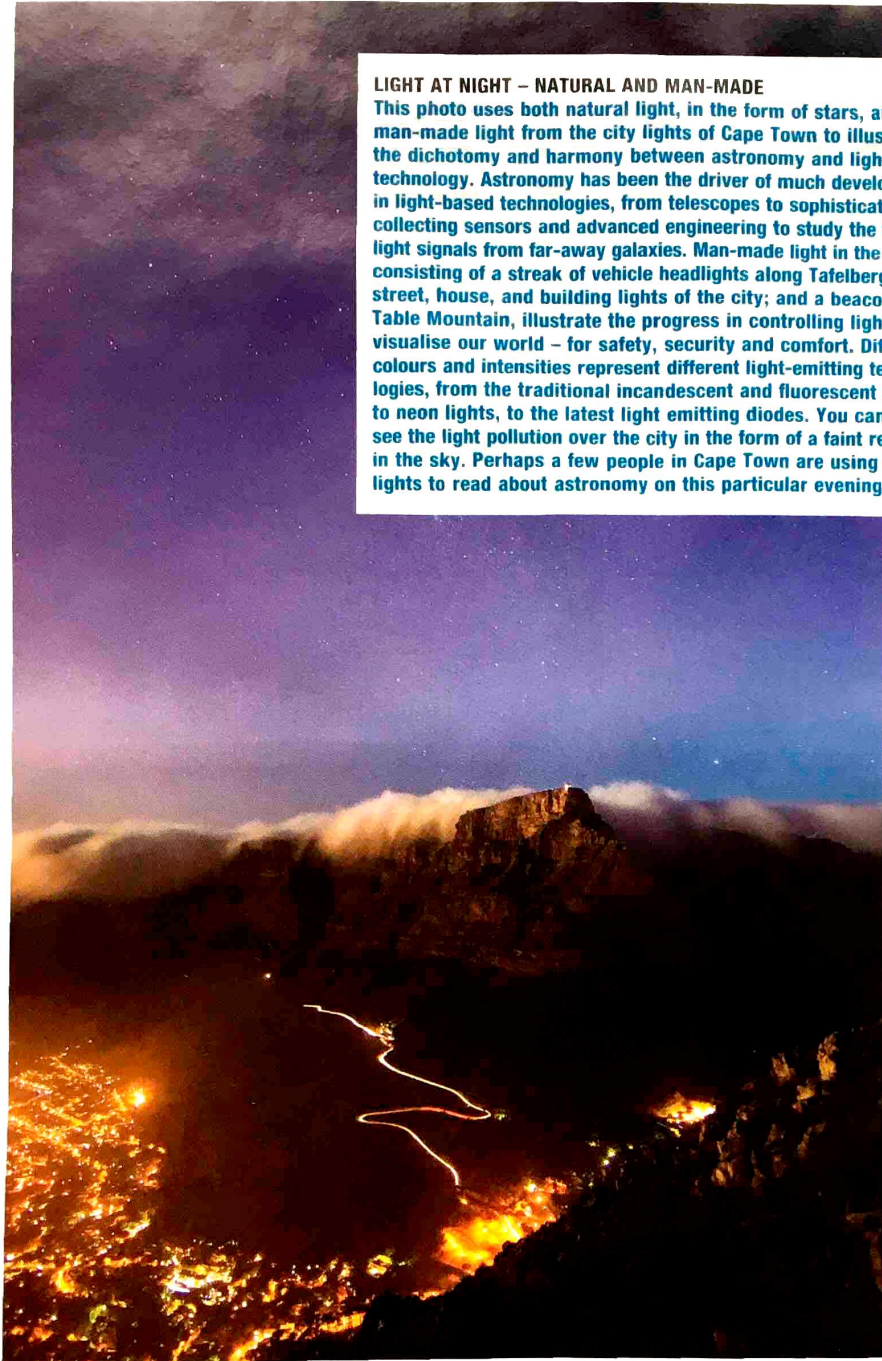


#### LIGHT AT NIGHT – NATURAL AND MAN-MADE

This photo uses both natural light, in the form of stars, and man-made light from the city lights of Cape Town to illustrate the dichotomy and harmony between astronomy and light-based technology. Astronomy has been the driver of much development in light-based technologies, from telescopes to sophisticated light collecting sensors and advanced engineering to study the faintest light signals from far-away galaxies. Man-made light in the image, consisting of a streak of vehicle headlights along Tafelberg Road; street, house, and building lights of the city; and a beacon atop Table Mountain, illustrate the progress in controlling light to visualise our world – for safety, security and comfort. Different colours and intensities represent different light-emitting technologies, from the traditional incandescent and fluorescent bulbs, to neon lights, to the latest light emitting diodes. You can even see the light pollution over the city in the form of a faint red glow in the sky. Perhaps a few people in Cape Town are using their lights to read about astronomy on this particular evening.



#### Tell us a bit about yourself.

I have broad interests in science. I studied physics and molecular biology at MIT before doing an MSc and PhD focused on conservation ecology at the University of Pretoria. I've been interested in photography since I was very young, but since graduating, photography has become a full-time passion. I write articles about science, Nature, travel and culture, and illustrate them through photography. Telling stories through good imagery is always a fun challenge and is particularly important in the modern visual culture. More at [morgantrimble.com](http://morgantrimble.com) or [facebook.com/morgantrimblephotography](https://facebook.com/morgantrimblephotography)

#### What equipment did you use?

Taking photos of the night sky together with a landscape requires a sturdy tripod, a fast wide-angle lens, and a good camera sensor. I used a Canon 1D Mark IV and a 14mm f2.8 lens. That's pretty hefty equipment, so it was a tough climb up Lion's Head for the shot. I kept my shutter speed to 30 seconds to make sure the stars appeared as points rather than streaks in the sky. The long exposure was enough to make the car headlights on Tafelberg Road appear as a ribbon of interesting light. A handy rule to avoid star trails is to divide 500 by the focal length of your lens to get the maximum number of seconds you should use. Bump up the ISO to get a fast enough shutter.

#### How do you believe this kind of competition or image, or both, contributes to the understanding and advancement of science?

Photographing "science" is difficult if you have the narrow point of view that science is what happens in laboratories with people wearing goggles and lab coats – totally inaccessible to the general public. In fact, science is going on all around us and literally any scene can be seen through that filter. Some

photos are better than others at illustrating scientific ideas to the audience, but I think a photo can spur a lot of thought. Good science photography opens up the topic to a much wider audience than traditional channels, like scientific publishing, so Science Lens makes a big contribution in that sense. It also gets scientists thinking about how to better present their work to a wider audience, which is definitely a good thing. **PM**

## MORGAN TRIMBLE

Winner, International Year of Light and Light-based Technologies: Light at night – natural and man-made



#### What inspired you to choose this particular subject?

This category was particularly well geared towards photographers because photography itself is a light-based technology, and we spend a lot of time considering light and shaping it to create striking images. When I think about light, the dichotomy between light in Nature and light made by humans comes to mind – the Sun and stars versus all our various artificial light sources. For me, nothing illustrates that better than the night sky over a city. In the case of Cape Town, Table Mountain forms a clear barrier between the realm of men in the lower slopes of the city, and the natural world of the mountain and starry sky.

To find out more about the science behind these images or to see more photos, visit [www.saasta.ac.za](http://www.saasta.ac.za)