Telescope Farms in Chile and the History of the Hacienda of Stars

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The popularization and exceptional improvement of amateur astronomy equipment has democratized astrophotography, making it possible to achieve nearly professional-quality shots. Some enthusiasts even install internet-controlled telescopes under the world's most beautiful skies, such as those in Chile.

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Chile boasts one of the world's most stunning skies, as evidenced by the numerous scientific observatories, such as Cerro Tololo, La Silla, Gemini South, the VLT at Cerro Paranal, and the 39-meter ELT currently under construction at Cerro Amazones. This concentration of large telescopes is due to Chile's unique geography: the proximity of the Pacific Ocean and the Andes mountain range results in very low turbulence at high altitudes, above the cloud layer.

The explosion in the number of remotely controlled amateur telescopes in recent years has been enabled by the internet and increasing automation of telescopes accessible to amateurs. While some astrophotographers invest significantly (some even owning two observatories, one for each hemisphere!), a visit to the Astronomy Picture of the Day website reveals stunning images of galaxies and nebulae that rival professional work in aesthetics.

It is now possible to own fully automated instruments at reasonable costs. Many enthusiasts have embarked on the adventure of remote imaging. However, finding a suitable location for the equipment, with necessary prerequisites like an internet connection, security, and technical support for adjustments or repairs, is still required. Hence, numerous "telescope farms" have been established, particularly in Chile.

Nadine Roux and Raymond Christian are among the pioneers, with their installation in the Andes dating back to the early 2000s. Initially, their idea was to welcome visitors to discover the beauty of the Chilean sky, but the installation of remotely controlled telescopes began in 2017. Here’s a look back at this life adventure!

Figure 1. Nadine Roux and Raymond Christian in front of some telescopes of the Hacienda of Stars.

Figure 2. The lodge perched at an altitude of 1800 meters

Arriving in Chile

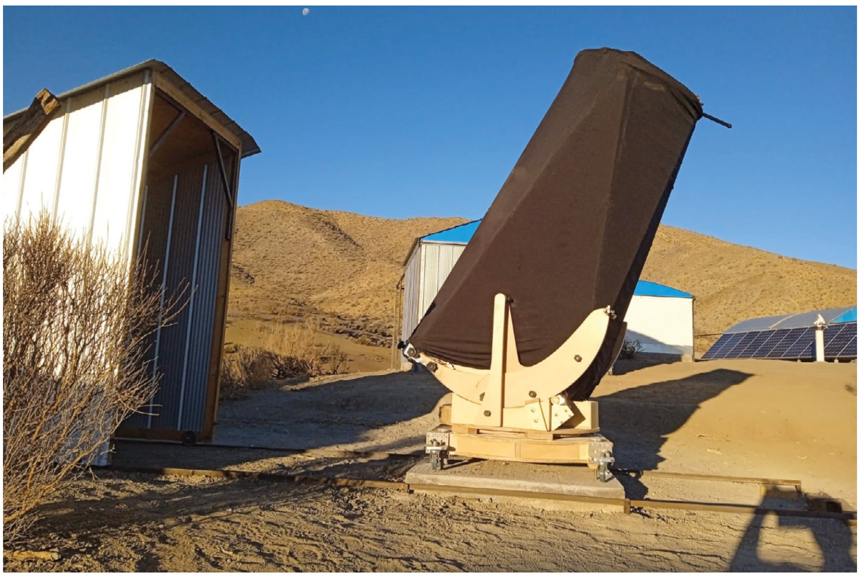
The meeting between Nadine Roux and Raymond Christian sparked a desire for change, a return to a simpler life closer to nature. In 2000, they packed their bags for a long journey in search of the best place for this new life. The journey began in Texas, where they bought a van, which became their mobile home.

First, they explored Mexico and Central America, starting a project to import Native American crafts and trade gemstones such as Mexican opals, amethysts, aquamarines, and Colombian emeralds. They established a successful import and sales business in France, gaining a good reputation among jewelers in southwestern France.

After deciding to leave their business, they set off for Latin America at 53, visiting Mexico and Costa Rica. Their journey continued along the Pan American Highway, encountering challenges like flat tires, unsettling encounters, and finding themselves in a dump at night. But these were outweighed by magnificent landscapes and interesting meetings.

After a brief return to France to replenish funds, they resumed their quest in Nicaragua and Guatemala, taking various jobs like grape picking and apple harvesting. Their search led them through Peru and Machu Picchu, finally arriving in Chile in 2002. They found the country different, with a European feel, • • •

Figure 3. The setup of a Dobsonian telescope for visual observation



less poverty, and warm hospitality. The marked four seasons and the beauty of the Chilean sky convinced them to pursue their astronomy project here. They needed to find the ideal spot.

Using their van, they explored every nook from Arica. San Pedro de Atacama didn't appeal due to its tourism. After visiting La Serena, a charming coastal town, they headed to the Andes for clearer skies. Eventually, they found a spot by the Rio Ponio near Monte Patria. A local shepherd woman suggested a remote family-owned land unused by its owners. After some discussions and a return trip to France, they secured ten hectares of land in 2003.

Building the Hacienda of Stars

Upon returning to Chile with tents and backpacks, they visited the remote site with the shepherd's son. Finding a water source under thorny bushes, they realized the place's potential. They bought a 4x4, rented a bulldozer to create an access road, and started building their retreat, living in a tent and dining under pear trees. By winter 2004, they completed a pavilion with two bedrooms, bathrooms, and a kitchen.

Their first guest was a French amateur astronomer from Santiago, accompanied by his wife and three-year-old daughter. They built the first observatory for a 14-inch telescope without outside help, as no company wanted to go that far up the mountain. Today, the Hacienda of Stars features four pavilions for astronomers or nature lovers, offering limited stays for up to 8 people to maintain tranquility.

The Hacienda of Stars Today: For those unable to visit Chile, Nadine and Raymond built shelters for a small number of robotic telescopes, allowing remote observation of the stunning Chilean sky. Over the years, the Hacienda of Stars has welcomed enthusiasts despite the pandemic, modernization, and climate change. Initially enjoying 320 clear nights a year, now it's about 280 due to increasing cloud cover.

Setting up a Dobsonian Telescope for Visual Observation

The robotic telescope park expanded post-pandemic in 2021 with new installations. Despite changes, the Hacienda remains a haven for Nadine and Raymond, living semi-self-sufficiently with a vegetable garden, chicken coop, fruit trees, and close ties with local shepherds. They've ensured top-notch internet access for remote users, recognizing Chile's sky remains among the world's finest for astronomy.

Conclusion

Amateur and professional astronomy has surged, with remote telescopes proliferating in Chile at sites like Deepskychile, Obstech eL Sauce, and eL Pangue, near the Hacienda of Stars. Despite initial establishment challenges, they value friendship over business, with connections to renowned astro-photographers and clubs.

While initially remote, the Rio Hurtado area now hosts several telescope farms, leading to some light pollution. Given the choice, they might prefer higher, less polluted areas like Paranal or La Silla. Still, the Hacienda remains relatively protected, maintaining its appeal with 260 clear nights annually.

Despite challenges like light pollution and Starlink satellites, Chile remains a premier astronomy destination. Raymond remains devoted to the stars, proclaiming, "Love the stars, love the planet, the Earth is our homeland, astronomy is our religion!"

Copyright for photos of the Hacienda of Stars: Nadine Roux and Raymond Christian.

Figure 4. Sh2-308 (emission nebula and an HII region). Mosaic of 2 images with a total exposure time of 40 hours for each image: 20 hours on the Ha layer and 20 hours on the OIII layer. Newtonian telescope with a 520mm diameter, F/D=3.5, ZWO6200 camera, sampling at 0.4 arc seconds per pixel. Image captured from the Hacienda des Étoiles (copyright: Team Janus: Laurent Bernasconi and Michel Meunier)