

Astronomy Talk 21st May 2024

Artificial light at night, environmental impact, dark sky places preservation

This Zoom talk was given Dr Chris Baddiley, a leading member of the CfDS (Committee for Dark Skies). 52 participants attended.

First, Chris talked about the many organisations relevant to this subject, and in particular how much we owe to Bob Mizon, who was national coordinator of the CfDS. The main message is not to turn off essential lights, but to make sure they're well directed.

Light has no boundaries, and it's in particular the horizontal light that pollutes. The lighting industry has taken this on board and has appropriate standards. Light constitutes 19% of all electricity used (in 2015), so there's an enormous amount of waste. In particular, road lighting is mostly not pointing down enough.

The Neighbourhood and Environment Bill of 2005 made light a potential statutory nuisance, but the government doesn't accept that light is a problem. The bill had a long list of exclusions, e.g. ports, and Poole harbour is a particularly egregious example. An all-party parliamentary group for dark skies reported in 2021 with recommendations, but with very little success as the government keeps asking for more evidence, despite there being ample amounts to show.

The newer bluer LEDs are a disaster for human health and for flora and fauna. Chris looked at human melatonin levels and how they're affected, at night flying insect pollinators, and many other examples of effects on animals and plants.

Chris then looked at places that are dark, e.g. Cranborne Chase is a designated International Dark Sky Reserve, and for many places that are lit up, there has been replacement lighting installed to great effect. Leaving lights on all night is a particularly unnecessary waste but is very common in city office blocks.

Lastly, Chris covered the satellite mega-constellation problem, which is becoming a real issue for amateur and professional astronomers.

There were many comments and questions, so the audience was very well engaged by this talk.