



Mars, Saturn and the International Space Station captured from Devil's Den in Wiltshire

Dark skies and bright ideas

Astrophotographer Robert Harvey ARPS explains his craft to Tom Soper LRPS

Why astrophotography?

The scale of the universe is enormous: our galaxy holds between 100-400 billion stars and 100 billion planets. It is estimated there are another 100 billion galaxies beyond ours. I find the magnitude of it intriguing. Photographing the full range of astronomical phenomena gives me a sense of our place in the universe.

So, it's not just about photographing stars?

No. I photograph a range of celestial objects and events including the moon, the planets, the Milky Way, aurorae, meteors, solar eclipses, lunar eclipses, star trails and even the International Space Station.

Where should we go if we want to give astrophotography a try?

Somewhere away from habitation and light pollution – dark skies are essential. The darkest skies



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are in Namibia, a country of mostly uninhabited desert. The dazzling southern hemisphere skies are unlike anything we can see in Britain, but there are plenty of good locations in the UK. I spend a lot of time on Salisbury Plain, which has reasonably dark skies. The Dorset coast is a popular location for photographing the Milky Way in summer. Dartmoor, for the bold foregrounds provided by granite tors; Sycamore Gap at Hadrian's Wall in Northumberland is interesting, and the Isle of Skye – in particular the Old Man of Storr – is stunning.

What about aurorae?

The northern lights are most commonly photographed around the Arctic Circle but are occasionally seen in Scotland or northern England. They are beautiful to look at but can be difficult to photograph as they move so fast.

Should we include foreground interest in our astrophotography?

Foreground interest is important as it gives context and definition to an image of the night sky. A good foreground subject should stand above the horizon so it can be photographed against the sky. Good examples include rock outcrops, trees, a monument or a tower on a hill.

Is it difficult to expose and focus for a foreground subject against the night sky?

It can be but, like all areas of astrophotography, you can master it with practice, patience, planning, perseverance, experience and luck. An understanding of hyperfocal distance helps with focusing. As for exposure, I sometimes show foregrounds as silhouettes if they have a strong outline. Alternatively, foreground subjects can be lit using a torch, stray light pollution from a town

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or streetlight, or they can be lit by a bright gibbous moon.

What equipment do we need?

A DSLR that can produce good results at higher ISOs such as ISO 1600 or 3200; a fast lens opening to f/2.8 or wider, especially for shooting the Milky Way; a sturdy tripod is essential for exposures of 20 seconds or more; a lockable cable release to create images of star trails. Finally you'll need warm clothes and a torch as a lot of time is spent standing around in the cold.

Which astronomical phenomenon is your favourite to photograph?

I love to shoot eclipses because they are so rare. During a total

TOP
Moonrise over Glastonbury Tor

ABOVE
The Milky Way and southern twilight seen from Pebble Island in the Falklands

lunar eclipse every sunrise and sunset on Earth is projected on to the lunar surface, making the moon a beautiful copper red. A total solar eclipse is one of the most stunning events in nature. But it's a challenge to photograph as you have to be in exactly the right place on Earth, and technically it's tricky as light levels change by 17 stops in less than a second. I've seen four total solar eclipses and plan to be in Chile on 14 December 2020 for my fifth.

Robert Harvey ARPS is an astrophotography tutor at Lacock Photography. Visit lacockphotography.com and naturalworldphotography.net

GEAR SPY

Gavin Stoker keeps his eye on upcoming releases



● There were plenty of equipment teasers for 2019 at Cologne's Photokina exhibition. Promised within the first six months is a Fuji GFX medium-format digital camera with a 100-megapixel resolution. Known for now as the 'GFX 100 Megapixels', it follows Fuji's new GFX 50R camera, which arrived last month. The 50R is 25mm thinner than 2017's GFX, plus lighter by 145g.

● We are also awaiting working samples of Panasonic's two Lumix 'S' series full-frame sensor-incorporating S1 and S1R models, boasting 24 and 47 megapixels respectively. The new cameras will feature the Leica L mount, the first fruits of Panasonic's newly announced partnership with Leica and Sigma, known as the 'L-mount alliance'. ● Even more unexpected is a forthcoming Zeiss-branded full-frame mirrorless camera. The ZX1 arrives in early 2019 and, interestingly, instead of an interchangeable lens mount features an integrated 35mm f/2 autofocus lens, married to a 37.4-megapixel sensor.