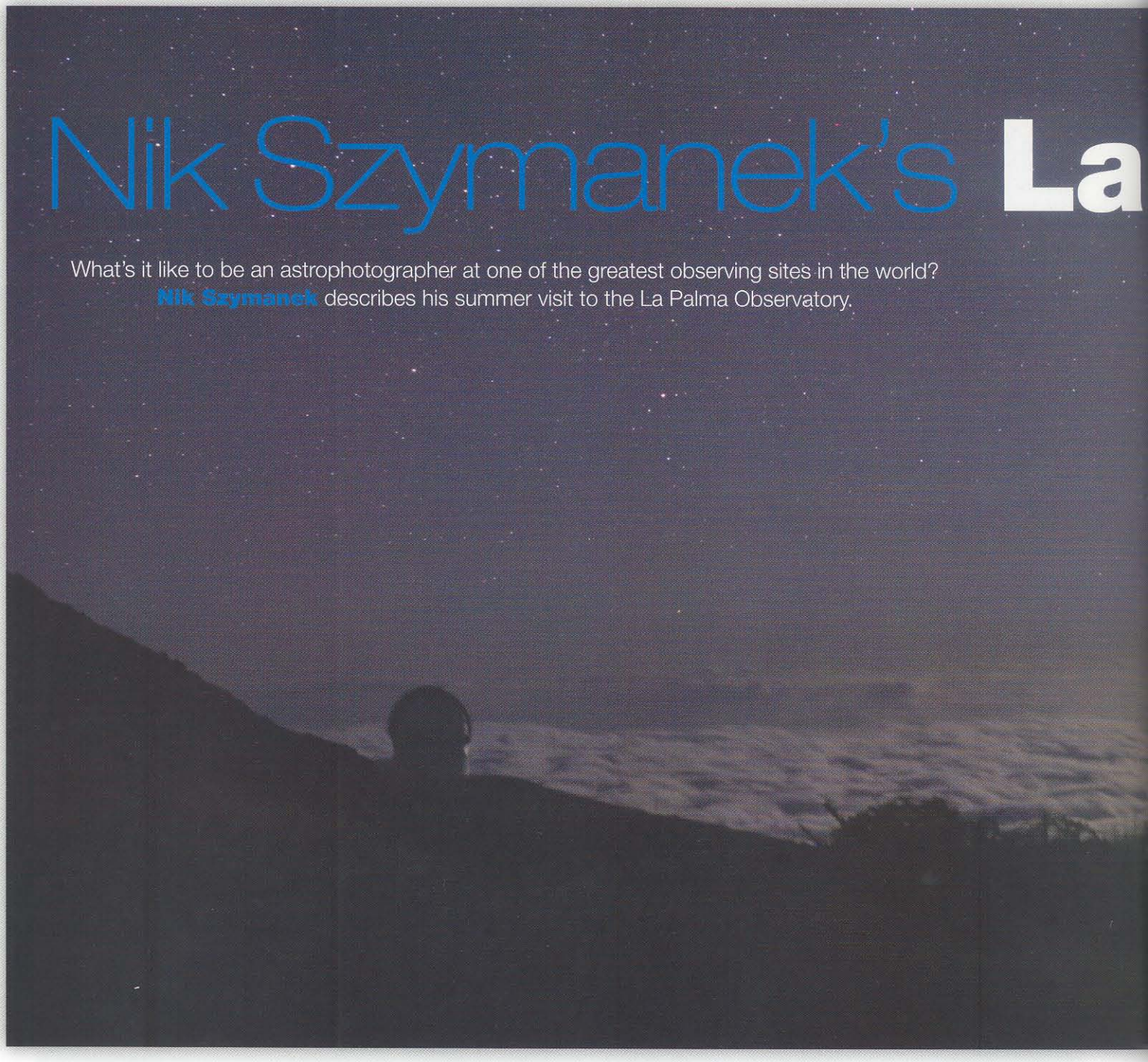
Nik Szymanek's La

What's it like to be an astrophotographer at one of the greatest observing sites in the world? **Nik Szymanek** describes his summer visit to the La Palma Observatory.



▲ A magical view of the giant 10.4-metre Gran Tecan Telescope illuminated by a waxing crescent moon. A two-pane mosaic image made up of 30-second exposures with a Canon 20D DSLR, 28mm lens at f/3.5 and an AstroTrac TT320 mount. All images: Nik Szymanek.

▶ The Lagoon Nebula imaged with a Pentax 75mm refractor, QSI 532s CCD camera and Astronomik hydrogen-alpha and oxygen [III] filters, with 60 minutes per filter.

The island of La Palma is a popular location for European astrophotographers seeking skies of the highest quality. In June 2008, I travelled there with a small team to photograph the glories of the summer skies. La Palma is located at a latitude of 28 degrees north, so constellations like Sagittarius and Scorpius and the summer Milky Way can be seen in all their glory. The following account shows that whilst the skies were perfect there were many trials and tribulations to deal with!

Journey

There are now direct flights to La Palma all year round. This is ideal, as previous visits have entailed at least two flights, typically via Madrid. With the huge amount of equipment we take, any extra flight increases the risk of damage as well as extending the journey time. We flew from Gatwick Airport, with a journey time of only four hours. Originally, we were hoping to pre-book our excess baggage as this cuts the extortionate fees down by fifty percent but were told that the sister company who we were apparently flying with doesn't offer that option. Potential visitors to La Palma should be careful to check this in advance.

Arriving on time at La Palma we collected the hire cars, stocked up with provisions and then collected our equipment from a good friend who lives on the island and is kind enough to look after it for us between our visits. The journey from sea level to the observatory takes about one hour and is a spectacular trip in daylight, with incredible views. Our journey, however, was in darkness and we didn't arrive at the observatory accommodation building until midnight. The sky was incredible, with no sign of the dreaded Saharan dust that had caused problems during our previous two visits.

The next day dawned beautifully clear and we transported the equipment up to our observing location. This is just about the nicest place to observe from, with all the comforts of home, power, and a magnificent view of the observatory. I have carried out lots of public-relations work for the UK's Isaac Newton Group of Telescopes on La Palma in the past, including

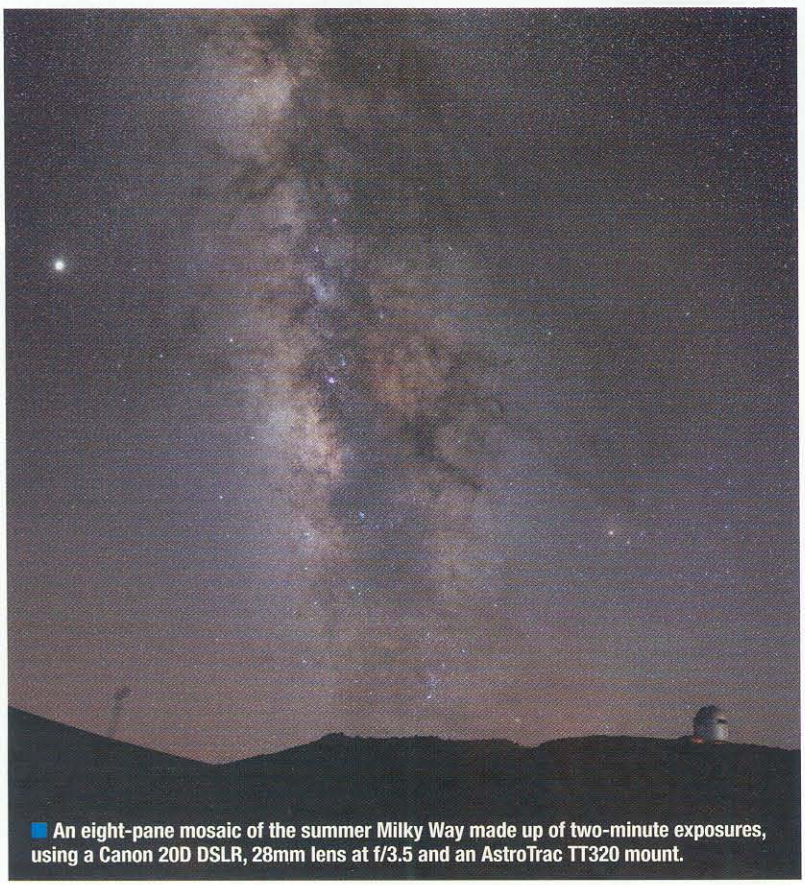
Palma diaries

photography and video filming of the telescopes, night sky photography and the processing of CCD images taken with the UK's telescope there. In return for this we are allowed to use these facilities, which is an amazing privilege as the observatory isn't available to amateur astronomers. We spent most of the day setting up our EQ6 Pro mounts and CCD equipment. As the sky darkened that evening and the Zodiacal Light appeared we could see that we were about to experience the very best of European skies. Things started well, with very low wind, amazingly transparent skies and no problem with the mosquitoes that occasionally haunt that location and delight in inflicting torment on astrophotographers. All our equipment and cameras were working well and seemed to have survived the journey intact. One hour into the first session my mount suddenly locked up, displaying an error message on the handset, and steadfastly refused to work again. We carry spares for these mounts but in the rush to get up the mountain they were left at our friend's house. That curtailed my imaging plans for the first night but fortunately I had a contingency plan.

Skyscapes

Earlier this year, I was honoured to accept an invitation to join an international team of astrophotographers in an organisation known as The World at Night, or TWAN (www.twanight.org/newTWAN/), who are a special project of the International Year of Astronomy. The philosophy of this organisation is to show that we all share the same peaceful sky, regardless of borders, religion, politics etc. The TWAN website holds an amazing collection of photographs and time-lapse video sequences that show the sky above famous landmarks around the world. For the rest of that first night I concentrated on producing images, particularly of the stunning Milky Way visible from La Palma, that I could contribute to the TWAN image library. I wanted to be able to move around the site and work in a variety of locations so for this I used my AstroTrac TT320 mount. This attaches to any ordinary photo tripod and gives two hours of high quality guiding, powered, in my case, from a set of rechargeable AA batteries (see the review in the August 2007 issue of *Astronomy Now*). This gave complete portability and I was able to acquire many great pictures using a Canon 20D DSLR camera. I remember many happy occasions when I was able to just sit back while the camera was taking pictures, fully dark-adapted and enjoy the sprawling views of the Milky Way, incredibly bright and stretching from horizon to horizon.

▲ **The Observatorio de Tacande, a superbly equipped observatory available for hire to visitors. Many different observing packages are available, from basic to advanced.**



■ **An eight-pane mosaic of the summer Milky Way made up of two-minute exposures, using a Canon 20D DSLR, 28mm lens at f/3.5 and an AstroTrac TT320 mount.**

The superb weather continued and we took advantage of it to collect the spare circuit board for my errant mount as well as one of the team's tripods that had earlier been left at Gran Canaria during a connecting flight from Italy. We also were able to drive up to the visitors' car park, the highest point on La Palma, which offers sweeping views of the magnificent volcanic crater (La Palma is a volcanic island with the volcano rising seven kilometres above the seabed, and 2.4 kilometres above sea level) and observatory complex, especially in the beautiful evening light.

Thankfully, the replacement circuit board fixed the problem on my mount and I was able to start imaging again on the third night as well as acquiring more wide-field photographs with the AstroTrac mount for the TWAN project. Checking the night's CCD images the next day alerted me to another problem in that my camera seemed to have suffered a reduction in sensitivity. We were able to trace a further problem with the power supply to my motorised filterwheel and I suspect that the reduction in sensitivity may in fact have been the result of the filterwheel misplacing the filters and actually partially blocking out the sky! Needless to say, all this gear works perfectly at home in my back garden observatory. Conditions at the summit of the mountain were such that the humidity was very low

■ The Milky Way imaged with a Canon 20D DSLR, 28mm lens at f/3.5 and AN AstroTrac TT320 mount, involving five two-minute exposures co-added.

"I WAS ABLE TO JUST SIT BACK, FULLY DARK ADAPTED AND ENJOY THE SPRAWLING VIEWS OF THE MILKY WAY FROM HORIZON TO HORIZON"

and the dust found there extremely abrasive. Add to that very high levels of static electricity and you have a very unfriendly environment for sensitive electronic equipment. Fortunately, equipment used by the other members of team behaved itself and good images were taken.

A fantastic stay

Towards the end of our stay I visited the Observatorio de Tacande, (www.astropalma.com) a private observatory owned by Joan Genebriera, which is available for use by visitors to La Palma. A very impressive 16-inch Cassegrain telescope can be used for imaging and spectroscopy, while outside there is a 20-inch Obsession Dobsonian telescope for visual use and solar telescopes. There's also an area with solid piers for observers to mount their own telescopes. Situated in a lovely dark site with good transparency and seeing, this is an ideal location for amateur astronomers to image the sky.

We experienced fantastic weather for the rest of the visit with seven cloudless, ultra-transparent nights. I was able to secure many panoramic shots of the observatory, especially as during the last few evenings we were graced with a lovely crescent moon that was ideal for illuminating the foreground scenery. We were exhausted by the end of our stay as the night-long high altitude observing, a lack of sleep and the low humidity finally took its toll. Fortunately, we had a late flight home so were able to pack all the gear away and get back to the airport at a fairly leisurely pace. Needless to say, at check-in we were charged for the full complement of excess baggage, at an even higher rate than advertised, so our total excess baggage fee came to £1,000. Other than this, it was a hugely enjoyable visit, with great skies and the opportunity to visit friends at the observatory.

Nik Szymanek is an astrophotographer and the author of Infinity Rising. *He would like to thank Campbell Warden of the IAC, Tenerife, and staff at the Isaac Newton Group of Telescopes for their ongoing support.*

▲ The Moon is about to set and the Zodiacal Light shines brightly. A four-minute exposure with a Canon 20D DSLR, 28mm lens at f/3.5 and an AstroTrac TT320 mount.

▶ Omega Centauri imaged with a Pentax 75mm refractor, QSI 532s CCD camera and Astronomik LRGB filters. L 25 minutes, RGB 15 minutes per filter.