regions a strategic imperative for the [space component of any future conflict](#) with the West.

Such a combination of imperatives has driven Beijing's increasing space activities in the Western hemisphere in the past two decades. China highlighted its interest in such engagement with increasing detail in its [2008](#) and [2016](#) China-Latin America Policy White Papers. More recently, China reiterated its interest in space collaboration with the region in the [2022-2024 China-CELAC Joint Action plan](#). There, Beijing highlighted its interest in working with the Latin America and Caribbean Space Agency, established in Mexico [in September 2021](#), and advocated the region's expanded use of the Chinese BeiDou satellite constellation. Language on space cooperation also appears in China's 2023 [Global Security Initiative](#) (GSI), in which China expresses interest in working through the Community of Latin American and Caribbean States (CELAC) and BRICS.

China's presence in Latin America's space sector

Beijing's space activities in Latin America date to 1988 when China and Brazil [established](#) the China Brazil Earth Research Satellite (CBERS) program. Since China's launch of the first jointly developed CBERS satellite [in 1999](#), the two countries have collaboratively developed and launched six satellites, with plans to [launch a seventh](#) in early 2025. Nonetheless, technical difficulties made at least two of the CBERS satellites malfunction unusually early, and CBERS-3 was destroyed in a [2013 launch failure](#).

As China expanded its engagement with Latin America [in commercial, political, and other domains](#), it also expanded its space engagement with the region. Early efforts by Beijing included a 1989 agreement leading to the China-Argentine Observational Station at the Feliz Aguilar Astronomical Observatory in San Juan, and the construction of a satellite [laser range finding facility on the site in 2006](#). China also signed a [2005 cooperation agreement](#) with Argentina's satellite manufacturing organization INVAP, in an attempt to involve itself in the country's ARSAT satellite program. Beijing also unsuccessfully sought a role in replacing Chile's [Airbus-built FASAT-C imaging satellite](#).

In 2005, China enlisted Peru as the only Latin American member [in founding](#) the [Asia-Pacific Space Cooperation Organization](#) (APSCO). Since then, the two countries have collaborated on a range of minor projects within the framework of APSCO, and under a 2015 agreement between Peru's space agency [CONAIDA and China National Space Administration](#).

China has had limited interactions with Mexico, including [through APSCO](#), where Mexico has been an [observer since 2015](#).

China's most important entries into the Latin American space sector came through collaboration with anti-U.S. populist governments in Venezuela and Bolivia.

In [2008](#), China's military-connected space services provider [Great Wall Industrial Corporation](#) (GWIC) built and launched the Venesat-1 communications relay satellite, under a [\\$405 million contract](#) largely funded by Chinese loans. A problem during launch put Venezuela's first satellite into a defective elliptical orbit, leading to diminished utility for several years, and [ultimately leading to loss of the satellite](#) in 2020. A planned replacement, [Venesat-2](#), has not been launched.

Beyond the Venesat-1 communication relay satellite, the PRC also built and launched two imaging satellites for Venezuela, [VRSS-1 in 2012](#), with a five year useful life, and its replacement, [VRSS-2 in 2017](#).

As part of its support to Venezuelan space activities, China has also trained at least [150 Venezuelan space](#) personnel and built two ground control facilities: the [El Sombrero tracking station](#) at the Manuel Rios airbase, and the [Luepa backup facility](#) at [Fort Manikuyá](#), in southeastern Bolivar state. According to technicians interviewed by the Washington Post, the PRC [may have remote access](#) to these facilities even without continuous physical presence there.

In Bolivia, Beijing's space collaboration has centered on a [\\$300 million program](#), principally funded by a [\\$250 million Chinese loan](#), to build and launch the [Tupac Katari communications relay satellite](#). As in Venezuela, As part of the project, China trained at least [64 Bolivian space personnel](#), and China's GWIC, which built Venezuela's ground control stations, [built](#) two facilities in Bolivia: the primary control site at [Amachuma](#), near La Paz, and the secondary facility at [La Guardia](#), in the Department of [Santa Cruz](#). The Bolivian government currently [rents use of the facility](#) to China for their own space control purposes, giving them a regular presence there.

In the end, the Tupac Katari's hoped-for benefits in generating revenues and bolstering Bolivia's own space capabilities fell short. Plans to launch a second satellite for earth observation, the [Bartolina Sisa, in 2017](#), were delayed and ultimately scrapped.

In Chile, the Chinese Academy of Sciences also [has operated an astronomy center](#) on Calan Hill, in the [greater Santiago area](#), since 2013. Of greater concern, in the Santiago Satellite Station in the Andes mountains, the China Satellite Launch and Tracking Control (CLTC) operates [two C-band radar antennas](#) in a facility run by the [Swedish Space Corporation](#) (SSC). Because of Swedish government concerns that such facilities could be used for military purposes, SSC has announced that it will [not renew CLTC's lease](#) at this and other sites.

In Argentina, in 2012, the PRC [signed a \\$300 million agreement](#) with the leftist Peronist government of Christina Fernandez to build a deep space radar facility in the Bajada de Agrío region of Argentina's remote Neuquén province. The facility was officially intended to support China's communication with and [tracking of space vehicles](#), increasingly important as it conducted [beyond-earth missions](#), including the [Chang-e lunar missions](#), and planned [Tianwen Mars missions](#).

Controversially, China's Neuquén facility is run by the CLTC, a part of the [People's Liberation Army Strategic Support Force](#). The site on Argentine soil has correspondingly been manned primarily by [Chinese military personnel](#), with [only intermittent presence](#) of Argentine authorities at the facility. The S and X bands on which the Chinese facility transmits and receives, has potential military uses, including [aerial early warning to airborne intercept, missile guidance and weapons tracking](#).

Beyond Neuquén, in late 2023, China began assembly of the China Argentina Radio Telescope (CART), a very large ([40 meter diameter](#)) instrument, at the [Felix Aguilar observatory](#) where, as previously noted, it has operated a satellite laser range finding capability since 2006.

In the far south of Argentina, in Rio Gallegos, the Chinese firm [Emposat](#), with [links to](#) China state-owned China Aerospace Science and Technology Corporation (CASC), reportedly plans to [build a facility with four to six antennas](#) that could give it the capability to track and/or capture data from satellites in polar orbits, complementing the capabilities of the PRC's [Zhongshan](#) and [Inexpressible Island](#) facilities in Antarctica.

Risks

Chinese space architecture and access to partner nation facilities in Latin America is part of what the head of U.S. Southern Command, U.S. Army General Laura J. Richardson calls "[dual use](#)" [infrastructure](#). While such facilities may have legitimate commercial purposes, they present risks of being exploited for intelligence and/or military purposes by China, particularly in times of conflict.

Depending on the characteristics of the particular antenna or device, space facilities accessible by the Chinese in the Western Hemisphere can potentially be used to [intercept data](#) being transmitted by Western satellites. During wartime, when China would likely seek to deny the West its use of space architectures, such facilities could potentially track and support kinetic or [other attacks against Western satellites](#). If in such a war, the PRC uses orbital attack systems, such as the "[hypersonic glide vehicle](#)" it [demonstrated in 2021](#), space-facing systems in the Western hemisphere could potentially provide it telemetry or communication and guidance in support of such an attack.

The bottom line of such scenarios for Latin American governments is that, despite their desire to [not involve themselves](#) in [Great Power competition](#), in wartime they could find the PRC using space facilities on their national territory to support military actions against Western democracies.

Conclusion

As with the [effective management of other aspects](#) of engagement with the PRC, it is imperative for Western governments to engage with China in the space domain with transparency, caution, and effective oversight. Doing so will increase the probability of obtaining the hoped-for scientific and technical benefits, while lowering risk that such partnerships are exploited in wartime in ways contrary to their sovereign will.

The principles of transparency and technical competence similarly apply to decisions about contracting to the Chinese for launch services and/or technical facilities, while at the same time, keeping open a range of opportunities for advancing national capabilities and interests through engagement with Western collaborative programs such as the [Artemis accords](#).

***Evan Ellis** is research professor at the U.S. Army War College Strategic Studies Institute. The views expressed in this article are strictly his own.*

***Disclaimer:** The views and opinions expressed in this article are those of the author. They do not necessarily reflect the official policy or position of any agency of the U.S. government, *Diálogo* magazine, or its members.*