



SPACE

awareness

WHO IS AN ASTROPHOTOGRAPHER?

Field Astrophotography, astronomy, photography, optics

Type Outreach, education, art

Level of study Online and face-to-face certified courses



What is the field about?

Astrophotography is an activity that consists in taking photographs of celestial bodies, such as stars, planets, comets, star clusters and galaxies, or events such as eclipses, transits, among others. These can be pictures of beautiful landscapes taken under large areas of the night unpolluted skies, which may also include some planets or the Moon, for example. Most of the incredible long exposure pictures of the star trails we are familiar with, or the 360° photos of the Milky Way, were also taken by astrophotographers.

Astrophotography often gives us an artistic view of the night sky. This is why it helps making so many people become more passionate about the universe. Nowadays it is seen by many as a hobby activity, but it is always possible to do it professionally. Depending on the subject of interest, Astrophotography can be further divided in categories. The main ones are: The Solar System; Deep Space Objects (DSO); Wide field Astrophotography and Time-lapse Astrophotography.

What would I do every day?

Astrophotographers can only work under a clear night sky, outside in the backyard, in the countryside or in a remote location. In simple terms, the darker it is, the better it is. In such places you can use your photographic equipment and aim it at your preferred kind of celestial objects or events to take their pictures or record them on video. Depending on the target, you might only need a few minutes or an entire night to get the work done. On the other hand, if you are interested in the Sun, it is obvious that this routine can only take place during the day.

You can still work on cloudy nights (or days), but only on a computer to digitally process the pictures taken during the clear nights or to plan what to photograph in the next opportunity.

Sometimes you must plan in advance how to operate all the equipment to register your photographs correctly, especially when it comes to events which happen once in a lifetime, or during a short period of time, or at a specific location.

How much and what do I need to study?

Astrophotography is highly dependent on specialized photographic equipment and any astrophotographer should be comfortable to study very technical information about optics, digital sensors and software. Each kind of celestial objects require a specific combination of cameras and telescopes or photographic lenses to obtain the best results. The equipment can be as simple and low cost as the camera of a mobile phone, or as complex and costly as a cooled CCD camera with a filter wheel attached to a telescope controlled by a computer.

Astrophotography is taught in short courses on a big variety of platforms such as websites, books and regular courses. Some universities offer one semester course as well as extra-curricular courses. On the internet there are many discussion groups where your doubts can be easily solved by experienced astrophotographers.

Where can I work?

Professional astrophotographers are often freelancers who sell their photos and videos to specialized magazines and other media, give courses and publish books on the subject.

This is the job for you, if...

... you like to study technical subjects on optics, digital sensors, imaging processing software. Some knowledge on astrophysics is obviously welcomed but is not essential.

...you pay attention to the details and have an artistic eye for photographic composition.

...you fancy to stay outdoors at night in the darkness, sometimes in very remote places far from the lights of the civilization.

... you are available to travel to remote places to find the ideal sky to obtain the planned picture.

...you feel comfortable spending some time behind a computer using photographic software to process the images taken during the night.

Learn more about astrophotography:

Here you can search for pictures taken by astrophotographers from the entire world and filter them using keywords like the name of the object or one specific equipment item: <https://www.astrobin.com/>

For introductory discussions and to browse articles on tips for astrophotography:

<https://www.lonelyspeck.com/astrophotography-101/>

<http://www.skyandtelescope.com/astronomy-resources/astrophotography-tips/>

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Here you can see stunning nightscape photos and timelapse videos of some of the world's landmarks against celestial attractions: <http://www.twanight.org/newTWAN/index.asp>

ESO Ambassadors Gallery <https://www.eso.org/public/outreach/partnerships/photo-ambassadors/>

Text based on information kindly provided by Fausto Barbosa, freelance astrophotographer and Adjunct Professor at the Federal Institute of Education, Science and Technology of Rio Grande do Sul (IFRS).

Image: Within reach

Credit: P. Horálek/ESO



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