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CYBER-COSMOS: A NEW CITIZEN SCIENCE CONCEPT IN A DARK SKY DESTINATION

Abstract

Astrotourism is becoming a major trend of a sustainable, high-quality tourism segment and became a central element in the protection of Dark skies in many countries. In Portugal, several Dark Sky destinations have appeared in recent years following a growing awareness of its potential to boost the local economy by regional stakeholders around professional observatories. It benefits from the dark skies of those sites and requires little infrastructure to get stargazing started. It is also backed by a growing desire from the general public to experience rare night skies. UNESCO, the UN World Tourism Organization and IAU have jointly recognized the benefits of protection of Dark Skies and have developed guidelines and promoted certifications like the Dark Sky Starlight Foundation Tourism Destinations to protect and defend the sky and valuing it as a resource necessary for life and the intangible heritage of humanity. The "La Palma Declaration" emphasises the protection and conservation of the night skies as an important scientific, cultural, environmental and tourist resource. Therefore, the Dark Sky territories are prime locations to initiate citizen science projects and connect astrotourism initiatives to science education. In the Summer of 2020, in the middle of COVID pandemics, we started an initiative to train young students using an Unistellar eVscope, a smart, compact and user-friendly digital telescope that offers unprecedented opportunities for deep-sky observation. This was probably the first continuous application of this equipment in a pedagogical and citizen-science context, and in a pandemic context. Presented

at Web Summit 2019, the eVscope features an integrated Wi-Fi system that connects to mobile devices within a 50-meter radius, allowing users to remotely operate the telescope and download the images through an app on their smartphones and tablets — especially useful at a time of social distancing.

The idea behind our training is to foster and guide a citizen-science community, where anyone can contribute to astronomical discoveries by sharing their images in real-time with scientific observation campaigns observing planet occultations, doing planetary defense or simply stargazing. Pampilhosa da Serra, in a certified Dark Sky Reserve destination in central Portugal was the chosen location for this project, where we expect astrotourism and science education to flourish.